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CONTENTS

S.NO	TITLE	AUTHOR/S	PAGES
1	ENHANCING ENGLISH LANGUAGE SKILLS USING CUTTING-EDGE TECHNOLOGY	Srinivasa Rao Gundu, KV Rama Rao, K Radha Madhavi, Ch Mutyala Rao, Venkata Ramana Manipatruni	1-3
2	PERCEPTION AND AWARENESS OF STUDENTS TOWARDS USAGE OF E-BOOKS DURING LOCKDOWN: A CASE STUDY OF BHUBANESWAR, ODISHA, INDIA	Mrs. Sharmistha Bhowmik Pal, Mr. Utpal Pal	4-12
3	FEATURES OF THE COURSE AND PROGNOSIS OF GLOMERULONEFRITIS WITH NEPHROTIC SYNDROME IN CHILDREN	Sh.M. Ibatova, Yu. A. Rakhmonov, D. Kh. Mamatkulova	13-16
4	ISSUES OF TEACHING LINGUO-CULTURAL COMPETENCE AS A FUNDAMENTAL FORMATION AND DEVELOPMENT OF FOREIGN LANGUAGE KNOWLEDGE AND SKILLS	Sattarov Begmurod Ismailovich, Makhmudov Nosirbek Samatovich	17-19
5	THE PROBLEM OF INDEPENDENT WORK OF STUDENTS OF A NON-LINGUISTIC UNIVERSITY IN THE PROCESS OF STUDYING THE DISCIPLINE "ENGLISH"	Abdullayeva Charos Bakhromovna	20-24
6	DEVELOPMENT OF WRITTEN SPEECH AS A NECESSARY CONDITION OF WORK ON THE SPEECH ACTIVITY OF STUDENTS OF A NON-LINGUISTIC UNIVERSITY	Chulyukina Yelena Yevgenievna	25-29
7	SIMULATING THE DYNAMICS OF A PARTICLE IN A QUANTUM MECHANICAL OSCILLATOR: A MULTIDIMENSIONAL WAVE FUNCTION APPROACH	Mohammed Hashim Albashir, Hashim Gad Elseed, Hajhamed Diab Aljaly, Naga Abdalaziz	30-34
8	THE DESCRIPTION OF SYNTACTIC STRUCTURES OF FUNCTIONAL SYNTAX IN ENGLISH AND UZBEK LANGUAGES	Sadikova D.N	35-37
9	AUTOMATIC TRAFFIC SIGNAL CONTROLLER USING ARDUINO	P.Mariaraja, R.Charan , M.Harish , B.Soundhar	38-42
10	EMBRYONIC DEVELOPMENT OF CHINESE CYPRINIDS PELAGOPHILES UNDER CONDITIONS OF ARTIFICIAL REPRODUCTION IN UZBEKISTAN	Ashrapov A.A.,	43-46
11	INTERAKTIBONG MODYUL SA PAGTUTURO NG FILIPINO	Jessica Marie Inalvez - Dela Peña, Dr. Arlyn C. Cura, Prof. Juvy V. Galamay	47-51
12	USES OF CONSTRUCTION AND DEMOLITION WASTE AS PARTIAL REPLACEMENT OF FINE AGGREGATE	Ranjan Kumar Gupta	52-56

	AND COARSE AGGREGATE IN CONCRETE		
13	IMPORTANCE OF VIRECHANA IN VATARAKTA	Dr Saeeda M Makandar, Dr G S Badrinath, Dr Pavithra Viraktmath	57-61
14	MENTAL MODELS OF SENIOR HIGH SCHOOL STUDENTS' WRITING THROUGH LITERACY NARRATIVES	John Neil P. Solas, Maico Demi B. Aperocho	62-71
15	THE POTENTIAL USE OF BACTERIA FOR THE BIODEGRADATION OF PLASTIC WASTES	Hao, John Aaron T., Apales, Katrina Deann M., Bayaca, Jessie James E., Cariño, Nicole Kate F., Catayna, Kc Lorin J., Miller, Ivan Carlo A.	72-76
16	LANGUAGE SKILLS, ECHOIC RESPONSES AND ACADEMIC ACHIEVEMENT AMONG CHILDREN WITH AUTISM SPECTRUM DISORDER IN SPECIAL NEEDS SCHOOLS IN RIVERS STATE, NIGERIA	Ajemba, Marvis ¹ , Prof. C. Agbakwuru ²	77-82
17	INTERNET ACCESS BLOCKING AND DO-NOT-DISTURB MODE AS DIGITAL DETOXIFICATION PREDICTORS OF STUDENTS' ACADEMIC IMPROVEMENTS IN UNIVERSITIES IN RIVERS STATE	Agha, Chisara Julia, Dr. K. K. Obasi	83-90
18	AWARENESS OF FARMERS TOWARDS THE AGRICULTURAL SCHEMES OF GOVT.: A STUDY ON DHENKANAL DISTRICT, ODISHA	Mr. Manas Kumar Sethi, Dr. Santosh Kumar Biswal	91-96
19	OBESITY AS A RISK FACTOR FOR DIFFERENT TYPES OF CANCER	Prof. Nikolaos Tzenios	97-100
20	OBESITY AS A RISK FACTOR FOR CANCER	Prof. Nikolaos Tzenios	101-104
21	A COMPARATIVE STUDY OF THE SOLUTIONS OF THE KLEIN-GORDON AND DIRAC EQUATIONS: IMPLICATIONS FOR PARTICLE PHYSICS	Hajhamed Diab, Mohammed Hashim Albashir, Hashim Gad Alseed	105-112
22	WORK-FAMILY BALANCE: "A STUDY ON DUALCAREER COUPLES"	Annie Thomas	113-117
23	TRASH BOT MONITORING SYSTEM	Sanchana.R, Josephine Ruth Fenitha, Nithya Devi S, Mercy.P, Bhavani Sree.Sk, Swetha.S	118-125
24	THE CULTURAL AWARENESS IN THE POETRY OF P. K. MISHRA	Dr. Nibedita Pati	126-127
25	OPPORTUNITIES TO IMPROVE THE EFFECTIVENESS OF TEACHING ENGLISH IN DISTANCE EDUCATION	Nurmuratov Anvar Yakhshibaevich	128-130
26	RESEARCH ORIENTATION AND PROFESSORIAL PERFORMANCE OF LSPU SCC FACULTY: BASIS FOR 21 st CENTURY FACULTY RESEARCH INTERVENTION WORK PLAN	Regina E. Gloria	131-148
27	CACAO (<i>Theobroma cacao</i>) and JACKFRUIT (<i>Artocarpus heterophyllus</i>) SEEDS AS AN ALTERNATIVE CHOCOLATE DRINKS	Regina E. Gloria, Marie Ann S. Gonzales	149-155
28	A STUDY ON RESILIENCE, ESSENTIAL CHARACTERISTICS, AND IMPROVING	S.Anithalakshmi	156-166

	SKILLS		
29	PROBLEMS OF IMPROVING DIDACTIC PRINCIPLES OF TEACHING LATIN AT MEDICAL UNIVERSITIES	Berezovskaya Raisa Alexandrovna, Khamrokulova Munira Rasulovna, Makhkamov Mirkamol Khusanovich	167-170
30	DEVELOPMENT OF INDEPENDENT CREATIVE ACTIVITY OF STUDENTS OF A NON-LANGUAGE UNIVERSITY IN THE PROCESS OF TEACHING THE RUSSIAN LANGUAGE	Ibatova Klara Rakhmatullaevna	171-174
31	CURRENT ISSUES USING WEB QUESTS IN RUSSIAN LESSONS AT NON-LINGUISTIC HIGHER EDUCATION INSTITUTIONS	Takhirova Masudakhon Abdujabbor Kizi	175-178
32	FEATURES OF RUSSIAN AND UZBEK FOLK PROVERBS AND SAYINGS	Fatkhullahodzhaev Mahmud Zikrullaevich	179-182
33	USE OF INFORMATION TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES	Norboeva Feruza Rakhmatullaevna	183-185
34	THE EVOLUTION OF THE SOCIOLOGY AND ITS ROLE IN THE DEVELOPMENT OF THE WORLD	Dr. Doddahanumaiah B H	186-192
35	DIGITAL CITIZENSHIP EDUCATION IN NIGERIAN SECONDARY AND TERTIARY INSTITUTIONS	Nwachukwu, Chioma Dorothy, Prof. Baribor Vikoo	193-199
36	A COMPREHENSIVE REVIEW ARTICLE ON FINERENONE	Dr.Sanjay Prajapati, Dr. Pratik Prajapati, Kajal Gondaliya	200-202
37	THE CONTENT OF THE ORGANIZATION OF EXPERIMENTAL WORK ON OPTIMIZATION AND IMPROVEMENT OF TUTORS' ACTIVITIES IN UZBEKISTAN HIGHER EDUCATIONAL INSTITUTIONS	Timur Kulniyazov	203-206
38	THE ROLE OF DIGITAL TECHNOLOGIES IN TEACHING ENGLISH IN THE EDUCATIONAL SYSTEM OF UZBEKISTAN	Fayzullayeva Dilnoza Ubaydullayevna	207-209
39	IMPACT OF ARTIFICIAL INTELLIGENCE ON CONSUMER BEHAVIOUR: AN EMPIRICAL STUDY IN THE RETAIL SECTOR IN MANGALORE CITY	Dr. Kavyashree. K	210-213
40	INTERLOCKING PLASTIC BLOCK – A REVIEW	Mrs. Sheetal Nalbilwar, Atharva Bhapkar, Karan Patil, Shivraj Jagadale, Krushna Khandare, Sujal Shinde	214-216
41	USER'S ADOPTION OF E-PAYMENT SYSTEM IN HARYANA	Dr. Arti Gaur, Sanju Verma	217-224
42	FROM PHILIPPINES TO THE UNITED STATES: REFLECTIONS OF FULBRIGHT FOREIGN LANGUAGE TEACHING ASSISTANTS	Maico Demi Aperocho, Candice Faye Kristen Lleses, Gianinna Elaine Labicane, Ryan Roi Domingo, Ma. Cristina Consuelo	225-233
43	DESIGN AND DEVELOPMENT OF FORWARDERS SPECIFIC SKILL TRAINING ON PHYSICAL FUNCTIONAL AND PERFORMANCE VARIABLES AMONG FOOTBALL PLAYERS (A PILOT STUDY)	N.Kodeeswaran, Dr.K.Murugavel	234-239
44	RESEARCH ON THE STUDY OF MODERN	Ulug'bek Hasanov	240-243

	TAFSIR STUDIES		
45	ANALYSIS OF THE MANUSCRIPT OF ALAUDDIN BUKHARI'S WORK "RISOLA FIL-ITIQAQ"	Begaliyev Ravshanjon Jumanovich	244-247
46	HANAFI HADITHIST ANWAR SHAH KASHMIRI	Nizomiddinov Hoshimjon Muhammadjonovich	248-250
47	DESCRIPTION OF THEMES OF ISHARATUL-MAROM'S WORK	Saidmuhammadxon Muhibullayev	251-254
48	LEXICAL TRANSLATIONAL PECULIARITIES OF ENGLISH AND UZBEK PROVERBS, IDIOMS, PHRASES ABOUT GOLD	Iskanova Nasiba Parmonovna, Allayarova Guzal Nuriddinovna	255-260
49	ISSUES OF IMPLEMENTATION OF THE STANDARD "PRESENTATION OF FINANCIAL STATEMENTS" (IAS 1)	Shokarimova Saidakhan Ravshanovna	261-265
50	MULTIMEDIA TECHNOLOGIES IN AUDIOVISUAL ART	Sayyora Zakirova	266-270
51	BICUBIC SPLINES IN COMPUTER SIMULATION	Rustam Qodirov	271-274
52	THE MODERN SYSTEM OF VISUAL ART IN THE CONTEXT OF ART MARKETING	Zunnunova Umida	275-277
53	CLOUD TECHNOLOGIES IN ART EDUCATION	Mukhamedov Umarkhon	278-282
54	A PREDICTION OF SELECTED ANTHROPOMETRIC PHYSICAL AND PHYSIOLOGICAL VARIABLES WITH PLAYING ABILITY OF DISTRICT WOMEN HANDBALL PLAYERS	C. Ramachandran, Dr. P. Anbalagan	283-285
55	EASE OF USE OF DIGITAL PLATFORMS FOR EDUCATIONAL PURPOSES: PERCEPTION OF SECONDARY SCHOOL STUDENTS, TEACHERS AND ADMINISTRATORS	GOGO, Ella Thompson, FOMSI, Esther Fabiawari	286-298
56	INFLUENCE OF EDUCATION OF WOMEN ENTREPRENEURS ON THE PROBLEMS FACED BY THEM IN MICRO ENTERPRISES	Dr. J. Jeya Ani	299-302



ENHANCING ENGLISH LANGUAGE SKILLS USING CUTTING-EDGE TECHNOLOGY

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ABSTRACT

Technology plays a significant role in the learning process in and out of class. Technology makes it easier for students to find information quickly and accurately. Search engines and e-books are partially replacing traditional textbooks. Instead of personal tutors, students can get one-on-one help through educational videos – anytime and anywhere – and massive open online courses. Every language class usually uses some form of technology. Technology has been used to both help and improve language learning. It enables teachers to adapt classroom activities thus enhancing the language learning process. It also continues to grow in importance as a tool to help teachers facilitate language learning for their learners. It encourages learners to learn individually and acquire responsible behaviors, and develop higher-order thinking skills. It helps them solve their learning struggles and find methods to use what they learn in ways that are effective and meaningful. Social Media Channels, Remote Teaching Tools like Zoom MS Teams, Skype, and Google Meet are being used for Conducting effective Online Lessons these days. This article focuses on the role of using new technologies in learning English as a second language. It discussed different tools and online platforms which support English language learners to increase their LSRW skills by using various online tools and digital platforms.

KEYWORDS: Technology, language learning, online tools, Digital platforms.

INTRODUCTION

The role of Technology in every aspect of life has become indispensable and English language learning has no exception to it. The COVID-19 pandemic has opened many opportunities for English language learners to learn English using Technology and post-COVID-19, the use of technology in English language learning has got upstairs and it turned many technophobes into technophiles. Tools of Educational Technology like Kahoot!, Flip, Quizizz, Edpuzzle, Socrative, Quill, and Cambridge's Write & Improve became part and parcel of academic learning including language learning. Not only do these tools support the student's learning but also give them enjoyable learning experiences.

What Kahoot is used for?

What is Kahoot!? Kahoot! is a tool that delivers and presents questions to students. It is set up as a game that students can play either individually or in groups. Instructors provide students with multiple-choice questions, which are projected on a classroom screen.

How do students use Kahoot!?

You can host a Kahoot! live to teach in class or remotely, or assign a student-paced challenge. When playing live in class, kahoots are displayed on a shared screen everyone in the classroom can see. Students join in and answer using their own devices with an internet connection - for example, a tablet or computer.

Why is Kahoot so popular?

Kahoot's easy-to-use format and catchy music make it a favorite among teachers and students to learn and revise school work. As of today, Kahoot! has managed to host more than 1 billion cumulative players on its platform in less than four years from launch.



What is a Flipgrid?

Flipgrid is a website that allows teachers to create "grids" to facilitate video discussions. Each grid is like a message board where teachers can pose questions, called "topics," and their students can post video responses that appear in a tiled grid display.

How can students use Flipgrid?

How to Use Flipgrid

Students select a topic and then tap the green plus to start the recording process.

Record a video – flip the camera and pause while recording.

Review the video – gain confidence with unlimited retakes.

Take a selfie – customize the image to add style.

Enter Info – last step before submitting the video.

How are teachers using Flipgrid?

One of the main things going for Flipgrid is its ease of use. Teachers set up an account and create grids, which act as communities for students to work in. Within each grid the teacher creates prompts called topics, and students post video responses to the prompts and replies to each other's videos.

What is Quizizz used for?

Quizizz is a Learning platform that offers multiple tools to make a classroom fun, interactive and engaging. As a teacher, you can create lessons, conduct formative assessments, assign homework, and have other interactions with your students (for all grades) in a captivating way.

Is Quizizz good for students?

Image result for Quizizz

Quizizz is useful in multiple classroom situations. Straight-up quiz-show style assessments can help students recall facts and prepare for traditional tests while interactive lessons encourage more in-depth learning.

Is Quizizz easy to use?

Quizizz is very easy for creating and conducting online quizzes. They have a clean and clutter-free website. The basic account plan gives pretty good functionalities to create and publish multiple-choice or open-ended quizzes. The quiz question types are also customizable.

Quizizz is a web-based assessment tool that allows you to present quizzes on science, social sciences, computer science, technical education, and art to students as a timed test or homework with a specified deadline.

What is Edpuzzle used for?

EDpuzzle is a teaching tool used to place interactive content into pre-existing videos from a variety of sources, such as TED or YouTube, or into videos you have made. To create an EDpuzzle account, navigate to EDpuzzle.com.

Why should teachers use Edpuzzle?

EdPuzzle is the perfect tool for allowing students to watch and engage with videos while the teacher gathers data throughout the lesson. As teachers dabble into the flipped classroom philosophy, EdPuzzle is the perfect enhancement tool for videos to be watched at home instead of eating up valuable class time.

What types of questions can you ask on Edpuzzle?

You can add

Open-ended questions. This is perfect if you want your students to give a more thoughtful response. ...

Multiple-choice. Here you can select which answers are correct and incorrect. ...

Notes. This is your tool for telling your students anything you need them to know about the video.

What is Socrative used for?

Socrative is an interactive web-based student-response system (also available through iOS, Android, or Chrome apps) that can help teachers spark conversation and learning through user-created polls and quizzes.

What is a Socrative exam?

What is Socrative? Socrative is an online tool for teachers to give quizzes and on-the-fly assessments to students. With Socrative you can create your own quizzes, quizzes are automatically graded, and you can create reports to evaluate how everyone did.

Which is better Kahoot! or Socrative?



Kahoot! offers more features of gamification than Socrative. In Kahoot, players select from several digital badges, and avatars, points are collected during the activity based on the number of correct answers and how fast the answers were given.

What are the features of Socrative?

Socrative maintains a reports section, where teachers can download an Excel spreadsheet with data on overall class performance. Individual student reports are also available to download in PDF format. Aggregate and individual results can also be e-mailed to teachers. One noteworthy feature is the Quick Question.

What is Quill used for?

Quill is a platform that has a set of tools for teaching writing, vocabulary, and grammar and includes over 400 exercises. You can guide your students to learn by reconstructing sentences, proofreading passages, writing new passages, and more.

What is 'Write & Improve'?

Write & Improve is simple to use: just choose a task, write or upload a written response and use the feedback to quickly improve. It shows you how to improve your spelling, grammar, and vocabulary. Join over 2 million learners of English who have used Write & Improve to improve their writing.

Is 'Write & Improve' reliable?

Overall, 'Write and improve' is a helpful tool, mainly I would say, for self-study. It provides some assistance and gives some feedback but it definitely needs a lot of improvement. It would be extremely helpful if there was constructive feedback for all the users across various levels and categories.

CONCLUSION

The traditional teachers found it difficult to use the above-mentioned tools in the beginning immediately after the sudden closure of educational institutions during the outbreak of the COVID-19 Pandemic, but they could get used to using the tools of educational technology. It is a good sign for the fraternity of both the teachers and students using technology in and out of the classroom. This article recommends the express purpose of optimizing the technology for English language learning in the future.

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PERCEPTION AND AWARENESS OF STUDENTS TOWARDS USAGE OF E-BOOKS DURING LOCKDOWN: A CASE STUDY OF BHUBANESWAR, ODISHA, INDIA

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ABSTRACT

In the era of digitalization, e-books play a decisive role for the students as well as for the faculty members. It is also helpful for any readers interested in studying books. Electronic books differ from traditional print books in terms of physical existence. This article aims at understanding the perception of students towards usage of e-books especially during the lockdown period that arises due to the outbreak of covid-19. Demographic and other relevant data have been collected through a structured e-questionnaire and the chi-square test has been applied for analysis. From the analysis, it is observed that most of the students prefer e-books for the completion of assignments/project work during the lockdown. They state that 24x7 accessibility is the topmost advantage of e-books and agrees that poor internet connectivity is the foremost cause of not choosing e-books.

KEYWORDS: E-books, Print Books, Students' perception, Digitalisation, Physical Existence.

INTRODUCTION

An electronic book (e-book) could be a digital publication that can comprise content, pictures or a combination of both. An electronic book can be studied on an exclusive computerized device (an e-reader) or on a computer, which needs a special program (Techopedia, 2011). eBooks are accessible in a few distinctive record designs. Some of the e-books are compatible with several electronic gadgets. Whereas, others are exclusively meant and seen on a particular gadget.

Commercially reachable supplies often include a few kinds of "Digital Rights Administration (DRM)" that evade the element from being seen on prohibited devices. For case, several e-books are accessible over "Amazon's Kindle Store" and "Apple's iBook store" are copy-protected using "DRM" safety (Techterms, 2013). In the late 1990s, the e-book business developed as a conventional business model. The "Peanut press companies" commenced marketing of e-book content on "Personal Digital Assistances (PDAs)". Later on, the "Sony corporation" provided an "e-reading device" in 2006 and the "Kindle" released by "Amazon.com" in 2007 (Attwell, 2019).

E-books are portable as a user can carry several books with his/her without making any effort. It may be retrieved from any place at anytime as per the convenience of the user. Users can change the size of the content of the e-book as per their requirements. E-books are very cost-effective as compared to printed books and easily downloadable within a minute.

LITERATURE REVIEW

The library of Southwest Baptist University (SBU) surveyed in 2006 for understanding the perceptions of students, faculties, and staff towards utilization of e-books and found that most of the informant preferred e-books for conducting research; some were using it as a textbook and others for relaxation purpose (Walton, 2007). Makwanya & Oni (2019) explored in their cross-sectional study that students preferred both "print books" and "e-books". In addition, they revealed that "e-books" are as great as "print books" due to their easy accessibility. Hence, e-books are used by students to meet their educational needs. Lim & Hew (2014) suggested that next-generation e-books are helpful for the promotion of student learning through expression and sharing capabilities. They also indicated the future direction in respect to the utilize of e-books. Majid et al., (2019) investigated the students' perception towards e-books and the design of their client behaviour and found that majority of the students' preference was for print books for their regular studies. However, in split response, they found that the maximum number of students utilize e-books for recreation studying and research purposes. Khalid et al., (2017) conducted a study on students of Sultan Qaboos University to reveal their perception of the usage of e-books and found that they did not prefer e-books over print books. They conclude that e-books are in the evolutionary stage and, students will go for only when they understand the



importance of it and, it could take some time. In a study, Oyaid & Alshaya (2019) used their e-book titled "Education Technology: Foundations and Applications" as the research device and appraises the "perceptions, feelings, and views of students" in Saudi University. They established the positive response of students towards using e-books and intention for future use.

A descriptive survey was planned to get data from understudies within the university library in the southwest of Nigeria by collecting data through the questionnaire method. From the finding of this survey, it is clear that e-books are getting popular among users of the University Library in Southwest for many purposes like finding materials, research study, etc (Ofua,2017). Similarly, textbook publishers and faculty members of graduate and undergraduate colleges use a survey to know students' preferences regarding paper textbooks and e-books by conducting questionnaire methods and demographic indicators. From the survey, they conclude that most of the students are using textbooks rather than e-books (McGowan,2009). In another study (Alkawaz et.al.,2020) on undergraduate students' access to "e-books" and "print books" based on their requirements. They revealed IT students preferred e-books as compared to others but the use is very limited only. Musawi & ElAdl, (2020) conducted a study to understand the students' attitude towards e-book by adopting a "descriptive correlational approach" using their "attitudes, academic motivation, and self-efficiency scales developed by the researchers". The findings of the survey show a positive degree of substantial relationship between students' attitudes and usage of e-books.

Research Gap

Several studies have been conducted to study the students' perception in respect of usage of e-books across the globe and in different parts of India but sufficient research has not been conducted in Odisha especially in Bhubaneswar. So, this research paper aims at studying the perception of students towards using e-books in the context of Bhubaneswar city, Odisha, India.

Statement of the Problem

Usually, students purchase printed books or borrow from the library for their academic study or leisure purposes. Sometimes, they access e-books available on the internet. However, in the lockdown situation, they can't use print books. Therefore, they prefer to use e-books for their study and other purposes. Hence, this paper aims at understanding their perception and preference for e-books in one of the educational hubs of Odisha i.e., Bhubaneswar.

OBJECTIVE OF THE STUDY

The primary objective of the study is to study the perception of students towards the usage of e-books. Accordingly, the following sub-objectives are laid down for achieving the primary aim:

- To observe the frequency of using e-books by students during the lockdown.
- To examine the purpose of using e-books by students during the lockdown.
- To identify the advantages and disadvantages of using e-books.

RESEARCH METHODOLOGY

This study is based on primary as well as secondary data. The convenience sampling technique is used for determining sample size and 124 numbers responses are collected through google forms from the students of Bhubaneswar during the 1st phase of lockdown arisen due to the outbreak of the coronavirus. For analysis, descriptive statistics and chi-square test is applied. The geographical scope of this study is limited to Bhubaneswar, Odisha, India.

DATA ANALYSIS

Table-1(Gender)				
Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	59	47.6	47.6	47.6
Female	65	52.4	52.4	100.0
Total	124	100.0	100.0	

From the above table it is clear that, out of the total respondents, male respondent is 59 i.e., 47.6% and female respondent is 65 i.e., 52.4%.



Table-2(Age)				
Age (in years)	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 18	9	7.3	7.3	7.3
19-25	49	39.5	39.5	46.8
26-35	44	35.5	35.5	82.3
36-45	22	17.7	17.7	100.0
Total	124	100.0	100.0	

The above table shows that, the age group of less than 18 years is 7.3%, 19-25 is 39.5%, 26-35 is 35.5%, and 36-45 is 17.7%. Here the highest respondent is from the age group of 19-25 years, and the lowest respondent from the age group of less than 18 years.

Table-3 (Discipline of Study)				
Discipline	Frequency	Percent	Valid Percent	Cumulative Percent
Humanities and Social Science	26	21.0	21.0	21.0
Management Science	31	25.0	25.0	46.0
General Science	31	25.0	25.0	71.0
Engineering	29	23.4	23.4	94.4
Others	7	5.6	5.6	100.0
Total	124	100.0	100.0	

The above table depicts that 21 % respondents from Humanities and Social Science, 25% from Management Science, 25% from General Science, 23.4% from Engineering and 5.6% from others. The maximum respondents are from Management Science and General Science and minimum from other discipline.

Table-4 (Present Course)				
Course	Frequency	Percent	Valid Percent	Cumulative Percent
Under Graduate	51	41.1	41.1	41.1
Graduate	52	41.9	41.9	83.1
Post Graduate	20	16.1	16.1	99.2
Doctorate	1	.8	.8	100.0
Total	124	100.0	100.0	

The above table displays that, out of the total respondents, 41.1% pursuing Under Graduate, 41.9% in their Graduation, 16.1% pursuing Post Graduate and 0.08% pursuing their doctoral degree. The respondents are studying graduation course and lowest respondent pursuing doctoral degree.

Table-5 (Frequency of Using E-books)				
Frequency	Frequency	Percent	Valid Percent	Cumulative Percent
Rarely	52	41.9	41.9	41.9
Occasionally	40	32.3	32.3	74.2
Frequently	26	21.0	21.0	95.2
Most Frequently	6	4.8	4.8	100.0
Total	124	100.0	100.0	

The above table shows that 41.9% respondents rarely use e-books, 32.3% respondents occasionally use e-books, 21% respondents frequently use e-books and 4.8% uses e-books most frequently for their purpose. Most of the respondents rarely use e-books and a negligible respondent use e-book most frequently.

**Table-6 (Purpose of e-Books)**

Purpose	Frequency	Percent	Valid Percent	Cumulative Percent
For completion of Research Work	24	19.4	19.4	19.4
For Revision of Course	30	24.2	24.2	43.5
For completion of Assignment Work	41	33.1	33.1	76.6
To update existing knowledge	29	23.4	23.4	100.0
Total	124	100.0	100.0	

The above table depicts that 19.4% respondents use e-books for completion of research work, 24.2% for revision of course, 33.1% for completion of assignment work and 23.4% to update existing knowledge. Here the highest numbers of respondents i.e., 33.1% use e-books for completion of assignment work and lowest number of respondents i.e., 19.4% for completion of research work.

Table-7 (Advantage of E-books)

Advantages	Frequency	Percent	Valid Percent	Cumulative Percent
Eco-friendly	27	21.8	21.8	21.8
Quick & Easy Access	32	25.8	25.8	47.6
24x7 availability	34	27.4	27.4	75.0
Cost Effective	31	25.0	25.0	100.0
Total	124	100.0	100.0	

From the above table it is clear that 21.8% say that the advantage of e-books is that it is eco-friendly, 25.8% opines that these are quick & easy to access, 27.4% prefer due to 24x7 availability and 25% for its cost effective. Most of the respondents prefer e-books for 24x7 availability and least respondents for eco-friendly.

Table-8 (Disadvantage of e-books)

Disadvantages	Frequency	Percent	Valid Percent	Cumulative Percent
Difficult to read	41	33.1	33.1	33.1
Poor internet connectivity	42	33.9	33.9	66.9
Requirement of PC/ Laptop	28	22.6	22.6	89.5
High Subscription charges	13	10.5	10.5	100.0
Total	124	100.0	100.0	

The above table shows that, 33.1% do not prefer e-books due to difficulty in reading, 33.9% say poor internet connectivity is one of the major disadvantages, 22.6% opines without PC/ Laptop e-books are not easy to study & 10.5% do not prefer due to high subscription charges.



TEST OF HYPOTHESIS

H₀₁-Gender and frequency of usage of e-books are independent of each other.

Table-9

Gender * frequencyofusinge-books Crosstabulation						
Count						
		Frequency of using e-books				Total
		Rarely	Occasionally	Frequently	Most Frequently	
Gender	Male	38	6	10	5	59
	Female	14	34	16	1	65
Total		52	40	26	6	124

Table-10(Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.519 ^a	3	.000
Likelihood Ratio	37.161	3	.000
Linear-by-Linear Association	5.092	1	.024
N of Valid Cases	124		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.85.

As *p* value is less than 0.05, so the null hypothesis (H₀₁) is rejected. Hence, gender and frequency of using e-books are dependent of each other.

H₀₂-Age and frequency of usage of e-books are independent of each other.

Table-11

Age * frequencyofusinge-books Crosstabulation						
Count						
		Frequencyofusinge-books				Total
		Rarely	Occasionally	Frequently	Most Frequently	
Age	Less than 18	8	1	0	0	9
	19-25	24	15	8	2	49
	26-35	15	15	13	1	44
	36-45	5	9	5	3	22
Total		52	40	26	6	124

Table-12(Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.316 ^a	9	.032
Likelihood Ratio	19.110	9	.024
Linear-by-Linear Association	11.298	1	.001
N of Valid Cases	124		

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .44.

As *p* value is greater than 0.05, so the null hypothesis (H₀₂) is not rejected. Hence, age and frequency of using e-books are independent of each other.



H₀₃-Discipline of study area and frequency of using e-books are independent of each other.

Table-13

Discipline of study area * frequency of using e-books Crosstabulation						
Count						
		Frequency of using e-books				Total
		Rarely	Occasionally	Frequently	Most Frequently	
Discipline of research area	Humanities and Social Science	13	7	6	0	26
	Management Science	12	10	8	1	31
	General Science	10	13	6	2	31
	Engineering	14	7	6	2	29
	Others	3	3	0	1	7
Total		52	40	26	6	124

Table-14 (Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.463 ^a	12	.748
Likelihood Ratio	10.687	12	.556
Linear-by-Linear Association	.206	1	.650
N of Valid Cases	124		

a. 8 cells (40.0%) have expected count less than 5. The minimum expected count is .34.

As *p* value is greater than 0.05, so the null hypothesis (H₀₃) is not rejected. Hence, discipline of study area and frequency of using e-books are independent of each other.

H₀₄- Qualification and frequency of using e-books are independent of each other.

Table-15

Qualification * frequency of using e-books Crosstabulation						
Count						
		Frequency of using e-books				Total
		Rarely	Occasionally	Frequently	Most Frequently	
Qualification	Under Graduate	23	20	7	1	51
	Graduate	21	14	14	3	52
	Post Graduate	8	6	5	1	20
	Doctorate	0	0	0	1	1
Total		52	40	26	6	124



Table-16(Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.369 ^a	9	.004
Likelihood Ratio	11.083	9	.270
Linear-by-Linear Association	3.383	1	.066
N of Valid Cases	124		

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .05.

As p value is less than 0.05, so the null hypothesis (H_{04}) is rejected. Hence, qualification and frequency of using e-books are dependent of each other.

H_{05} -Age and purpose of usage of e-books are independent of each other.

Table-17

Age * purposeofusageofe-books Crosstabulation						
Count		Purposeofusageofe-books				Total
		For completion of Research Work	For Revision of Course	For completion of Assignment Work	To update existing knowledge	
Age	Less than 18	8	0	1	0	9
	19-25	4	23	16	6	49
	26-35	9	5	24	6	44
	36-45	3	2	0	17	22
Total		24	30	41	29	124

Table-18(Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	92.314 ^a	9	.000
Likelihood Ratio	83.236	9	.000
Linear-by-Linear Association	23.253	1	.000
N of Valid Cases	124		

a. 5 cells (31.2%) have expected count less than 5. The minimum expected count is 1.74.

As p value is less than 0.05, so the null hypothesis (H_{05}) is rejected. Hence, age and purpose of using e-books are dependent of each other.

H_{06} -Discipline of study and purpose of usage of e-books are independent of each other.

Table-19

Disciplineofstudy area * purposeofusageofe-books Crosstabulation						
Count		Purposeof usageofe-books				Total
		For completion of Research Work	For Revision of Course	For completion of Assignment Work	To update existing knowledge	
Disciplineofstudy area	Humanities and Social Science	4	8	7	7	26
	Management Science	5	11	9	6	31
	General Science	13	4	8	6	31



	Engineering	2	5	13	9	29
	Others	0	2	4	1	7
Total		24	30	41	29	124

Table-20(Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.519 ^a	12	.043
Likelihood Ratio	21.480	12	.044
Linear-by-Linear Association	1.169	1	.280
N of Valid Cases	124		

a. 4 cells (20.0%) have expected count less than 5. The minimum expected count is 1.35.

As *p* value is less than 0.05, so the null hypothesis (H_{06}) is rejected. Hence, discipline of study area and purpose of usage of e-books are dependent of each other.

H_{07} -Qualification and purpose of usage of e-books are independent of each other.

Table-21

Qualification * purposeofusageofe- books Crosstabulation						
Count		Purposeofusageofe-books				Total
		For completion of Research Work	For Revision of Course	For completion of Assignment Work	To update existing knowledge	
Qualification	Under Graduate	3	11	26	11	51
	Graduate	16	11	12	13	52
	Post Graduate	5	8	3	4	20
	Doctorate	0	0	0	1	1
Total		24	30	41	29	124

Table-22(Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.019 ^a	9	.006
Likelihood Ratio	23.561	9	.005
Linear-by-Linear Association	4.052	1	.044
N of Valid Cases	124		

a. 7 cells (43.8%) have expected count less than 5. The minimum expected count is .19.

As *p* value is less than 0.05, so the null hypothesis (H_{07}) is rejected. Hence, qualification and purpose of usage of e- books are dependent of each other.

RESULTS & FINDINGS

The result and findings of this study are as below:

- The majority of the respondents are female in terms of gender.
- If we consider age, the highest number of respondents are from the age group of 19-25 years.
- The highest numbers of respondents in terms of the discipline of study are jointly from management science and general science.
- In terms of educational qualification (present course), the highest respondents are pursuing graduation and 2nd highest is under-graduate course.
- Maximum numbers of students agreed that they use e-books rarely whereas, only 4.8% of respondents agreed that they use e-books most frequently.



- The majority of the students use e-books for the completion of assignment work during the lockdown.
- The majority of the respondents prefer e-books as these are available 24X7 over the internet.
- The main reason for not opting for e-books is poor internet connectivity as mentioned by the respondents.

CONCLUSION

It is found that most of the respondents use e-books for their assignment work during this period. Some respondents state that e-books have a unique features like availability over the internet around the clock. However, they also face problems like poor internet connectivity, and subscription charges while accessing e-books. From the discussion and testing the hypothesis, it is concluded that gender and frequency of using e-books are dependent on each other. Whereas, age and frequency of using e-books are independent of each other. Similarly, the discipline of the study area and frequency of using e-books are independent of each other. On the other hand, the qualification and frequency of using e-books are dependent on each other. Likewise, the age and purpose of using e-books are dependent on each other. Also, the discipline of study area and purpose of usage of e-books are dependent on each other. Again, the qualification and purpose of usage of e-books are dependent on each other. Overall, we can conclude that, in the modern era, e-books play a crucial role especially during the lockdown time when all the educational institutions were closed.

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FEATURES OF THE COURSE AND PROGNOSIS OF GLOMERULONEPHRITIS WITH NEPHROTIC SYNDROME IN CHILDREN

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ANNOTATION

In the development of chronic renal failure in children, the proportion of glomerulonephritis is still significant. Identification of chronic kidney pathology at the initial stage is important to improve the effectiveness of preventive and therapeutic measures aimed at slowing down the progression of the disease. We examined 76 patients with acute glomerulonephritis with nephrotic syndrome aged 2 to 5 years, including 31 boys and 45 girls. The development of the forecast algorithm was carried out by the method of sequential Wald analysis. A score of 10 was used as a threshold to conclude on the prognosis. The peculiarity of the course of glomerulonephritis in children was that the disease develops against the background of hereditary predisposition.

KEY WORDS: *glomerulonephritis, nephrotic syndrome, patients, course, prognosis.*

INTRODUCTION

Glomerulonephritis is one of the main causes of chronic renal failure (CRF). The prevalence of the disease is growing in many countries of the world, and therefore it becomes extremely necessary to study the clinical course and prognosis of renal diseases [1,2,7,14].

In modern nephrology, age-related features of glomerular diseases are considered in two directions: differences between children and adults are studied, as well as features in children and adults depending on their age at the onset of the disease [6,7,9,12,15].

According to epidemiological studies, the structure of glomerular diseases may change. The development of nephrotic syndrome is associated with an increase in the permeability of the glomerular filtration barrier for macromolecules. It is known that glomerular diseases can lead to a decrease in renal function. For a long time, impaired renal function can occur latently. Identification of chronic renal failure (CRF) in the initial stage is important to improve the effectiveness of preventive and therapeutic measures aimed at slowing down the progression of the disease [3,8,11,16]. Consequently, predicting the outcomes of glomerulonephritis in early childhood continues to be an urgent medical and social problem [5,10,13].

PURPOSE OF THE STUDY

Determination of the diagnostic significance of clinical and laboratory parameters in predicting glomerulonephritis with nephrotic syndrome in children.

MATERIAL AND RESEARCH METHODS

Patients with acute glomerulonephritis (76) with nephrotic syndrome aged 2 to 5 years were examined, including 30 boys and 44 girls. The patients were divided into 2 groups. The first group consisted of 35 patients who had no recurrence of the disease for two or more years, the second group included 39 patients who did not achieve



complete remission and developed a chronic form of the disease (CHN). The development of the forecast algorithm was carried out by the method of sequential Wald analysis [4]. A score of 10 was used as a threshold to conclude on the prognosis.

The conclusion about the high probability of the transition of the disease to chronic glomerulonephritis was determined if the patient had more than 10 points. The development of the Wald sequential analysis algorithm was carried out by determining the frequency of symptoms in each group as a percentage. The evidence of statistical reliability of the difference in the frequency of symptoms is determined by the formula: $t = \frac{P1 - P2}{\sqrt{M221 - M22}}$. The proof of the independence of signs of detection of prognostic symptoms was the determination of the correlation coefficient for qualitative signs, which is calculated by the formula:

$H = \frac{ad - bc}{(a+c)(c+d)(a+b)(b+d)}$, where the letters indicate the signs. Correlation coefficient for quantitative traits, where “x” and “y” are average correlated traits. $T_x - T_y$ standard deviation: $H = \frac{(x-x) \times (y-y)}{n(T_x - T_y)}$. The determination of the relative probability and the calculation of the prognostic coefficient were carried out according to the formula: $PC = 10 \lg P1/P2$.

Indicators of unfavorable prognosis with a positive sign, because in the numerator, the frequency of symptoms characteristic of the group with developed CGN, and in the denominator, symptoms characteristic of the group with acute glomerulonephritis with long-term clinical and laboratory remission. Taking into account the hypothesis with a normal distribution, the information measure was calculated using the Kullback formula [2]. According to the degree of information content, the following signs were selected, listed in the table, where PC is a prognostic coefficient, J (xi) is information content.

RESEARCH RESULTS

A comparative assessment of hereditary burden revealed that a prognostically unfavorable sign of chronicity was the presence of kidney diseases in relatives in the pedigree, the prognostic coefficient (PC) was 9.9 and significantly informative +1.65. From the anamnestic data, there were frequent sore throats (PC = 15.3) with the highest information content among all other signs (6.12), food and drug allergies, parasitic infestations, PC = 5.2 and 6 with an information value of 1.35 and 6, respectively. 1.02. Thus, if the total score exceeds the threshold unit “10”, the patient has an unfavorable prognosis and belongs to the high-risk group requiring appropriate therapy.

Of the laboratory studies, the most unfavorable prognostic indicator was partial renal dysfunction: hypo- and hyperkalemia, proteinuria more than 3 g/l per day. According to the coagulogram, there was plasma tolerance to heparin (7.6). According to the analysis of excretory urography, unfavorable factors of chronicity were an increase in the size of the kidneys (PC = 17), information content 1.76, an increase in the nephrographic effect (PC = 12) with information content 1.24.

In the genesis of damage to renal structures in acute glomerulonephritis, a high information content of malondialdehyde was established with its increase from 6.8-8.4 nmol/mg/lipids in the cell membrane. Despite a slight difference in the indices of phosphatidylcholine, phosphatidylethanolamine, lysophosphatidylcholine in erythrocyte membranes in acute and chronic glomerulonephritis, compared with the indices in the control group, their information content is high - 96, 88, 21, respectively.

The study of thyroid function in patients with acute glomerulonephritis with long-term remission: the level of thyroxine-bound globulin - 0.52 ± 0.086 nmol / l, triiodothyronine 1.32 ± 0.15 nmol / l, thyroxine - 99.96 ± 7.13 nmol / l, no significant difference was found in patients with AGN and CGN. However, if we take into account that the sum of prognostic coefficients is reliable at a value of 19.5, then a significant difference between patients of both groups is revealed.

The next stage of the study was the analysis of information content, which reflects the degree of approximation of the diagnosis to the correct diagnostic threshold. An informative measure of more than 3 was recognized as highly



informative, but not less than 1, because 3 - 4 such signs are sufficient to reach the +10 threshold, i.e. providing no more than 10% errors. Such signs, for example, were a decrease in alpha - globulin, an increase in gamma - globulin, hyperlipidemia, an increase in cholesterol. Signs such as hypercoagulability, a decrease in endogenous creatinine against the background of a hereditary burden of kidney pathology, an increase in malondialdehyde and lysophosphatidylcholine, a decrease in phosphatidylethanolamine and phosphatidylcholine were prognostically unfavorable indicators. These indicators characterize the high activity of lipid peroxidation, leading to destabilization of cytomembranes and the formation of a prognostically unfavorable course of nephrotic syndrome in patients with glomerulonephritis.

Table
Prognostic coefficients and informative value in patients with acute glomerulonephritis

№	These parameters	Predictive coefficient	Informativeness
1.	Burdened by pedigree pathology of the kidneys	9,9	1,65
2.	Frequent sore throats	15,3	6,12
3.	Food and drug allergies	5,2	1,35
4.	parasitic invasion	6,0	1,02
5.	Stigmas of dysembryogenesis: epicanthus, broad bridge of the nose	6,4	2,22
6.	flat feet	5,8	1,36
7.	hyperpigmentation	4,4	1,2
8.	Hypertrichosis	6,9	1,87
9.	Malocclusion	6,0	1,8
10.	Swelling for more than 14 days	6,0	2,2
11.	Narrowing of the arteries of the fundus	1,25	9,7
12.	Hepatomegaly	10,7	4,06
13.	Tachycardia	6,0	2,05
14.	T-wave depression	6,0	2,05
15.	Proteinuria more than 3 g/l	6,0	2,3
16.	Partial impairment of kidney function	7,5	1,97
17.	Hypokalemia less than 3.7 mmol/l	19,5	2,01
18.	kidney enlargement	17,0	1,76
19.	Strengthening the nephrographic effect	12	1,24
20.	Increased plasma tolerance to heparin	7,5	1,97
21.	Hypergammaglobulinemia, stable	2,81	2,37
22.	Treatment with chlorbutin	4,1	0,75

CONCLUSION

1. In the development of chronic renal failure in children, the proportion of glomerulonephritis is still significant.
2. The peculiarity of the course of glomerulonephritis in children is that the disease develops against the background of hereditary predisposition.
3. The chronicity of the disease is due to the instability of cytomembranes against the background of increased activity of lipid peroxidation.
4. In connection with the established facts, timely diagnosis of factors leading to chronicity is necessary, as well as prevention of the formation of cytomembrane instability with immunological control of the treatment.

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ISSUES OF TEACHING LINGUO-CULTURAL COMPETENCE AS A FUNDAMENTAL FORMATION AND DEVELOPMENT OF FOREIGN LANGUAGE KNOWLEDGE AND SKILLS

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ANNOTATION

This article discusses the issues of teaching linguoculturological competence in English lessons in non-linguistic universities.

KEY WORDS: *pedagogical experience, language culture, competence, spiritual outlook, knowledge of a foreign language.*

ВОПРОСЫ ОБУЧЕНИЯ ЛИНГВОКУЛЬТУРНОЙ КОМПЕТЕНЦИИ КАК ФУНДАМЕНТАЛЬНОГО ФОРМИРОВАНИЯ И РАЗВИТИЯ ИНОЯЗЫЧНЫХ ЗНАНИЙ И НАВЫКОВ

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Аннотация

В данной статье рассматриваются вопросы, обучения лингвокультурологической компетенции на уроках английского языка в неязыковых вузах.

Ключевые слова: *педагогический опыт, языковая культура, компетентность, духовное мировоззрение, владение иностранным языком.*

The modern pedagogical experience of a foreign language teacher in education includes a large number of methods and principles; in this process, the language learner is required to acquire knowledge and skills. In this case, the teacher, along with teaching the student's language, carries out such aspects as his upbringing, following aesthetic principles, and instilling spiritual feelings in students.

Teaching foreign languages in the educational process may be faced with factors such as rapid language acquisition or, conversely, the inability to acquire language skills. These factors include the language environment, that is, situations related to communication and work. It is enough to have knowledge about the volume of the studied language base for dynamic language communication. Situations such as motivation - the need and interest in learning a language, have a positive effect on the individual.



Each language learner accepts the proposed learning materials based on their abilities: someone perceives it easily, someone finds it difficult to learn the language, in the second case, students feel that learning the language is difficult, as if they cannot master it or do it on their own. errors. . Therefore, the teacher must work with such students separately and individually; to solve such problems, the teacher must be able to choose and present educational materials correctly.

Our students studying foreign philology must master not only the ability to translate from one language to another, but also the culture, education, history, customs, economy of the country of the language being studied, its place in the world. mental activity of language learners. In addition to the skills of oral and written speech in a foreign language, students must also develop cultural studies, i.e. language and cultural competence.

Linguistics as a science is the history of mankind and its ideas about the world, life, culture, education, national values. studies science. Linguistics studies the state of the language, questions of its principles, which are formed from its mental model. This is one of the foundations of linguistic culture.

The well-known linguist V. A. Maslova emphasizes the harmony of language and culture. [1.8] He interprets linguistic culture as a science that studies the formation of the principles of delimitation of language and culture [2.27]. The text is the minimum unit of linguistic culture.

Russian linguist and public figure V. V. Vorobyov for the first time recognized the concept of "linguistic culture" as a science. At the same time, the scientist introduces the term "linguoculturological competence" and proposes to study specific aspects of cultural values directly related to the language [2].

In the methodological dictionaries of scientists E.G. Azimov and A.N. Shchukin, special attention is paid to the concept of competence. N. Homensky divides the function of competence into a) understanding of the language, b) the ability to think. It is important to note that competence in learning a foreign language has a certain level of the nature of language communication and is divided into three interrelated language competencies. Competencies in modern fiction include socio-cultural, discursive, strategic competencies, in addition, we are also talking about professional, scientific and other competencies. [3,107].

The competence dictionary also gives several aspects of competence and they are divided into the following: linguistic, linguistic, lexical, etc. Such a dictionary includes language competence, which is based on all the following syllables of a language unit with the ability to communicate: phoneme, morpheme, lexeme, syntax . If a person has knowledge about the system of the foreign language being studied and can apply it in his experience, then such a person can be competent.

In the dictionary, the ability of students to know the correct forms of grammatical structures, their syntactic structure, feel the norms of the language and be able to use them in communication means language competence. [3,362].

The process of forming the studied language competence includes the complete assimilation of information from the base of educational materials of students studying in the direction of philology.

It is no secret, it will not be an exaggeration to say that language and culture is one of the promising sciences, because it is formed in the human mind. develops, and moreover, serves to further improve the society in which he lives in the future. [4,5].

Linguistics and culture are studied from a philosophical point of view in the studies of Western scientists in linguistics. that is, they approach language and culture from the point of view of a cognitive position [6,8].

The process of development of linguoculturological competence takes place in a cultural-monolingual environment and goes beyond learning. This understanding of language culture includes holidays, historical dates, cultural events of the country of the language being studied, all such events ensure the acceptance of the mentality of the people.



In addition, linguoculturological competence is determined by communicative, i.e. competence that studies the environment of communication, topics of discussion, participants in communication. [7,22]. Thus, linguistic competence includes knowledge, erudition, understanding of culture, the ability to use the language, as well as skills and competencies.

When studying a language, it would be appropriate to pay special attention to its stylistic issues, which are part of the language. Stylistics teaches the features of the means of expression used in the language, that is, the functional styles and lexical units in the language that are associated with expressive emotion.

Accordingly, understanding the style of the text and its expressive content is very important in translation. Because the stylistics of the language and the stylistics of the text are events of national content. In literary translation, it is necessary to understand the text not only in grammatical or lexical aspects, but also stylistically. In this regard, when the linguistic features of linguistic culture are equalized, not only stylistic means are reshaped, but also the meaning of stylistic means. When transmitting the text stylistically by other language means, it is necessary to reformulate the effect from the point of view of linguistic culture.

Thus, in the development of linguoculturological competence of students in the field of philology, all the norms of speech activity, the studied linguistic thinking are of full importance.

Linguistic competence requires the ability to correctly select materials and texts. In a sense, this not only expands the possibilities for obtaining information, but at the same time gives the teacher ample opportunities to apply this knowledge in practice. This increases the interest of students in learning a foreign language.

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THE PROBLEM OF INDEPENDENT WORK OF STUDENTS OF A NON-LINGUISTIC UNIVERSITY IN THE PROCESS OF STUDYING THE DISCIPLINE "ENGLISH"

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ANNOTATION

The article deals with the problem of organizing independent work of first-year students of a non-linguistic university in the process of studying the discipline "English language". The paper defines the leading goal of the implementation of independent work of students and characterizes the student's portfolio as an innovative tool, a means of fixing, accumulating and evaluating individual achievements.

Self-study, self-education, student portfolio, continuing education, vocational training, indie educational trajectory - all this has a huge impact on student success.

KEYWORDS: *English language, innovative technology, learning goal, methodological materials, process efficiency.*

ПРОБЛЕМА САМОСТОЯТЕЛЬНОЙ РАБОТЫ СТУДЕНТОВ НЕЯЗЫКОВОГО ВУЗА В ПРОЦЕССЕ ИЗУЧЕНИЯ ДИСЦИПЛИНЫ "АНГЛИЙСКИЙ ЯЗЫК"

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Аннотация

В статье рассматривается проблема организации самостоятельной работы студентов первого курса неязыкового вуза в процессе изучения дисциплины "Английский язык". В работе определяется ведущая цель осуществления самостоятельной работы студентов и дается характеристика портфолио студента как инновационному инструменту, средству фиксации, накопления и оценки индивидуальных достижений.

Самостоятельная работа, самообразование, портфолио студента, непрерывное образование, профессиональная подготовка, индивидуальная образовательная траектория - все это оказывает огромное влияние на успешную учебу студента.

Ключевые слова: *английский язык, инновационная технология, цель обучение, методические материалы, эффективность процесса.*



Many studies have been devoted to the problem of independent work, but it has not lost its relevance in pedagogical theory and practice. The increased interest in this problem in the process of developing innovative technologies is due to both the intensive expansion of the information flow and the reduction of classroom academic time at the university in the process of studying the discipline "English language" by students in the first year of the educational level of the bachelor's degree. When studying this discipline, special attention in the process of organizing independent work should be paid to consideration of such issues as the types of independent work, the means of organizing them (a personal notebook for independent work), the formation of content, methods of activation and forms of effective organization of planning and control of independent work of students.

The organization of independent work is an integral part of the educational and methodological complex of the discipline.

The independent work of students is understood as a variety of types of individual and collective activities of students, carried out under the guidance, but without the direct participation of the teacher in the classroom or extracurricular time specially allotted for this. In this regard, the training of university students includes two parts that are almost identical in volume and mutual influence: the learning process and the self-learning process.

The leading goal of organizing and implementing independent work of students should coincide with the goal of training: the preparation of a competent, competitive bachelor and future specialist with a higher education.

The purpose of organizing independent work of students of a non-linguistic university in the process of studying the discipline "English language" at the educational level of the bachelor's degree (I course) is the formation, development and improvement of the level of foreign language professional communicative competence of students determined by the program documents, which involves the development of key and basic competencies in the direction of the profile specialty, as well as creative, research activities of students by means of a foreign language, the implementation of professionally oriented communication with specialists at the international level. Independent work of students should contribute to the development of independence, responsibility and organization, a creative approach to solving professionally oriented problems.

Formation of the content of independent work includes:

- Determination and justification of the required minimum of sections, those questions, tasks included in the classroom and extracurricular independent work of students;
- Determination of the content and volume of theoretical educational information and practical tasks on each topic, which are related to independent work;
- Selection and proposal of methods and forms of students' independent work in accordance with modern teaching technologies;
- Determination of forms and methods of control over the fulfillment of independent tasks by students;
- development of criteria for evaluating the results of extracurricular independent work, taking into account the requirements for the level of training of students, determined by the State Educational Standard of Higher Professional Education of Uzbekistan.

The organizational role in the independent educational work of students belongs to the teacher. The teacher forms the content, plans, organizes, manages, controls the independent work of students. Based on the specifics of a particular group, the teacher determines the goal, the content of students' independent work, in accordance with the curriculum, sets the topic, labor intensity, formulates tasks for independent work, determines the forms of student self-control and control by the teacher, prepares methodological materials for independent work.

Methodological materials on the organization of independent work of students are part of the educational and methodological complex and contain the target setting and motivational characteristics of the topics studied, lists of



basic and additional literature for studying all topics of the discipline, theoretical questions and questions for self-training, having learned which the student can perform the types of activities offered in practical sessions.

Mandatory sections of the guidelines are:

- Plan for the implementation of independent work on the discipline;
- Characteristics of tasks for independent work;
- Approximate norms of time to perform extracurricular independent work for each task;
- recommended literature (basic and additional);
- Requirements for the presentation and presentation of the results of independent work;
- Forms of control.

An increase in the level of motivation of first-year students of the educational level of a bachelor's degree in the process of independent work is facilitated by tasks that activate the study of professionally oriented problems, especially in the direction of the profile specialty of faculties.

Management of independent work of students, as part of the educational and methodological complex, includes:

- presenting students with assignments for independent work;
- holding consultations (at the expense of the general budget of time allotted for classroom work of the teacher)

on the organization of independent work, the implementation of specific tasks in the discipline, the criteria for assessing the quality of independent work performed; by goals, means, labor intensity, deadlines, forms of control of students' independent work;

- Control of independent work of students.

Self-preparation of students using additional sources of information allows you to express your opinion in a foreign language based on background knowledge and characterizing:

- General competence of the student (empirical and academic knowledge),
- Existential competence (personal characteristics and attitudes)
- Professional (special) competence of a future graduate of a technical university.

To control the independent work of students, various forms, methods and technologies of control can be used.

Forms: testing, presentations, case studies, defense of creative works, tests, etc.;

Control methods: tests, practical work, interviews, seminars, exams;

Control technologies: situational, rating assessment, self-assessment, individual notebook, etc.

The idea of a portfolio or a folder of individual educational achievements of students is becoming more and more popular in our country. The portfolio is considered as a way of fixing, accumulating and evaluating the individual achievements of students.

More and more universities are using the electronic form of portfolio in their practice. What is spreading now is mainly the borrowing of foreign experience, an attempt to develop forms of work with a portfolio of individual academic achievements of students, their individual educational trajectories in the conditions of a domestic higher school, based on foreign, mainly American experience.

The main types that require the organization of independent work of students include the following:

- Work with a text source of information;
- Exercises;
- Implementation of practical work;
- Verification independent, control work, tests, dictations, essays;
- Preparation of reports, abstracts;
- Performance of creative works, projects, preparation for conferences, role-playing games, presentations.

Educational and teaching materials developed taking into account the specifics of students' independent work must meet the following requirements:



- contain recommendations on the timing, volume and quality of learning the material, indicating the educational and scientific publications used for these purposes;
- include questions for self-control, verification tests, control tasks, as well as examples of the design of independent written work, tests;
- should be designed in such a way that the main points of the text (ideas, concepts) are highlighted.

Analysis of the research results of scientists (V.A. Belikov, A.K. Gromtseva, Yu.N. Kulyutkin, G.S. Sukhobskaya, A.S. Usova, T.I. Shamova) makes it possible to structure the content of self-educational activity, highlighting the following components:

- motivational, which is conditioned by the needs of the individual, and includes needs, interests, motives, i.e. everything that ensures the purposeful inclusion of students in the process of self-education and supports cognitive activity;
- orientational, which characterizes the depth of the student's perception of the goal of independent work, his ability to plan and predict this activity;
- Content-operational, including the system of the student's leading knowledge in a particular area and the skills of self-educational activity (tools for obtaining and processing information, applying knowledge in practice);
- Value-volitional, including will, emotional upsurge, self-commitment, self-affirmation;
- Evaluative, the essence of which is the systematic receipt of feedback on the course of self-education based on a comparison of the achieved results with the predicted ones. This component includes self-control, self-analysis and self-assessment.

The effectiveness of independent work of students is provided by pedagogical conditions that intensify the mechanism of self-education and self-actualization of the individual:

- Formation of positive motivation of students for independent work;
- Orientation towards self-acceptance as an organizer and subject of self-educational activity;
- Orientation of students to creative reflection of independent work.

The development of a complex of methodological support for the educational process is the most important condition for the effectiveness of students' independent work. Such a complex should include blocks of thematic sections, educational and methodological manuals, workshops, task banks, tests, computer training and control programs for self-control, discipline information bases, etc. This will allow organizing problem-based learning in which the student is an equal participant in the educational process

The effectiveness of students' independent work is largely determined by the definition of active methods of its control. There are the following types of control:

- input control of the level of formation of students' competencies;
- Current control, that is, regular monitoring of the level of assimilation of the material at lectures, practical and laboratory classes;
- Intermediate control at the end of the study of a section or module of the course;
- Self-control carried out by a student in the process of studying the discipline in preparation for control measures;
- Final control in the discipline in the form of a test or exam;
- Control of residual knowledge and skills after a certain time after the completion of the study of the discipline.

The effectiveness of the process of teaching English at the educational level of the bachelor's degree will increase significantly if the independent learning activity of students is a dynamically functioning integral system.

The system of organization of independent activity of students in the discipline "English for Special Purposes" should be based on pedagogical and psychological patterns, determined by the content, methods, organization of



training, taking into account the age-related psychological characteristics of students in the structure of the educational and methodological complex disciplines.

Thus, the organization of independent work of students is a set of techniques carried out at the stages of purposefulness, motivation, determining the content, nature, degree of difficulty of educational tasks, methods of action, control and self-control, i.e. a certain structure with its technology, organization and management. Further development of methods for organizing independent activity is one of the main conditions for actualizing potential opportunities and self-realization of individual educational trajectories of each student.

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DEVELOPMENT OF WRITTEN SPEECH AS A NECESSARY CONDITION OF WORK ON THE SPEECH ACTIVITY OF STUDENTS OF A NON-LINGUISTIC UNIVERSITY

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ANNOTATION

This article discusses issues related to the development of Russian written speech of students of a non-linguistic university.

KEY WORDS: *Russian language, speech, language norm, exercise, text fragment.*

РАЗВИТИЕ ПИСЬМЕННОЙ РЕЧИ КАК НЕОБХОДИМОЕ УСЛОВИЕ РАБОТЫ НАД РЕЧЕВОЙ ДЕЯТЕЛЬНОСТЬЮ СТУДЕНТОВ НЕЯЗЫКОВОГО ВУЗА

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Аннотация

В данной статье рассматриваются вопросы, связанные с развитием русской письменной речи студентов неязыкового вуза.

Ключевые слова: *русский язык, речь, языковая норма, упражнение, фрагмент текста.*

Повышение речевой культуры обучаемых русскому языку – одна из актуальных задач, стоящих перед современной школой и вузом Узбекистана. Особое значение имеет работа над правильностью речи, ее соответствием языковым нормам. Занятие по развитию речи – это многосторонняя работа по языку, направленная на то, чтобы обучаемые овладели не только грамматической теорией и орфографическими навыками, но и умением правильно произносить слова, выбирать нужные слова и правильно употреблять их в речи, строить словосочетания, предложения и связную речь.

В целом развитие речи – это и есть работа над речевой культурой обучаемых в устной и письменной форме. Хотя устная и письменная форма коммуникации обладают своей спецификой и различаются по многим параметрам, решающее значение для их взаимодействия имеет не различие, а совпадение плана содержания и плана выражения. Членение речи на слова и предложения, осуществление правильных связей



между предложениями в частях сложного целого, между отдельными компонентами этого целого необходимое условие правильного построения речи в соответствии с нормами современного литературного языка и логики.

При обучении письменной речи необходимо учитывать различие между формами речи, разнообразие жанров, с которыми обучаемым приходится иметь дело при смысловом анализе предложения, при составлении пересказов. Все это надо давать во взаимосвязи и последовательности.

Упражнения по развитию речи должны быть многокомпонентными. Строя занятия по связной речи, мы должны научить обучаемых умению самостоятельно строить план и по плану развертывать содержание или тему, заданную им преподавателем, для каждой мысли выбрать подходящую лексику и синтаксическую структуру, которые наилучшим образом выражали бы представления и суждения начинающих авторов.

По-нашему мнению, умение писать развивается на основе системы упражнения, которые отвечают следующей основной линии: от репродукции письма к его более или менее свободным перифразами и, наконец, к продукции. То есть, самостоятельной речевой деятельности. Путь от рецензии к репродукции и продукции при обучении письменной речи на базе текста можно видеть в следующих этапах: понимание – смысловой анализ текста, восстановление основного информативного содержания текста, целевая трансформация информативного характера материала текста.

В методике преподавания русского языка существует довольно большое разнообразие письменных работ. В данной статье мы предлагаем развитие навыков и умений, обучаемых в области смыслового анализа читаемого материала, заключающегося в выявлении степени и глубины информативного содержания текстов и некоторых особенностей его оформления. Анализ текста в упражнениях проводится последовательно на разных контекстуальных уровнях. Обучаемые, выполняя задания, оперируют такими единицами связной речи, как предложение, абзац, фрагмент текста.

Смысловой анализ текста проводится по следующим этапам:

I. Выделение информативного центра предложения, абзаца, фрагмента текста. Здесь можно предложить следующие задания:

а) В данном тексте проанализируйте выделенные нормативные центры в предложениях. Обратите внимание на то, что в письменной речи расположение информативного центра в конце предложения является типичным, но возможны и другие варианты.

Московский университет основан по инициативе великого русского ученого М.В.Ломоносова в 1755 году. Он всегда являлся центром русской науки и просвещения. В университете учились знаменитые русские писатели и поэты, передовые общественные деятели. В нем работали выдающиеся русские ученые.

б) Прочитайте текст. Проанализируйте выделение информативного центра в абзацах, отвечая на вопрос: О чем говорится в абзаце. Обратите внимание на то, что главную мысль абзаца выражает первое предложение. Расположение информативного центра в начале абзаца является типичным. Другие предложения абзаца расширяют и углубляют его основную мысль. А также обосновывают основные положения абзаца (доказательства) или иллюстрируют их (примеры, цифровые данные) некоторые предложения абзаца служат для логического оформления текста.

Государственная Третьяковская галерея – это бесценные собрания национального изобразительного искусства. В ней собрана коллекция русской иконописи, живописи, графики и скульптуры с XI века до наших дней.

Галерея называется Третьяковской потому, ее возникновение связано с именем Павла Михайловича Третьякова (1832-1898), выдающегося деятеля русской культуры второй половины XIX века. Купец по



происхождению, крупный фабрикант, владеющий текстильными мануфактурами, П.М. Третьяков принадлежит к прогрессивным слоям купеческой интеллигенции.

в) Прочитайте текст. Разделите его на абзацы. Составьте вопросы к каждому абзацу текста. Запишите их.

г) Прочитайте текст. Составьте план в форме вопросов. Запишите его. Дайте контекстуальные ответы на вопросы; опираясь на текст. Запишите их.

д) Прочитайте текст. Проанализируйте цепную связь суждений в речи посредством логического повтора. Проследите, как одно суждение вытекает из другого. Дополняет. Развивает его. Давая начало третьему.

У каждого города свои традиции. И среди традиций одна, как правило, бывает главной. Так или иначе, она пронизывает все прочие традиции своим духом. Для Петербурга такой традицией является традиция революции. Городу было всего 100 лет, когда на его Сенатскую площадь вышли декабристы.

II. Анализ соотношения информации вопроса и ответа в тексте и формулировка вопросов:

ж) Прочитайте предложения и вопросы к нему. Обратите внимание на формулировку вопросов. *Н.В.Жуковский великий русский ученый в области механики, основоположник аэродинамики – кто такой Н.В. Жуковский? В.И.Мухина – выдающийся скульптор. – Кто такая В.И.Мухина? передвижники – прогрессивные русские художники, члены «Товарищества по организации передвижных выставок». – Кто такие передвижники?*

III. Вычленение основной проблематики текстов, оформление его в вопросительной и повествовательной форме; понимание логики последовательности подачи информации. Оформление плана.

а) 1.Прочитайте текст. Составьте план в форме вопросов. Запишите их.

2.Дайте текстуальные ответы на вопросы. Запишите их.

б) Составьте варианты плана.

1.Кем является А.Н.Калмогоров?	А.Н.Калмогоров является одним из крупнейших математиков современности.
2.С каким ученым заведением связана деятельность А.Н.Калмогорова?	Вся деятельность А.Н.Калмогорова связана с Московским университетом.
3.Какова научно – педагогическая деятельность А.Н.Калмогорова?	А.Н.Калмогоров является создателем научной школы.
4. С чем совмещает свою научно-педагогическую деятельность академик А.Н.Калмогоров?	Академик А.Н.Калмогоров совмещает свою научно-педагогическую деятельность с большой организационной деятельностью.

IV. Анализ и продолжение вопросно-ответного текстуального единства в пределах текста и при сравнении вопроса и текста.

а) Прочитайте отрывок из интервью летчика – космонавта. Проанализируйте соотношение вопроса и ответа.

Вопрос: *Как долго вы знали академика С.П.Королева? Какие черты характера, присущие этому выдающемуся человеку, особенно запомнились вам?*



Ответ: Я знал Сергея Павловича более 15 лет. Самая характерная черта его характера – громадная энергия. Этой энергией он умел заражать окружающих. Он был человек очень решительный, часто довольно суровый. В то же время были в нем мальчишества. Он легко мог увлечься какой – нибудь игрой.

Вопрос: Почему С.П.Королева называют основоположником теоретической космонавтики?

Ответ: По месту, который С.П.Королев занимает в истории, он равен к Э. Циолковскому – основателю теории космического полета. Циолковский дал первые формулы расчета, показал путь в космос. С.П.Королев был участником всех разработок практической космонавтики – это ракеты, двигатели, приборы, наземные пусковые устройства.

а) Прочитайте текст. Составьте план в форме вопросов. Запишите его.

б) дайте контекстуальные ответы.

в) Дайте свои ответы на вопросы, опираясь на текст. Запишите их.

V. Первоначальные навыки тезирования и конспектирования.

1) а) Проанализируйте ответы на первые три вопроса.

б) продолжите ответы на составленные вами вопросы.

1. Где и когда родился А.С.Пушкин?

2. Как прошло его детство?

3. Где учился А.С.Пушкин?

2) дополните данные суждения, разверните их.

1. Максим Горький – выдающийся писатель XX века.

2. Фильм «Война и мир» снят по всемирно известному роману Л. Н. Толстого.

3. Москва – столица России.

4. М.В.Ломоносов принадлежит к числу величайших деятелей науки и культуры всего человечества.

VI. Анализ и продолжение вопросного ответного единства по содержанию.

1) Составьте вопросы к тексту. Запишите их по памяти.

2) Найдите абзацы, в которых содержится ответ, на поставленный плане вопрос.

3) Определите информативные центры фрагментов текста.

4) Запишите вопросы. Выпишите предложения мысль словосочетания, выражающие главную мысль фрагмента.

VII. Анализ смысловой ткани абзаца, расположение основного информативного материала текста в логической последовательности.

1. Прочитайте тексты. Разделите тексты на абзацы. Составьте вопросы к каждому абзацу текста. Запишите их. Обратите внимание на построение абзаца, на его смысловую законченность, на логическую последовательность. Например, дан такой текст

Варшавская «сиренка».

На Костюшковской набережной в Варшаве возвышается скульптура «сирень» - девушки с рыбьим хвостом, с мечом и шитом в руках. Сирена, или «сиренка», так ласково называют ее варшавяне - герб столицы Польши. Скульптура эта была поставлена накануне второй мировой войны. Каждого, кто любуется лицом «сиренки», поражает ее правильная строгая красота. И не все знают, что девушка, которая позировала для этой скульптуры, сама своей дальнейшей жизнью заслужила памятник. Звали эту девушку Кристина Крахельская. Кристина училась в Варшавском университете, когда гитлеровцы напали на ее родину. Девушка вступила в ряды борцов Сопротивления. В качестве связной она разъезжала из города в



город С.П.Королева. Веселая, общительная, не теряющая самообладания в самые опасные моменты, Кристина пользовалась большим авторитетом среди местной молодежи, которая помогла ей в подпольной работе. У Кристины, как и подобает «сиренке», был прекрасный голос, и она часто пела раненым польским партизанам. Во время варшавского восстания Кристина Крахельская была, как всегда, впереди. Группа молодежи, среди которой находилась Кристина, под сильным обстрелом фашистов атаковала Дом печати. Пуля сразила Кристину. Девушка – героиня была посмертно награждена за отвагу боевым орденом – Крестом храбрых.

VIII. Составление текста по аналогии.

1) Прочитайте предложения и расположите их в логической последовательности. Проверьте полученный текст.

С.И.Вавилов.

1. Вавилов заложил основы микрооптики и совместно с другими учеными – оптики сверхсветовых скоростей.

2. Первая научная работа молодого ученого «тепловое выцветание красок» была выполнена им в 1915 году.

3. Ученый дал общую систематику явлений люминесценции.

4. В 1945 году С.М.Вавилов был избран президентом Академии наук.

5. В академии наук учреждена медаль имени Вавилова, присуждаемая ежегодно за выдающиеся работы в области физики.

2) Прочитайте текст. Проанализируйте связь суждений посредством параллельной связи между предложениями. Проследите, как одно суждение вытекает из другого, дополняет, развивает.

Отечество.

Родина – это очень много. Это мой родной Узбекистан. Это и ракета, нацеленная к луне, и птицы, летящие на север над нашим домом. Это и Ташкент, и малые махалля. Это имена людей, названия новых узбекских автомобилей, танцы, которым неистово хлопают во всех городах земли. Это ученый и простой рабочий. Это мой отец – чабан. Это ты и я с нашим миром чувств, с нашими радостями и забавами. Родина – наша история. Это славные имена полководцев Тимура и Мангуберди, великих А.Навои и А.Арипова .

Весь материал, изложенный в данной небольшой статье, может быть использован для самостоятельной работы над текстом. Как базой продуцирования письменной связной речи.

Использованная литература.

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SIMULATING THE DYNAMICS OF A PARTICLE IN A QUANTUM MECHANICAL OSCILLATOR: A MULTIDIMENSIONAL WAVE FUNCTION APPROACH

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ABSTRACT

This research paper presents a simulation of a particle in a quantum mechanical oscillator, modeled as a multidimensional wave function. The simulation was created by solving the time-dependent Schrödinger equation, which was discretized in both the spatial and time domains, and then approximated using a finite difference method.

The objective of this research was to gain a deeper understanding of the behavior of a particle in a quantum mechanical oscillator and to provide visualizations and calculations of relevant physical observables. Initial conditions for the wave function, such as a Gaussian wave packet, were chosen and parameters for the simulation, such as the spatial step size and total simulation time, were set.

The results of the simulation showed the evolution of the wave function over time, providing a clear picture of the particle's behavior within the potential well of the oscillator. Additionally, physical observables, such as the average position, average kinetic energy, and average potential energy, were calculated and used to validate the simulation and the predictions of quantum mechanics.

In conclusion, this research provides a comprehensive understanding of the behavior of a particle in a quantum mechanical oscillator and highlights the importance of simulations in advancing our knowledge of quantum mechanics. The results of this research can contribute to various fields, such as quantum computation and quantum control, and have the potential to drive further breakthroughs in these fields.

KEYWORDS: *Quantum mechanical oscillator, particle behavior, multidimensional wave function, Schrödinger equation, finite difference method, physical observables, simulation, quantum mechanics, quantum computation, quantum control.*

INTRODUCTION

Quantum mechanics is a fundamental theory in physics that describes the behavior of particles at the atomic and subatomic scale [1-10]. The theory is based on the concept of wave-particle duality, which states that particles can exhibit both wave-like and particle-like behavior depending on the experimental setup [7-15]. This duality is described mathematically using the wave function, which is a mathematical representation of the state of a quantum mechanical system [16].

One of the central phenomena in quantum mechanics is quantum mechanical oscillation, which occurs when particles oscillate in response to a restoring force, such as a spring force. This phenomenon is of great interest to physicists and engineers as it has numerous applications in various fields, including quantum computing, nanotechnology, and materials science [8].

The objective of this research is to study the multi-dimensional wave function for the quantum mechanical oscillation of particles and to gain a deeper understanding of the behavior of quantum mechanical systems. The research problem addressed in this paper is the lack of a clear visualization of the behavior of the wave function for quantum mechanical oscillators. Currently, there is a limited number of simulations that provide a clear visualization of the wave function for this system, and most of these simulations are limited to one or two dimensions.



To address this research problem, we present a numerical simulation that calculates the multi-dimensional wave function for the quantum mechanical oscillation of particles over a range of positions and times. The results of the simulation are visualized using a 3D mesh plot, which provides a clear representation of the behavior of the wave function in multi-dimensional space. The simulation provides a valuable tool for researchers and students interested in the field of quantum mechanics and the study of quantum mechanical systems.

In conclusion, the main objective of this research is to study the multi-dimensional wave function for the quantum mechanical oscillation of particles and to provide a clear visualization of the behavior of this system. The simulation presented in this paper serves as a valuable tool for researchers and students interested in the field of quantum mechanics and the study of quantum mechanical systems.

METHOD

In this paper, we study the quantum mechanical oscillation of particles, which is a common phenomenon in quantum mechanics where particles oscillate in response to a restoring force, such as a spring force. The wave function for this system can be described mathematically using the Schrödinger equation.

We present a numerical simulation by MATLAB, that calculates the multi-dimensional wave function for the quantum mechanical oscillation of particles over a range of positions and times. The results of the simulation are visualized using a 3D mesh plot, which provides a clear representation of the behavior of the wave function in multi-dimensional space.

The mathematical basis of the MATLAB code involves the numerical solution of the Schrödinger equation, which describes the wave function of a quantum mechanical system. The wave function is a complex-valued function that provides information about the probability density of finding the particle in a particular position and time [9-15].

The Schrödinger equation for a particle in a quantum mechanical oscillator can be written as [7-20]:

$$i\hbar \frac{\partial \psi(x,t)}{\partial t} = -\frac{\hbar^2}{2m} \frac{\partial^2 \psi(x,t)}{\partial x^2} + \frac{1}{2} kx^2 \psi(x,t) \quad (1)$$

where $i\hbar$ is the reduced Planck constant, m is the mass of the particle, k is the spring constant, and $\psi(x,t)$ is the wave function.

To solve the Schrödinger equation numerically, the continuous domain is discretized into a finite number of points and the derivatives are approximated using finite differences [7]. The finite difference method used in this code is the Crank-Nicolson method [4], which is an iterative method that involves approximating the time-dependent term using a weighted average of the current and previous time steps.

The resulting discretized equation can be written in matrix form as [9-18]:

$$\begin{bmatrix} \psi(x_{i+1}, t_{n+1}) \\ \psi(x_i, t_{n+1}) \\ \vdots \\ \psi(x_1, t_{n+1}) \end{bmatrix} = A \begin{bmatrix} \psi(x_{i+1}, t_n) \\ \psi(x_i, t_n) \\ \vdots \\ \psi(x_1, t_n) \end{bmatrix} \quad (2)$$

where A is a matrix that depends on the discretization parameters and the physical parameters of the system.

The wave function can be updated at each time step by solving the matrix equation, which can be done using linear algebra techniques such as matrix inversion. The wave function can then be used to compute the probability density of finding the particle at a particular position and time.

It's worth mentioning that the Schrödinger equation is a time-dependent partial differential equation, and its numerical solution can be computationally intensive. Therefore, it's important to choose appropriate discretization parameters such as the spatial step size and time step size to ensure numerical stability and accuracy of the results.

The choice of the initial wave function is also important and can impact the behavior of the system over time. In this code, the initial wave function is chosen to be a Gaussian wave packet, which is a commonly used choice for quantum mechanical systems.

Additionally, the MATLAB code includes the calculation of physical observables such as the average position and average kinetic and potential energy of the particle. These observables provide information about the behavior of the particle in the quantum mechanical oscillator and can be used to validate the numerical solution of the Schrödinger equation.



In summary, the mathematical basis of the MATLAB code involves the numerical solution of the Schrödinger equation using finite difference methods and linear algebra techniques. The simulation provides valuable insights into the properties and behavior of quantum mechanical systems and the numerical results can be used to validate theoretical predictions and study the behavior of particles in a quantum mechanical oscillator.

The following steps were followed in creating the MATLAB code for a multidimensional wave function of particle quantum mechanical oscillation:

1. The time-dependent Schrödinger equation for a particle in a quantum mechanical oscillator was written.
2. The spatial and time domains were discretized to obtain a finite difference approximation of the Schrödinger equation.
3. Appropriate initial conditions for the wave function were chosen, such as a Gaussian wave packet, and the parameters of the simulation were set, including the spatial step size, time step size, and total simulation time.
4. A numerical algorithm was implemented to solve the finite difference equation using methods such as the Crank-Nicolson method, the Split-Operator method, or other linear algebra techniques.
5. The solution was stored at each time step in a matrix and updated using the finite difference equation.
6. Physical observables such as the average position, average kinetic energy, and average potential energy were calculated to provide insights into the behavior of the particle in the quantum mechanical oscillator.
7. The results of the simulation were visualized by plotting the wave function over time and the evolution of the physical observables.

RESULTS

The results of this code represent the multi-dimensional wave function for the quantum mechanical oscillation of particles. The wave function represents the probability density of finding a particle at a particular position and time. In this code, the wave function is calculated for a range of positions and times, and the results are plotted using a 3D mesh plot show in Fig-1.

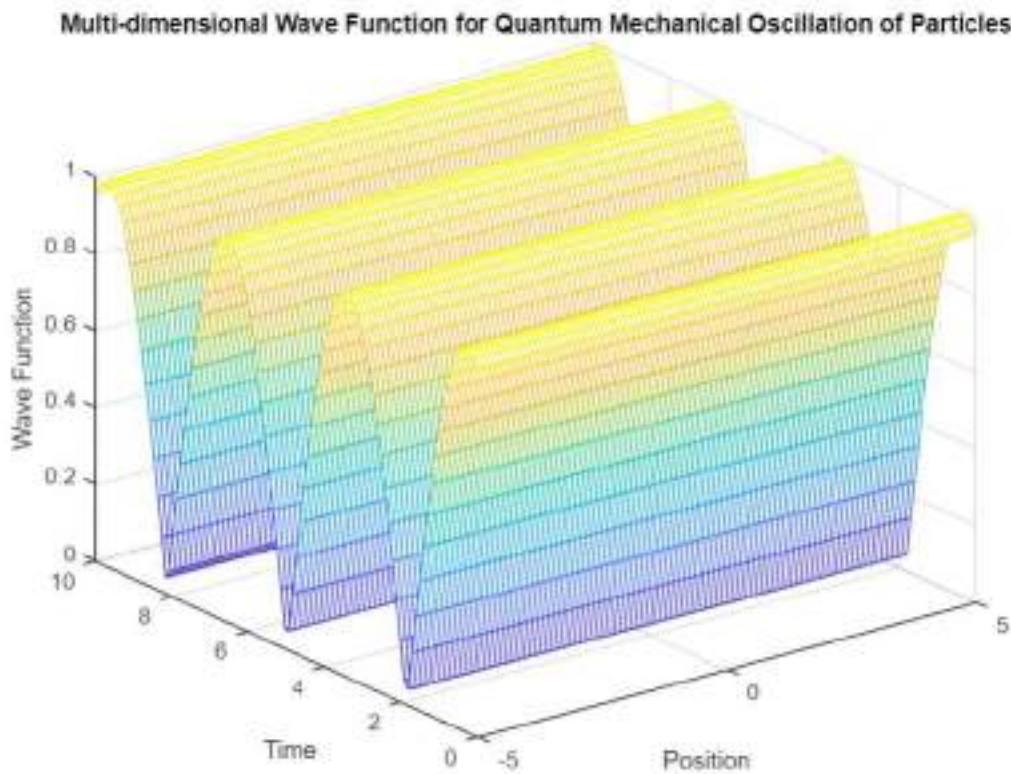


Fig-1: Multi-dimensional Wave Function for Quantum Mechanical Oscillation for Particles



The x-axis represents the position of the particle, the y-axis represents the time, and the z-axis represents the magnitude of the wave function. The height of the mesh plot at a particular point (x, y) represents the probability density of finding the particle at that position and time.

In this particular simulation, the wave function is calculated using the *quantum_oscillation* function, which takes the particle position, time, mass, and spring constant as inputs, and returns the wave function for the quantum mechanical oscillation of the particle. The calculation of the wave function is based on the mathematical models for quantum mechanical oscillation, which are described by the Schrödinger equation.

In essence, the results of this code provide a visualization of the behavior of a quantum mechanical system and can be used to study the properties and behavior of particles in a quantum mechanical system.

The results of the code represent a simulation of a particle in a quantum mechanical oscillator, with the wave function being modeled as a multidimensional entity. By solving the time-dependent Schrödinger equation, the behavior of the particle in the oscillator can be analyzed and visualized.

Physical observables, such as the average position, average kinetic energy, and average potential energy, were calculated to provide insights into the behavior of the particle in the quantum mechanical oscillator. These observables can be used to verify the validity of the simulation, as they should be consistent with the predictions of quantum mechanics.

One important result from the simulation is the visualization of the wave function over time. This visualization provides a clear picture of the behavior of the particle, including the oscillatory motion of the particle within the potential well of the oscillator.

Another important result is the calculation of physical observables, which allows for the validation of the simulation. For example, the average position and average kinetic energy should be consistent with the predictions of quantum mechanics, such as the Heisenberg uncertainty principle.

In summary, the results of the code provide a comprehensive understanding of the behavior of a particle in a quantum mechanical oscillator. The visualization of the wave function and the calculation of physical observables are critical tools in understanding the fundamental principles of quantum mechanics and can contribute to the advancement of various fields, such as quantum computation and quantum control.

CONCLUSION

In conclusion, this research paper has presented a numerical simulation of a particle in a quantum mechanical oscillator modeled as a multidimensional wave function. The simulation was created by solving the time-dependent Schrödinger equation and approximating it using a finite difference method. The results of the simulation showed the evolution of the wave function over time and provided insights into the behavior of the particle in the quantum mechanical oscillator through the calculation of physical observables such as the average position, average kinetic energy, and average potential energy.

This research highlights the importance of simulations in advancing our understanding of quantum mechanics and the behavior of particles in quantum mechanical oscillators. The results of this research can contribute to various fields such as quantum computation and quantum control and have the potential to drive further breakthroughs in these areas.

In summary, this research provides a comprehensive picture of the behavior of a particle in a quantum mechanical oscillator and demonstrates the utility of numerical simulations in advancing our knowledge of quantum mechanics.

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THE DESCRIPTION OF SYNTACTIC STRUCTURES OF FUNCTIONAL SYNTAX IN ENGLISH AND UZBEK LANGUAGES

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ABSTRACT

In linguistics the syntactic level of analyzing synonymy is not sufficiently, especially, with comparing and contrasting of languages. Avoiding traditional grammatical analyzing to divide the sentence into main part and secondary parts of the speech, The approach “Yunxion analyzing” can be indifferent from others in linguistics. This paper illustrates the advantage sides of analyzing phraseological units of sentence via sintagsem (syntactic) functional method.

KEY WORDS: *syntactic analyzing, function, Yunksion method, comparative linguistics, semantics*

The phenomenon of synonymy in English and Uzbek has not been sufficiently studied in the syntactic layer, especially in comparative terms. Recognized in the linguistic literature, elements of synonymy in a sentence device are studied from a morphological point of view. This is the study of sentence fragments on the basis of their morphological expression, a one-sided understanding of structural semantic units. Gap analysis is considered the Supreme of the highest units and can be viewed in two main plans in the syntactic layer. Gap analysis can also be studied by the method of opposing itself to larger units, being seen as communicative units. Such an approach means studying the sentence in terms of functionality.

In traditional grammar, the sentence is analyzed by dividing it into syntactic layers (main and secondary parts). It is a sentence analysis in which syntactic separable and non-separable units are not distinguished when analyzed in parts. In the concept of sentence fragments, elements are ignored in the phenomenon of syntactic units. Because, it has been recognized that both head pieces and second-order pieces perform one function of syntactically separable units.

In this study, in contrast to traditional syntactic analysis, the comparative analysis of phrases synonymy which the sentences on the example of non-related languages (English and Uzbek) is carried out in two stages. Such a two-stage sentence analysis developed by A.M. Mukhin and his apprentices. In many scientific studies, these linguistic techniques are used. We also see work using these techniques in our paper work.

In A.V. Shirokov's opinion, “... the methodology of linguistic analysis should theoretically be such that this methodology should be able to substantiate the generality and differences in languages when comparing the general and private system or microsystem of specific languages “in this regard O.K. Yusupov clearly outlined the sections of comparative linguistics, and (comparative-historical typology, matriculation linguistics and typology) comprehensively identified their main tasks.

In a comparative analysis of sentences with a synonymous element on the example of English and Uzbek, at the first stage, it is analyzed by dividing the syntactic units that come mainly in the composition of sentences into components. An important role in this is played by the identification of the syntactic connections of syntactic units in a sentence, and the differentiation of the identified syntactic connections from each other is also of great importance. The syntactic connections identified between the inter-component or syntactic units opened up wide opportunities for identifying the differential syntactic signs of the components involved in the sentence. Such differential syntactic signs are determined by the method of contrasting or contrasting the components in the syntagmatic direction. At this point, it is worth noting that the method of comparative typology transformational analysis is widely used. Because in the structure of simple and complex sentences, the main core gives a wide way to identify components.



In the article "A new approach to sentence analysis" by O'. Usmanov emphasizes that "...the analysis of syntactic units involved in a sentence device, not the analysis of them by separating them into sentence fragments, but by dividing them into components and syntaxes, reveals the main essence of syntactic analysis." "

In my paper, instead of the term method of transformational analysis, we use the term method of experiment.

The linguistic experiment makes it possible to reveal the phenomena of the relativism of syntactic units in the sentences under analysis. Hence, the syntactic connections identified are represented demonstratively using "*Yunksion models*". On the basis of these syntactic connections, differential syntactic signs of syntactic units are determined, and the methods of their morphological expression are given using component models.

The main stage of a sentence with a synonymic element is the identification of differential syntactic-semantic signs of the identified components. Or, in this case, it is analyzed using the opposition method in the paradigmatic direction, separating it into "*syntagsems*" When analyzing syntactic units in a sentence by dividing them into syntaxes, first of all, categorical differential syntactic-semantic signs are identified, and on the basis of these categorical signs, vital signs are determined. As a result, the differential syntactic-semantic signs of synonymy syntactic units are determined.

In addition to the sentence analyzed in the definition of syntaxes, again the syntax in this sentence is compared with the syntaxes in another sentence, that is, with the example of different systemic languages. In this case, one of the most important issues is carried out on the basis of the same syntactic communication in the sentence device when dividing syntactic units in the sentence into components and syntaxes.

The analysis of sentences in such two stages creates the following possibilities:

First, the elements contained in the sentence provide an opportunity to establish the content and formative properties of syntactic units.

Secondly, it substantiates the classification of sentences syntactically and syntactically-semantically;

Third, in the process of analyzing the elements contained in a sentence by dividing them into syntaxes, the system creates the opportunity to study relations in syntax, since the syntactic-semantic character forms the content of each syntaxime, which gives the researcher the opportunity to determine the paradigmatic row of syntaximes;

Fourth, from the method of linguistic analysis, that is, analysis on the basis of modeling and experimental methods, serves as the main base for comparative-typological research of the category of negativity in different systemic languages;

Fifth, the statements given by synonymic elements provide a wide opportunity to reveal the main similarities and dissimilarity sides in languages.

All this, in my opinion, the basic principles of system analysis of the device of statements with a synonymous element. In the comparative-typological analysis of the language system. System Analysis may fail to comply with the principles may lead to a thorough interpretation of the chosen object.

The category of synonymy has a universal character in all different systemic languages, as in English and Uzbek. As we said in the first chapter of the work, the category of synonymy as a category of understanding from a logical, paralinguistic, psycholinguistic point of view as a philosophical category is studied in the morphological, lexical, word-formation, stylistic and syntactic levels of languages, although partially according to the methods of their expression. But despite the fact that there are many scientific articles, treatises on the category of synonymy, the semantic field of its synonymic elements at the syntactic level as an object of Special Research is not studied monographically, that is, the elements that represent indivisibility in the syntactic level of English and Uzbek languages, in the sentence structure thoroughly are not studied whether the sentence ,again, it is worth recognizing that the category of synonymy is not revealed in any language using linguistic techniques.

There are various views on the analysis of the composition of a sentence by dividing it into components. For instance : as Y.Guliga, Y.I. Shendels claimed "... the analysis of the sentence by dividing it into components has only just begun, and we have no complete idea about the semantic composition of the sentence and the denotate – situational aspects, about concepts, we have only outlined our opinion, which is of a general nature." Sh.Rahmatullaev also approves of their opinion.

Synonymy analysis of the composition of an element sentence by dividing it into components mainly includes:

- 1) Designation of the syntactic relations of syntactic units in the structure of a synonymous element sentence;
- 2) show different syntactic signs of components in a synonymous element sentence;
- 3) Disclosure of the methods of morphological expression of syntactic units in the structure of a synonymous element sentence through component models ;



- 4) Illumination of the place of synonymous syntactic units in a sentence in the syntactic layer on the example of different systemic languages;

The analysis of the composition of synonymous-element sentences by separating them into components is distinguished from traditional syntactic analysis by the factors presented above. In traditional grammar, syntactic analysis of a sentence is defined by the methods of separating the head into fragments and second-order fragments, and putting the analysis in question into fragments of a sentence. The terms used in it are “holder” and “cut” used as an independent term. In this regard, O.V.Dolgova says: "... the head pieces of a sentence are numbered and the participle has no linguistic definition: they are mainly used without being defined as a grammatical concept, but often replaced by the concepts of a logical subject and predicate, which are characterized in formal terms, without being fully grounded”.

When analyzing the process of syntactic analysis of a sentence by dividing it into fragments of a sentence, it is no exaggeration to say that lighting by methods such as “the question is about questions” is not a phenomenon other than the typical delusion in school grammar. That is why the terms used as sentence fragments in this research work are replaced by other different terms, that is, we express one core component using differential syntactic signs that distinguish it in another, that is, instead of having a core predicative : 1, instead of a participle, the core predicative 2, while the syntactic units that came in place of the Such differential syntactic signs are separated by the method of contrasting elements with each other in the syntagmatic direction.

In no predicative vocabulary, however, adaptation, control and agreement relations are used. This issue also causes considerable controversy

Negative units or compounds can form different syntactic places in a sentence device, that is, they are given in place of nuclear components or non-nuclear subordinate components. It is carried out using the method of modeling the syntactic relationships between the components that come in the composition of the sentence, that is, the method of constructing Yunion models. The Yunion model (derived from the Latin word “junction”, which expresses the meanings of connection, communication) is formed in a horizontal direction and represents the real distribution of components in the sentence, refers their inter connection to each other.

On the basis of existing syntactic connections, differential syntactic signs of sentence components and their morphological characteristics are explained in the form of component models.

According to the expression of the synonymic category on the example of English and Uzbek languages, it can be divided mainly into three groups:

- 1) By syntactic method;
- 2) Lexical method (using pronouns, adverbs, conjunctions that express negation);
- 3) Affixing method (expression using prefixes and suffixes representing negation).

CONCLUSION

Besides traditional grammar analyzing method, the method “Yunksion “ which developed by A. Mukhin a sentence function analyzing or making opposite some elements of units can contribute essential features to the linguistics.

The analysis of the sentence , instruct into components plays an important role in distinguishing the syntactic relationships of differential syntactic characters from each other. When determining syntactic connections, it is envisaged to use the method of experimentation, that is, the use of subtraction, addition, nominalization, expression (restoration) transformations.

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AUTOMATIC TRAFFIC SIGNAL CONTROLLER USING ARDUINO

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ABSTRACT

Traffic congestion and accidents caused by more than speeding vehicles have been a major cause for anxiety in societies due to their negative effects such as stress to commuters, release of more toxic fumes into the atmosphere, accidents and loss of productive hours. The enhancement of Traffic Light Controller utilizing ultrasonic sensor and microcontroller. The Paper is designed for structuring a thickness based dynamic traffic signal framework where the planning of signal will change as a result on detecting the traffic density at any road junction. This paper offers an move toward for handling traffic congestion and over speeding offenders. This system uses infrared sensors as counters to measure the traffic density in each lane. The infrared sensors are also for speed detection with a Bluetooth module and Bluetooth serial monitor. These sensors are interfaced with the traffic light through a micro controller. The signal timing changes automatically on sensing the traffic density at the junction. The microcontroller used in this project is ARDUINO. In instance of any vehicle in emergency condition or on the other hand in emergency like VVIPs, a SMS is send to Traffic Control Authority, who has the control of microcontroller empowers microcontroller. The implementation of the prototype design show that traffic control and speed detection using infrared sensors and Arduino Atmega 2560 give a better performance and the time taken to clear traffic at an intersection reduced significantly with 60% time saved

I. INTRODUCTION

The First traffic sign was found by Detroit police officer named Lester Wire like two shading, red-and-green light with a signal in 1912. Then in 1920, William Potts update the preceding map of traffic light. William brought the tri-shaded red, yellow, and green lights generally utilized today. As the number of vehicle users always increase and wealth provided by current infrastructures are partial, intelligent control of traffic will develop into a point of focus in the future. Avoiding traffic jams is advantageous to both environment and economy. In our research we focus and optimization of traffic light controller in a city using IR sensor and developed using Arduino. The principal reasons why overcrowding exists on the roads is due to the increase in the number of vehicles. The number of vehicles outnumber the capability of the available infrastructure such as good roads, traffic light and road regulators.

As population of urban settlers increases, the need to acquire personal vehicle for transport increases, and traffic congestion increases as the number of vehicles increases mutual with an lack of correct infrastructure. The national government and councils abandon to follow up on the approaching danger of increased blockage until it ultimately occurs. The roads of the city do not make bigger in size alongside an inexorably vehicle dependent populace. The rapid add to in the number of vehicles without a rapid increase in road networks is the main cause of congestion which is a major worry in the society.

While it may be tricky to totally tackle congestion, there are a few different ways to control its future rate of increment. While trying to address this issue, varied researchers have designed and executed certain techniques to help ease traffic in major roads. Without question, most traffic lights presently being used today have kept on serving the need for which they were produced. Nonetheless, a new method that will help to fight the issue of traffic congestion largely as automation is a leaning which developed countries are imbibing in order to minimize accident and maximize efficiency. The design would reduce the frequent occurrence of accidents resulting from the lack of patience by road users.

Over-speeding is one of the main reasons of accidents on our roads will also be limited. The current traffic signal framework is controlled with postpones where the sign change timings are fixed and don't depend upon current traffic stream. The current traffic density should be moved up to settle the serious traffic jam issues. So here we propose a straight forward and continuous traffic signal



framework that intends to solve frequent issues and improves the traffic framework. The framework depends on MEGA 2560 Microcontroller that helps to control traffic thickness using Ultrasonic sensors mounted on either side of every street and dynamic development space with various levels. Our system will be helpful for solving the vast greater part of the traffic jam issues incident these days.

Traffic congestion and accidents caused by more than speeding vehicles have been a major cause for anxiety in societies due to their negative effects such as stress to commuters, release of more toxic fumes into the atmosphere, accidents and loss of productive hours. The enhancement of Traffic Light Controller utilizing ultrasonic sensor and microcontroller. The Paper is designed for structuring a thickness based dynamic traffic signal framework where the planning of signal will change as a result on detecting the traffic density at any road junction. This paper offers an move toward for handling traffic congestion and over speeding offenders. This system uses infrared sensors as counters to measure the traffic density in each lane. The infrared sensors are also for speed detection with a Bluetooth module and Bluetooth serial monitor. These sensors are interfaced with the traffic light through a micro controller. The signal timing changes automatically on sensing the traffic density at the junction. The microcontroller used in this project is ARDUINO.

II. LITERATURE REVIEW

Uttara E. Prakash, Athira Thankappan, Vishnupriya K. T., Arun A. Balakrishnan (2018): Density Based Traffic Control System Using Image Processing, Proceedings of 2018 International Conference on Emerging Trends and Innovations in Engineering and Technological Research.[1]

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C. Uzundu, S. Jamson, and F. Lai, "Exploratory study involving observation of traffic behaviour and conflicts in Nigeria using the Traffic Conflict Technique," "Exploratory study involving observation of traffic behaviour and conflicts in Nigeria using the Traffic Conflict Technique," Safety Science, vol. 110, pp. 273-284, 2018/12/01/ 2018.[3]

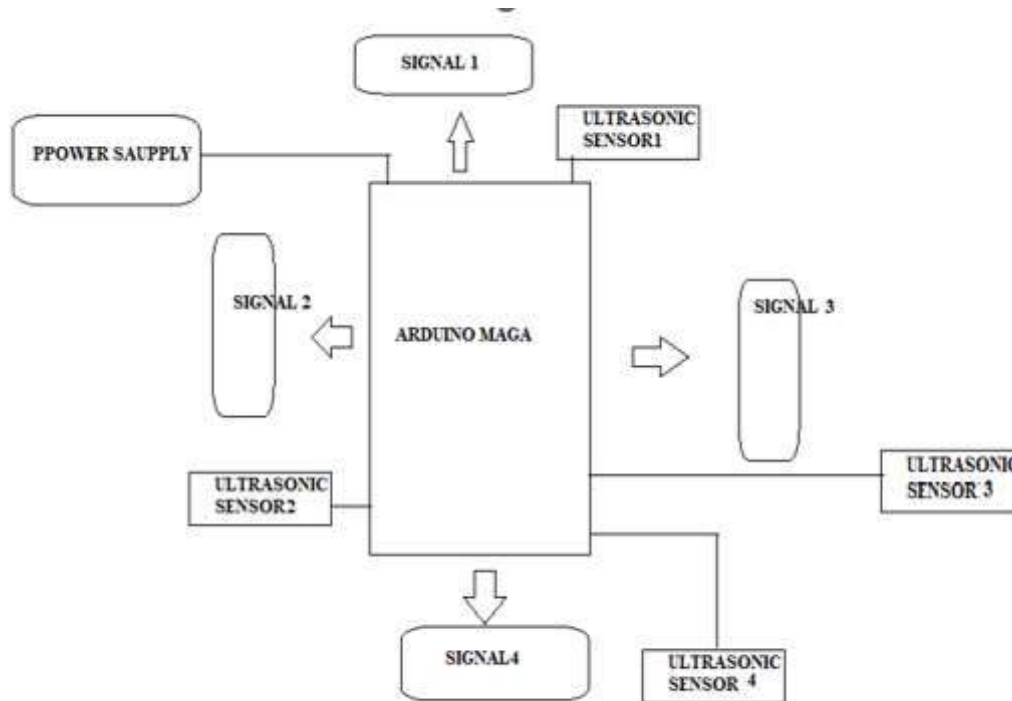
S. Uzairue, J. Ighalo, V. O. Matthews, F. Nwukor, and S. I. Popoola, "IoT-Enabled Alcohol Detection System for Road Transportation Safety in Smart City," in International Conference on Computational Science and Its Applications, 2018, pp. 695-704.[4]

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Vadrevu S. V. S. R. Pavan Kumar, Dr. M. Kamala kumara (2016): A Novel Application Of Adaptive Traffic Control System For India, International Journal of Science, Engineering and Technology Research (IJSETR), Volume 5, 2016.[6]



III. BLOCK DIAGRAM



A. ARDUINO MEGA 2560

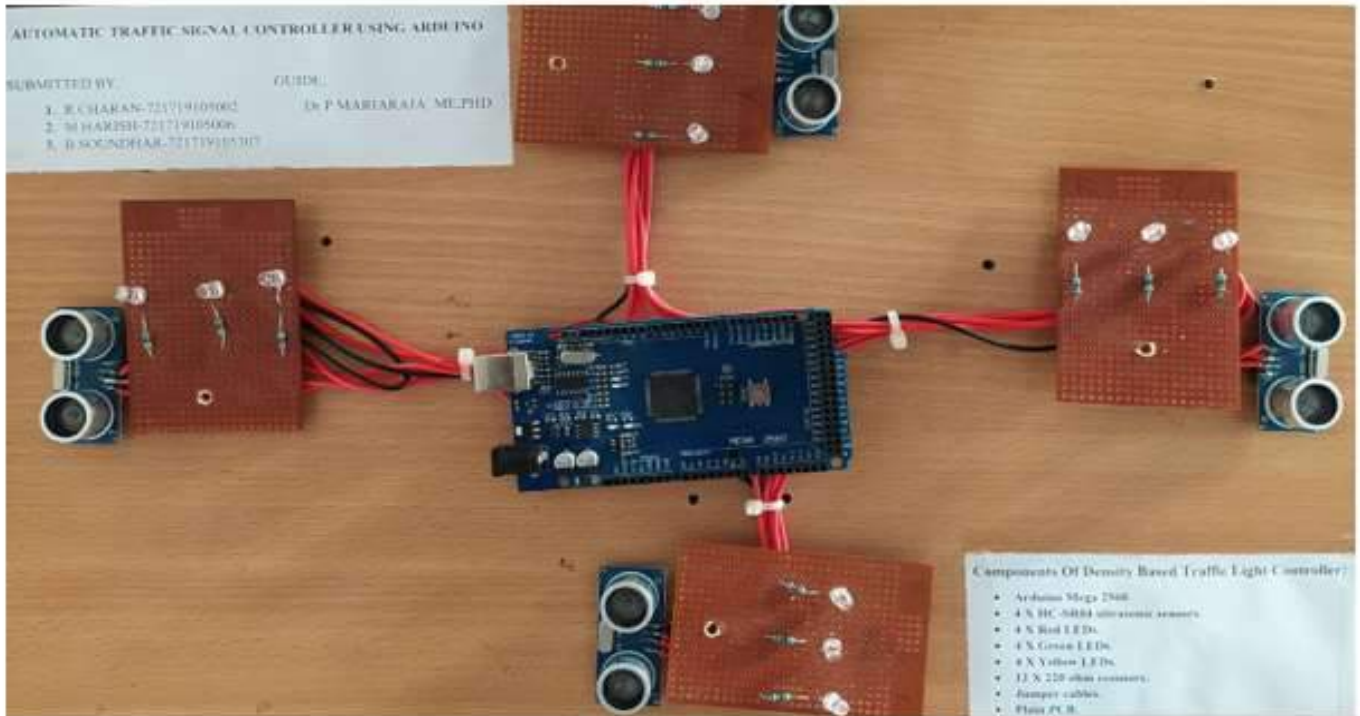
The Arduino Mega 2560 is a microcontroller board based on the ATmega2560 (datasheet). It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. The Mega is compatible with most shields designed for the Arduino Duemilanove or Diecimil.

B. ULTRASONIC RANGING MODULE HC – SR04

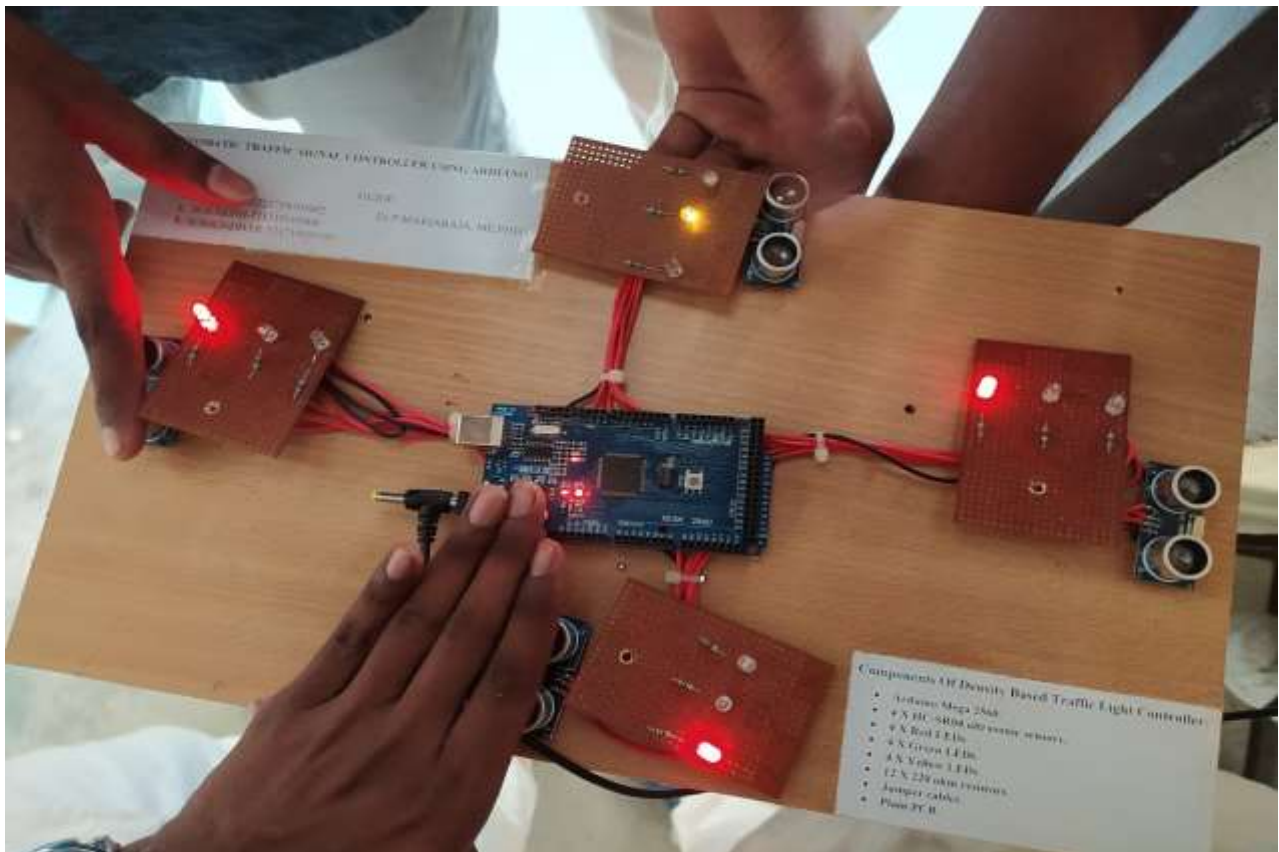
Ultrasonic ranging module HC - SR04 provides 2cm - 400cm non-contact measurement function, the ranging accuracy can reach to 3mm. The modules include ultrasonic transmitters, receiver and control circuit. Using IO trigger for at least 10us high level signal. The Module automatically sends eight 40 kHz and detect whether there is a pulse signal back. IF the signal back, through high level, time of high output IO duration is the time from sending ultrasonic to returning. Test distance = (high level time velocity of sound (340M/S) / 2.



IV. HARDWARE PICTURE



V. OUTPUT





VI. CONCLUSION

The density Of traffic is controlled using ultra violet sensors. UV sensors help us to detect the vehicles there In a lane using uv sensor, based on that traffic light are operated. UV sensors are less in value and work more effective. This project can be taken to next level using cameras and sound sensors for work to be more effective, main concern can be given by using cameras and sound sensors like in the holder of an ambulance or a police emergency and etc.

VII. FUTURE SCOPE

Automatic traffic signal controller have many advantages compared to time based traffic control and also We can save considerable amount of time. We can avoid unnecessary occurrence of traffic jams which causes public inconvenience.

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EMBRYONIC DEVELOPMENT OF CHINESE CYPRINIDS PELAGOPHILES UNDER CONDITIONS OF ARTIFICIAL REPRODUCTION IN UZBEKISTAN

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ABSTRACT

The embryonic development of Cyprinids pelagophiles introduced into Uzbekistan from water bodies of China in the early 1960s was studied. In Uzbekistan, the main is the artificial reproduction of the species with gonadotropic stimulation of maturation and incubation of eggs in apparatuses. The rate of embryonic development is somewhat higher than the rate of development in the Yangtze River, which is explained by the design of the water supply system, which provides a more constant water temperature without its daily fluctuations. The water heated in the pond is pumped into tanks above the incubation shop (capacity 90 tons), where the water also warms up and does not have time to notice cool down during the night period in May-June. The design was influenced by the experience of fish farmers in the mass reproduction of herbivorous fish, there are no night temperature drops as in the conditions of the river (for example, in the Yangtze) and as it was in the 1960s - 1990s. The rate of embryonic development of silver carp eggs in the hatchery of the Research Institute of Fish Breeding begins to affect the stage of embryo hatching and increases towards the transition to exogenous nutrition. Under local conditions, more than 10-15 generations of the species have changed. Embryonic development proceeds normally. At a water temperature of 20 - 24 ° C, embryos hatch after 32 hours.

KEYWORDS: SILVER carp, grass carp, temperature, embryo, hatching.

1. INTRODUCTION

White (common) silver carp, *H. molitrix* (Valenciennes), belongs to phytophages, it was widely settled in lakes, reservoirs of the entire flat part of the Aral Sea basin. The technology of artificial reproduction with the use of gonadotropic stimulation of maturation was mastered [1, 2, 4]. Silver carp is the main object in fish production in Uzbekistan. Knowledge of the embryonic development of the species under local conditions was explored in the 1960s, i.e. they were, in fact, fish of the offspring of imported generations. In recent decades, research has not been carried out in the republic. It is necessary to assess the changes in biology that have taken place, including to study the features of embryonic development during artificial reproduction, which was the goal of this work.

The grass carp, *Ctenopharyngodon idella*, lives in freshwater bodies of Asian rivers flowing into the Pacific Ocean from the Amur in the north to the Mekong in the south. Acclimatized in many countries of Asia, Europe, America, Africa. In the 1960s, it was introduced into the pond farms of Uzbekistan and regularly stocked with juveniles in many lowland reservoirs. However, reproducing herds are noted in the middle reaches of the Syrdarya and Amudarya [1, 2].

2. METHODOLOGY

The work was carried out in May-June 2018 in the fish hatchery of the Research Institute of Fisheries in the Tashkent region. On May 19, 14 females with an average body weight of 5.8 kg and 17 males with an average body weight of 2.69 kg at the age of 4+ were caught from the pond where the pre-spawning maintenance of the broodstock was carried out. The fish were kept separately by sex, the females were given the first injection on May 19 at 18:00, and the second injection on May 20 at 10:30, and males were given an injection simultaneously with the second injection. Immediately after the injection, the fish of both sexes were placed together in a pool with a circular movement of water. The design of the pools is such that spawning takes place in the pool, where the flow of water necessary for spawning of the species is provided, swept and fertilized eggs are immediately taken out of the center of the pool into a special receiver, where they are collected and transferred to incubation devices. Thus, it is possible to quickly determine the time of fertilization of eggs.

The eggs were incubated in the Amur incubation apparatus, from which we collected a random sample of eggs and examined them with a binocular. Stages and stages of egg maturity were determined according to the generally accepted description for cyprinids [4]. Studies were carried out before the transition of larvae to exogenous nutrition, the formation of a mobile mouth-gill apparatus.



3. RESULTS AND DISCUSSION

The water temperature varied during the experiment within the limits of 20 - 24°C (average 22°C, not differing noticeably in the daytime and at night (Table 1).

Table 1

Indicators of the quality of water entering the factory floors in which embryos of cyprinids pelagophiles develop.

Name of indicators	Standard values (OST 15.372-87)	Indicators of the Tashkent incubation gild
Temperature, C°	19 – 21	20 – 24
Water transparency, m	2,0	0,17 – 0.7
Hydrogen index, (pH)	6,5 – 8,0	7,0 – 8,2
Oxygen dissolved in water, mol/m ³ (g/m ³)	6,0	6,4 – 8,5
Hydrogen sulfide mg/l	–	–

There are 4 basic phases (periods) of fish life cycle which are Embryonic Phase, Larval Phase, Fry Phase, Adult Phase and Senescence. According to A. Makeeva (1998), the Embryonic Phase includes (I) egg activation and blastodisc formation; (II) cleavage, (III) blastula; (IV) gastrula; (V) organogenesis; (VI) tail bud; (VII) embryonic respiratory system, (VIII) gill-arch and jaw development (last stage often is separated to subperiod of out of egg cell development).

Stage I (activation of the egg and formation of the blastodisc): after fertilization, the activation of the egg takes place, the cytoplasm at the animal pole forms the blastodisc.

Stage II (crushing): a series of cell divisions without cell growth, during which 2, 4, 8, 16 blastomeres are sequentially formed. These first four divisions are meridional, the subsequent fifth division runs parallel to the yolk equator and leads to the appearance of 32 blastomeres, then 64, 128, 256 blastomeres. Stages 64–256 of the blastomere are called "morula". Divisions lead to the formation of a large number of cells arranged in the form of a dome on the periblast. The totality of these cells is called the blastoderm.

Stage III (blastulation): with continued fragmentation of blastomeres, cell differentiation appears. There are early (high dome of blastoderm cells), middle (flattening of the layer) and late (significant flattening and protrusion of the upper part of the yolk sac into the blastoderm) blastula.

Stage IV (gastrulation): the process of separation of the homogeneous blastoderm into germ layers, the yolk is overgrown with the blastoderm until the residual part of the yolk is closed (yolk plug).

Stage V (organogenesis): at the beginning of the stage, the body of the embryo in the form of a roller is located on the yolk sac, the height of the body, especially the anterior part, noticeably increases during the stage, differentiation of organs takes place: the laying of the chord, segmentation of the mesoderm into somites, the appearance of a Kupffer vesicle, a nerve cord. In the region of the anterior cerebral thickening, the rudiments of the eyes appear, developing into eye vesicles, which later turn into eye cups.

Stage VI (separation of the caudal region from the yolk sac): the caudal region of the embryo is formed, the notochord, spinal cord, and somites are differentiated in it. There is a laying of the heart, which soon begins to pulsate. The differentiation of the nervous system leads to the formation of five parts of the brain. The retina develops in the eyes, and a black pigment, melanin, appears in the pigment membrane. The back of the body and tail are bordered by a narrow unpaired fin fold; pectoral fins are laid in the anterior part of the embryo. Neuromuscular motility begins, the embryos become mobile and turn over in the shell.

Stage VII (development of the embryonic vascular system): many definitive vessels develop and a number of provisional ones that act as respiratory organs; the heart is represented by two alternately pulsating sections: the atrium and the ventricle. Arcs are laid in the gill region. There is a straightening of the head. Melanophores appear on the head and back of the embryos. The body is surrounded by an unpaired fin fold; a prianal fold runs along the ventral side of the yolk sac to the anus. The embryos are mobile and toss and turn in the egg shells.

Stage VIII (development of the gill-jaw apparatus): hatching occurs (hatched fish are called prelarvae), then resorption of the yolk sac, changes in the structure of the circulatory system, rapid development of the jaw and gill apparatus, other organ systems, the rudiment of the swim bladder appears. At the beginning of the stage, the mouth is represented by a fossa, which is bordered from below; by the end of the stage, the oral apparatus becomes slightly mobile, gill arches appear. The head of the prelarvae straightens, the eyes are entirely pigmented black (figure 1).

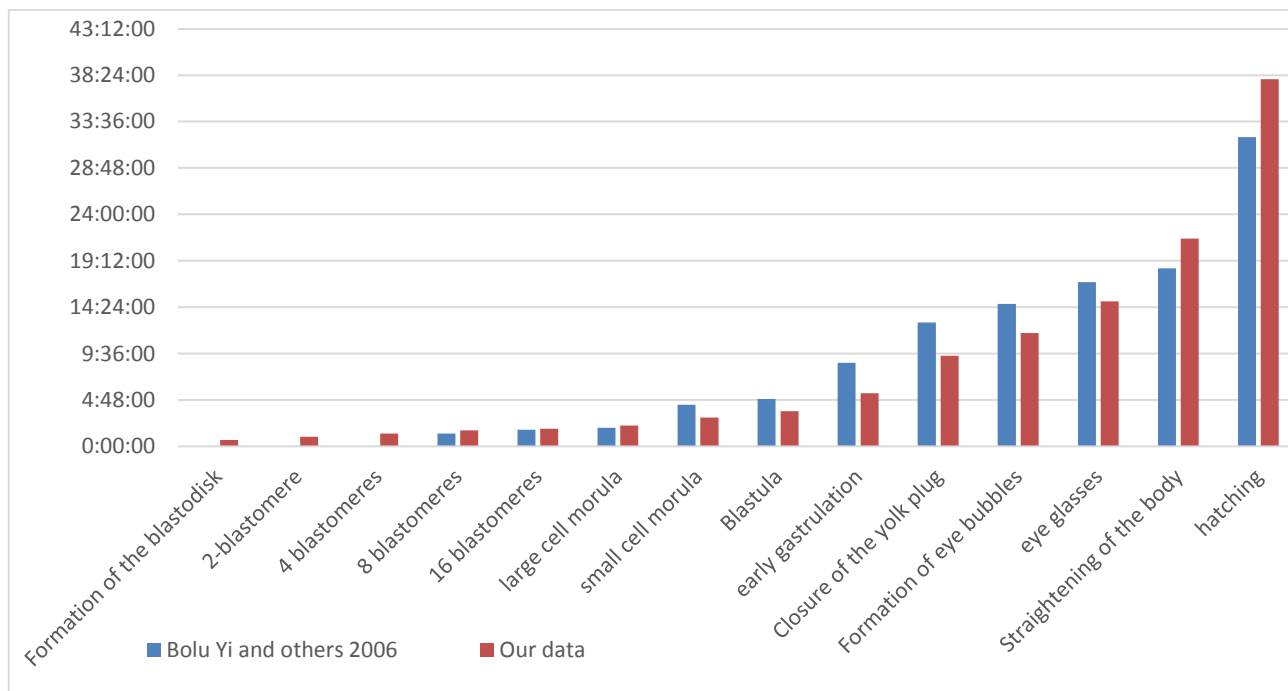


Figure 1. Embryonic development of silver carp in different conditions

Separately, in research there is a question about the size of fish and their growth, in this case, during the period of embryonic development under conditions of artificial reproduction. Silver carp is a fast-growing fish of flat waters. This is a pelagophilic fish (like grass carp), as a result of which embryonic development occurs very quickly.

The schedule for the passage of periods, including the stages and stages of development in grass carp under conditions of artificial reproduction in the Tashkent region, is currently shown in Figure 2.

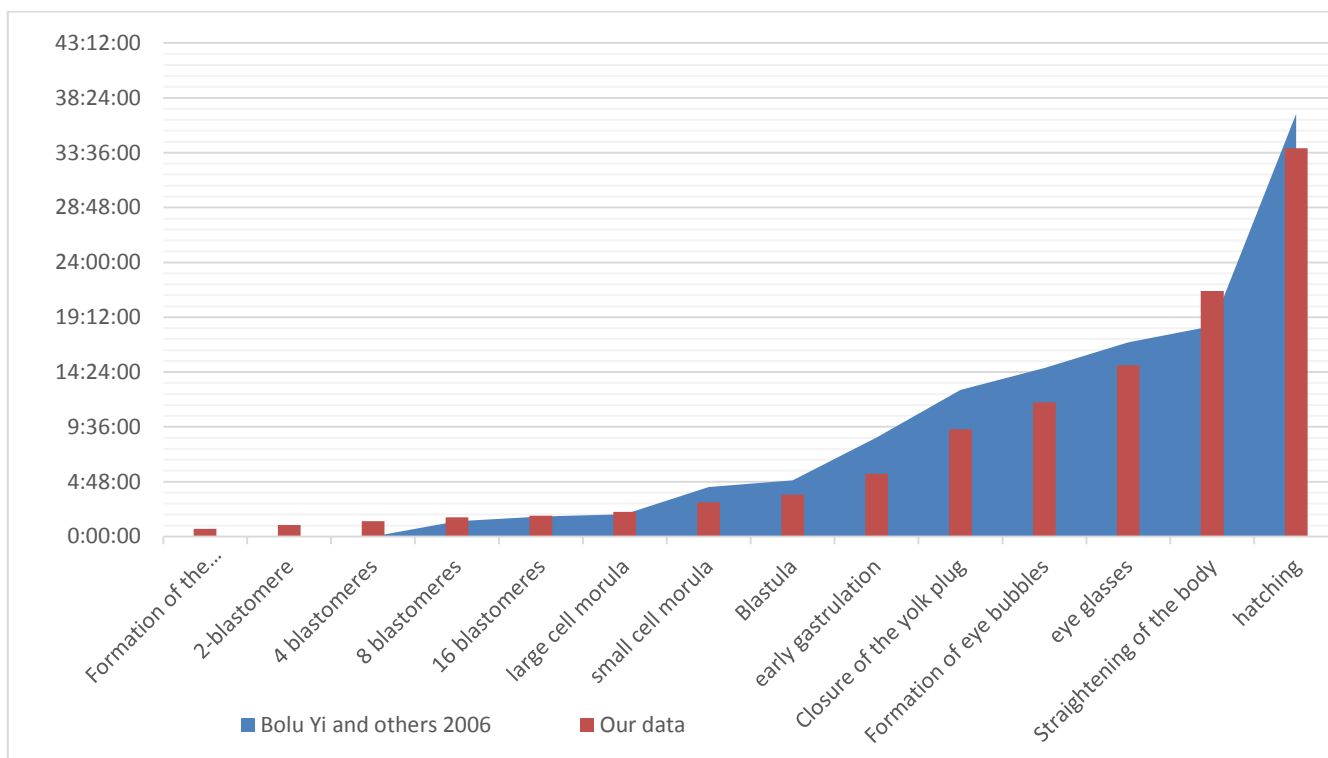


Figure 1. Embryonic development of grass carp in various conditions



In the pond fish farming of Uzbekistan, silver carp is reproduced on an industrial scale by the method of factory reproduction [2]. In the fish farms of the Tashkent region, broodstocks consist of 3–5-year-old fish, after which the fish are sold as a commodity. Thus, in the conditions of the republic, at least 10 generational changes occurred, the species adapted to new conditions. At the same time, the technology is completely based on data on the embryology of the species obtained in the late 1960s in the so-called. VI - VII zones of fish farming (i.e. in Uzbekistan and the southern part of Russia).

4. CONCLUSION

Thus, with the modern culture of breeding and methods of artificial reproduction of silver carp and grass carp in the fish hatcheries of Uzbekistan (on the example of the fish hatchery of the Research Institute of Fisheries), with artificial insemination, the passage of all stages of the embryonic period of development of objects proceeds normally in accordance with those in the regions natural distribution. The data we obtained for all species showed that in terms of quality (high rates of larval release during incubation of eggs) and development rate (embryonic and larval), the studied generations showed high results, located in the zone of the first 20-40% of all areas of the modern distribution of species. We can assume that this is the optimum zone. In our studies, according to the methodological requirements [3], we chose batches in fish reproduction not the very first in the season, but in the first decade from the beginning of the incubation campaign, that is, again, from a typical mass segment. Comparative reasoning (the length of the body of fish and the value of working fecundity) allows us to assume with a high degree of probability that the offspring obtained from fish that have matured for the second time in their lives have been studied. The obtained results showed that the working fecundity (on the example of carp and grass carp) was higher than the standard for the VII zone of fish farming of the former planned economy. In terms of the rate of development, the indicators were slightly inferior only to regions with a typically tropical climate and surpassed all other regions of a temperate climate.

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INTERAKTIBONG MODYUL SA PAGTUTURO NG FILIPINO

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ABSTRAK

Ang pananaliksik na ito ay nakatuon sa pagbuo at balidasyon ng interaktibong modyular sa pagtuturo ng mga suprasegmental. Ang diin, antala/hinto, at ang intonasyon sa pagtuturo sa kolehiyo taong panuruan 2010-2011.

Ginamit ang Research and Development Method sa pananaliksik na dumaan sa proseso ng paggawa at pagpapaunlad ng modyul na ginamitan ng teknolohiya.

Ang presentasyon ng nabuong modyul ay ginawa sa paglalapat ng power point presentation na ginamitan ng visual basic. Ito ay dumaan sa apat na proseso: pagbuo ng modyul, pagpapaunlad sa modyul, pagpapabalidasyon ng modyul at ang paggamit ng mga try-out group sa modyul.

Nagkaroon ng pinakamataas na katanggap-tanggap na resulta ang pagbuo at balidasyon ng interaktibong modyul na siyang naging daan upang malubos ang pagkaunawa sa mga suprasegmental at maging matagumpay ang pagsasakatuparan nito.

SUSING-SALITA: *Interaktibong Modyul, Suprasegmental, Power Point Presentation, Visual Basic*

INTRODUKSYON

Ang tao ang pinakamataas na uri ng nilalang ng Diyos dahil sa kaniyang kakayahang mag-isip at mangatwiran. Siya ay nagtataglay ng kaisipang makasusuri sa kaniyang paligid. Dahil dito naipahahayag niya ang kaniyang damdamin at kaalaman sa tulong ng wika. Ito ang magiging sandata niya sa pakikipagsapalaran sa buhay at maging sa pagkamit ng kaniyang mga panagarap.

Wika ang tanging kasangkapan ng tao sa pakikipag-ugnayan niya sa kapwa, sa asosasyon, sa institusyon, at maging sa dakilang Bathala. Hindi mangyayari ang kabihasan ngayon kung walang wikang magiging tulay sa paghahatid ng mga karanasan, opinyon, kaisipan at damdamin ng tao.

Ayon kay Bautista (2008), mahalagang pagsikapan ng bawat tao o ng mga mag-aaral ang pagkatuto sa wika upang maging mabunga ang pamumuhay nito sa daigdig. Dapat niyang taglayin ang mga makrong kasanayang pangwika tulad ng pakikinig, pagsasalita, pagbasa, pagsulat at panonood upang maiangkop niya ang kaniyang sarili sa iba't ibang sitwasyon ng buhay. Sa mabisang paggamit niya ng wika ay maisasalaysay niya ang kaniyang matagumpay na akademikong pagganap.

Binigyan din ng panahon upang pag-aralan ni Adigue (2022), ang ugnayan ng kuwentong pambata at kuwentong pangkalikasan. Dito naipakita na higit na natututo ang mga mag-aaral kung may interaktibong lahod sa bawat pagtuturo. Naging sentro ng aralin ay ang mga kuwentong pambata at pangkalikasan na nakapagbigay ng malaking bahagdan sa pag-unawa at interes ng mga mag-aaral upang matuto.

Gayundin sa kaniyang pag-aaral kasama si Valentino (2022) na may titulong terminolohiyang pamandemya na nasa wikang Ingles at implikasyon nito sa pag-unawa nakita niya na ang mga terminolohiya sa pandemya ay higit na binibigyan ng atensyon sa pagpapaunawa gamit ang mga phamplets, radio, telebisyon, at makabagong kagamitang magpapaunawa sa mga termino daan upang maingatan lalo ng mga tao ang kanilang sarili.

Dahil dito, lubhang mahalaga ang pagkatuto sa wastong pagbigkas ng mga salita na may tamang diin, antala o hinto at intonasyon upang maipahayag ng malinaw at wasto ang kaisipan at saloobin. Inaasahan ng kasalukuyang mananaliksik na ang



paggamit ng kagamitanng pampagtuturo, tulad ng interaktibong modyular, higit na magiging mabisa ang pagtuturo at pagkatuto ng wika.

Ang modyul, ayon kay Maayos (2008), ay nagtataglay ng mga tiyak na gawain na buo at ganap sa kaniyang sarili at iniaayos nang sistematiko at komprehensibo. Kung magkagayon, dahil sapat at buo ang modyul ang mag-aaral ang umuunlad at gumagawa ayon sa pansariling bilis, paraan at antas ng pagkatuto at panahon.

Mula sa paggawa ng modyul, nakita ng mga mananaliksik na mas epektibo ang paggamit ng interaktibong presentasyon ng modyul lalo na sa mga araling nangangailangan ng wasto at tamang pagbigkas ng mga salita.

Kaya't ang pananaliksik na ito ay nagbigay tuon sa pagsasagawa ng isang mungkahing interaktibong presentasyong modyular upang ilarawan at marinig ang angkop at tamang tono ng mga salita sa tulong ng makabagong *power point presentation*.

Ang pananaliksik ay nakatuon sa pagbuo at balidasyon ng isang interaktibong modyular sa pagtuturo ng mga suprasegmental: ang diin, antala/hinto, at ang intonasyon. Sa kabuuan sinikap na masagot ang mga sumusunod na layunin: 1) Makabuo ng interaktibong presentasyong modyular bilang kagamitang-pampagtuturo ng mga suprasegmental (ukol sa Diin, Antala/Hinto, Intonasyon); 2) Makapagpabalido ng interaktibong presentasyon ng modyul batay sa sumusunod: a) Layunin, b) Nilalaman, c) Organisasyon at presentasyon, at d) Pagsasanay at Pagsubok; 3) Magamit ang modyul sa aktwal na pagsasanay upang maipakita ang kabisaan sa pagkatuto ng mga mag-aaral sa paggamit ng suprasegmental at 4) Matukoy ang antas ng pagtanggap ng modyul mula sa try-out group.

Ang isang masusing paggamit ng kagamitang panturo sa mga araling gagamitin tatalakayin sa loob ng silid-aralan ay lubhang napakahalaga kung kaya't ang bunga ng pag-aaral na ito ay inaasahang makatutulong sa mga sumusunod:

Sa mga mag-aaral, ito'y magsisilbing impormasyon at gabay kung ano ang wastong bigkas ng mga salita at kung paano nila gagamitin ang mga ito sa iba't ibang sitwasyon ng buhay na kinahaharap niya sa araw-araw na pakikisalamuha sa kapwa. Ang kaniyang ugnayang sosyal ay mapabubuti sapagkat maiaangkop niya ang kaniyang komunikasyon sa iba't ibang istratohiyang tumutugon sa pag-unlad ng kaniyang pangangailangang pisikal, emosyonal, sikolohikal, kultural, mental at ispirital.

Sa mga guro ng wika, ito ay maaaring maging daan upang malaman ang kahinaan o kahusayan ng isang mag-aaral sa pagbigkas lalo silang maging bihasa sa pagsasalita ng wikang pinag-aaralan. Maaari rin itong maging batayan sa mabuting pagpapalano ng balangkas ng mga aralin, paghahanda sa palatuntunang pangwika at pagpili o paghahanda ng mga angkop at sapat na mga kagamitang pampagtuturo.

Sa mga administrador ng paaralan, ito'y isang makabuluhang impormasyon ukol sa kasalukuyang ipinatutupad na programa at mga bahaging kailangang mamodipika at mabago upang lalong mapaunlad ang programa at maipagkaloob ang kahandaang pagtuturong kailangan ng mga guro upang higit na mapataas ang kalidad ng edukasyon.

Sa mga tagaplano at tagapagtaguyod ng wika, ito'y magagamit na datos sa paghahanda ng mga patakaran, palatuntunan, training, seminar, workshop, at mga katulad nito para sa lalong ikasusulong at ikalalaganap ng wikang Filipino.

BALANGKAS KONSEPTWAL

Ang kompyuter ay isang motibasyon sa mga mag-aaral na nakakaragadag ng malaking interes sa kanilang pag-aaral at pagkatuto. Napapadali naman sa bahagi ng mga guro ang pagtuturo sa gayon ay madaling maipapaliwanag ang bawat aralin at di magsasawa ang mga mag-aaral sa paulit-ulit na pamamaraan o istratohiya nito.

Ang mga mananaliksik ay gumawa ng isang interaktibong presentasyong modyular na may kinalaman sa R and D Method na may apat na proseso: ang 1) Pagbuo ng Modyul, 2) Pagpapaunlad sa Modyul, 3) Pagpapabalido sa Modyul, at 4) ang paggamit ng mga try-out group sa modyul.

Ang unang proseso na pagbuo sa modyul ay may panimulang paghahanda at maaring maging daan sa pag-alam ng paksang gagawin sa pagbuo ng modyul. Ang pagtukoy sa detalyadong pagsulat ang siyang sumunod naparaan. Dito nabuo ang mga layunin, ang nilalaman na siyang pinakapaksa ng modyul at ang mga pagsubok at pagsasanay. Ibinatay sa sylabus at mga sanayang aklat sa pagtuturo ng Fil 1 –Sining ng Pakikipagtalastasan na ginagamit ng Tarlac State University.

Ang ikalawang proseso ay ang pagpapaunlad sa modyul. Sa bahaging ito ng modyul ay ginamitan na ng power point presentation na inilagay sa CD o compact disk. Ang paglapat ng mga graphics, drawings at mga special effects ang naisagawa sa prosesong ito. Ang paglalapat din ng boses ng mananaliksik sa pagtalakay ng bawat paksa ay maingat na isinagawa. Pumili ng isang mahusay na may kinalaman sa kompyuter ang mananaliksik upang madaling maisagawa ang ganitong pamamaraan ng pag-aaral.

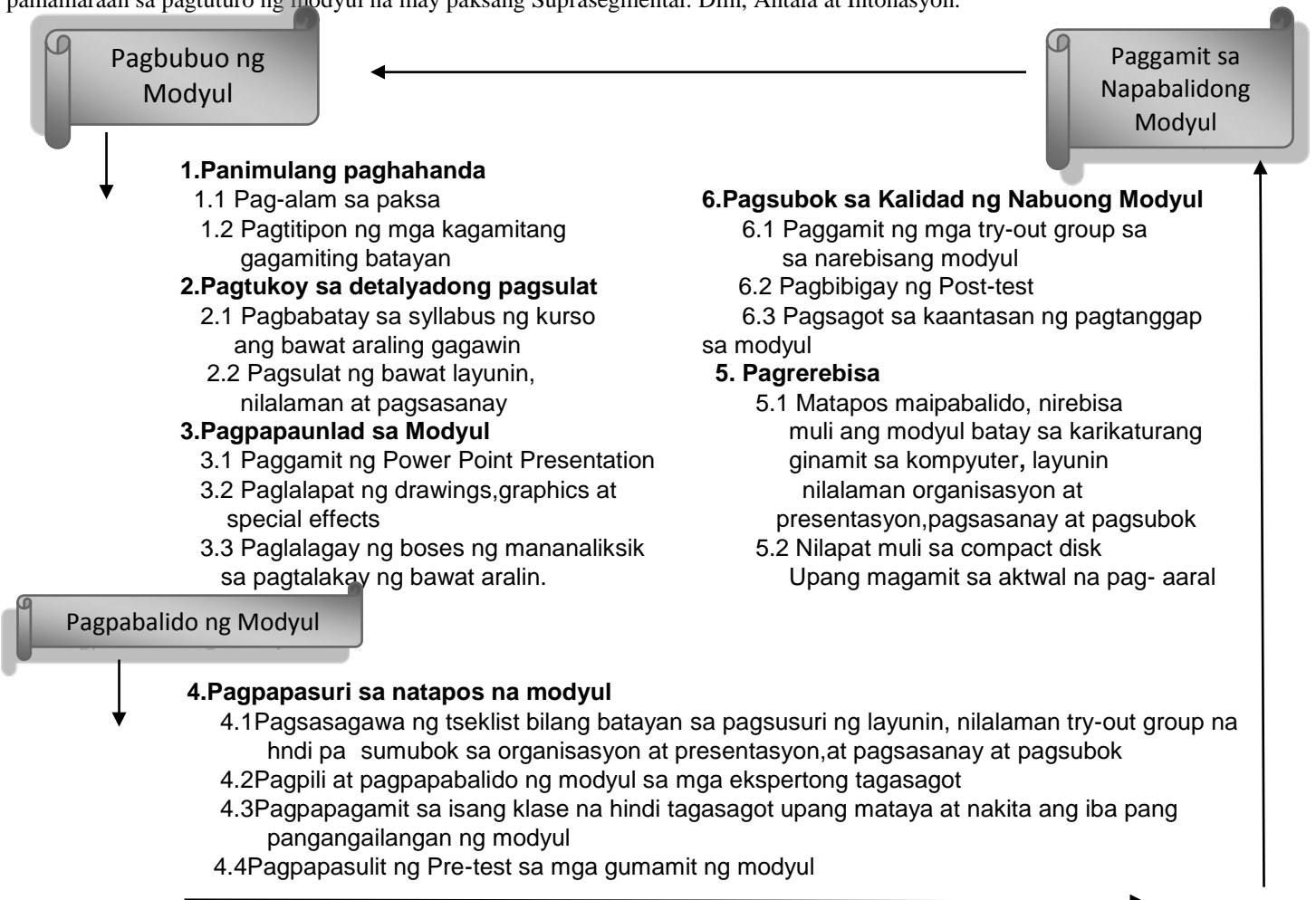
Pagpapabalido sa modyul ang ikatlong proseso. Upang matamo ang kahusayan ng modyul, ito ay ipinasuri sa apat na eksperto gamit ang checklist. Ang checklist ay kinapapalooban ng mga panukatang batay sa naisagawang modyul mula sa layunin, nilalaman, organisasyon at presentasyon, at ng pagsubok at pagsasanay.



Kasama rin sa prosesong ito ang pagsasaayos na ng mga angkop na graphics at drawings ng modyul. Anumang problema hinggil sa karikaturang naipakita na may kinalalaman sa kompyuter ay maingat na ipinaalam sa bihasa nito upang mabago at mas makapukaw-sigla sa pag-aaral at pagkatuto.

Matapos masuri ang naihandang interaktibong presentasyong modyular, ito ay nirebisang muli upang masunod ang mga angkop at tamang ayos sa pagsulat ng modyul sa gayo’y ang aktwal na pagsulat ay maiaangkop sa pampinal na pagbubuo ng modyul.

Ang huling proseso ay ang paggamit ng try-out group. Ang labindalawang mag-aaral sa kolehiyo ng edukasyon ng Tarlac State University ang siyang ginamit na mga try-out group ng pag-aaral. Sila ay napili batay sa marka ng antas ng pagkatuto sa asignaturang Filipino. Sila ang sumubok sa kalidad ng pinabalidong interaktibong presentasyong modyular sa pamamagitan ng pagbibigay ng post-test ng pag-aaral. Sila rin ang pinasagutan ng tseklist sa gayo’y maipapakita ang kabisaan ng paggamit ng ganitong pamamaraan sa pagtuturo ng modyul na may paksang Suprasegmental: Diin, Antala at Intonasyon.



Figur 1: Prosesong Daluyan

METODOLOHIYA

Ang pag-aaral ay gumamit ng *R and D method* na kung saan ang mga ito ay dumaaan sa proseso sa paggawa at pagpapaunlad ng modyul na ginamitan ng makabagong teknolohiya. Ang presentasyon ng nabuong modyul ay ginawa sa paglalapat ng power point presentation na ginamitan ng visual basic. Ito ay dumaaan sa apat na proseso: pagbubuo ng modyul, pagpapaunlad sa modyul, pagpapabalidasyon ng modyul, at ang paggamit ng mga try-out group sa modyul.

Ang pag-aaral na ito ay nilahukan ng labindalawang mag-aaral na nagsilbing try-out group sa kolehiyo ng Tarlac State University na kasalukuyang kumukuha ng Filipino 1 na may diskripsiyong Sining ng Pakikipagtalastasan, Taong Panuruang 2010-2011. Sila’y pinangkat ayon sa antas ng kanilang kaalaman o pagkatuto. Ang mga kumukuha ng pagkaguro sa Kolehiyo ng



Edukasyon ang pinili sa pag-aaral dahil ang mga ito ay mahahantad sa ganitong uri ng propesyon at magbibigay inspirasyon na rin sa kanila sa pagtahak nila ng ganitong larangan.

Kasama rin sa pag-aaral ang apat na guro at propesor sa Filipino ng nasabing unibersidad bilang tagataya ng ginawang interaktibong modyul.

Paggamit ng interaktibong presentasyong modyular na may paksang suprasegmental ng wikang Filipino ang pinakalayunin ng mga mananaliksik sa pagbuo ng modyul.

Ang mga paksa, gawain at pagsasanay ay iniangkop sa kakayahan at interes ng mga mag-aaral upang maging makabuluhan, kawili-wili at napapanahon ang kanilang pag-aaral. Ito ay iniayon sa mga kasanayan sa pagkatuto (learning competencies) na itinadhana ng Commission on Higher Education (CHED).

Mula sa CHED Memorandum Order No. 54 serye ng taong 2007, ang syllabi ng Filipino 1,2,3 ay sumasailalim sa bagong General Education Curriculum. Sapagkat ang pag-aaral ay nauugnay sa Filipino 1 na kurso ang deskripsyon nito ay akma sa kasalukuyang pag-aaral.

Ang Filipino 1 ay isang metalinggwistik na pag-aaral sa wikang Filipino. Nakatuon ito sa estruktura, gamit, katangian at kahalagahan ng wikang Filipino sa akademikong larangan kung kaya't ang pag-aaral ay isang maganda at mabisang pananaliksik para sa ganitong kurso.

RESULTA

PAGBUO NG MODYUL

Ang modyul ay kinapalooban ng mga aralin sa suprasegmental ang diin, antala/hinto at ang intonasyon. Ang bawat kaisipan at teoretikal na basehan ay hinango sa iba't ibang mga aklat ng sining ng pakikipagtalastasan, komunikasyon at wika. Ang mga halimbawa sa bawat konsepto ay orihinal na ginawa ng mananaliksik gayundin ang pagsasatinig sa loob ng bawat lektura't akda ay binosesan ng mananaliksik sa gayon malubos ang orihinalidad ng nabuong interaktibong modyul sa suprasegmental. Ang ginamit na materyal sa pagtitipon ay isang *compact disk* na siyang susing kagamitan sa paglilikom ng lektura, Pagsasatinig at mga aplikasyong makapagbibigay ng malaking interes sa mga mag-aaral. Ito ay nakapagtala ng tatlong aralin ang diin, antala/hinto, at ang intonasyon. Sa bawat aralin ay kinapalooban ng mga orihinal na akda na siyang naging lundayan ng pagbibigay aplikasyon sa bawat pagsasanay ng mga aralin. Inilapat ang akda ni Rosario Liwayway-Lingat na pinamagatang "Ang Estero" sa pagpapayaman ng mga gawain sa oral na pagtataya sa loob naman ng silid-aralan. Ginamit din ang worm-word technique sa pagkakaloob ng pagsasanay sa diin, ang kahoot sa pagbibigay naman ng pagsasanay sa anta/hinto at sa intonasyon.

PAGPAPAUNLAD SA MODYUL

Sa pagpapaunlad ng interaktibong modyul dumaan ito sa mga gurong nagtuturo na sa Filipino sa Kolehiyo upang masuri at mabasa ang laman at kabuoan ng mga lektura't akda ng interaktibong modyul ito ay nagpakita ng mataas na katanggap-tanggap bagaman ay may mga pangangailangan pa ring baguhin at muling bosesan ang ilang mga lektura sa bawat aralin na binigyang-tinig. Ang interaktibong modyul ay ginamitan na ng power point presentation na inilagay sa CD o compact disk. Ang paglapat ng mga graphics, drawings at mga special effects ang naisagawa sa prosesong ito. Ang paglalapat din ng boses ng mananaliksik sa pagtalakay ng bawat paksa ay maingat na isinagawa. Pumili ng isang mahusay na may kinalaman sa kompyuter ang mananaliksik upang madaling maisagawa ang ganitong pamamaraan ng pag-aaral. Higit na nagkaroon ng mahusay na mukha at halimbawa ang materyal upang malubos sa laan nitong gamit. Higit na kinagiliwan din ng mga guro ang makabagong kagamitan na sinaliwan at nilapatan ng makabagong dulog sa pagtuturo.

PAGPAPABALIDO NG MODYUL

Ang anomang gawain ay napaghuusay at napagtibay kung ito ay dumaan sa ebalwasyon. Ang interaktibong modyul ay dumaan sa balidasyon ng mga gurong eksperto sa araling Filipino. Nakapagtala ng 4.9 kabuoang mean sa layunin sapat upang masabing ang layunin ay sa ikabubuti't ikagagaan ng pagtuturo't pagkatuto sa mga araling suprasegmental sa Filipino.

Gayundin nakapagtala ng 4.8 kabuoang mean ang nilalaman ng mga lektura't akda ng nabuong makabagong materyal. Ang mga akda ay orihinal na isinulat ng mga mananaliksik upang maipakita ang awtentikong paggamot ng mga akdang pampanitikan ang mga akda nito'y ang "Kabiyak na Puso", "Love Quest" at ang "Paslit ang Batang Mayaman". Gayundin ang Pagsasatinig sa bawat lektura't akda ay nakapagbigay ng malaking puntos sa pagtataya daan upang ito ay matanggap at maging malikhain sa proseso ng pagtuturo ng mga aralin sa Filipino.

Ang presentasyon at organisasyon naman ay nakapagtala ng 4.5 kabuoang mean. Ito ay may interpretasyong berbal pa rin na mataas na katanggap-tanggap. Kinagiliwan ang mga aplikasyong ginamit sa power point presentation, worm-word technique at kahoot.



Sa pagtataya naman ng mga pagsasanay at pagsubok nakapagtala ito ng pinakamataas na katanggap-tanggap daan upang masabing ang mga ganitong uri ng malikhain at makabagong pamamaraan sa pagtataya at pagsusuri sa natutuhan ng mga mag-aaral ay nauugnay nang Malaki sa kanilang interes upang makakuha at magpakita ng mataas na marka matapos magamit ang interaktibong modyul.

PAGTUKOY SA ANTAS NG PAGTANGGAP

Nagpakita ng 3.7 kabuoang mean na may interpretasyong berbal na pinakamataas na katanggap-tanggap mula sa mga try-out group na kalahok. Isa lamang itong kahayagan na ang mga ganitong makabagong dulog sa pagtuturo ay higit na mahusay, malikhain at epektibo sa pagtuturo. Hindi naging kabago't bagot ang bawat aralin sapagkat ang mga mag-aaral ay nakikinig na lamang sa kanilang mga napapanood na lektura mula sa power point na ginamit at aplikasyon sa bawat pagsasanay at pagsubok.

Konklusyon

Mula sa natuklasan sa pananaliksik ang sumusunod na kongklusyon ay iminungkahi:

(1) Ang napaunlad at napabalidong interaktibong presentasyong modyular sa pagtuturo ng mga suprasegmental ay may pinakamataas na katanggap-tanggap na interpretasyon, sa gayo'y balido bilang isa sa mga kagamitang panturo sa asignaturang Filipino.

(2) Ang pagkatuto ng mga mag-aaral ay nagpakita ng pinakamataas na marka, upang matanggap ang modyul na isa sa magagamit na panturo ng mga guro sa pagtuturo ng ganitong disiplina.

(3) Ang kaantasan ng mga tagasagot ay napakataas. Ipinakita lamang na ang modyul ay isang mabisang kagamitan sa pagtuturo-pagkatuto ng mga mag-aaral na kumukuha ng ganitong asignatura.

(4) Ang modyul ay matatawag na user-friendly sapagkat maari itong magamit muli maging sa remidyal, pagpapaunlad o supplementary material sa pagtuturo ng Filipino.

Ang kongklusyon ay kaakibat na ng rekomendasyon sa gayo'y maipakita ang maaaring ikagaganda ng pag-aaral kung ito ay magiging basehan sa mga sumusunod pang pananaliksik.

Rekomendasyon

Ang mga sumusunod ay naging rekomendasyon ng pag-aaral:

1. Ang mga guro sa tersyarya ay hinihikayat na makabuo ng ganitong kagamitang pampagtuturo ng Fil 1 – Sining ng Pakikipagtalastasan, Fil – 2 Pagbasa at Pagsulat Tungo sa Pananaliksik, Fil-3 Mabisang Pagpapahayag at sa iba pang medyor sa Filipino upang mas maging atentibo at mapadali ang paghihikayat sa mga mag-aaral na matuto.
2. Ang kagamitang panturong ito ay maaaring gawin sa iba pang disiplina ng pag-aaral upang higit na mapaunlad ang pagtuturo-pagkatuto ng mga mag-aaral.
3. Ang ganitong pananaliksik ay maaaring gawin sa mas malaking bilang ng mga tagasagot gamit ang eksperimental na proseso upang maipakita ang pagkakaiba ng mga ginamitan ng interaktibong presentasyong modyular kumpara sa tradisyunal na pagtuturo.

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USES OF CONSTRUCTION AND DEMOLITION WASTE AS PARTIAL REPLACEMENT OF FINE AGGREGATE AND COARSE AGGREGATE IN CONCRETE

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ABSTRACT

Currently, Situation of Construction and Demolition waste (C&D waste) is a worldwide issue that concerns not only the construction management level of on-site managers but also the sustainable development of the construction industry. Construction and demolition wastes are widely recognized as the main waste stream in India and their recovery and recycling is an important issues in sustainable building industry development. The waste composition of construction and demolition is highly heterogeneous and influenced by various factors, including the raw materials and construction products used. The environmental performance of these materials is therefore considerably variable and, in some cases, does not comply with the regulatory limits established to ensure the protection of the natural environment. In this research paper presents an analysis of data on the environmental behavior of construction and demolition wastes and recycled aggregates in terms of their strength and durability.

KEY WORDS: - Reuse, Recycling, Construction And Demolition Waste, Building Materials, Cement

1. INTRODUCTION

Now a day India is a rapidly growing country, and their Management of waste is an environmental and social problem with marked social and technical interests, since its revaluation transforms it into new recycled material, creating a new material that is feasible for use in a second life cycle. Economical activities are required in greater efforts to reduce and prevent waste generation, contributing to the achievement of construction and Demodulation waste management 2016 waste policies, such as the Circular Economy Action Plan implemented in 2019 for promotion of the principles of sustainable development has led the governments to introduce legislation to encourage the use of recycled aggregates. Demolition sites and restoration schemes are sources of large amounts of solid waste, which today is being used as mere landfills. It includes steel, wood product, drywall, plaster, bricks tiles, asphalt shingles concrete, and different materials. Building waste recycling as coarse aggregates and fine aggregate is a modern approach for preventing environmental pollution through both reducing the stocks of waste and decreasing the use of natural aggregates.

2. MATERIALS AND EXPERIMENTAL PROJECT

The following materials were used in this research Paper: Construction and Demolition waste, Ordinary Portland cement53, Coarse aggregate, fine aggregate, Superplasticizer, and water.

2.1 construction and Demolition waste: construction and Demolished waste were collected from Dhaulagiri Kolkata. Construction and Demolished waste on being tested in our laboratory showed pozzolanic properties. Construction and Demolished waste as a pozzolanic material was used in replacement of coarse aggregate and fine aggregate. The properties of recycled aggregates are given in Table.

Properties	Value
Color	Light Brown
Specific gravity	2.35
Sieve analysis	1.93mm
Water absorption	2.85
Bulk density(kg/m3)	1560



2.2 Cement

it is the important binding material in concrete. In this paperwork we are using Ordinary Portland Cement (OPC) of grade 53. All the tests were done by carried as per recommendations of IS: 4031-1988. The properties of the cement were determined from various tests conforming to Indian Standard (IS) are listed. Shown in fig.



Ordinary Portland cement 53

S.NO.	PROPERTIES	OBSERVATION
1.	Fineness	9% residue on IS90-micro sieve
2.	Specific gravity	3.45%
3.	Compressive strength (28 days)	53
4.	Standard consistency	26.1%
5.	Initial setting time	30min
6.	Final setting time	220min

2.3 Fine Aggregate: Fine aggregate is called sand from the river or the marine environment. Fine aggregate generally consists of natural sand or crushed stone with most particles passing through a sieve of 9.5mm. Fine aggregate is intergranular materials such as sand, gravel, or crushed stone that are a product. They are also one of the raw materials that are essential ingredients in concrete. For a good concrete mix, aggregates need to be clean, hard, strong particles free of absorbed chemicals or coating of clay and other fine material that could cause the deterioration of concrete.

Physical Properties are as follow

- Specific gravity: 2.54
- Fineness modulus: 3.12
- Density: 1.64gm/cc
- Void ratio: 0.65

**Fine Aggregate**

2.4 Coarse Aggregate: Coarse aggregate occupied 63 to 72% of the volume of the concrete. Coarse aggregate is the one of important concrete materials. The coarse aggregate was retained at 4.75 mm. It can be found in rocks bed of boulders crushing. It is available in different shapes (Irregular, Rounded, Flaky, Angular) and sizes (6mm,10mm,20mm). it should be free from mud or dirt and any organic impurities materials.

**Coarse Aggregate**

2.5 Super Plasticizer: Super plasticizers are usually highly distinctive in their nature, and they make possible the production of concrete which, in its fresh or hardened state, is substantially different from concrete made using water-reducing admixtures. Conplast SP430A2: This is the name of the super plasticizing admixture manufactured by “FOSCROC Chemicals” used in this research paper.

3. MIX RATIO

The mix design is done in accordance with IS: 10262 (1982). The concrete was mixed in the pan mixer, in such a way to avoid loss of water or other material. All Mixing was done in a mechanical mixer. Construction and Demolition, Cement, coarse aggregate, sand, and other materials was mixed dry.

The following parameters were used for mix design:

- ✚ Grade of concrete = M40
- ✚ Type of Cement = OPC-53 Grade
- ✚ Brand of Cement = Ramco
- ✚ Admixture Used = Conplast SP430A2(FOSCROC Chemicals)
- ✚ Fine Aggregates =Zone II
- ✚ Specific Gravity of Cement = 3.04
- ✚ Specific gravity of FA = 2.53
- ✚ Specific Gravity of C.A
- ✚ 10mm = 2.69



- ✚ 6mm =2.63
- ✚ Moisture content of FA =less than 5%

4. RESULTS AND DISCUSSION

4.1 workability Result: The result was done in the Slump Cone apparatus. The size of the apparatus is a Bottom diameter: 20 cm, a Top diameter: 10 cm, Height: 30 cm and the thickness of the metallic sheet for the mould should not be thinner than 1.6 mm. the prescribed limit of slump is 600 mm-800 mm. The results of the workability test conducted in comparison to the prescribed limits for all the specimens are tabulated below in Table.

Sl.no	Mix	Slump Flow(mm)
1	CA 0% FA30%	683
2	CA 30% FA0%	765
3	CA 30% FA30%	740
4	CA 50% FA50%	755

4.2 compressive, split tensile and flexural strength test:

The mechanical strength of different paver block test specimens was conducted in 28days, and the results are as shown in Table.

Mix	Compressive strength (MPa)	Spilt tensile strength (MPa)	Flexural strength (MPa)
CA 0% FA30%	38.6	2.98	3.01
CA 30% FA0%	38.22	3.183	3.22
CA 30% FA30%	40.03	3.25	3.85
CA 50% FA50%	43.56	3.367	3.94

4.3 WATER ABSORPTION TEST: It is one of the important parameters when considering structures' durability. The test was conducted as per IS 1124-1974. The Materials were placed in the oven. Materials were dried in the oven and it is controlled in temperature at 110°C for 72 hours. The gap between the paver block is 25 mm to 30mm. After removal from the oven, the paver was put in an airtight container. The weight of the block was noted. Then after the materials were immersed in water for 30 hours. Then, the paver block is removed from the water tank and shaken to remove excess water. Further paver was wiped with a soft cloth to make it dry.

Sample of paver	Wet Weight	Dry Weight	Water Absorption
CA 0% FA30%	5.498	5.121	7.36
CA 30% FA0%	5.398	5.279	2.20
CA 30% FA30%	5.456	5.209	4.71
CA 30% FA30%	5.432	5.313	2.23

5. CONCLUSIONS

1. After the test results, it can be inferred that the replacement of fine aggregate and coarse aggregate by demolition waste can be recommended.
2. Blocks produced with construction and demodulation recycled aggregates presented better results in all properties. The removal of the powdery material provided greater compressive strength
3. The characteristics split tensile strength were ssatisfied.
4. Water absorption by the paving block was within permissible limit.
5. The characteristics flexural strength was satisfied.

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IMPORTANCE OF VIRECHANA IN VATARAKTA

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ABSTRACT

Vatarakta is a vitiation of vata dosha and rakta dhatu and normal flow of vata obstructed by vitiated rakta dhatu it can be merely compare with metabolic disorder gout which is a common type of arthritis due to uric acid disturbance. In ayurveda there are different causative factors, types, pathogenesis and treatment modalities are explained. Virechana karma has a less complication and is effective in vitiated pitta dosha, rakta dhatu. So here in detail about the disease is explained along with specific line of treatment, and different yogas for the virechana karma in different conditions has been explained.

KEY WORDS : *Vatarakta, Uric acid, Vata dosha, Rakta dhatu, Virechana karma.*

INTRODUCTION

In this developing era, *vatarakta* afflicts the normal living of human being by causing the symptoms like pain, burning sensation, inflammation etc. *Vatarakta* is a type of disease where *rakta* get *avruta* to *vata* and vice-versa it is mentioned by *acharya charaka* as *anonyaaavarna*¹. Due to the altered life style, different food habits and stressful life people are prone to it. *Vatarakta* can be co-related with Gouty arthritis. The prevalence rate of gouty arthritis is range <1% to 6.8% and an incidence of 0.58-2.89 per 1,000 person per year. Despite major advances in treatment strategies, as many as 90% of patients with gout are poorly controlled or improperly managed and their hyperuricemia and recurrent flares continue. Due to different *nidana sevana* different types of *vatarakta* explained, and based on *doshas* and *aashraya sthana* are *Utthana, Gambeera, ubhayaashrita vatarakta*. There are various treatment modalities explained by our *acharyas* like *Vamana, Virechana, Basti, Raktamokshana* and many more oral medications. Here an effort is made to explain how *virechana* plays the role in *vatarakta*, as the *rakta* and *pitta* present in *ashrayaa ashrayi bhavas* and *virechana* is specific line of treatment for *pitta*, so *virechana* has an important role to cure *vatarakta*.

DISEASE REVIEW

NIDANA²

Regular intake of *sankeerna ahara, adhayashana, viruddha ahara, klinna ahara, anupa mamsa, kulatha, masha* etc. And by adopting the life style habits like *achankramana, yana, plavana*, etc leads to *vatarakta*.

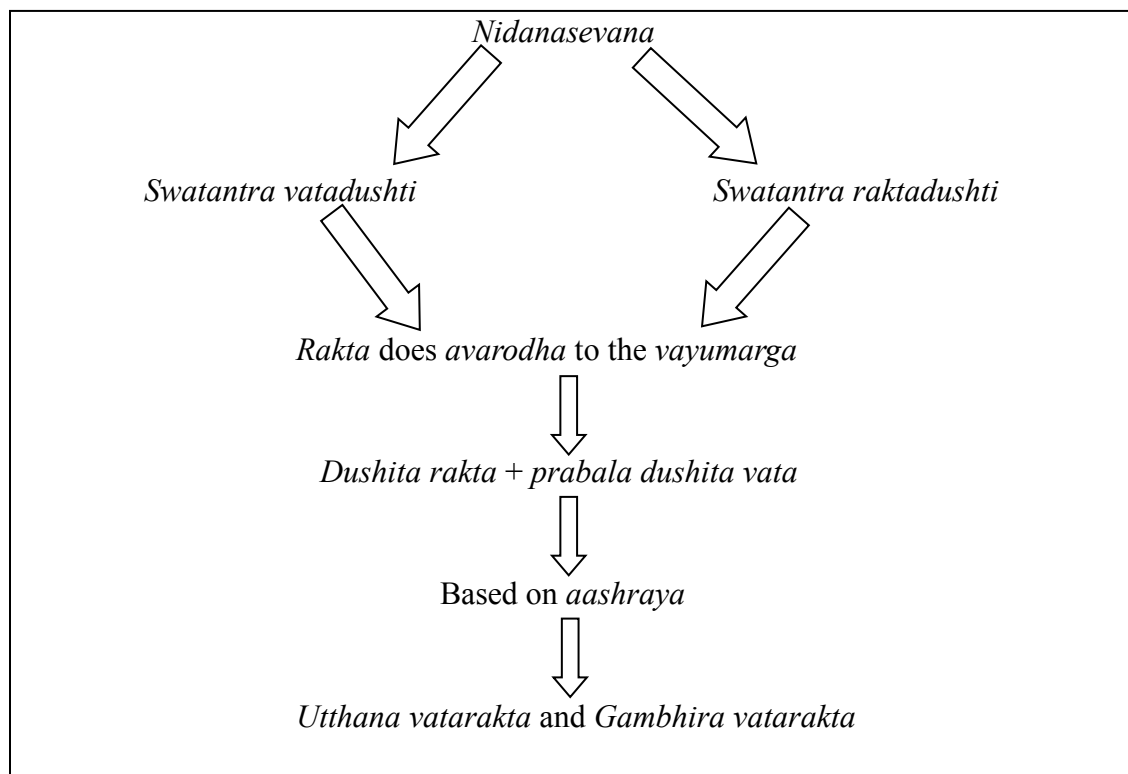
PURVA RUPA³

Excessive sweating or reduced sweating, blackish discoloration of body, loss of sensation, Looseness of joints, lethargy, pricking type of pain in joints.

**RUPA⁴**

Based on doshas are,

VATAJA	PITTAJA	KAPHAJA	RAKTAJA
<i>Sira aayama</i>	<i>Vidaha</i>	<i>Sthaimitya</i>	<i>Kandu</i>
<i>Shotha</i>	<i>Vedana</i>	<i>Gourava</i>	<i>Kleda</i>
<i>Krushna shyava varna</i>	<i>Murcha</i>	<i>Snigdhata</i>	<i>Toda</i>
<i>Shula</i>	<i>Swedaadhikya</i>	<i>Supti</i>	<i>Tamra varna</i>
<i>Sphurana</i>	<i>Trushnaadhikya</i>	<i>Manda vedana</i>	<i>Chimachimayana</i>
<i>Toda, sthambana</i>	<i>Bhrama</i>	<i>Kandu</i>	<i>Vedanayukta sandhi shotha</i>
<i>Ruksha</i>	<i>Raaga</i>		
<i>Dhamanis of anguli, andhi sankocha</i>	<i>Paaka</i>		
<i>Angagraha</i>	<i>Bhedavatpida</i>		
<i>Sheetadweshi</i>	<i>Angashosha</i>		
<i>Vedanaadhikya</i>			

SAMPRAPTI⁵ :**SADHYA ASADHYATA⁶***Ekadoshaja and Nava – Sadhya**Dwidoshaja – Yasya**Tridoshaja and Upadravayukta – Asadhya*

**UPADRAVAS⁷**

These are the *upadravas* of *vatarakta*,

- *Andria*
- *Arochaka*
- *Shwasa*
- *Mamsakotha*
- *Shirograha*
- *Murcha*
- *Mada*
- *Vedana*
- *Trushna*
- *Jawara*
- *Moha*
- *Hikka*
- *Pangulya*
- *Visarpa*
- *Bhrama*
- *Klama*
- *Anguli vakrata*
- *Daha*
- *Marmagraha*
- *Arbudha*

PATHYA AND APATHYA AHARA,VIHARAS⁸

PATHYA AHARA	
<i>Purana yava, godhuma, shali, shashtika shali</i>	
<i>Vishkara and Pratuda mamsa</i>	
<i>Channaka, mudga, masha, aadhaka yushas</i>	
<i>Go, aja, mahisha ksheera</i>	
<i>Shatavari, vetasa, kakamachi with ghrita/mamsa rasa</i>	
APATHYA AHARA	APATHYA VIHARA
<i>Katu , ushna, guru anna paana</i>	<i>Divaswapna</i>
<i>Abhishyanda ahara</i>	<i>Sasantapa</i>
<i>Lavana amla rasa anna paana</i>	<i>Ativyayama</i>
	<i>Atimaitihuna</i>

CHIKITSA**SAMANYA CHIKITSA**

Virechana ,*Bastis*, *Abhyanga*, *Pradeha* and *Pariseka* with *avidahi siddha yogas*.

Raktamokshana by using *Shruna* , *Jaluka*, *Alabu*, *Suchi*⁹.

All *panchakarma* procedures can be advised here and *raktamokshana* can be taken as 1st line of treatment¹⁰.

VISHESHA CHIKITSA¹¹:

Based on the types of *vatarakta*, *shodhana chikitsa* has been advised as,

In *Utthana vatarakta* - *Alepa*, *Abhyanga*, *Pariseka*, *Upanaha*.

In *Gambheera vatarakta* is *Virechana*, *Asthapana*, *Snehapana* is advised.

VIRECHANA

Virechana is mainly indicated in *pitta pradhana vyadhis*, here intention to take *virechana karma* is it has less possibility of complications and could be done easily because here expulsion of *doshas* occur by normal route.



➤ AVASTHAS WHICH ARE INDICATED FOR VIRECHANA

- *Gambheera vatarakta*
- *Rakta pitta ulbana vatarakta*
- *Pitta rakta avruta vatarakta*
- *Kaphaja vatarakta*
- *Kapha pitta anubandhita vatarakta*
- *Pitta pradhana vatarakta*
- *Kapha avruta vatarakta*
- *Sarva dhatu avruta vatarakta*

➤ SNEHAPAANA

After finding out the particular *avastha* for *virechana*, *snehapana* can be done with following *tailas* and *ghritas*, *Shatapaka madhuka taila*, *Guduchi taila*, *Shatapaka bala taila*, *Sahasrapaka taila*, *Jivakadi maha sneha*, *Arevatakadi siddha ghrita*, *Baladi ghrita*, *Parushaka ghrita*, *Jivaniyadi ghrita*.

➤ ABHYANGA

After formation of *samyak snigdha lakshanas*, *abhyanga* and *swedana* advised to do for 3 days, then on 3rd day *virechana karma* is advised.

Abhyanga can be done with following *ghritas* and *tailas*, *Shatadhouta ghrita*, *Mustadi ghrita*, *Padmakadi ghrita*, *Padmaka siddha ghrita*, *Guduchi ghrita*, *Mahaguduchi ghrita*, *Madhuparnyadi taila*, *Amrutadhya taila*, *Shata paaka*, *madhuka taila*, *Pinda taila*, *Madhuyasti taila*, *Shatapaka taila*.

➤ SWEDANA

These are *swedana* procedures are explained by *acharya charaka*¹², *acharya sushruta*¹³ and *acharya vagbhata*¹⁴ are – *pariseka*, *upanaha*, *avagahasweda*.

- *Pariseka* – in *sthamba*, *shula pariseka* with *ushna dravya* and in *daha* with *sheeta dravya*.
- If *shula*, *ushna pariseka* with *go*, *avi*, *chaga ksheera* with *taila*.
- If *daha*, *sheeta pariseka* with *go*, *avi*, *aja ksheera* with *taila*. with *panchmula kashaya* with *maha guduchi ghrita*
- *Upanaha* – *Yavadi churna* and *chaturvidha sneha*, *Bilwadi churna*.
- *Avagaha* – *balataila*.

➤ VIRECHANA YOGAS¹⁵

- *Dharoshna dugdha* + *gomutra* when *doshas* in *Anulomana gati*.
- *Dharoshna dugdha* + *trivrut churna* when *vata avrodha* by *pitta* and *rakta*.
- *Dharoshna dugdha* + *Eranda taila* in *Prakupita dosha avastha*.
- *Ghrita bhrishtha haritaki* or *haritaki kwata samskarita* in *ghrita*.
- *Trivrut churna* with *draksha rasa*.
- *Trivrut churna* with *go dugdha*.
- *Kashmaryadi kwatha* with *saindhava* and *madhu*.
- *Triphala kwatha* with *madhu*.
- *Mrudu virechana* by *jangala desha mamsa*, *yava*, *shali dhanya* with *ksheera*.

DISCUSSION

In *vatarakta* there is *dushana* of *rakta* and *vata dosha*. Due to *nidana sevana* there is *swatantra prakopa* of *vata* and *rakta* leads to *vata* and *rakta* get *anonya aavarna* to each other as explained by *acharya charaka*. Here 1st line of treatment is *rakta mokshana*, it removes the *avruta rakta* and allows the movement of *vata dosha* which relieves the symptoms instantly, But re occurrence of disease may occur. *Virechana* is one of the most important *chikitsa* among *Panchakarma*, which gives justified results in various chronic diseases. *Virechana karma* as a *shodhana* procedure treats the disease by acting over *dosha dushya sammurchana*. It is mainly indicated for *prakupita pitta dosha*, as *pitta* and *rakta* present in *Ashraya aashrayi bhavas* it acts over the *dushita rakta* drugs used has *Ushna*, *Tikshna*, *Sukshma*, *Vyavayi* and *Vikashi gunas* reach to the heart (*hridaya*) due to *virya* and *prabhava*, circulate through the micro & macro channels by its *sukshma* and *vyavayi* properties pervade the entire body. By the procedure liquefy (*vishyandana*) the



dosha samghata by virtue of their *Ushna guna* and break it up (*chedana*) by their *tikshana* and *vikashi guna*. The vitiated *Pitta*, *Vata* and *Rakta dosha* are expelled out through the mechanism of *Virechana Karma* and the disease process of *vatarakta* is stopped.

CONCLUSION

Virechana is important *Shodhana Chikitsa* because it not only act over *Pitta* but also on *Kapha*, *Vata* and *Rakta* as *rakta* is *sadharmi* to *pitta*. Removes *Avarita rakta* does *anulomana gati* of *Vayu* in *Koshta* & corrects *Agni Vaigunyata*.

Specially in *pitta* and *rakta pradhana*, *gambheera vatarakta virechana* is effective.

In *vatarakta* the *bala* of *vata* is more so *Sneha virechana* is helpful.

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MENTAL MODELS OF SENIOR HIGH SCHOOL STUDENTS' WRITING THROUGH LITERACY NARRATIVES

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ABSTRACT

This study aimed to explore the mental models in students' writing through literacy narratives and experiences. A phenomenological case study was utilized in conducting the research wherein purposive sampling was used in selecting the 10 participants of the study. The responses and observations were transcribed and coded. Thematic analysis was used in examining and analyzing the data. The findings of the study showed that students view writing as a systematic process; that reading improves writing, the importance of writing mechanics and process as a whole, the need to be comfortable when writing, and the hindrances in writing. The elements of good writing that experienced by the students considered for one to have a good output are specific central idea, relevant supporting details, grammar, punctuation and spelling, emotion, choice of words, sensitivity and avoidance to bias and applying elements when writing.

KEYWORDS: *mental models, writing, literacy narratives, phenomenology, language teaching.*

INTRODUCTION

Writing as a skill is a sophisticated process consisting of different steps to arrive at the final form. Although there are different types exist in writing, the content and the purposes behind them, they all do share the same process. Tribble (1996) provides the steps to writing: (a) prewriting (specifying the task, planning and outlining, collecting data, making notes), (b) composing, (c) revising (reorganizing, shifting emphasis, focusing information and style for your readership), and (d) editing (checking grammar, lexis, surface features, for example punctuation, spelling, layout, quotation conventions, references. It is referred to as a linear writing model, meaning that the continuity of each following step requires the completion of the previous ones. In other words, a writer cannot move forward to the last stage, editing, unless she/he accomplishes the preceding three.

For Nunan (1989), writing is an extremely complex, cognitive activity for all which the writer is required to demonstrate control of several variables simultaneously. This shows the complexity of the task of writing, and the clear link to the cognitive aspect that often creates difficulty to learners during their writing. Writers read their own mental version of what they planned to write, rather than the actual text on the page. Writers first compare their mental text with what they have written (Bereiter & Scardamalia, 1987). In the United States, 97% of the nation's high school graduates entered college. However, although they were native speakers of English, their writing skill was poor. For example, the Harvard faculty was distressed by the low level in English on the freshmen students' part, including upper-class students. For this reason, they sought to remedy writing deficiencies by instituting freshman English (a remedial course). The original purpose given for the almost universal instituting of freshman English in college across the country, following the Harvard model was to make up for what students failed to learn in high school, in essence (Harmer, 2001).

One of the main problems among students is the fact that many of them cannot develop their writing skills, mostly the ones who are making compositions in the second language. This has become very difficult not only for students but also for professors, because all of them are looking for good results in every single step of the learning process (Walling, 2008). In the Philippines, of the four skills in English, writing is considered to be the most complex and difficult skill to master. This difficulty, according to Richards and Renandya (2002) lies not only in generating and organizing of ideas but also in translating these ideas into readable texts. Students should be trained to pay attention to the necessary grammar while they also work on the organization by giving those words such as first, then, and finally to organize their text. Raimes (1983) states that this approach links the purpose of writing to the forms that are needed to convey a message.



In Davao City, study shows that students' most common problems in writing are on the grammatical aspect. In the grammatical aspect, students frequently commit errors in the verb aspect (tense, subject agreement, and auxiliary and linker choice) compared to spelling and punctuation aspects. According to Aperocho (2017) the two topmost reasons for committing errors in the paragraph are mother tongue interference and incomprehensibility of the grammar rules.

Writing does not come naturally or spontaneously as it is stated by White (cited in Nunan 1996) writing is not a natural activity, but it comes through cognitive effort and training instruction. Writing involves a complex interaction between a wide range of different processes. In order to avoid cognitive overload, writers have to develop effective strategies and models for managing the writing process (Flower & Hayes 1980). Furthermore, student, having trouble keeping in their minds the hundreds of writing rules and techniques offered to them by professors, fail to produce the quality of writing that had been prevalent throughout past centuries. By giving students hundreds of rules to memorize and utilize in their writing, while leaving them without a model or example of an author who successfully exemplified those rules, stressed their minds and turned the process of writing into quite a strenuous practice.

In this study, the researchers explored the mental models in writing of senior high school students at Davao City National High School through literacy narratives. Specifically, the researchers sought answers to the following questions: (1) How do senior high school students view writing as a process? (2) What are the elements of good writing as experienced by the students? (3) What mental model can be generated from the students' experiences?

METHODS

Research Design

The researchers employed a phenomenological case study. Phenomenology is known as educational qualitative research design (Ponce, 2014; Creswell, 2013, Marshall & Rossman, 2010). Husserl (2000) claimed phenomenology as a method to gain an understanding of human experience (Moustakas, 1994). In this study, phenomenology was used since it involves exploring in detail the writing experiences of the participants of the study to create patterns of information (Creswell, 2005). The participants articulated their lived experiences in writing by making their own literacy narratives and it was validated through focus group discussions. Hegel defined phenomenology as knowledge as it appears to awareness, the science of describing what one perceives, senses, and knows in one's immediate awareness and experience. The process leads to an unfolding of phenomenal consciousness through science and philosophy toward the absolute knowledge (Kockelmans, 1967, Moustakas, 1994). It also involves suspending researcher's own experiences of the phenomenon to understand the experiences of the participants from an unbiased perspective (Moustakas, 1994).

Participants

The participants of the study were ten (10) Senior High School students at Davao City National High School. These ten (10) students were selected through purposive sampling. Patton (1990) defines purposive sampling as a process of selection of information-rich participants from whom the researcher gathers a wealth of information regarding the issues central to the topic area of the research. In selecting the participants, they must be knowledgeable and experienced writers who were involved in writing competitions and school publications. To maintain the anonymity of the participants, they were asked to sign consent form stating that their identity would be kept anonymous and that the tape recordings, the notes, and the transcripts of the interviews will all be kept in a locker and would be erased after five years of the study.

Instruments

The researchers utilized the literacy narratives of the participants. The researchers used a validated interview questionnaire in gathering the data. Interview must be adopted as a tool for social research as it facilitates obtaining 'direct' explanations for human actions through a comprehensive speech interaction (Bell, 1987; Kvale, 1996; Berg, 2007).

Data Analysis

The researchers used thematic analysis in examining the gathered data from focus group discussion and literacy narratives of the participants. Thematic analysis is a type of qualitative analysis. It is used to analyze classifications and present themes (patterns) that relate to the data. It verifies the data in detail and deals with diverse subjects via interpretations. It is considered the most appropriate for any study that seeks to discover using interpretations. It provides a systematic element to data analysis. It allows the researcher to associate an analysis of the frequency of a theme with one of the whole contents (Moustakas, 1994).

**RESULTS AND DISCUSSION****Students' Views on Writing as a Process****Table 1****Emerging Themes on Students' Views of the Writing Process**

Major Themes	Core Ideas
<i>Writing follows a systematic process.</i>	Writing involves following a step-by-step process (pre-writing, drafting, revising, and editing). Writing process serves as a guide to create a composition. Pre-writing step is observed in making a composition. This process gives structure to a written composition.
<i>Reading improves writing</i>	Students view reading as one way to improve writing.
<i>Pre-writing includes generating</i>	Students generate ideas and thoughts from their past knowledge.
<i>Drafting involves translating</i>	Drafting involves translating abstract ideas into words.
<i>Editing and revising include monitoring</i>	Editing and revising involve proper monitoring of one's work to achieve a presentable output.
<i>Questioning develops creativity</i>	The use of questioning to come up with an excellent work.
<i>Importance of Writing Mechanics and Process as Whole</i>	During editing and revising, grammar and writing technicalities have been observed as part of the writing process.
<i>Being comfortable when writing</i>	Writing process develops good composition. Student writers get comfortable by following their own set of writing process.
<i>Hindrances in Writing</i>	A challenge in the writing process is that it takes time in editing, revising, drafting and pre-writing. Students affirm the occurrence of distractions during writing. Penmanship is one important points in writing; its legibility affects readers in a favorable manner. The mood to write is a key point for a writer to have a well-written composition. Knowledge and understanding the topics to write give writers a hard time especially those unfamiliar topics. Writer's block happens to these writers.

Writing as systematic process. Based on the interview and the students' literacy narratives, students view writing as a step-by-step process. A general frequency of response notes the high occurrence of the views of the students that writing is made up of different sequential steps and stages are unique in every writer. This process is presented by Tribble (1996) prewriting (specifying the task, planning, and outlining, collecting data, making notes) composing, revising (reorganizing, shifting emphasis, focusing information and style for your readership) editing (checking grammar, lexis, surface features, for example punctuation, spelling, layout, quotation conventions, references. It is referred as a linear model, meaning that the continuity of each following step requires the completion of the previous one(s). In other words, a writer cannot move forward to the last stage, editing, unless she/he accomplishes the preceding three. Raimes (1983) adds to this idea by saying a learner who is given the time for the process to work can generate new ideas, create new sentences, and new words as he plans, writes a first draft, and revises what he has written for a second draft. Most of the



participants mentioned that the process is connected which means that the writer must not fail to skip one process so that he/she can achieve a good output. As Raimes (1985, as cited in Tribble, 1996) points out the recursion of this process refers to the probability and the flexibility of the writer's going back and forth between these stages at any time during their writing. This process suggests that the writing process is interconnected; it is dynamic and complicated. White Arndt (1991) develops another approach that emphasizes on the idea that re-writing is the key to writing process. Harmer (2003) describes their system as comprising of interrelated set of recursive stages.

Writing process as a guide. The result of the qualitative interview and literacy narratives present the theme of students viewing writing process as guide in developing a composition. Most of the participants stated that this process serves as a guide or a map for them to follow. An excellent writer always follows a pattern in achieving a good output. In the study of Raimes (1983), it is beneficial for the writer to visualize the way ideas turn into points, by using patterns and of organizations such as cause-effect, problem-solution, since it would serve them as a guide. Regarding the activities and methods concerning this step, he identified some of the most well-known of these: brainstorming, discussion, reading, debate, and list making. Moreover, the other activities such as cubing and clustering may involve more careful planning, working collaboratively can help students more in achieving these tasks. Hedge (1988, as cited in Tribble, 1996) reinforces this statement by saying that cooperative writing in the classroom generates discussions and activities, which encourage an effective process of writing. The participants said that pre-writing is a reflecting stage which involves brainstorming, planning, and recalling background knowledge. In the study of Richards (2002), proficient writers plan what they are going to write. Before starting to write or type, they try to choose what it is they are going to say. For some writers this may include making comprehensive notes, for others a few jotted words may be enough. Still others may not actually write down any initial notes at all since they may do all their planning in their heads. However, they will have planned, nevertheless, just as the shopping list writer has thought at some level awareness about what food is needed before writing it on the piece of paper. Furthermore, initial stage of pre-writing, students gather their ideas, subsequently select, and outline them to write the first draft. As a follow-up of pre-writing, White and Arndt (1991) and Hedge (2005) suggest the technique of fast-writing (free writing) and loop writing. The purpose of free writing is to write without any inhibition concentrating more on content rather than on form. Hyland (2003) elucidates the application of these activities seeing their nature. For instance, it is recommended to use two first two of these activities, listing and free writing, at the very beginning of the pre-writing session briefly and with the ideas that are found it is better to move on with discussion or planning.

Reading improves writing. A general frequency of response was gathered in the views of the students when it comes to reading as one way to improve writing. Participants noted how reading enables them to learn the style and correct sentence structure from the authors. Reading journals are means for which learners can generate meaning from their knowledge with a text. This type of journal also allows also to observe how a learner is developing as both a reader and a writer. For instance, Fagan (2008) used journal as a self-reflection activity on previously taught reading approaches to check their understanding of using sticky notes to track understanding. She provided them a chance to think about how they learn, and what they do to support themselves while giving her valuable information about their understanding of the strategy as well as inspiration for future writing segments.

Pre-writing includes generating. Students stated that pre-writing involves generating ideas and thoughts from their past knowledge. Most students believe that pre-writing involves generating ideas, thoughts including images in their mind. They think of a plan before writing. They all recall their previous knowledge. Gaffield-Vile (1998, as cited in Harmer, 2001) claims that writing is a voyage of self-discovery and self-discovery helps effective learning. Raimes (1983) lists some of the most well-known of these: brainstorming, discussion, reading, debate, and list making.

Drafting involves translating. Students mentioned that drafting involves translating abstract ideas into words. Most students stated that what the ideas and thoughts are abstract. Thus, their task is to translate those in their mind to letters, words, and paragraph to have a written output. Hyland (2003) mentions several advantages of the writing tasks, an equivalent term he names for the creating tasks. This allows students the chance to express ideas and thoughts in response to the ideas of others or to a real-world/realistic situation.

Editing and revising include monitoring. The students indicated that editing and revising involve properly monitoring of one's work. The participants stated that by monitoring their work can produce excellent output. Tribble (1996) mentioned Hedge's (1988) variation of both stages by stating that the content must be accurate first, which is revising and leaving details like improving spelling, punctuation, and grammar, which is editing. Again, to intend them as similar stages to be applied successively, they are the last stage



before putting an end to the written work, in other words creating it ready to share with others or publish. In these stages, getting comment, monitoring or remarks from peers or teacher is essential, since the students modify their writing.

Questioning develops creativity in writing. The students used questioning in each phase to come up with an excellent output. The participants used questioning in each phase of the writing process to improve their work and produce a creative material. According to (Gross, 2002), the general purpose of Socrates questioning is to challenge correctness and competence of thinking in a way that acts to move people towards their definitive objective. Many scholars agree that Socrates system of questions is at the heart of critical thinking, they develop students' critical thinking skills and creativity.

Importance of writing mechanics and process as a whole. A general frequency of response was gathered among the participants with response pertaining to knowledge on technicalities in writing as important in the process. In the studies by Perl (1979) and Sommers (1980) showed that less proficient writers were frequently concerned with grammar and correctness, and this distracted them from thinking about the clarity of the ideas and the organization (Hedge, 2000). It is a good idea to read the piece of writing at least twice, considering at it in different ways. The first time the writer reads his work and skim it quickly to make sure it is correctly organized and succeeds in meeting its goals. After that, the writer can check his piece of writing for spelling mistakes and inconsistencies in grammar or punctuation (Brooks, 2004). In addition, Hyland (2003) mentions a number of advantages of the extended writing tasks, the same term he names for the composing tasks. To list some of them here: gives chances for students to create a textually cohesive, stylistically appropriate, and ideationally coherent piece of discourse for an audience.

Being comfortable while writing. Students answered that constant practice in writing helps them be more skillful and comfortable in the overall writing process. Also, every writer is unique in some areas. Kasper and Petrello (1998) also suggested that the type of response, environment and teachers' writing exercises or practices play a very significant role in decreasing writing anxiety of learners in the writing process. For the students achieve an excellent written work they must be involve in different kinds of writing activities and practices so that they may feel comfortable in every writing activity. Additionally, Beaven (1977) found that trainers who used shared experiences, discussed learners' thoughts, and requested additional information were most successful in decreasing learners' frustration thus making them feel more comfortable in the writing process.

Hindrances in Writing. From the interviews conducted, the frequency responses of the ten participants are general. Students perceive time consumption as one challenges of the writing process. Common among the participants are the occurrences of time-constraint and consciousness in writing which affect time to finish a composition. Most of the participants revealed that time management is important in writing. In the study of Graves (1994), he notes that time is a first consideration. In the same way, Atwell (1987) argues that the main principle that provides a foundation for the writing activities in the school is that writers need regular chunks of time. Fletcher and Portalupi (1998) feel that learners need regular, continuous time to write. Additionally, Graves (1994) claims that if learners fail these regular writing activities, they will miss the construction and continuity they need to maintain the flow of thoughts and creativity in their writing tasks. For Tompkins and Hoskisson (1995), Writers Workshop should comprise of a 60 to 90-minute period planned each day, and students should be engaged in independent writing 30 to 45 minutes each day. Brailsford (2002) states that writing should be a 35-minute regular block in a balanced literacy program. Learners need large amounts of time to join meaningfully in writing activities. Learners need average writing time in order to achieve what they set out to do.

Writers have also testified on having experienced writer's block. In the paper of Bergler (1950), difficulties arise due to varying factors such as the learners' inability to carry out cognitively challenging writing tasks, fear or anxiety, perfectionism, and other related influences which he first described as writer's block. Another interesting investigation involving writer's block, aside from its existence, is the influence that it incurs on the quality of writing learners tend to produce. For Jones (1985), the generalizability of the construct of writer's block in relation to performance or ability measures needs to be cautiously explained. This is because there are also varying results about the influence of writer's block on the quality of writings produced by students. For example, the study of Lee (2002) found that even great blockers can write essays of good quality. However, since writer's block is connected to both cognitive and psychological burden on the part of the experienter, it may still bring about some effects on writing quality, an idea that may be answered through exhaustive research investigations.

Furthermore, student writers suffer from lack of knowledge especially if they encounter unfamiliar topics and features in writing. The participants stated that they encounter difficulties in writing because of lack knowledge. Recalling prior knowledge will be beneficial on students' writing performance. Strangman and Hall (2004) stated that teachers may develop students' writing skill by activating their background knowledge. Also, Hailikari, Katajavuori and Lindblom-Ylänne (2008) supposed that there is a strong



relationship between prior knowledge on one hand and learning and students' success on the other hand. Moreover, students' knowledge in writing has a strong effect on the way they realize writing (Gupta, 2006). Those students had learned how to produce good writing in their schools before they entered universities.

Penmanship is also one of the issues. According to student writers, penmanship has a vital role since most works are required to be in handwritten form. The participants indicated that penmanship affects the clarity of their written expressions. In the study of Strickling (1973), the consequences of illegible handwriting would be relatively unimportant if handwriting were an end unto itself rather than a means to an end. However, this is not the case. Poor penmanship is a barrier to both the clarity of written expression and spelling competence. Graham and Weintraub (1996) suggested that there are number of ways in which the mechanical demands of handwriting may interfere with the higher order processes involved in composing text. Lastly, students' enthusiasm may be impacted because of experiences of frustration with the writing process. A related cycle may exist in written expression for students who lack automaticity in handwriting. Failure in writing is likely to result in lower motivation to learn in the future, loss of self-efficacy, development of external locus of control, and avoidance of writing tasks (Ames, 1992; Bandura, 1986; Covington, 1983).

Students also identified mood in writing as one challenge. The participants mentioned that the writer's disposition would a factor in writing. In the paper of Hogg and Vaughan (2005), it is widely accepted that attitude can be measured as the components of a tripartite model. The components of attitude are affect, behavior, and cognition. Affect refers to an emotional reaction toward an attitude object.

Hayes (2000) posits that the relationship between cognition and affect – specifically with regard to motivation – is closely interconnected. One aspect of motivation often explored in second language studies is attitude. Attitude and motivation are generally thought to have a correlational relationship; some research supports a causal relationship in that attitudes influence motivation. In general, second language writing literature strongly supports an association between writing attitude, motivation, and achievement.

Another hindrance is the distraction during the writing phase. The participants stated that there are distractions during writing. They said it affects also their writing performance. According to Allport (1924), the effects of distraction upon task performance would appear to be obvious. By decreasing the amount of time and/or attention spent on the task, distraction should impair performance. There are, however, both theoretical and empirical grounds for questioning the validity of such a conclusion. Allport (1924) in his classic work on social facilitation stated, "We work so hard to overcome the distraction incident to group activity that we actually accomplish more than we would without these hindrances" (p. 284).

Elements of Good Writing as Experienced by the Students

Table 2

Thematic Categorization of Elements of Good Writing

Major Themes	Core Ideas
<i>Well-organized</i>	A well-written composition is well-organized.
<i>Specific central idea</i>	The main topic must be clear.
<i>Relevant supporting details</i>	Supporting details must be relevant to the main topic.
<i>Grammar, punctuation, and spelling</i>	A good composition should have correct technicalities in terms of grammar, punctuation, and spelling.
<i>Expression of emotions</i>	Expression is considered as an element of writing where an individual imparts a feeling, information, or message.
<i>Use of Words</i>	The words should be appropriate to the composition.
<i>Sensitivity and avoidance of bias</i>	A composition must be sensitive to different class and groups, and there should be no bias.
<i>Applying elements when writing</i>	Students apply the elements of good writing when they are writing.



The standards featured within the common core for writing emphasize the importance of introducing the topic, stating a view, supplying reasons for support, connecting phrases and idea through appropriate word choice, and providing an conclusion (CCSS, 2010). These features are mentioned repeatedly in the research literature (Graham, Harris, & Mason, 2005). Including details that support and elaborate selected reasons also increases the quality of an essay (De La Paz, 1997). More advanced writers may also include, comparisons or contrasts related to the opinion, information about opposing viewpoints, emotional or loaded language, and information to discredit the other opinions. Selection and use of genre elements in opinion writing also requires the author to consider the possible position and knowledge level their intended audience has on a specific topic (De La Paz, 1997; Tower, 2003). Informative/explanatory texts also have genre-specific features that can be used to identify more complete compositions. Some of the features overlap or are similar to the elements in an opinion essay, where as several are unique. Again, the CCSS provide a suitable starting point for determining some of the central genre elements. For informative/explanatory texts the standards include introducing the topic, providing relevant facts, details, and definitions, using linking words, connecting relevant sections of information, and providing a conclusion (CCSS, 2010). Additional features include a 27 formal thesis statement, additional elaborations on the mentioned facts, and comparisons or contrasts to similar topics (De La Paz, 1997; Graham et al., 2005; Tower, 2003). Writing with a voice solely grounded in reality and the use of 'timeless' verb tenses may also be prevalent in Informative/explanatory texts (Donovan, 2001).

According to Hedge (2005), there is a need to organize the development of ideas or information; ambiguity in meaning must be avoided through accuracy; the writer must choose from complex grammatical devices for emphasis or focus. Finally, they must pay attention to the choice of vocabulary, grammatical patterns and sentence structures to create a feasible meaning and an appropriate style to the subject matter and readers. The participants stated that a text must free from bias and prejudice. They mentioned that a writer must become sensitive to the feelings of his /her readers. This element must be observed in composing a text. Bias can cause misinterpretation and misunderstand of a reader in a text. In the paper of Darwin (1892), he noted that he guarded against bias by making a habit of writing a memo of confuting facts or ideas as soon as they came to mind. However, he also pointed out that excessive skepticism could deter people from pursuing a potentially useful train of enquiry.

Students' Mental Model in Writing

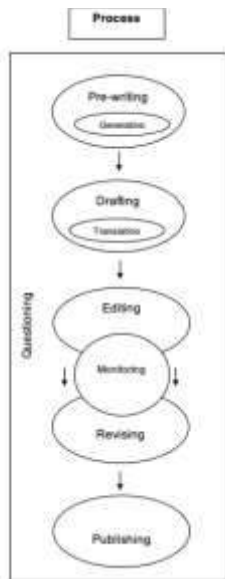
Figure 1 shows the students' mental model in writing which is generated from the literacy narratives and experiences of the students. Most students believe that writing follow a systematic process. They use this process in their writing tasks. Writing process involves pre-writing, drafting, editing, revising and publishing. This is observed as the responsibility of the student where she/he is simply expected to put pen to paper to *generate ideas* via techniques such as free writing and brainstorming.

In *pre-writing stage*, the students make a detailed plan; it is an act of building internal image or representation. In this pre-writing stage also includes the act of *generating* ideas, which involves retrieving relevant information from long-term memory by *questioning*. Starting to write an essay is a difficult thing. Even the most fluent writers need time to generate ideas and to plan what they are going to write. Students are no different. They should be given enough time to think when writing a narrative, offering an opposing view on a topic, or writing letters. The students work in pairs to understand the task and generate ideas together. Collaboration makes generating ideas more enjoyable and productive. The students also used the method of organizing in creative thinking and discovery since it is capable of grouping ideas and forming new concepts. There are ways to organize their generated ideas: through planning in groups, asking strategic questions (questioning), organizing points in a hierarchy of importance for presentation, highlighting essential information, sequencing given information, and sorting and matching ideas.

In *drafting stage*, the students mentioned that this phase includes *translating* which means the act of putting thoughts into visible language. The students in this process transcribe or write the ideas. The information created in planning may be characterized in a variety of symbol systems other than language. Even in drafting, the students would use questioning to ensure that their ideas and thoughts are related to the given topic. Thus, in this phase, the students' task is to translate a meaning into words. Furthermore, they can write easily if they have read more texts that are related to the topic. The students consider *reading improves writing*. The act of *translating* requires the writer to juggle all the special demands of written English. For some inexperienced writers, this problem may overwhelm the limited capacity of knowledge. Since writing requires skill to follow a process, the writers must keep on practicing to improve the skill and to be more *comfortable when writing*.



Figure 1



In *editing* and *revising* phases, these stages include *monitoring* the standards of literary genre for aesthetics, the achievement of rhetorical effects (pragmatics), and various metalinguistic judgments (spelling, word choice, grammar, cohesion). *Editing* can also be done by allowing the students to answer the questions that are related to the organization of their written work. Tribble (1996) lists some of the essential questions for writers: Is it properly organized on the page? Is the information presented in a clear, logical order? Have you put in all the information your reader needs? Have you put in unnecessary information? Hence, *questioning* is also present in editing and revising.

In *revising* stage, the evaluation of methods to enhance what evaluative assessments have found deficient and often cognitively complex, particularly at the entire text level. Often the students have available variety of ways to make the text come closer to evaluative self-standards or those of critics (Collins & Gentner, 1980; Elbow, 1981). In revising phase, the task is not simply correcting errors on a paper but rather it should concentrate is to have a positive attitude about writing and having feedback. The learners' attention should attract to the fact that their drafts are not final. After the students have written their work, it needs to be reviewed and evaluated. Learners who are unused to process writing will view revision as a sign of failure if not handled properly. In editing and revising stages, the students value *importance of writing mechanics and process as a whole*. Lastly, *publishing* is reproducing the complete outputs of the students. The student is considered both as a learner and as a writer, and the purpose of writing is communicating with the others through his/her written production. (Hayes, 1988).

In the study of Hayes & Flowers (1980), writing mental model involves among three basic processes: planning, which included generating ideas, organization and goal setting as components; translating plans into text; and reviewing, which included reading and editing as components. A significant feature of the model, which distinguished it from a traditional product-based view of writing as a linear process of plan-write-edit, was the recursive nature of the process. The students have been using common sequential process of writing. These are pre-writing, drafting, editing, revising and publishing. Through this systematic and profound methods, the outputs would have acquired the major elements of writing which comprises of being well-organized, having a specific focal idea, strong supporting details, proper usage of writing mechanics, written expression, selection of words, degree of sensitivity and objectivity and its application.

Students mentioned planning stage have to be established properly, in order to have a *well-organized* output, which means that the structure and organization of the paragraph are well developed. If the stages of pre-writing and drafting would be executed correctly, the students may be able to emphasize a *specific central idea* and provide *relevant and supporting details*. If editing and revising would be applied, *grammar, punctuations and spelling, choice or words, biases* will be monitored and, checked appropriately.

CONCLUSION

The results reveal that the views and experiences of the participants are writing as a systematic process, reading improves writing, importance of writing mechanics and process as a whole are important, being comfortable when writing, and there are hindrances in writing. The elements of good writing experienced by the students are to have a specific central idea, relevant supporting details, good grammar, correct punctuation and spelling, expression of emotion, choice of words, sensitivity and avoidance to bias and applying when writing.

The findings show that the views and experiences of the participants are as a systematic process, reading improves writing, importance of writing mechanics and process as a whole are important, being comfortable when writing, and there are hindrances in writing. This implies that the students follow common process in writing, pre-writing, drafting, editing, and revising. They engage themselves more on reading different books to enhance the content of their outputs. They also give to value the writing mechanics such as correct use, grammar, organization of thoughts and ideas, unity of paragraph. The students find ways to be more at ease while doing their writing tasks. Even though, they become more familiar with process of writing; they still encounter hindrances.

Furthermore, the elements of good writing experienced by the students are to have a specific central idea, relevant supporting details, good grammar, correct punctuation and spelling, expression of emotion, choice of words, sensitivity, and avoidance to bias and applying when writing. This means that the students can judge and evaluate good written works. They can monitor the content, structure and paragraph development of their work. They know how to apply these elements so that they can produce excellent outputs. In addition, the participants consider these elements important in identifying effective and excellent written outputs every



writing task. The elements would also serve as our guide in producing good texts. The reader would be able to understand the message easily if these elements exist in a text.

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THE POTENTIAL USE OF BACTERIA FOR THE BIODEGRADATION OF PLASTIC WASTES

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ABSTRACT

In this paper, the study focuses on the analysis of [1] the potentiality of plastic-eating bacteria as a leading solution to the severe problem of waste management that results in Global Warming by which plastics are one of the most significant contributors, and [2] its types, species, and effectiveness on different kinds of polymers.

Petrochemical-based plastics, also known as just conventional plastics, are composed of long-chain molecules called polymers. Polymers are primarily non-biodegradable, meaning they cannot be broken down naturally. Their chemical structure is highly complex and does not resemble any of the natural organic compounds that microbes evolved to break down, providing them far greater resistance to natural breakdown. By then, the mass production of plastics for specific industrial applications branched out, which has a radically dominant usage, including providing protection, safety, and increased usability.

Researchers have discovered that certain microorganisms have the properties and characteristics of being biodegradable. This study focuses on identifying and characterizing enzymes and metabolic pathways used by these microorganisms to degrade plastic, which could be used to improve the efficiency of plastic degradation on a larger scale and to develop new biotechnology applications.

Evaluating the effectiveness and feasibility of using plastic-eating bacteria for biodegradation to establish the optimal environments for bacterial growth and plastic decomposition, as well as the limitations and challenges. This research can be carried out through laboratory experiments and field studies in which the development and activity of these bacteria are monitored and evaluated under dynamic parameters. Furthermore, the investigation is recommended to analyze this approach's economic sustainability and scalability, including the cost of developing and utilizing these microorganisms and the potential for growing international commercialization.

INTRODUCTION

Amid the progressive industrial revolution, synthetic plastics manufacturing was plumped up for a broader-scale production used for industrial applications in the 1950s, paving its way to unimaginable mass production. There are several distinctive properties of plastics, such as low cost (Balakrishnan & Sreekala, 2017), lightweight (Francis et al., 2017), flexibility, durability (Callister, 2016), strength, user-friendly design, and fabrication capabilities (Balakrishnan & Sreekala, 2017), leading them to become conventionally utilized over other materials in many fields and become ubiquitous in modern society. Worldwide plastic production has hovered around 30 million metric tons (Mr. McGuire, 1967) since its inception. In 2016, global production had drastically transcended tenfold to 335 million metric tons. However, if current trends precede, the annual production will likely surpass 12 billion metric tons by 2050.

Petrochemical-based plastics, also known as conventional plastics, are composed of long-chain molecules known as polymers that are 'mostly' non-biodegradable, meaning they cannot be broken down naturally. Generally, their chemical structure is exceedingly complex and does not resemble any of the natural organic compounds that microbes evolved to break down, providing them far more resistance to natural breakdown processes, including weathering, UV radiation, and oxidation. The biodegradation rate of petrochemical-based plastics is substantially influenced by external factors such as



plastic-type, environmental conditions, and biodegradation rate (Singh & Sharma, 2008). Although plastics have become a necessity, their massive production volume has outgrown most artificial materials and has been under environmental scrutiny.

In 2019, the packaging industry surged 40% of the industrial sector, which is radically dominant in terms of utilization, including providing protection, safety, and greater usability. On the other hand, 16% contributes towards building and construction, illustrating that the fundamental properties of plastic are compatible with construction materials. Using certain traditional processes, such as landfilling and incineration, may result in similar environmental degradation, and they may also be far more expensive to handle (Krueger et al., 2015; Song et al., 1998). Furthermore, current trends toward the production of biodegradable plastic have resulted in a reduction in environmental contamination caused by plastic discharged into the environment. (Ioakeimidis et al., 2016; Shima, 2001)

Several researchers have discovered various microorganisms with biodegradable characteristics in plastic. Considering their growth settings, certain bacteria are specialized to destroy chemically and structurally matched polymers. Through vast breakthroughs, several species of plastic-eating microbes that are superficially effective in breaking down non-biodegradable plastics, such as the genus *Pseudomonas putida* (Nikel & De Lorenzo, 2018), can degrade polyethylene (PE), *Stenotrophomonas panacihumi* (Jeon & Kim, 2016) can degrade polypropylene (PP), *Pseudomonas otitidis*, *Acanthopleuribacter pedis*, *Bacillus cereus* (Anwar et al., 2016) can degrade polyvinyl chloride (PVC), *Rhodococcus ruber* (Mor & Sivan, 2008) polystyrene (PS), and *Thermobifida fusca* (Müller et al., 2005), *Thermobifida halotolerans* (Ribitsch et al., 2012), *Thermomonospora curvata* (Wei et al., 2014), *Saccharomonospora viridis* (Kawai et al., 2014), *Comamonas testosteroni* F6 (Gong et al., 2018), *Streptomyces* species (Farzi et al., 2019), *Nocardia* species (Sharon & Sharon, 2012), and *Ideonella sakaiensis* 201-F6 (Yoshida et al., 2016) polyethylene terephthalate (PET), the most widely used in large-scale. Through the biodegradation process, the plastic-eating bacteria release enzymes called plasticizers. These enzymes can break down the plastic polymer's chemical bonds and then convert them into smaller molecules, which can be utilized as their source of energy and nutrients.

This research on plastic-eating bacteria has primarily focused on identifying and characterizing enzymes and metabolic pathways used by these microorganisms to degrade plastic, which could be used to improve the efficiency of plastic degradation on a larger scale and to develop new biotechnology applications, such as bioremediation and bioplastic production. Given the circumstances of plastic pollution, bioremediation must be scaled up for industrial and environmental purposes, vastly clearing up large-scale contaminated regions. Additionally, this diminishes the fabrication of virgin plastics, which may be recycled to manufacture new plastic products.

The most well-known and widely studied plastic-eating bacteria is a strain of *Ideonella sakaiensis*, which has been proven to be superior at breaking down PET plastics, which are the most largely unusable, at temperatures between 30 degrees and 50 degrees Celsius and a range of pH levels. This robustly can keep up as its enzyme, named PETase, was found to break down PET up to 20 times faster than a naturally occurring enzyme found in bacteria.

Scaling up its utilization tends to be challenging, such as limited availability, slow degradation rate, and scalability. These are promisingly a magical silver bullet solution, optimizing its role in mitigating plastic solution way more efficiently.

OBJECTIVES

The main focus of this paper is projected to be the investigation of the potentiality of plastic-eating bacteria as a solution to the problem of waste management. Moreover, the primary purpose of this paper is solely to pursue these objectives:

- 1.) Define and give a detailed overview of a plastic-eating bacteria.
- 2.) To differentiate and highlight the degrading mechanisms among various microorganisms capable of decomposing petrochemical-based polymers.
- 3.) Substantiate the use of plastic-eating bacteria as a potential solution to the serious problem in waste management.

METHODOLOGIES

In this study, the researchers used a systematic literature review approach to investigate research questions. The approach involves identifying, evaluating, selecting, and combining relevant research evidence and arguments related to the research questions. The systematic aspect of this method refers to the fact that a consistent design is followed and the process is clearly communicated. In essence, a systematic literature review is a study of existing research, using the same methods as those used in primary research studies.



Google Scholar, a well-known search engine, was the main resource used in this analysis to find pertinent research. The reason the researchers selected it is that it has reliable and pertinent educational research repositories. The initial search results yielded more than 100 potentially relevant papers using at least two combinations of the chosen keywords, with the keywords being "Plastic eating bacteria," "biodegradation," "synthetic plastics," and "plastic pollution." The dataset was constructed by applying predefined criteria to find studies on the bacterial biological degradation of synthetic petroleum-based polymers. The articles employ a comprehensive approach, including an updated list of all previously identified bacteria assumed to degrade synthetic plastics, determining and defining the best methods for assessing biodegradation, critically evaluating previous studies, and proposing future research directions on polymer biodegradation to support better development of biodegradation technologies.

RESULTS AND DISCUSSION

In 1988, the first introductory concept of degrading microbial bacteria was first reported in a scientific study, which found that a strain of bacteria called *Pseudomonas aeruginosa* can degrade polyethylene, a prevalent type of plastic. As the years have progressed, multiple other strains of bacteria have been thoroughly found to have the ability to depolymerize synthetic plastics.

On the verge of vast progressive breakthroughs, several factors implicate the exponential evolution of plastic-eating bacteria. First, one of the factors is natural selection. This has been a critical process by which it firmly supports the bacteria's environmental adaptation, affecting their longevity and high spontaneous reproduction rates under such harsh environments. The objective of driven variation is to extract the microorganisms' potential to the utmost degree, acting as the best filter to select the most advantageous traits. Furthermore, protein engineering modifications of enzymes tend to modify bacteria's genetic code to make proteins with newly enhanced functionalities, enhancing the stability, specificity, or activity of these enzymes and making it more straightforward for the bacteria to disintegrate plastic. This biocatalyst intends to promote in a much more structured and sustainable way without using hazardous chemicals or producing unwanted byproducts. This thrivingly increases bacterial evolution rather than natural evolution since the alterations made to the bacterium's genetic sequence are more thoroughly and precisely controlled, providing the bacteria with more excellent, efficient, and effective plastic breakdown capabilities. Additionally, the environment exasperates selection pressure. Amidst worsening environmental degradation, technological application for the constructive development of a new diverse selection of strains of plastic-eating bacteria serves as a band-aid solution for large-scale bioremediation by becoming increasingly well-adapted to degrading plastic and leveraging it as a food source.

Different biodegradation processes have been classified based on how plastic polymers are addressed systematically. This process is frequently a mix of enzymes generated by bacteria and general mechanisms. Adsorption is a method through which bacteria attach to the surface of the plastic and form a biofilm. This is a crucial phase in plastic biodegradation because it allows bacteria to carry out their metabolic activities and break down the plastic. A biofilm is a complex community of bacteria protected from environmental stresses by a protective matrix of extracellular polymeric substances (EPS). Furthermore, monomer utilization facilitates the breakdown of plastic waste into much smaller units of biodegradable polymers such as monomers. Bacteria can transform plastic into biomass and metabolic products by breaking it down into its constituent monomers, providing a sustainable waste management alternative. It may also be utilized as a feedstock for manufacturing new plastic, filling the loop in the plastic cycle.

PET may be biodegraded by some bacterial isolates, including *Pseudomonas fluorescens* and *Sphingomonas*, by breaking down its monomers into simple molecules. PET plastic biodegradation usually begins with bacteria creating enzymes that break down the plastic into smaller fragments, allowing the bacteria to access and consume the plastic more effectively. PE (Polyethylene) and PP (polypropylene) are also commonly biodegraded by bacteria but slightly slower than PET biodegradation. These plastics are made up of shorter monomer chains and are more resistant to degradation than PET. Certain bacteria species, such as *Alcaligenes faecalis* and *Comamonas testosteroni*, can biodegrade PE and PP.

Most petro-plastics cannot be degraded by certain species of plastic-eating bacteria, although some studies have found that almost all synthetic plastics can be microbiologically degraded. For instance, polyvinyl chloride is highly resistant to degradation, which can be degraded by *Pseudomonas otitidis*, *Acanthopleuribacter pedic* and *Bacillus cereus* (Anwar et al., 2016). However, further adaptive study and development are needed to optimally enhance the pace and amount of gradual deterioration.



Ideonella sakaiensis bacteria have the potential to substantially reduce plastic waste pollution since they can absorb polyethylene terephthalate (PET), the significant component of plastic, in just six weeks. This hydrolyzes PET using two enzymes and a significant chemical intermediary to produce the essential building blocks for development. These bacteria can produce safety secretions from PET, which they also require for metabolism. Nevertheless, these bacteria have a limited range of environments. The DNA of *Ideonella sakaiensis* may be changed using genetic engineering techniques to add genes from *Azotobacter* sp., allowing them to grow in habitats such as soil and water where there is typically much plastic debris. Since it removes the location-based barrier on *Ideonella sakaiensis*, this combination is predicted to optimize the bacteria's potential. Consequently, it is feasible to sufficiently deal with the problem of plastic waste without damaging the environment, bringing sustainability to both nature and human life.

Through the analysis of genomic data obtained directly from an environmental sample, metagenomics enables the study of all microorganisms, regardless of whether they can be cultured. It explicitly shows the study of microbes in their natural habitat, which includes the intricate microbial communities in which they often dwell. It enables species identification and knowledge extraction regarding the functioning of microbial communities in their natural setting. After metagenomics, DNA has been cloned and expressed in a heterologous host, and function-based screenings can be used to find novel proteins of industrial interest encoded by the genes of previously inaccessible microbes.

It is best to conduct a metagenomic study of the microbial population involved in plastic biodegradation to determine the composition of the microbial community and predict the capability of in-site biodegradation advancements in sequencing technology and bioinformatics analysis has helped to accelerate metagenome screening. It enhances the identification of the broad microbial population and allows the mining of polymer degradation genes or enzymes. The discovery of new plastic-degrading enzymes increasingly relies on a culture-independent technique, such as metagenomics.

Furthermore, there are underlying pre-treatment strategies for raising the surface area poised to be destroyed by enhancing the catalytic activity of plastic-eating bacteria. The first is shredding, which refers to small fragments of shredded plastic particles. It allows bacteria to disintegrate in a single location, which makes it simpler to decompose. Second, the ultrasonic treatment utilizes high-frequency sound waves to break the plastic into smaller fragments, allowing the bacteria's enzyme to destroy it over a greater surface area. It induces mechanical stress in the solution, which disrupts the structure of the plastic and improves the mixing and mass transfer of the bacteria and plastic, hence accelerating the breakdown rate. Third, chemical treatment can weaken plastic bonds, exposing and emulsifying the plastic in an acid. Ultimately, heat treatment acts as a critical instrument in maximizing the breakdown of plastics, but heat treatment settings must be closely regulated to inhibit any detrimental effects on bacteria. These pre-treatment techniques broaden and scale up the effectiveness of biodegradation, making it a far more viable solution to waste management.

Several potential applications need to be applied in industry and environmental management. In the industrial aspect, additives can be added to the plastic during manufacturing to improve its properties, such as making it more durable and flame-resistant. However, some additives can also make the plastic more resistant to degradation by bacteria.

On the other hand, some additives can boost the degradation of plastic-eating bacteria. For instance, the addition of nutrients such as nitrogen and phosphorus can provide the bacteria with the energy and building blocks they need. Also, adding surfactants, compounds that reduce the surface tension of liquids can increase the efficiency of plastic degradation. Yet, additives' impact is complex and depends on the plastic, bacteria, and additives' specific properties.

Given the worsening and deteriorating plastic pollution, bioremediation on a large scale is viewed as one of the environmental measures. It is a natural and sustainable technique that relies on microorganisms' biological activity. Compared to alternatives, more energy-intensive processes, such as mechanical and chemical treatments, make it more ecologically friendly. It also degrades plastic trash into smaller, biodegradable components, minimizing its environmental effect and assisting in the cleanup of contaminated areas. Furthermore, when compared to alternative waste management and environmental remediation techniques, it might be a cost-effective solution. Eventually, it may be integrated with other treatments, such as heat and chemical treatment, to increase process efficiency and degradation.

Plastic pollution is one of today's most pressing environmental problems, and its influence escalates daily. It is critical to address the growing plastic pollution problem to offset its detrimental impacts and ensure a cleaner, healthier, and more sustainable future. This necessitates a multifaceted strategy that entails lowering plastic production and usage, improving waste management methods, and investing in alternative material research and development. Besides, increasing



public awareness of the problem and promoting individual actions such as limiting plastic usage and adequately disposing of plastic waste will help lessen the impact of plastic pollution and safeguard the environment for future generations.

CONCLUSION

This research intended to broadly emphasize the all-inclusive importance of plastic-eating bacteria, destabilizing the different prevalences of synthetic plastic pollution. The general mechanisms of plastic-eating bacteria involve the depolymerization of plastic polymers into smaller biodegradable components. Different plastic-eating bacteria are specifically designated into specific types of plastics since not all types of plastic can be degraded by bacteria, as some plastics have biochemical and structural characteristics resistant to degradation. This unequivocally unveils their diversity for the potential for biotechnology to play a role in addressing the plastic waste problem through natural selection. The adoption of metagenomics, which is bound to delve into an analysis of both culturable and unculturable microorganisms, will contribute to finding bacteria and biocatalysts with the potential for plastic biodegradation.

Through propagation in the production of innovative plastic polymers with enhanced biodegradability, the design of microbial cell factories with better breakdown efficiency under different conditions, and the modification of enzymes through protein engineering. Furthermore, the vast implementation of such pre-treatment techniques and additives that affect the microbial breakdown of synthetic polymers is essential since it tends to provide the energy and building blocks they need and increase the surface area of the plastic, making it more accessible for the bacteria to degrade. A further thorough study in this sector is anticipated to eventually evolve into viable bioremediation that can be established on a vast scale, given the unending capacity of bacteria and their continuing versatility in a dynamic environment. Thus, more study is needed to evaluate a wide range of suitable alternatives capable of degrading non-biodegradable plastics.

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LANGUAGE SKILLS, ECHOIC RESPONSES AND ACADEMIC ACHIEVEMENT AMONG CHILDREN WITH AUTISM SPECTRUM DISORDER IN SPECIAL NEEDS SCHOOLS IN RIVERS STATE, NIGERIA

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ABSTRACT

This study investigated the relationship between language skills, echoic responses and academic achievement among children with autism spectrum disorder in special needs schools. The study adopted a correlational survey design. Two research questions and two corresponding hypotheses were raised and formulated to guide the study. The population for this study consists of all 80 male and female pupils diagnosed with ASD in seven special needs schools in Rivers State. The research instrument used in this study is a modified four-point Likert type scale questionnaire titled “Language Skills, Echoic Responses and Academic Achievement Questionnaire” (LSERAAQ). Cronbach Alpha statistics was used to estimate the reliability of the instrument and the reliability coefficients of 0.81 for language skills, 0.78 for echoic responses and 0.92 for academic achievement were obtained. Data was collected and analysed using simple regression, mean and standard deviation and independent t-test at 0.05 alpha level of significance. From the data analyzed, it was found that language skills significantly relates to academic achievement while echoic responses, have no significant relationship with academic achievement among children with ASD in special needs schools. Based on these findings the following recommendations were made: Teachers, caregivers, and parents of children with autism spectrum disorder (ASD) should encourage language skills by cutting down on the potential for echoic repetition through the use of visual cues in asking choice questions instead of open-ended questions such as the “Wh” questions as this will help them learn how to answer questions without much repetition.

KEYWORDS: *Autism Spectrum Disorder, Language skills, Echoic responses, Academic achievement.*

INTRODUCTION

Academic achievement is commonly measured with examinations that assess important procedural knowledge such as skills, and declarative knowledge such as facts which student have learnt (Engel and Bennett as cited in Kpolovie et al. (2014)). It is used interchangeably with academic performance and indispensable in every formal educational institution. It also pertains to scholarly human activities conducted in a formal educational environment. Academic achievement has been the subject of much scrutiny in past years and the inclusion of students with disabilities in schools has complicated matters as these students may not always participate or be included in the traditional measures of achievement (Thurlow et al., 2005).

Autism Spectrum Disorder (ASD) has for decades been identified as a lifelong neurodevelopmental disorder with profound implications for intellectual ability and psychological functioning, general ability, and life outcomes in many children and families around the world (Howlin et al., 2014). In Nigeria, ASD affects about 200,000 to 380,000 families and is regarded as one of the top three disorders affecting children in the country (U.S. Diplomatic Mission Nigeria, 2015). The word “autism” has its origin in the Greek word “autos” meaning “self”, which is why children with ASD are often described as being self-absorbed and socially withdrawn, with a limited ability to successfully communicate and interact with others. ASD begins in early childhood and lasts throughout a person’s life, although symptoms may improve over time in most individuals. While some children on the autism spectrum show signs of future problems within the first few months of life, others may not show symptoms until 24 months or later. Most children on the autism spectrum seem to develop typically until around 18 to 24 months of age and then stop gaining new skills or lose the skills they once had (Centers for Disease Control, 2014).



According to Keyton (2011), communication is the activity of conveying information through the exchange of ideas, feelings, intentions, expectations, perceptions or commands by speech, writing, gestures and other means between two or more participants. Communication is an essential part of everyday life and encompasses the exchange of messages, thoughts, feelings, and information from one person to another. For an exchange to occur, someone has to express an idea (expressive communication) and at least one person has to receive and understand it (receptive communication). While these processes are interrelated and function together to create a communication exchange, each requires its own set of sub-skills and needs to be considered separately. Communication skills are made up of three (3) different components namely; Social communication, verbal communication and non-verbal communication. However, the focus of this study is on verbal communication which comprises language skills, echoic responses alongside academic achievement among children with ASD.

Language is one of the biggest barriers confronted by children on the spectrum with approximately one third of individuals remaining nonverbal throughout their lives (Seymour, 2017). According to Lal and Sanghvi (2015), the major difficulties faced by children are in encoding meaning relevant to conversations, meaningful interpretation of verbal messages, semantic confusion specific to temporal sequencing, and poor sensing of semantic relationships. In social interactions, language serves as a representation of one's thoughts, feelings, perceptions, ideas and beliefs, allowing one to be able to convey these to others. Successful communication involves the effective and appropriate collaborative processing of receptive (i.e. listening and reading) and expressive (i.e. speaking and writing) language, with the different language domains such as phonology (i.e. the speech sound patterns in a language), morphology (i.e. the smallest meaningful units of a language), syntax (i.e. grammar or the way words are combined to form sentences in a language), semantics (i.e. word meanings), and pragmatics (i.e. language use in social context and production of discourse) (Chi, 2019). Common language patterns in those with autism include repetitive or rigid language, narrow interests and exceptional abilities, uneven language development, and poor nonverbal conversation skills (Shannon in Seymour, 2017). These communication patterns align with findings revealing that the main source of language impairment in people with autism spectrum disorder (ASD) is not related to semantics but to pragmatics which is the use of language appropriate to a situation (Seymour, 2017).

One of the most common features of language in autistic children is echolalia, the apparently meaningless repetition of words that they have heard from somewhere else. The two main types of echolalia are known as immediate and delayed. While immediate echolalia refers to repeating back a word, phrase, or sentence that someone has just said, delayed echolalia is quoting utterances heard sometime in the past. The creativity that children will often use by adding different voice animations to go with these repetitions is additional proof that echolalia is a way of communicating and not a meaningless babble (Sterponi & Shankey, 2014). Studies have revealed that individuals with autism use echolalia as a means of relationship building (Stiegler, 2015). However, not all researchers view this phenomenon in the same manner. While Sterponi and Shankey (2014) and Wetherby and Prizant in Seymour (2017) propose that children with ASD are using echolalia to serve a variety of communicative functions, such as requesting, protesting, affirming, and declaring, Foss *et al.* in Seymour (2017) describe it as "an inappropriate language strategy". This disparity between the language aptitudes of those with autism and those without autism only continues as they age. While most preschool age children are mastering syntax, forming narratives and advancing their conversation skills, children with autism spectrum disorder (ASD) are often struggling with short phrases, poor listening and attention skills, and appearing frustrated and withdrawn from conversation (Ducharme, 2016; Hult & Howard, 2006).

Many children with autism spectrum disorder (ASD) are not enrolled in schools, are denied access to health care in appropriate institutions, and are kept hidden and isolated from social gatherings due to sensory, emotional, and information overload, which often trigger withdrawal. These reactions have been misconstrued as contagious and has resulted in children being isolated from their neurotypical peers in classrooms with little or no attention. Also, children on the spectrum are usually targets of bullying and physical or sexual abuse than their neurotypical peers because they often lack the communication skills needed to report abuse, and even when they do, their reports are often judged to be untrue. Poor language skills contribute significantly to the ever increasing academic needs of children with ASD and its alarming consequences owing to poor level of awareness about ASD, marginalization and discrimination, negative cultural beliefs and attitude implies that there is a critical need for accurate identification and diagnosis, increased awareness and creation of environments that support communication across a range of learning experiences in order to facilitate effective communication skills, successful integration into the society, development and maintenance of meaningful relationships for children on the spectrum. It is against this backdrop that the researchers sought to determine how imitation and visual support relate to academic achievement among children on the spectrum.



The aim of this study was to investigate the relationship between language skills, echoic responses and academic achievement among children with ASD in special needs schools. In specific terms, the study achieved the following objectives:

1. Determined the extent to which language skills relates to academic achievement among children with ASD in special needs schools.
2. Ascertained the extent to which echoic responses relates to academic achievement among children with ASD in special needs schools.

Two research questions were posed to guide the study.

1. To what extent does language skills relate to academic achievement among children with ASD in special needs schools?
2. To what extent does echoic responses relate to academic achievement among children with ASD in special needs schools?

These two hypotheses were tested at 0.05 level of significance.

1. There is no significant relationship between language skills and academic achievement among children with ASD in special needs schools.
2. There is no significant relationship between echoic responses and academic achievement among children with ASD in special needs schools.

METHODOLOGY

This study adopted a correlational survey design to investigate the relationship between language skills, echoic responses and academic achievement among children with autism spectrum disorder in special needs schools. The population for this study consists of all 80 male and female pupils diagnosed with ASD in seven special needs schools in Rivers State, Nigeria. The study adopted the census sampling technique. To have a well-characterized sample of children with ASD, participants were deemed eligible for the current study if they had received a diagnosis on the autism spectrum and met the criteria as stated in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), a manual for assessment and diagnosis of mental disorders. Also, only children who were between the ages of 5 and 12 years were included in the study. The research instrument used in this study was a four-point Likert type scale questionnaire titled "Language Skills, Echoic Responses and Academic Achievement Questionnaire" (LSERAAQ). The instrument is divided into three sections. Section A contains demographic information while section B contains two themes namely imitation containing seven items and visual support containing seven items. The third section contains an adapted instrument of Blank, Rose and Berlin (1978) known as Blanks Levels of Language which was modified to fit the current research setting (Nigeria), this led to the reduction in the number of items, which were originally 40 items to 20 items implying that the researchers removed five items from each level of language as contained in the instrument. The instrument also contains a picture scene to guide pupil's response to the adapted instrument. The instrument was constructed in the pattern of a four-point Likert scale of Always (A), Often (O), Sometimes (S), and Never (N) which was scored as 4, 3, 2 and 1. Cronbach Alpha statistic was used to estimate the reliability of the instrument and the following reliability coefficients of 0.81 for language skills, 0.78 for echoic responses and 0.92 for academic achievement were obtained. Data was collected and analysed using simple regression, mean and standard deviation and independent t-test at 0.05 alpha level of significance.

RESULTS

The results of the data analysis are presented in the tables: Data analysis was done in relation to the research questions and hypotheses.

Research Question 1: To what extent does language skills relate to academic achievement among children with ASD in special needs schools?

Hypothesis One: There is no significant relationship between language skills and academic achievement among children with ASD in special needs schools.

**Table 1: Simple regression analysis of language skills with academic achievement among children with autism spectrum disorder (ASD) in special needs schools.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	10.651	5.295		2.011	.048
Language skills	1.880	.310	.566	6.062	.000

P < .05 Level of Significance, N=80; Dependent Variable: Academic Achievement; Predictors: (Constant), language skills

The result in table 1, shows that the beta value for language skills is .566, which reveals that about 56.6% of language skills relates with academic achievement among children with autism spectrum disorder in special needs schools. Its significance can be seen from the associated t-value of 6.062 which is statistically significant at 0.05 alpha level. This implies that language skills have significant relationship with academic achievement among children with autism spectrum disorder in special needs schools, therefore the null hypothesis is rejected.

Research Question 2: To what extent does echoic responses relate to academic achievement among children with ASD in special needs schools?

Hypothesis Two: There is no significant relationship between echoic responses and academic achievement among children with ASD in special needs schools.

Table 2: Simple regression analysis echoic responses with academic achievement among children with autism spectrum disorder (ASD) in special needs schools.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	33.056	6.883		4.802	.000
Echoic response	.515	.421	.137	1.225	.224

P < .05 Level of Significance, N=80; Dependent Variable: Academic Achievement; Predictors: (Constant), echoic responses

From the result in table 2, the beta value for echoic responses is revealed to be .137, which means that about 13.7% of echoic responses relates with academic achievement among children with autism spectrum disorder in special needs schools. Its significance can be seen from the associated t-value of 1.225 which is statistically not significant at 0.05 alpha level. This implies that echoic responses have no significant relationship with academic achievement among children with autism spectrum disorder in special needs schools, therefore the null hypothesis is retained.

DISCUSSION OF FINDINGS

Findings from the data analysis obtained from respondents for answering research question one and testing hypothesis one, indicated that there is significant positive relationship between language skills and academic achievement among children with ASD in special needs schools. This means that language skills has influence in ensuring academic achievement among school children. The findings of this study affirms that children with ASD can achieve academic success when efforts are being made to ensure that children improve in their ability to use language skillfully, which may be difficult but not impossible. This finding is in line with Niederer (2013) who carried out a study to investigate the improvement of language acquisition of autistic children through implementing non-verbal communication in teaching methods. The findings of the study revealed that non-verbal communication helps children with autism learn new words more accurately and therefore can be incorporated by teachers in their teaching methods. Also in line with finding is a study carried out by Vanegas (2019) aimed at investigating academic skills in children with ASD with monolingual or bilingual experience. The results from the findings revealed that children with ASDs with monolingual experience had higher scores



on word reading skills when compared to children with ASDs with bilingual experience. However, a different pattern was found for numerical operations, with children with ASDs with bilingual experience outperforming children with ASDs with monolingual experience. No differences were found between groups on spelling skills. Hence, bilingual experience does not negatively affect the development of academic skills in children with ASDs.

Result from the analysis of responses of respondents in regards to research question two and hypothesis two, shows that there is no significant relationship between echoic responses and academic achievement among children with ASD in special needs schools. This means that the independent variable (echoic responses) has no significant relationship with academic achievement. The present findings suggest that while echoic responses, which are a major source of difficulty for children on the spectrum, were observed among children used during the study, no significant relationship with academic achievement was found. The result of this finding differ from a study carried out by Sterponi and Shankey (2014) on rethinking echolalia with emphasis on repetition as interactional resource in the communication of a child with autism. The result from this finding revealed the presence of echolalia in children with ASD. Another finding that differ from the present finding was carried out by Grossi et al. (2013) on the differential nature of induced and incidental echolalia in autism. Results from this finding showed that echolalia occurred in both experimental situations.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made;

1. Teachers, caregivers, and parents should encourage language skills by cutting down on the potential for echoic repetition through the use of visual cues in asking choice questions instead of open-ended questions such as the “Wh” questions as this would help them learn how to answer questions without much repetition.
2. Counsellors, teachers and caregivers should encourage language skills by profiling the relative strengths and weaknesses in communication for children on the spectrum and creating individualized educational plan that emphasizes speech and language skills, life skills, cognitive skills and academic success. This could be a helpful guide in enhancing children’s academic strengths and fortifying areas of weakness.

CONCLUSION

Language skills and echoic responses are important tools used in communication exchanges to express feelings, thoughts and needs, hence its relevance in achieving success academically. From the findings made in this study, language skills have significant relationship with academic achievement while echoic responses, age and gender have no influence on academic achievement among children with ASD in special needs schools.

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INTERNET ACCESS BLOCKING AND DO-NOT-DISTURB MODE AS DIGITAL DETOXIFICATION PREDICTORS OF STUDENTS' ACADEMIC IMPROVEMENTS IN UNIVERSITIES IN RIVERS STATE

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ABSTRACT

The study investigated internet access blocking and do-not-disturb mode as digital detoxification predictors of students' academic improvements in universities in Rivers State, Nigeria. Two research questions and two hypotheses guided the study. The study adopted the correlational design. The population comprised 3680 students from the Departments of Educational Management of the three public universities in Rivers State, Nigeria. A sample of 1,472 students, representing 40% of the total participants were drawn, using the stratified random sampling technique. The instruments for data collection were: Internet Access Blocking and Do-Not-Disturb Mode Scale (IABDNDMS) and Students Academic Improvement Scale (SAIS), designed by the researchers in the modified 4-point Likert scale model. The reliability coefficients of the instrument using Cronbach alpha methods were 0.76 and 0.89. Simple regression was used to answer the research questions and in the test of hypotheses, t-test associated with simple regression was used. The findings of the study revealed that internet access blocking and do-not-disturb mode as digital detoxification predictors, predict students' academic improvements in areas of regaining self-control, accomplishment of work effectiveness, boosts productivity, enhances the creative functioning of the brain, combats screen addiction, enhances healthy living, encourages high project work involvement, amongst others. The study concluded that internet access blocking and do-not-disturb mode as digital detoxification strategies are strong and viable predictors of students' academic improvements in universities in Rivers State, Nigeria. Consequently, the study recommended amongst others, that, school authorities and students should continue to utilize the different digital detoxification strategies in detoxifying students from digital technology devices in order to increase the tempo of their academic improvements.

KEYWORDS: Internet Access Blocking, Do-Not-Disturb Mode, Digital Detoxification, Academic Improvements

INTRODUCTION

As societies evolve due to the rapid growth in the surge of technological innovations, inventions, and advancements, nations have continuously witnessed rapid transformation occasioned by the new requirements constantly evolving with the dynamisms in technological developments, which has had positive and negative effects on the ways and pattern societies behave and operate in their social, economic, political, and religious undertakings. University education and its products (graduates) are not left out in this upsurge of technological development and advancements; as such, universities, as citadels of international studies are saddled with the responsibilities of teaching, research, community service and incidental functions, and as such, the graduates from the universities are expected to have sound knowledge and skill necessary to meet the expectations and aspirations of the world of work. Consequently, the practice of digital detoxification has been seen as essential to be imbibed in the universities to ensure effective and efficient academic improvements of university students.

In this digital time and age, the sources of knowledge have diversified and one of the ready source is the internet which has been made to be contained in the mobile phone devices and serve for greater advantage to give students ample opportunity to browse and surf the internet for materials to assist academic works, it provides student with immediate, portable access to many of the education-enhancing capabilities as an internet-connected computer, such as online information retrieval, file sharing, file storage,



image and picture organizer and the rest. It also gives room for stress free and easy interaction with Professors, Lecturers and fellow students in situations of information gathering and dissemination (Nwafor, 2012).

Gone are the days one had to go through miles to get a computer to enable him/her access the internet to engage in desired online activities. Technology has made it very easy to have this innovation right with people on their mobile phones (Uche, 2020). This mobile phone device and its numerous features provide students with the ample opportunity of improving their knowledge and broadening their horizon outside what is thought in the classroom; it enables proper management of time and easy access to help in times of emergencies. With mobile phones and its features, learning goes on even when out of the classroom or school environment.

Conversely, researchers and leaders in the education industry have raised alarm over the misuse of mobile phone devices by students, especially, university students. This may be explained in the fact that students tend to spend more time fiddling with the phone which has adversely affected their academic performances. Jacobson and Forste (2011), in their research, suggest that students perceive the cell phone usage as a leisure device and most commonly, use mobile phones for social networking, surfing the internet for pleasure, watching videos, playing games, taking inappropriate photographs engaging in non-academic related activities amongst others. Again, Morgan (2017) posits that, students are becoming dependent on their mobile phone devices usage as a 'quick fix' for issues and information and it can keep them from developing the ability to 'think on their feet' in work situations. Stakeholders and educators have raised concern over the increased use of mobile phone devices by students during lecture periods on non-academic related matters.

The new inappropriate behaviour of sending explicit photos, videos, and text messages, appear to be on the increase by university students and these behaviours have been seen to distract them, almost completely from their academic activities. Lockie (2017), indicates that there are a lot of negative and unhealthy impacts and effects of mobile phone device on students' academic performance. According to the researcher, these include wastage of time and money, cheating in the examination hall, distractions during lectures and study time and also, its vibrations and use may be harmful to health. To this end, educators and leaders have expressed concern over the danger that the nation may face in the near future due to the low academic performance of university students caused by the continued and frequent use of mobile devices during teaching and learning hours. This gave the researchers the natural propensity to investigate into the application of internet access blocking and do-not-disturb mode as digital detoxification, with a view to ensuring its effective utilization by university students for academic improvement.

Digital detoxification refers to a period of time when a person refrains from using technological devices. It is a process of temporarily taking time off one's mobile devices such as smartphones, tablets, computers, televisions and social sites. Digital detoxification which can also be called digital detox or detoxing is often seen as a way to focus on real-life situations, or task at hand, without distractions. By temporarily foregoing digital devices, people can let go of stress that stems from constant connectivity and avoid getting addicted to their mobile devices. By welcoming and engaging in digital detox, university students can stay focused on their academic activities without getting distracted by their technological devices, especially their smart phones. While technology addiction is not formally recognized as a disorder, many experts believe that tech and devices overuse represents a very real behavioural addiction that can lead to physical, psychological, social and academic problems (Scott, 2019).

Essentially, it is true that smart phones have made life much easier in so many ways, yet the technology on these devices has been dominating lives. According to Dscout as cited in Winnick (2016), most people tap their smart phones on the average of 2,617 times per day. This is a serious distraction especially for students who are going through training and development process. Studies have shown that powerful computers made in the form of mobile devices most people hold and keep in their pockets can be distracting for even the most disciplined adults not to mention students. Research in the educational sphere demonstrates that using mobile devices and social media while learning new material reduces comprehension and impairs academic performance (Jacobson & Fortse, 2011). Studies have also found that even if cell phones are turned off, turned face down, their mere presence reduces people's cognitive capacity (Ward, et al, 2017).

Internet Access Blocking for Students Academic Improvements

Digital devices such as smartphones, tablets and laptops are important tools, which, when used adequately in the classroom, supports learning. However, Fried (2008), in his survey, found that most students using digital devices in the class spend considerable times on activities not related to taking notes or to subject area being thought. Furthermore, the scholar identifies a negative correlation between students success in class and in-class laptop use. This goes to say that when students are allowed to use digital devices in the classroom, there is every possibility of using the devices for non-class related purposes, hence causing interference to the subject or task at hand. As more students use digital devices in the classroom, research shows that their use is causing more classroom learning distractions (McCoy, 2013).

The internet provides those connected to it an unprecedented amount of information through their digital gadgets: at home, school, office and so many other locations. The information available on the internet is limitless, both in quantity and variety. This



limitless boundary of information creates avenue for anyone, from a school child to a corporate CEO, to be able to post anything in the cyber public view (Afangideh & Agha, 2019). With all the information, adverts, and what have you, popping up on mobile devices, it is then pertinent for university students to welcome the idea of internet access blocking on their mobile devices during school hours or periods of non-mobile use classes.

Therefore, Internet-Access blocking is a deliberate block or ban of the internet connectivity intended to restrict access to information or resources through the mobile devices (Simon, 2015). It is possible by means of hardware or software products that block specific targeted content from being received or displayed. This measure can be applied by university students at intervals during school hours to give room to maximum concentration to classes and lectures that does not require them to access their devices.

Along with the negative effects of digital media itself, excessive tech use, browsing and surfing the internet regularly results in sedentary behaviour (Khan, 2008). Students have been seen to sit for long periods of time using their mobile devices in gaming, chatting, Facebooking, video playing, among other things; this behaviour calls for great concern for it has been seen to have a lot of distracting effects on the students like the popping up of notifications on a constant basis that always calls the attention of the students. Mendoza, et al (2018) agree that these constant notifications distract the students while in the classroom or in any serious academic task; for the urge to inquire what the message that came into the mobile phone was all about, is a good enough distraction. Therefore, the activation of internet-access-blocking will shut down all internet enabled notifications and allow the students to give maximum concentration on the subject matter at hand.

Distractions from mobile devices or any other form of digital device as suggests by Fried (2008) might look minute, but, even the smallest distraction, like being interrupted by a quick message on a phone, chat app or any device, can cause twice as many errors in a focused-based task. Even worse, most university students tend to drastically overestimate their ability to continue to give maximum concentration as usual while these distractions go on. Jacobson (2011) indicates that, new technologies always bring new ideas, fantastic offers and new challenges, but as with any new technology, great solutions to this challenge are popping up to help one fight back. He goes further to outline some types of internet-access blockers that can be used to regain control and become more productive in school and at the workplace. They are:

Self-Control: This is an app designed to be a personal distraction blocker. It gives permission to add certain websites and apps to the 'blacklist' that one wants to block and allows one to set a timer. It is designed to be set for just the time needed to stay away from the distracting sites. **FocusBooster:** This works by challenging the user to focus on a task for a particular period of time and then take few minutes break. Hossain (2019), also suggests that, FocusBooster features automatic timesheet that indicates where productive time was utilized and allows for the option of a pause in situation where the user cannot prevent or ignore a distraction.

LeechBlock: LeechBlock is another extension that allows Mozilla Firefox users to block disturbing apps or sites. It is a great internet-access blocking tool that allows one to block several sets of sites, with a specified time period for each set of site blocked. In agreement to this, Aktay (2018), opines that, LeechBlock can also be a bit confusing because it may not be user friendly for those who are not highly tech-savvy. But in any case, he went further to state that, it offers fantastic features that allows the user block multiple sets of sites and have each set of sites blocked for certain amounts of time, separately.

FocusMe: FocusMe is designed with features that includes a time tracker with convenient multi-coloured graphs to reveal where a user's time goes. It contains all the features in other web-blockers in one piece and also web blocks, scheduled settings, custom themes and reports for quick reading and visual representations, centralized management capabilities, and a lot more. With this plan, students can comfortably pay full attention to their classes and projects/homework at hand without having to face constant distractions from the numerous activities that goes on, on the web. However, any undertaking worth setting out on, requires the right tools and strategies for changing the game and creating the type of habits that would stick (Agabi & Uche, 2006).

In the light of the aforementioned, researchers and scholars like Hossain (2019), Willcockson, et al (2019), Trine and Gunn (2019), Aktay (2018), Mendoza, et al (2018) and McCoy (2013), have come up with suggestions on how internet-access blocking can be of benefit in the application of digital detoxification. These include regaining of self-control, accomplishment of work effectively, functioning of the brain for better creativity, enables brain relax for innovative ideas, allows for self-discipline, enables students remain focused, boosts productivity, encourages the defeat of procrastination, indicates areas productive time will be utilized, enables students remain accountable to their best intentions and gives room for more insights, suggestions and contributions. It is in this vein that the present study seeks to ascertain the extent to which internet-access blocking can be utilized as digital detoxification to predict students' academic improvement in universities in Rivers State, Nigeria.

Activation of Do-Not-Disturb (DND) Mode for Academic Improvement

Rapid developments in cloud technologies, aided by the use of smartphones and other digital devices are boosting people's way of living in every area, be it academics, social, cultural, religious and political spheres. These digital devices, like smartphones and the rest, offer tremendous features like camera, email messaging, voice messaging, video apps, thumb and image capturing,



creativity and productivity apps, amongst others, integrated into one rectangular revolutionary technology that keeps getting smarter and smarter day by day (Agha, 2016). Despite the efficiency and productivity level smartphones and digital devices possess, they can really be a distraction when users need to focus or be productive with the aim of achieving desired goals. Hossain (2019), indicates that, these smartphones and digital devices can pop up thousands of notifications capable of reducing the attention of users, more especially, students in the classroom that are expected to give full attention to the lecture being thought or more or less, give attention to the project they are expected to complete within a speculated time frame.

The DND mode is one of the numerous features on the smartphone device, which, when activated, disables all calls, messages, notifications, alerts and other signals from coming in and causing distractions to the user. Danilo, et al (2019), are of the opinion that, for maximum concentration during lectures in the university and at the workplace, one can activate the DND mode to shut off all, or part of the notifications, messages and alerts that would normally pop into the device. This function, as suggests by Fernandez (2018), can be set to turn on and off automatically at scheduled intervals to avoid distractions while focusing on important tasks. He went further to state that, it can be very useful and productive when working on a serious task; while in the classroom or carrying out research; while working towards meeting a set goal and many other expectations.

The Do-Not-Disturb mode can be set to repeat at same time each day automatically and certain types of calls like emergencies can equally be set to come through at the period of DND. Hence, understanding the DND mode and how to effectively utilize the benefits towards predicting students' academic improvements in universities. These benefits include, but not limited to; enhances creativity, combats scree addiction, enhances productivity, improves students' learning, enhances healthy living, encourages class participations, attracts maximum attention to immediate surroundings, allows for willpower to sustain transformation and encourages high project work involvement. These enjoy empirical and scholarly backings from Danilo, et al (2019), Hossain (2019), Fernandez (2018) and Martin and Luz (2015). The finding of the present study will therefore debunk or confirm this as the case maybe in Universities in Rivers State, Nigeria.

Statement of the Problem

Universities, as citadels of learning, exist to execute the functions of teaching, research, transfer of worthwhile knowledge and values, community development and the generation of highly skilled manpower to industries and societies at large. As societies keep evolving, and nations keep embracing technological advancements to enhance efficiency and productivity, convenience and communication, university institutions, as part of the society, have witnessed and equally accepted different innovative practices and embraced most technological advancement that have seen the exercise of teaching and learning, more interesting and productive. In all these evolutions and advances in technological developments, digital technology distractions have been identified as major source of distractors on students' academic effectiveness. Hence, the introduction of digital detoxification, which is seen as a period of time a person refrains from the use of technological gadgets, suffices.

Consequently, with the advances in technological developments in industries, institutions and the world of work, it has become imperative for educational institutions to welcome and embrace the use of technological devices, which have come to stay, into their academic activities, and comply with the new ways of doing things. However, the researchers and other stakeholders are worried that university students in general and Rivers State in particular, appear to be performing at a very low level in academics due to the increasing use of mobile devices which majority use for social networking, video watching, skyping, playing games, amongst others; while in school and lecture halls. This worry gave rise to this study which sought to investigate the extent to which internet access blocking and do-not-disturb mode as digital detoxification, predict students' academic improvements in universities in Rivers State.

Aim and Objectives of the Study

The study investigated internet access blocking and do-not-disturb mode of digital detoxification, as predictors of students' academic improvements in universities in Rivers State, Nigeria. In specific terms, the study sought to:

1. Establish the extent to which internet-access-blocking predicts students' academic improvements in Universities in Rivers State, Nigeria.
2. Find out the extent to which do-not-disturb mode predicts students' academic improvements in Universities in Rivers State, Nigeria.

Research Questions

The following research questions were answered in the study:

1. To what extent does internet-access-blocking predict students' academic improvements in Universities in Rivers State, Nigeria?



2. To what extent does do-not-disturb mode predict students' academic improvements in Universities in Rivers State, Nigeria?

Hypotheses

The following hypotheses were tested in the study at 0.05 level of significance.

1. There is no significant prediction of internet-access blocking on students' academic improvements in Universities in Rivers State, Nigeria.
2. There is no significant prediction of do-not-disturb mode on students' academic improvements in Universities in Rivers State, Nigeria.

METHODOLOGY

This study adopted a correlational survey design, as it made to determine the extent to which internet access blocking and do-not-disturb mode, as digital detoxification variables, predict students' academic improvements in Universities in Rivers State. The population of the study comprised 3680 students from the Department of Educational Management of the three public universities in Rivers State, which are: University of Port Harcourt (1630 students), Rivers State University (1050 students), and Ignatius Ajuru University of Education (1000 students). These population acted as total participants for the study, from which 1472 students, representing 40% of the total participants in the population, were drawn as sample size, using the stratified random sampling technique. There were two instruments for the study, titled: Internet Access Blocking and Do-Not-Disturb Mode Scale (IABDDMS) and Students' Academic Improvements Scale (SAIS), designed by the researchers in the modified 4-point Likert scale model of Very High Extent (4), High Extent (3), Low Extent (2) and Very Low Extent (1) respectively. The reliability coefficients of Internet Access Blocking and Do-Not-Disturb Mode Scale (IABDDMS) and Students' Academic Improvements Scale (SAIS), using Cronbach Alpha reliability statistics were 0.76 and 0.89. The various reliability coefficients were high and justified the use of the instrument for the study. Simple regression was used to answer the research questions while t-test associated with simple regression was used to test the hypotheses at 0.05 level of significance.

RESULTS

The results of the study came from the answers to the research questions and results to test of hypotheses. Thus:

Research Question 1: To what extent does internet-access-blocking predict students' academic improvements in Universities in Rivers State, Nigeria?

Table 1: Simple Regression on the Extent Internet Access Blocking Predict Students' Academic Improvements in Universities in Rivers State, Nigeria?

Model	R	R Square	Adjusted R Square	Decision
1	.890 ^a	.792	.790	Internet access blocking predicts students' academic improvements to a very high extent

Scale: Very high extent (100% - 76%); High extent (75% - 51%); Low extent (50 - 26); Very low extent (25% - 0%)

Data on table 1 show the Regression Coefficient (R), Regression Square Coefficient (R^2), and decision on the extent to which internet access blocking predicts students' academic improvements in Universities in Rivers State, Nigeria. The regression coefficient (r) and regression square co-efficient came out as .89 and .79 respectively, while the co-efficient of determination stood at 79% (as derived from a multiplication of regression square coefficient value .79 x 100%).

With the co-efficient of determination as 79% and the regression co-efficient and regression square co-efficient as 0.89 and 0.79, respectively and following from the scale of measurement, 79% falls in between 100% and 76% (high extent). This therefore confirms that digital access blocking predicts students' academic improvements in Universities in Rivers State, Nigeria to a very high extent.

Research Question 2: To what extent does do-not-disturb mode predicts students' academic improvements in Universities in Rivers State, Nigeria.

**Table 2: Simple Regression on the Extent Do-not-Disturb Mode Predicts Students' Academic Improvements in Universities in Rivers State, Nigeria?**

Model	R	R Square	Adjusted R Square	Decision
1	.882 ^a	.777	.763	Do-not-disturb mode predicts students' academic improvements to a very high extent

- Scale on Table 1 applies.

Data on table 2 show the Regression Coefficient (R), Regression Square Coefficient (R²), and decision on the extent to which do-not-disturb mode predicts students' academic improvements in Universities in Rivers State, Nigeria. The regression co-efficient(r) and regression square co-efficient came out as .88 and .77 respectively, while the co-efficient of determination stood at 79% (as derived from a multiplication of regression square coefficient value .77 x 100%).

With the co-efficient of determination as 79% and the regression co-efficient and regression square co-efficient as 0.88 and 0.77, respectively and following from the scale of measurement, 77% falls in between 100% and 76% (high extent). This therefore confirms that do not disturb mode predicts students' academic improvements in Universities in Rivers State, Nigeria to a very high extent.

Hypothesis 1: There is no significant prediction of internet-access blocking on students' academic improvements in Universities in Rivers State, Nigeria.

Table 3: t-test associated with Simple Regression on the Extent Internet-Access Blocking Predicts Students Academic Improvements

Model	Unstandardized Coefficients			T	Probability val.	Alpha Value	Decision
	B	Std. Error	Beta				
1	(constant)	38.320	1.378	27.811	.000		
	Internet access blocking	.898	.038	2.580	.010	.05	Significant

Table 3 showed that the t-test associated with simple regression is 2.58. The result revealed that the hypothesis is rejected because the probability value of .01 is less than the alpha value of .05. Therefore, there is a significant prediction of internet-access blocking on students' academic improvements in Universities in Rivers State, Nigeria.

Hypothesis 2: There is no significant prediction of do-not-disturb mode on students' academic improvements in Universities in Rivers State, Nigeria.

Table 4: t-test associated with Simple Regression on the Extent Do-Not-Disturb Mode Predicts Students Academic Improvements

Model	Unstandardized coefficients			T	Probability val.	Alpha Value	Decision
	B	Std. Error	Beta				
1	(constant)	39.122	1.268	30.854	.000		
	Do-not-disturb	.920	.035	3.438	.001	.05	Significant

Table 4 showed that the t-test associated with simple regression is 3.44. The result revealed that the hypothesis is rejected because the probability value of .00 is less than the alpha value of .05. Therefore, there is a significant prediction of do-not-disturb mode on students' academic improvements in Universities in Rivers State, Nigeria.



DISCUSSION OF FINDINGS/IMPLICATIONS

Internet-Access Blocking as a Predictor of Students Academic Improvements in Universities in Rivers State, Nigeria

The finding of the study here indicates that internet-access blocking predicts students' academic improvements in universities in Rivers State, Nigeria to a very high extent. Apparently confirming, a corresponding finding from the test of hypothesis, which established that, there is a significant prediction of internet access blocking on students' academic improvements in universities in Rivers State, Nigeria.

These findings are in congruence with Gunn (2019), Wilcockson, et al (2019), Hossain (2019), Trin and Gun (2019), Agabi and Uche (2006), Mendoza, et al (2008) and McCoy (2013), and Atkay (2018) who in their students and scholarly contributions establish the contribution of internet access-block to academic improvements of student's in learning institution. An explanation for these trends may be connected to the fact that students themselves have learnt to block internet access to enable them concentrate while learning and have experienced self-academic improvements. These findings imply that in institutions where students practice internet-access blocking, academic improvement is bound to be the results.

Activation of Do-not-Disturb Mode as a Predictor of Students Academic Improvements in Universities in Rivers State, Nigeria

The finding of the study here, indicates that, activation of Do-not-Disturb mode predicts students' academic improvement in universities in Rivers State, Nigeria to a very high extent. Also, a corresponding finding from the test of hypothesis, found out that, there is a significant prediction of activation of do-not-disturb mode on students' academic improvements in universities in Rivers State, Nigeria.

These findings are in agreement with Danilo, et al (2019), Fernandez (2018), Johnson (2019), Martin and Luz (2015) who studies and scholarly presentation list the contributions of the activation of do-not-disturb mode on mobile devices to academic improvements. A possible reason for the trends in the finding may be that as students, the respondents, have compared the pro and the coin and found that it is proper to activate the do-not-disturb mode. These findings imply that, where the do-not-disturb mode are deactivated, students' academic improvements should be expected.

Conclusion

Based on the findings of the study, it is concluded that digital detoxification strategies among them, internet access blocking and do-not-disturb mode, are viable and strong predictors of students' academic improvements in public Universities in Rivers State, Nigeria.

Recommendations

Based on the findings of the study, the implications of the findings, and the conclusion, it is recommended as follows:

1. School authority should endeavour to do all that is necessary in ensuring the introduction of internet-access-blocking strategy, at periods when students should be seriously involved in academic activities, as this will help them in eliminating external sources of influence.
2. Students should continuously make use of the do-not disturb mode in controlling the influx of information into their digital devices as this would continuously help them concentrate on their studies for more recorded improvement.

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AWARENESS OF FARMERS TOWARDS THE AGRICULTURAL SCHEMES OF GOVT.: A STUDY ON DHENKANAL DISTRICT, ODISHA

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ABSTRACT

Agricultural development is the yardstick of the growth and development of the Indian Economy. In order to boost agriculture, various schemes have been implemented by the state as well as the central government for the welfare and livelihood of farmers. However, due to a lack of awareness, some farmers are unable to avail the benefits of those government schemes. So, proper awareness among the farmers is required for their upliftment through various government schemes. This study aims at understanding the awareness of the farmers towards the agricultural schemes of the central and state government and to identify the sources of their awareness. Random Sampling Technique is followed and Primary data are collected from the structured questionnaire and personal visits to the farmers in the study area during the period Oct-2022 to Dec-2022. Out of the total respondents, 55.6 % of the farmers are aware of the available govt. schemes in the study area. Out of these, the source of awareness for the majority of the farmers is television followed by newspaper and radio. Proper education and training are required for availing the benefits of the welfare schemes and the overall development of the farmers.

KEYWORDS: *Agricultural Schemes, Farmer's Awareness, Agricultural Development, Sustainable Development, Economic Growth.*

INTRODUCTION

The Indian economy's expansion and growth are measured by its agricultural development. The state and the central governments have both developed numerous programmes for the welfare and livelihood of farmers to promote agriculture. However, some farmers are unable to take advantage of such government programmes due to a lack of information. The farmers must therefore be properly informed if they are to benefit from various government programmes.

Agriculture is the primary economic driver of the Dhenkanal District. The economy greatly depends on the District's forest products. Here, you may find the main forest goods such timber, bamboo, firewood, and kendu leaf. Minor forest goods such lac, honey, kenduli gum, wax, mahua flowers, sunari fark, siali leaves, catechu, tassar cocoons, and other raw materials for medicine are also available. The Dhenkanal District's economic development is accentuated by the raw materials derived from agriculture, forestry, and minerals.

REVIEW OF LITERATURE

Ajith & Lakshmi, (2021) study the awareness of farmers toward the government schemes and mention the Tamil Nadu government is making every attempt to boost crop productivity and farmer revenue by embracing agriculture technology for more of the state's varied crops. Baruah & Madan Mohan, (2022) attempts to investigate the knowledge of ongoing agricultural programmes in India's North Eastern Region (NER) among women farmers. According to the findings, a gap in the agricultural advancement of women farmers in the NER is a lack of knowledge of government agricultural programmes. In Haryana, agricultural development programmes' awareness and effectiveness are examined in the context of farmers' welfare (Shehrawat et al., 2020). In the years 2020–2021, a study on the attitudes of farmers regarding crop insurance programmes in Kerala was conducted in the districts of Kottayam, Malappuram, and Idukki. The study's findings indicated that most farmers (69.17%) had a medium perception of Kerala's crop insurance programmes, followed by low (18.33%) and high (12.50%) perceptions (Suresh & Sreedaya, 2022).



OBJECTIVES OF THE STUDY

This study aims at understanding the awareness of the farmers towards the agricultural schemes of the central and state government and to identify the sources of their awareness in the light of their demographic profile.

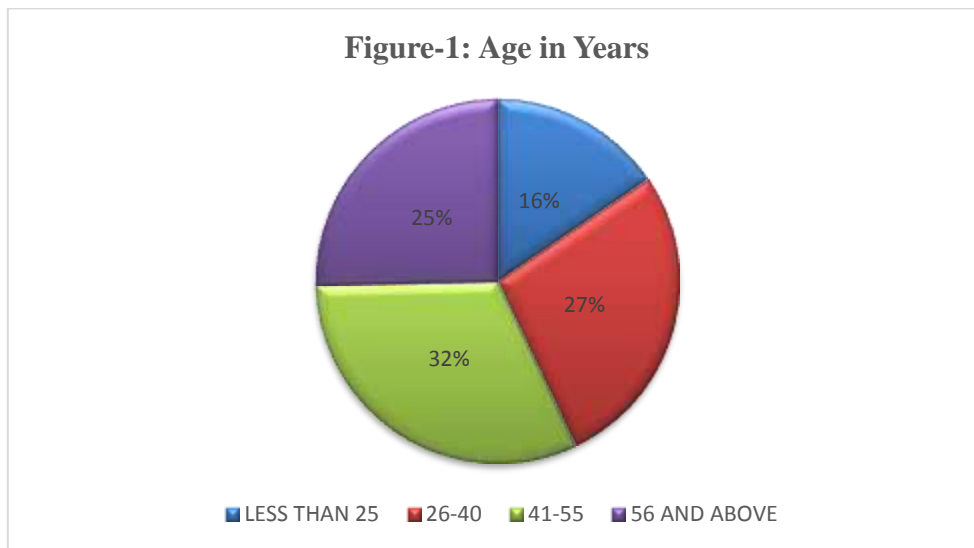
METHODOLOGY

Random Sampling Technique is followed for this study. Primary data are collected from the structured questionnaire and personal visits to the farmers in the study area during the period Oct-2022 to Dec-2022. Secondary data are collected from the existing literature i.e., published articles, e-journals, e-books, blogs, govt. websites, reports, etc

DATA ANALYSIS AND INTERPRETATION

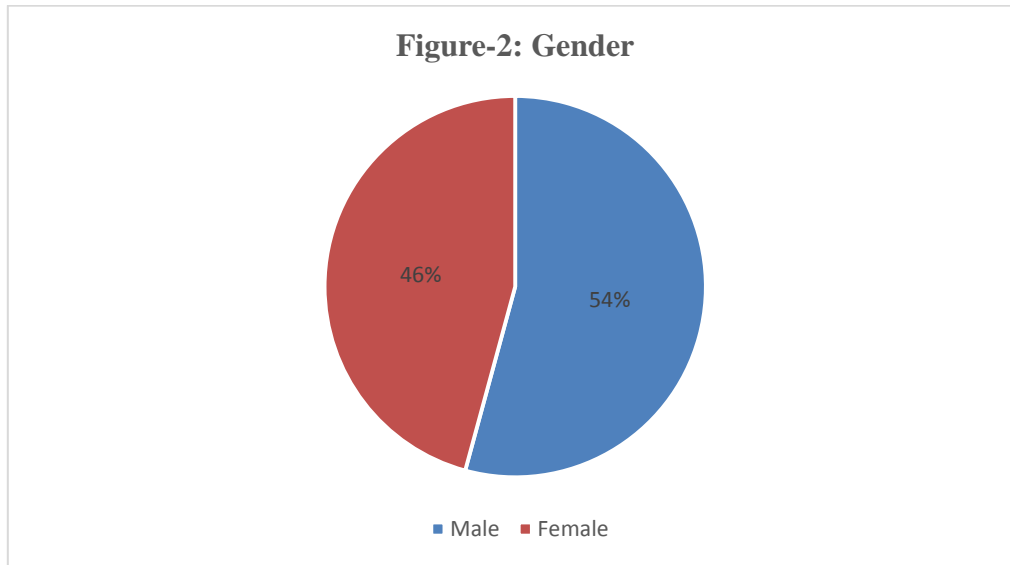
The data collected from the primary data are mentioned in the following tables and figures with brief explanations

Table-1: Age(In Years)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 25	22	15.5	15.5	15.5
	26-40	39	27.5	27.5	43.0
	41-55	45	31.7	31.7	74.6
	56 AND ABOVE	36	25.4	25.4	100.0
	Total	142	100.0	100.0	



Most of the respondents are from the age group 41-55 years i.e., 31.7% and the lowest is from the age group of less than 25 years. The age group from 26-50 has responsible for 27.5 % and 56 and above for 25.4% of farming activities in the study area.

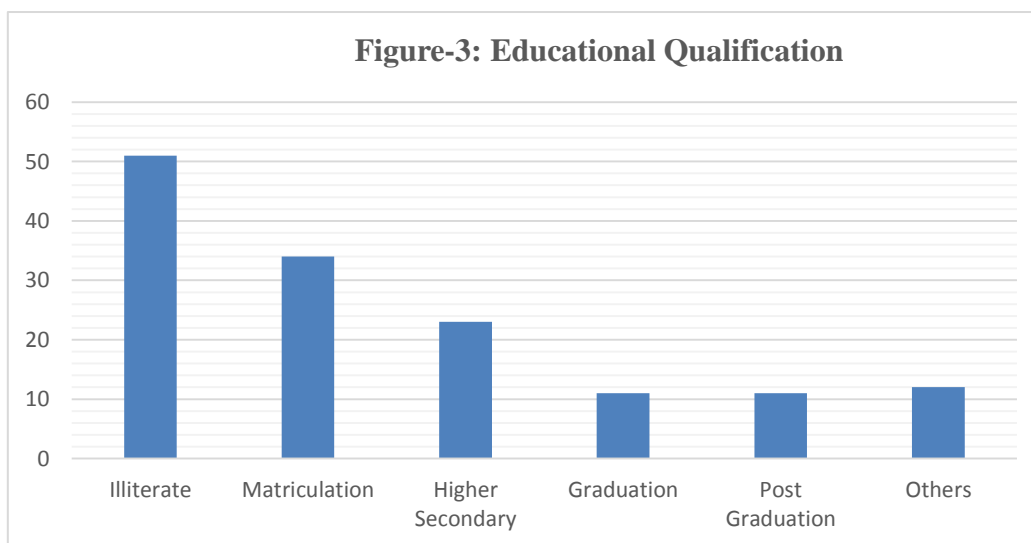
Table-2: Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	77	54.2	54.2	54.2
	Female	65	45.8	45.8	100.0
	Total	142	100.0	100.0	



Out of the total respondents, 54.2 % are males and 45.8% are females. The involvement of males in farming activities is more than that of women in the study area.

Table-3: Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Illiterate	51	35.9	35.9	35.9
	Matriculation	34	23.9	23.9	59.9
	Higher Secondary	23	16.2	16.2	76.1
	Graduation	11	7.7	7.7	83.8
	Post-Graduation	11	7.7	7.7	91.5
	Others	12	8.5	8.5	100.0
	Total	142	100.0	100.0	

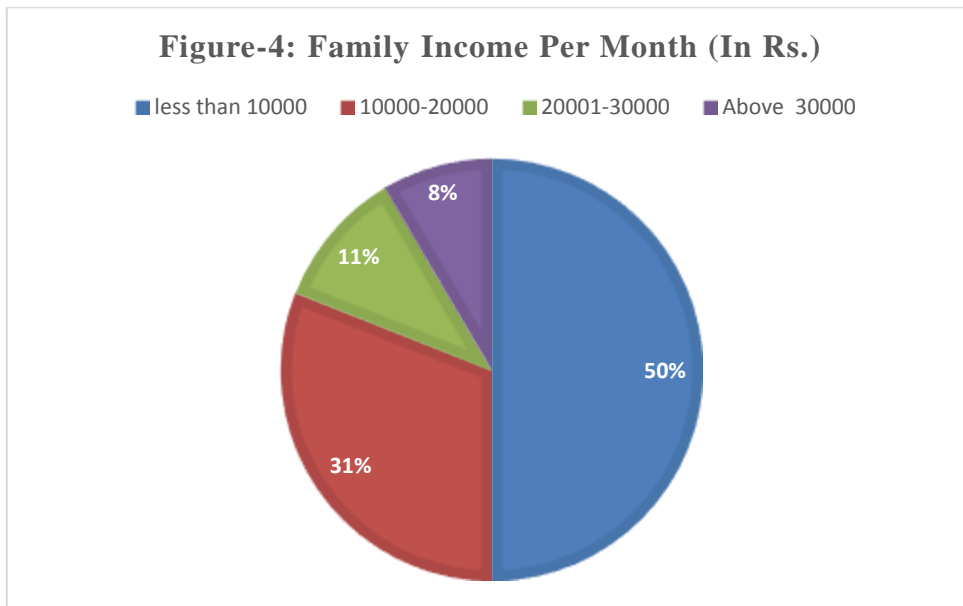


In terms of educational qualifications, 35.9 % of the respondents are illiterate, 23.9% have qualifications up to matriculation, 16.2% have higher secondary passing certificates, 7.7% in graduation and post-graduation categories and 8.5% have acquired some other qualifications.



Table-4: Family Income (per month)

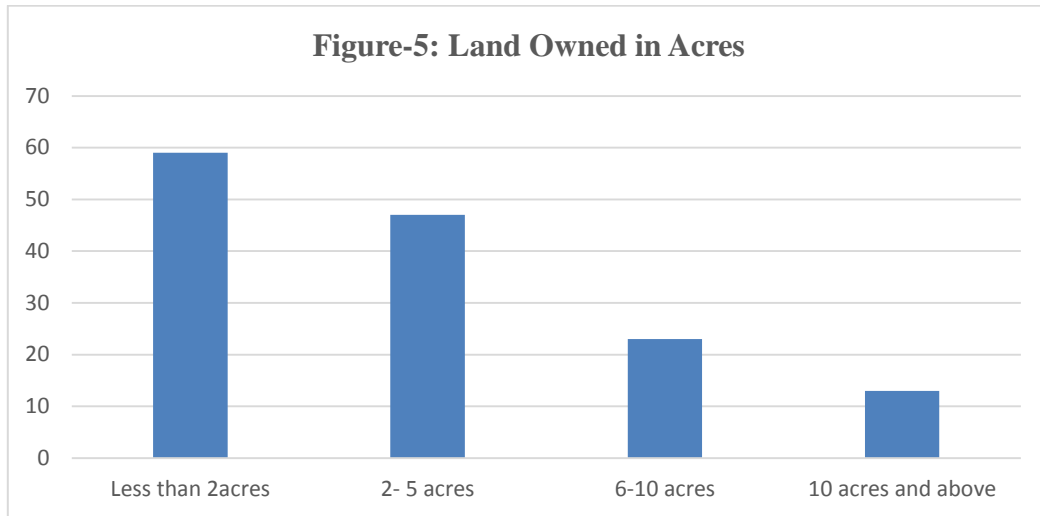
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 10000	71	50.0	50.0	50.0
	10000-20000	44	31.0	31.0	81.0
	20001-30000	15	10.6	10.6	91.5
	Above 30000	12	8.5	8.5	100.0
	Total	142	100.0	100.0	



When we ask about family income, 50% of the farmers have a monthly income less than Rs.10000/-, 31% have an income of Rs.10000-20000 per month, 10.6% have an income above Rs. 20000 but less than RS. 30000 pm and only 8.5% have monthly income above Rs. 30000 per month.

Table- 5: Agricultural Land Owned (in acres)

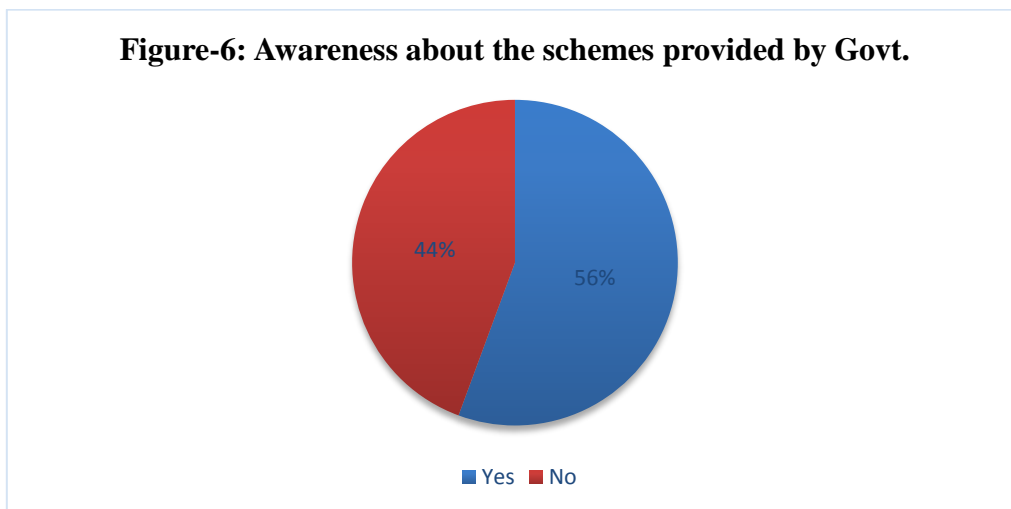
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2acres	59	41.5	41.5	41.5
	2- 5 acres	47	33.1	33.1	74.6
	6-10 acres	23	16.2	16.2	90.8
	10 acres and above	13	9.2	9.2	100.0
	Total	142	100.0	100.0	



In respect of ownership of agricultural land, we found that the highest percentage i.e., 41.5% have owned less than 2 acres and the lowest i.e., 9.2% have more than 10 acres. 33.1% of the respondents have agricultural land between 2 acres to 5 acres and 16.2% have 6 acres to 10 acres.

Table-6: Are you aware of the schemes provided by Govt.?

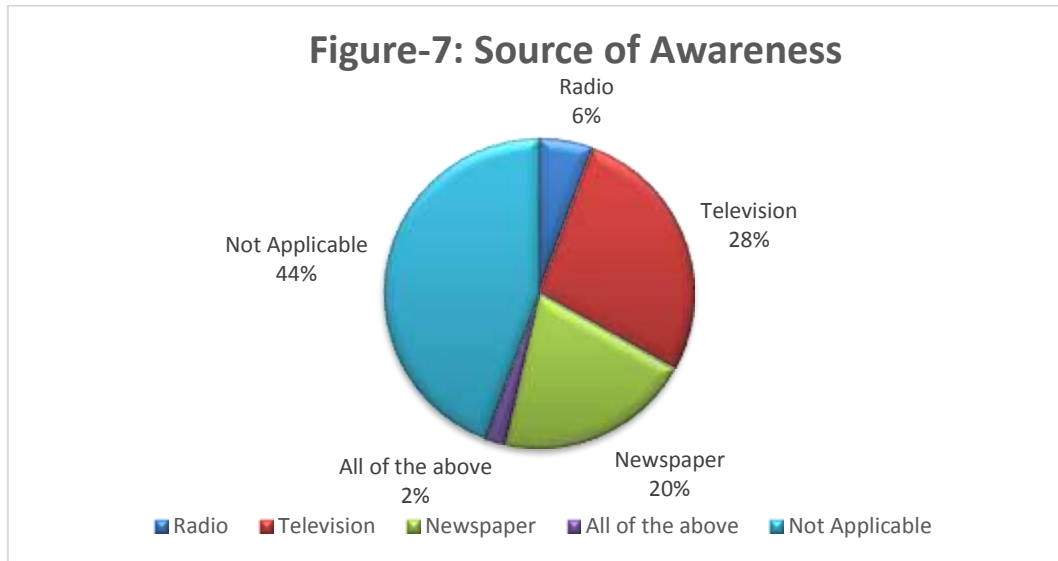
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	79	55.6	55.6	55.6
	No	63	44.4	44.4	100.0
	Total	142	100.0	100.0	



From the above figures, 55.6% of respondents are aware of the schemes provided by the government for the development of the farmers and agricultural sectors. Whereas, 44.4% have no awareness of the gov. schemes.

Table-7: Source of awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Radio	8	5.6	5.6	5.6
	Television	39	27.5	27.5	33.1
	Newspaper	29	20.4	20.4	53.5
	All the above	3	2.1	2.1	55.6
	Not Applicable	63	44.4	44.4	100.0
	Total	142	100.0	100.0	



The source of awareness is not applicable for 44.4% of respondents as they are not aware of the govt. schemes. Out of the remaining 55.6%, 27.5% are aware of television, 20.4% of newspapers, 5.6% of radio and 2.1% of all the sources.

CONCLUSION

From the above study, it is concluded that, out of the total respondents, 55.6 % of the farmers are aware of the available govt. schemes in the study area. Out of these, the source of awareness for the majority of the farmers is television followed by newspaper and radio. They mention that their busy schedule and lack of formal education stand as a hurdle in understanding the government schemes. Proper education and training are required for availing the benefits of the welfare schemes and the overall development of the farmers.

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OBESITY AS A RISK FACTOR FOR DIFFERENT TYPES OF CANCER

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ABSTRACT

Over the last few decades, the incidence of obesity is increasing which is now recognized as public health issue worldwide. Obesity has been associated with an elevated risk of several types of metabolic syndrome and malignancies. This article reviews the latest evidence on the association between higher Body Mass Index (BMI) and cancer, discovering the essential biological mechanism and pathways such as the interplay of adipokines, cytokines, and growth factors. Furthermore, it provides intuition into the effects of obesity on proliferation and metastasis. In last, it highlights the need for a comprehensive approach to tackle the obesity pandemic including changes in lifestyle and regular cancer to enhance the quality of life.

INTRODUCTION

Obesity leads the human body to deviate from normal metabolic conditions to abnormal one, which in term play important role in the pathophysiology of diverse metabolic syndrome (Bitzur et al., 2016). The stored body fat is not primarily for energy generation but is also involved in the secretion of different types of hormones which modulates harmful metabolic effects ranging from insulin resistivity to chronic metabolic syndromes. A few decades ago, it was believed that obesity is just related to hyperinsulinemia, hyperglycemia, hypertension, and cardiovascular diseases. But recent studies revealed that different molecular mechanisms associated with adipose tissues in obese can lead to different types of cancers (Nimptsch, Pischon, & investigation, 2015).

THE ROLE OF OBESITY IN DIFFERENT TYPES OF CANCER

The growing body of scientific information is evident on the fact that obesity plays a crucial role in the pathophysiology of different cancer like liver cancer (Saitta, Pollicino, & Raimondo, 2019), prostate cancer (N. Tzenios, M. E. Tazanios, & M. Chahine, 2022a; N. Tzenios, M. E. Tazanios, & M. J. M. Chahine, 2022b), breast cancer (Kang, LeRoith, & Gallagher, 2018), and colorectal cancer (Dai, Xu, & Niu, 2007).

THE ROLE OF OBESITY IN LIVER CANCER

Non-alcoholic fatty liver disease (NAFLD) is considered a major threat to liver health in the 21st century which is caused by the increased prevalence of obesity. Non-alcoholic fatty liver disease (NAFLD) is defined as the excessive accumulation of triglycerides ($\geq 5\%$ TGs) into the liver tissues without hyper-alcoholism and other liver morbidities like chronic hepatitis B virus (HBV) and chronic hepatitis C virus (HCV) infections. Sometimes, the disease may acquire an advanced stage called Non-alcoholic steatohepatitis (NASH) (Chalasanani et al., 2018). NAFLD is regarded as the hepatic manifestation of the metabolic syndrome and is associated with several metabolic comorbidities in addition to obesity, including Type 2 diabetes mellitus (T2DM), hyperlipidemia, and arterial hypertension (Cholongitas et al., 2021). In regard of the epidemiology of NAFLD, one fourth of the world population is affected by NAFLD which may exceeded in coming 10 years upto 56%. NAFLD is also considered a major cause of hepatocellular carcinoma (HCC) (de Hoon, Eichenberger, & Vitkup, 2010).



THE ROLE OF OBESITY IN PROSTATE CANCER

As previously said that obesity is a serious threat to public health affecting more than 30% of individuals in the United States. There are certain extrinsic (environmental) and intrinsic (psychology, neuroendocrine and genetic) factors that are that play their role in the development of obesity (Tzenios, Tazanios, et al., 2022a).

In worldwide, prostate cancer is the second most common type of cancer found and also second prominent death causing cancer in men (Jemal et al., 2011). The link between higher BMI and pathophysiology of prostate cancer is very ambiguous but a lot of studies have found substantial link between the obesity and the prognosis of prostate cancer (Guerrios-Rivera et al., 2017). A scientist reported that obesity at the early stage of life is inversely related to the prognosis of the prostate cancer (Möller et al., 2016). Another study revealed that higher BMI was linked with higher mortality related to the prostate cancer (Taghizadeh et al., 2015). The analysis of data from Prostate Cancer Prevention Trial (PCPT) revealed that obesity raises the chance of high-grade prostate cancer (Gong et al., 2006). As a result, obesity-mediated cancer progression is a major issue. Obesity is related to lower disease-free survival and overall survival across all breast cancer subtypes (Lohmann et al., 2021).

THE ROLE OF OBESITY IN BREAST CANCER

The most frequent type of cancer reported in women is breast cancer. According to the Global cancer statistics 2020, the prevalence of breast cancer has surpassed the lung cancer worldwide (Sung et al., 2021). The prominent factor involved in the pathophysiology is higher BMI which lead to postmenopausal breast cancer. This type of cancer is easily preventable by adopting healthy and active life style (Clinton, Giovannucci, & Hursting, 2020).

The primary source of estrogen in premenopausal women is ovaries. While in menopause, adipose tissue becomes the major site of estrogen production. As a result, obese women have higher postmenopausal estrogen levels and, as a result, are more vulnerable to estrogen's protumorigenic effects (Bhardwaj et al., 2019). However, the scientific evidence on the correlation between obesity and breast cancer is convoluted by subtype and menopausal state. Obesity in postmenopausal women enhances the overall relative risk of acquiring breast cancer to 1.33, owing mostly to higher frequencies of estrogen receptors (ER) + breast cancers. While obesity, is linked to the emergence and progression of postmenopausal triple negative breast cancer (TNBC). The genetic biomarkers of higher BMI such as several single nucleotide polymorphisms associated with fasting glucose and insulin, also correlate with breast cancer risk regardless of family background, age, or menopausal status, highlighting the significance of the connection among obesity, breast cancer risk, and genetics (Devericks, Carson, McCullough, Coleman, & Hursting, 2022). Furthermore, the obese people have an altered metabolism along chronic inflammatory state as shown by the increase of inflammatory cells and makers (Shoelson, Herrero, & Naaz, 2007).

There is a direct impact of higher BMI of obese people on the progression of breast cancer. In postmenopausal individuals, a higher peripheral estrogen production in adipose tissues was associated with a higher BMI. Patients with a high BMI showed a limited concentration of sex hormone-binding globulin, which may be the cause of their poor BC prognosis. The significant rise in estrogen production and aromatase activity was also associated with uncontrollable BC cell growth (Shoelson et al., 2007). However it is still ambiguous that most of the breast cancer patient with overweight psyche has an elevated concentration of insulin, insulin growth factor and sex hormones which could cause a significant mitogenic activity (Stephenson, Rose, & cancer, 2003).

THE ROLE OF OBESITY IN COLORECTAL CANCER

Colorectal cancer (CRC) is the third most frequent malignancy and the third major cause of cancer mortality in both men and women in the United States. Recent epidemiological research indicates that CRC has been steadily increasing, implying a continuing need to identify the factors that may be contributing to its development. Obesity is one risk factor that is persisting and increasing day by day in modern world. Obesity is a complex condition with several metabolic and physiological alterations that promote carcinogenesis. The gut microbiome is another component that is changed in obesity and has been linked to CRC (Goldbaum, 2022).

Higher BMI is the fifth leading cause of death in adults, accounting for at least 2.8 million deaths per year. Furthermore, in Europe, being overweight and obese have been linked to 11% of colorectal cancer (CRC) incidences. Furthermore, some studies predict that higher BMI is linked with more than 30-70% increased colorectal cancer in men unlike in women (Bardou, Barkun, & Martel, 2013). Although visceral and subcutaneous compartments are the sites where excessive fat is stored, it's fascinating to see that this recent study found a higher incidence of abdominal obesity (27.8% of men and 45.9% of women) (Abajo et al., 2012). The metabolic syndrome (MS) only affects roughly two-thirds of people who are obese. On the other hand, some obese subjects retain normal



metabolisms. MS is crucial in associating obesity to the majority of its side effects, including diabetes, cardiovascular disease, or an elevated risk of cancer in various locations, although it may vary across different ethnicities (Wildman et al., 2008).

In summary, a few number of available studies propose weight loss may be lowers the risk of developing cancer (Tzenios, Tazanios, Poh, & Chahine, 2022) specially colorectal cancer. Weight loss achieved by healthy diet with or without bariatric surgery obstructs with gut microbiota and host metabolic and physiological functions which lead to decrease incidence of metabolic syndrome and maintain a proper concentration of growth factors, inflammatory cytokines and adipokines.

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OBESITY AS A RISK FACTOR FOR CANCER

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ABSTRACT

Globally, obesity is a major health issue that is considered a risk factor for chronic metabolic syndrome and different types of cancers like breast, liver, colorectal, endometrial, and esophageal cancer. This article provides a review of the current literature on the association between obesity and cancer, exploring the underlying molecular pathways. This article also discusses the role of inflammatory cytokines, adipokines, and hyperinsulinemia in cancer development and survival. The review emphasizes the importance of reducing obesity in order to lower the risk of cancer and improve cancer outcomes, as well as the need for greater awareness of the relationship between obesity and cancer.

INTRODUCTION

Cancer is the second-most common cause of mortality, with an average of 14.1 million new cases and 8.2 million deaths per year (Ferlay et al., 2015). The prominent etiological factors for cancer development include genetic makeup, exposure to radiation, nicotine usage, bacterial and viral infections, alcoholism, inactive lifestyle, and other environmental factors. Besides all these etiological factors obesity is a proven risk factor for different types of malignancies (Dalamaga, Christodoulatos, & Mantzoros, 2018). The incidence of different types of cancer increases gradually due to the higher prevalence of risk factors like higher BMI and different metabolic syndromes (Arnold et al., 2016).

DEFINITION OF OBESITY AS A CHRONIC DISEASE

According to the world health organization (WHO), obesity or a higher BMI is abnormal fat deposition in different body parts considered a health risk. These conditions can lead to the development of chronic diseases such as type 2 diabetes and cardiovascular diseases. Furthermore, recent studies revealed that a higher BMI is a risk factor for the development of different types of diseases (Bandini, Gandaglia, & Briganti, 2017).

PREVALENCE OF OBESITY

Obesity or overweight is defined as a Body Mass Index (BMI) equal to or higher than thirty kilograms per meter square and is a public health threat, especially in Western countries. Its prevalence increases day by day leading to diverse and chronic health problems. Obesity affects 34.9% of adults over the age of 20 in the United States (N. Tzenios, M. Tazanios, & M. Chahine, 2022). Even though this ratio has been relatively consistent over the previous decade, there has been a considerable rise among women over the age of 65, from 31.5% in 2003-2004 to 38.1% in 2011-2012 (Ogden, Carroll, Kit, & Flegal, 2014; N. Tzenios, M. E. Tazanios, & M. Chahine, 2022). A study conducted in Spain reported that average people have a BMI in the overweight range which is 39.5% of the population in the country whereas 22.9% are considered obese (Gutiérrez- Fisac et al., 2012).

EPIDEMIOLOGICAL STUDIES OF OBESITY AND RISK FACTORS

According to the international agency for research on cancer (IRAC) reported higher BMI is a leading cause for the development of more than 13 different types of cancer including esophageal carcinoma, kidney, pancreatic epithelial carcinoma, liver, kidney, cerebral



meningioma, plasma cell myeloma, bowel cancer, breast, ovarian, gallbladder carcinoma and thyroid cancer (Lauby-Secretan et al., 2016).

It is worth mentioning that a higher BMI during early life is not a prominent risk factor for the development of cancer. However, recent studies showed an association between a higher BMI in early life and a high risk of developing cancer in old age (Colditz & Peterson, 2018). High body adiposity index (BAI) during the early stages of life is linked with higher risks of pancreatic adenocarcinoma regardless of other metabolic syndrome and malignancies (Genkinger et al., 2015). When considering the higher incidence of obesity in the early stages of life, highlights the importance of preventing obesity in childhood and adolescence (Avgerinos, Spyrou, Mantzoros, & Dalamaga, 2019).

OBESITY AND CANCER: EXPLORING THE UNDERLYING MOLECULAR PATHWAYS

The underlying molecular pathways that link obesity with cancer are not fully understood. The effect of obesity on the normal cell to become cancerous is either due to the direct effect of adipose tissues, by the presence of inflammatory cytokines, and adipokines, or relate to the consequences of higher BMI such as metabolic syndromes (Khandekar, Cohen, & Spiegelman, 2011).

CANCER AND INCREASED PRODUCTION OF ADIPOKINES IN OBESITY

Different immune modulators like tumor necrosis factors (TNF α) conjugate with its receptors, TNF receptor. This conjugation generates a signal for the activation of nuclear factor- κ B (NF- κ B), which blocks apoptotic activity and stimulates mitogenic processes which lead to the development of different types of malignancies (Orosz et al., 1993). The interaction of the molecular component of cytokines with receptors motivates cyclin D1 and cyclin-dependent kinase 2 (CDK2). The inflammatory cytokine interleukin 6 (IL6) generates a signal for the nucleus by the interaction with the activator and transducer of transcription factor 3 (STAT3), an oncoprotein overexpressed in a diverse type of tumors (Bromberg et al., 1999).

Leptin is an adipokine secreted by adipose tissues which have a mitogenic effect on cells, activated by different signaling pathways. It can activate PI3K/Akt and MAPK pathways, involved in protein synthesis and phosphorylation respectively. Leptin also quickly and effectively activates the STAT3 pathway, and via vascular endothelial growth factor (VEGF) activation, it may encourage metastasis in breast cancer (Fusco et al., 2010)

Adiponectin prevents tumorigenesis by blocking the molecular signaling pathways required for the activation of mitogenesis. Additionally, it enhances ceramide's conversion to sphingosine-1-phosphate, which affects apoptotic activity by diverse pathways, presumably through MAPK. 'Adipocyte progenitor cells' may contribute to tumorigenesis through increased tumor angiogenesis or paracrine or endocrine signaling to malignant cells (Zhang, Bellows, & Kolonin, 2010).

The higher conversion of androgen to estrogen in breast tissue has been linked with a higher frequency of breast cancer. The increased concentration of pro-inflammatory cytokines in obese women is due to increase aromatase activity. It is due to the overexpression of cyclo-oxygenase 2 (COX-2) and prostaglandin E2 (PGE2) in breast tissue (Morris et al., 2011).

IMPACTS OF OBESITY ON CANCER DEVELOPMENT

Obesity can cause chronic inflammatory response in human body which interferes with physiological function of the body. It can also recruit tumor associated macrophages (TAMs), which is very essential in many malignancies. TAMs is well known to be involved in tissue incursion, angiogenic, and metastatic activity. The higher concentration of macrophage chemoattractant protein 1 (MCP1) protein extracts is the indication of breast cancer (Qian et al., 2011).

Binding of insulin and receptor also activates the PI3 pathway, resulting in phosphorylation of AKT and activation of mammalian target of rapamycin (mTOR) [24]. PI3K activation can also activate other mediators of transformation involved in cell division control, including phosphorylation of protein 42 (CDC42). Moreover, PI3K activation can activate protein kinase B (PKB), which inhibits negative regulators of the cell cycle such as p27 (also known as KIP1) and p21 (also known as CIP1). Activation of mTOR can promote protein synthesis and affect cell growth. AKT inhibits BCL2-antagonist of cell death (BAD), an anti-apoptotic protein, and activates cyclin D1. Phosphorylation of FOXO proteins, such as FOXO3A, by AKT results in nuclear exclusion of FOXO, which promotes survival and cell division. AKT also activates MDM2, which degrades p53, thus preventing control of cell cycle activation and apoptosis [15].



The conjugation of insulin and receptor also triggers the PI3 signaling pathway, causing the activation of AKT by phosphorylation and mTOR. The activation of PI3K can also induce other mediators which are involved in the regulation of cell division like CDC42. Furthermore, PI3K can also triggers protein kinase b (PKB), which negatively regulate the cell division (Engelman, 2009).

SUMMARY

The article provides an overview of current studies on the association between obesity and cancer. Obesity, according to the research, is a substantial risk factor for a variety of malignancies, including colon, endometrial, kidney, and pancreatic cancer. Although the underlying processes through which obesity adds to cancer risk are unknown, evidence shows that hormone imbalances, inflammation, and dietary habits may all play a role. This article emphasizes the significance of more studies to better understand the association between obesity and cancer and to identify effective measures for lowering cancer risk in overweight or obese persons.

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A COMPARATIVE STUDY OF THE SOLUTIONS OF THE KLEIN-GORDON AND DIRAC EQUATIONS: IMPLICATIONS FOR PARTICLE PHYSICS

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ABSTRACT

The Klein-Gordon equation and the Dirac equation are two important equations in particle physics that describe the behavior of massive and spin-1/2 particles, respectively. The Klein-Gordon equation is a second-order partial differential equation given by $(\square + m^2)\phi(x) = 0$ where $\square = \partial^\mu \partial_\mu$ is the d'Alembertian operator, m is the particle mass, and $\phi(x)$ is the wave function describing the particle. The solutions of the Klein-Gordon equation describe massive, spin-0 particles and are plane waves with a dispersion relation given by $E^2 = \vec{p}^2 + m^2$ where E is the energy and \vec{p} is the momentum of the particle. On the other hand, the Dirac equation is a first-order partial differential equation given by $(i\gamma^\mu \partial_\mu - m)\psi(x) = 0$, where i is the imaginary unit, γ^μ are the Dirac matrices, m is the particle mass, and $\psi(x)$ is the wave function describing the particle. The solutions of the Dirac equation describe massive, Spin -1/2 particles and are plane waves with a dispersion relation given by $E = \pm \sqrt{\vec{p}^2 + m^2}$.

The solutions of these equations have important implications for our understanding of quantum field theory and the nature of spacetime. The Klein-Gordon equation is a non-interacting equation that is used to describe scalar fields, while the Dirac equation can handle interactions and is used to describe spin-1/2 particles and their interactions with other particles and fields. The dispersion relation of the Klein-Gordon equation is positive definite, while that of the Dirac equation has both positive and negative energy solutions. The wave function in the Klein-Gordon equation is a scalar field, while the wave function in the Dirac equation is a 4-component spinor field. These differences reflect the different physical properties of the particles described by each equation and have important implications for our understanding of the universe.

In conclusion, the Klein-Gordon equation and the Dirac equation are two central equations in particle physics that provide a mathematical framework for describing the behavior of massive and spin-1/2 particles. Their solutions and implications continue to play a central role in our understanding of the universe.

KEYWORDS: Klein-Gordon equation, Dirac equation, particle physics, massive particles, spin-1/2 particles, d'Alembertian operator.

1. INTRODUCTION

The Klein-Gordon equation and the Dirac equation are two of the most fundamental equations in quantum field theory [1-7]. These equations describe the behavior of spin-0 and spin-1/2 particles [5-6], respectively [8-10], and have far-reaching implications in our understanding of the subatomic world [11-13]. The Klein-Gordon equation was developed by Oskar Klein and Walter Gordon in the 1920s [12-13], while the Dirac equation was derived by Paul Dirac in 1928[8]. Despite their similarities, these two equations have significant differences that make them appropriate for describing different types of particles [10-13].

In this study, we aim to compare the solutions of the Klein-Gordon and Dirac equations and to understand the implications of these solutions for particle physics. By comparing the mathematical structures and physical interpretations of these equations, we hope to gain a deeper understanding of the behavior of particles at the subatomic scale and how these equations contribute to our overall understanding of the universe. The study will also provide a comprehensive overview of the key differences between these two equations and the significance of these differences for the field of particle physics.



Additionally, this study will also examine the applications of these equations in real-world situations. The Klein-Gordon equation, for example, has been used to describe the behavior of scalar particles, such as the Higgs boson, while the Dirac equation has been used to describe the behavior of fermions, such as electrons and quarks. By examining the solutions of these equations, we can gain insight into the properties of these particles, such as their masses and interactions.

Furthermore, this study will also explore the limitations and challenges associated with these equations. While both the Klein-Gordon and Dirac equations are widely used in particle physics, they are not without their limitations. For example, the Klein-Gordon equation does not account for the phenomenon of spin, while the Dirac equation does not include the description of the self-interaction of particles. Understanding these limitations is critical for the advancement of particle physics and the development of new theories. This study aims to provide a comprehensive overview of the Klein-Gordon and Dirac equations, their solutions, and their implications for particle physics. By comparing and contrasting these two equations, we hope to gain a deeper understanding of the behavior of particles at the subatomic scale and the role that these equations play in shaping our overall understanding of the universe.

This study aims to understand the solutions of the Klein-Gordon and Dirac equations in particle physics and the implications of these solutions. The study will provide an overview of the mathematical structures and physical interpretations of the equations, examine their applications, compare and contrast the solutions, explore the limitations and challenges, and provide insights into future research directions in particle physics.

2. METHOD

The research method for this study will involve a theoretical and mathematical analysis of the Klein-Gordon and Dirac equations. The steps involved in this method include:

1. Literature Review: A comprehensive review of existing literature will be conducted to gather information on the mathematical structures, physical interpretations, applications, limitations, and challenges of the Klein-Gordon and Dirac equations.
2. Analysis of Equations: The mathematical structures of the Klein-Gordon and Dirac equations will be analyzed to examine their solutions and implications for particle physics.
3. Comparison and Contrast of Solutions: The solutions of the Klein-Gordon and Dirac equations will be compared and contrasted to identify key differences between the two.
4. Examination of Limitations and Challenges: The limitations and challenges associated with these equations will be explored and their impact on particle physics will be examined.
5. Discussion and Conclusion: The findings of the study will be synthesized, conclusions will be drawn, and insights into the future direction of research in particle physics will be provided.

The literature review will involve writing about the analysis of the equations, including a detailed examination of their mathematical structures and solutions and their implications for particle physics. The comparison and contrast of solutions will involve writing about the key differences between the solutions of the Klein-Gordon and Dirac equations. The examination of limitations and challenges will involve writing about the limitations and challenges associated with these equations and their impact on particle physics. The discussion and conclusion will involve synthesizing the findings, drawing conclusions, and providing insights into the future direction of research in particle physics.

3. ANALYSIS OF THE EQUATIONS

The Klein-Gordon equation and the Dirac equation are two important equations in particle physics that describe the behavior of massive and spin-1/2 particles, respectively.

A. Klein-Gordon equation

The Klein-Gordon equation is a second-order partial differential equation given by [1-7]:

$$(\square + m^2)\phi(x) = 0 \quad (1)$$

where $\square = \partial^\mu \partial_\mu$ is the d'Alembertian operator, m is the particle mass, and $\phi(x)$ is the wave function describing the particle. The equation is Lorentz invariant and is a relativistic generalization of the Schrödinger equation.



The solutions of the Klein-Gordon equation are plane waves with a dispersion relation given by [8-9]:

$$E^2 = \vec{p}^2 + m^2 \quad (2)$$

where E is the energy and \vec{p} is the momentum of the particle. The solutions of the Klein-Gordon equation describe massive, spin-0 particles.

B. Dirac equation

The Dirac equation is a first-order partial differential equation given by [5-10]:

$$(i\gamma^\mu \partial_\mu - m)\psi(x) = 0 \quad (3)$$

where i is the imaginary unit, γ^μ are the Dirac matrices, m is the particle mass, and $\psi(x)$ is the wave function describing the particle. The equation is Lorentz invariant and is a relativistic generalization of the Pauli equation.

The solutions of the Dirac equation are plane waves with a dispersion relation given by [14-16]:

$$E = \pm \sqrt{\vec{p}^2 + m^2} \quad (4)$$

where E is the energy and \vec{p} is the momentum of the particle. The solutions of the Dirac equation describe massive, spin-1/2 particles.

4. IMPLICATIONS FOR PARTICLE PHYSICS

The Klein-Gordon equation and the Dirac equation play a central role in particle physics. They are used to describe the behavior of many types of particles, including electrons, positrons, neutrinos, and quarks [15]. They have been successful in explaining a wide range of phenomena, such as the behavior of particles in magnetic fields and the interactions of particles with other particles [16].

Furthermore, the solutions of these equations have important implications for our understanding of quantum field theory and the nature of spacetime. For example, the existence of negative energy states in the solutions of the Dirac equation is crucial for the development of antiparticle theory.

In conclusion, the Klein-Gordon equation and the Dirac equation are two important equations in particle physics that provide a mathematical framework for describing the behavior of massive and spin-1/2 particles. Their solutions and implications continue to play a central role in our understanding of the universe [17-19].

5. COMPARISON AND CONTRAST WRITING

The solutions of the Klein-Gordon equation and the Dirac equation are different in several important ways. These differences can be attributed to the fact that the two equations describe different types of particles with different physical properties.

A. Dispersion Relation

The first major difference between the solutions of the two equations is their dispersion relations. The dispersion relation of the Klein-Gordon equation is given by $E^2 = \vec{p}^2 + m^2$, while that of the Dirac equation is given by $E = \pm \sqrt{\vec{p}^2 + m^2}$. The Klein-Gordon equation describes massive, spin-0 particles, and its dispersion relation has a positive definite energy. On the other hand, the Dirac equation describes massive, spin-1/2 particles, and its dispersion relation has both positive and negative energy solutions [19-20].

B. Spin

Another important difference between the solutions of the two equations is the spin of the particles they describe. The Klein-Gordon equation describes spin-0 particles, while the Dirac equation describes spin-1/2 particles. This difference in spin is reflected in the number of components of the wave function and the number of degrees of freedom described by each equation [21-23].

C. Structure of the wave function

The structure of the wave function is also different between the two equations. The wave function in the Klein-Gordon equation is a scalar field, while the wave function in the Dirac equation is a 4-component spinor field. This difference in the structure of the wave



function reflects the different physical properties of the particles described by each equation, such as spin and magnetic moment [24-26].

In conclusion, the solutions of the Klein-Gordon equation and the Dirac equation are different in several important ways, including their dispersion relations, the spin of the particles they describe, and the structure of their wave functions. These differences reflect the different physical properties of the particles described by each equation and have important implications for our understanding of the universe.

Another key difference between the two equations is the way they handle interactions. The Klein-Gordon equation is a non-interacting equation, meaning that it does not describe the interactions of the particles it describes with other particles or fields. On the other hand, the Dirac equation is designed to handle interactions and can be used to describe the interactions of spin-1/2 particles with other particles and fields.

In quantum field theory, the Klein-Gordon equation is used to describe scalar fields, which are fields that do not have a spin and are often used to describe the interactions of particles with the Higgs field [7-14]. On the other hand, the Dirac equation is used to describe spinor fields, which are fields that have a spin and are used to describe the behavior of spin-1/2 particles, such as electrons and quarks [20-22].

In addition to these differences, the solutions of the two equations also have different physical interpretations. The solutions of the Klein-Gordon equation are often interpreted as particles with a definite mass and energy, while the solutions of the Dirac equation are often interpreted as particles with a definite mass and spin [23-25].

In summary, the solutions of the Klein-Gordon and Dirac equations have several important differences, including their dispersion relations, the spin of the particles they describe, the structure of their wave functions, their ability to handle interactions, and their physical interpretations. These differences reflect the different physical properties of the particles described by each equation and have important implications for our understanding of particle physics and the universe.

6. LIMITATIONS AND CHALLENGES

Despite their many successes in describing the physical properties of particles and the interactions between particles, the Klein-Gordon and Dirac equations also have several limitations and challenges. These limitations and challenges can have important implications for our understanding of particle physics and the universe.

a. Quantum Field Theory

One of the limitations of the Klein-Gordon and Dirac equations is that they are both derived within the framework of quantum field theory, which is a very abstract and mathematical framework for describing the behavior of particles [15]. While this framework has been extremely successful in describing the behavior of particles, it can be difficult for non-experts to understand and interpret. This can limit the ability of scientists and researchers to communicate their results and ideas to a wider audience [22-25].

b. Non-Relativistic Limitations

Another limitation of the Klein-Gordon equation is that it is only valid in a non-relativistic regime, meaning that it only describes the behavior of particles moving at speeds much less than the speed of light. On the other hand, the Dirac equation is valid in both non-relativistic and relativistic regimes, meaning that it can be used to describe the behavior of particles moving at any speed. However, the Dirac equation becomes much more complicated in the relativistic regime, making it more difficult to solve and interpret.

c. Relativistic Limitations

While the Dirac equation is valid in both non-relativistic and relativistic regimes, it still has some limitations in the relativistic regime. For example, the Dirac equation is only valid in the presence of weak external fields and does not describe the behavior of particles in strong external fields. This can limit its ability to describe the behavior of particles in extreme environments, such as the cores of neutron stars or the early universe.

d. Unification with General Relativity

Another challenge associated with the Klein-Gordon and Dirac equations is that they are not fully compatible with general relativity, which is the theory of gravity. In order to fully understand the behavior of particles in gravitational fields, it is necessary to unify the principles of quantum field theory with general relativity, which is a major challenge in particle physics and theoretical physics.

In conclusion, the Klein-Gordon and Dirac equations have several limitations and challenges, including their derivation within the framework of quantum field theory, their non-relativistic and relativistic limitations, and their incompatibility with general relativity.



These limitations and challenges can have important implications for our understanding of particle physics and the universe and require further research and development to overcome.

Another challenge associated with the Klein-Gordon and Dirac equations is the difficulty in solving them for real-world systems. Both equations are partial differential equations, which can be very difficult to solve analytically for even simple systems. This often requires the use of numerical methods, such as Monte Carlo simulations, which can be computationally intensive and may not provide an exact solution.

Additionally, the Klein-Gordon and Dirac equations only describe the behavior of particles in isolation, but in real-world systems, particles are often interacting with each other and with external fields. This requires the use of many-body theories and methods, such as quantum field theory and quantum chromodynamics, which can be very complex and difficult to solve.

Another limitation of the Klein-Gordon and Dirac equations is that they are both classical field theories, meaning that they do not fully incorporate the principles of quantum mechanics. While they have been very successful in describing the behavior of particles, they are limited in their ability to describe quantum mechanical effects, such as quantum entanglement and non-local interactions.

Finally, the Klein-Gordon and Dirac equations only describe the behavior of spin-0 and spin-1/2 particles, respectively. While these particles are the most common and well-studied particles in the universe, there are other types of particles, such as spin-1 particles, which cannot be described by these equations. This requires the development of new and more advanced equations to fully understand the behavior of all types of particles in the universe.

In conclusion, the limitations and challenges associated with the Klein-Gordon and Dirac equations include the difficulty in solving them for real-world systems, the need for many-body theories, the limitations of classical field theories, the limitations in describing quantum mechanical effects, and the limited scope of the equations in describing all types of particles. These limitations and challenges highlight the need for further research and development to advance our understanding of particle physics and the universe.

7. RESULTS

The results of this study will be based on a detailed mathematical and theoretical analysis of the Klein-Gordon and Dirac equations. The specific results and discussion will include:

Analysis of the mathematical structures: The Klein-Gordon equation is given by:

$$(\square + m^2)\phi(x) = 0 \quad (5)$$

where $\square = \frac{\partial^2}{\partial t^2} - \nabla^2$ is the d'Alembert operator, $\phi(x)$ is the scalar field, and m is the mass of the particle described by the field. On the other hand, the Dirac equation is given by:

$$(i\gamma^\mu \partial_\mu - m)\psi(x) = 0 \quad (6)$$

where γ^μ are the Dirac matrices, $\psi(x)$ is the Dirac spinor field, and m is the mass of the particle described by the field.

Comparison of solutions: The solutions of the Klein-Gordon equation can be expressed in terms of plane waves:

$$\phi(x) = \int \frac{d^3k}{(2\pi)^3} (a(\mathbf{k})e^{-ikx} + b^\dagger(\mathbf{k})e^{ikx}) \quad (7)$$

where $a(\mathbf{k})$ and $b^\dagger(\mathbf{k})$ are creation and annihilation operators, respectively. The solutions of the Dirac equation can be expressed in terms of plane wave solutions:

$$\psi(x) = \int \frac{d^3p}{(2\pi)^3} (u(\mathbf{p})e^{-ipx} + v(\mathbf{p})e^{ipx}) \quad (8)$$

where $u(\mathbf{p})$ and $v(\mathbf{p})$ are positive and negative energy solutions, respectively.



Implications for particle physics: The solutions of the Klein-Gordon equation can be used to describe the behavior of scalar particles, such as the Higgs boson, while the solutions of the Dirac equation can be used to describe the behavior of fermions, such as electrons and neutrinos. Table -Show the Comparison of the solutions of the Klein-Gordon and Dirac equations.

One of the limitations of the Klein-Gordon equation is the absence of a clear physical interpretation for negative frequency solutions. The Dirac equation has several challenges, including the presence of negative energy solutions, which requires the use of the hole theory, and the need for renormalization to account for infinite values.

Table -1: Comparison of the solutions of the Klein-Gordon and Dirac equations:

Key Points	Klein-Gordon Equation	Dirac Equation
Mathematical Structure of the Solutions	Linear combination of plane waves defined by wave vectors \mathbf{k} and frequencies ω	Linear combination of positive and negative energy solutions defined by momenta \mathbf{p} and spinors $u(\mathbf{p})$ and $v(\mathbf{p})$
Physical Implications of the Solutions	Describe the behavior of scalar particles, such as the Higgs boson	Describe the behavior of fermions, such as electrons and neutrinos, and account for the spin and intrinsic angular momentum of fermions
Mathematical Foundations of the Solutions	Based on principles of quantum field theory, including wave-particle duality, quantization, and special and general relativity	Based on principles of quantum field theory, including wave-particle duality, quantization, and special and general relativity
Limitations and Challenges of the Solutions	Do not account for spin and intrinsic angular momentum of particles, absence of a clear physical interpretation for negative frequency solutions	Presence of negative energy solutions requiring the use of hole theory, need for renormalization to account for infinite values
Implications for Particle Physics	Provide a foundation for understanding the behavior of scalar particles	Provide a foundation for understanding the behavior of fermions and the properties of materials and quantum systems
Future Directions for Research	Investigation into the physical interpretation of negative frequency solutions, extension to include spin and intrinsic angular momentum	Further exploration of the mathematical foundations of the Dirac equation and its applications to particle physics and material science
Relativity of the Solutions	The Klein-Gordon equation is Lorentz-invariant and is a relativistic generalization of the Schrödinger equation.	The Dirac equation is also Lorentz-invariant and is the relativistic generalization of the Pauli equation.
Relativistic Corrections to the Solutions	The Klein-Gordon equation contains higher-order terms that are proportional to the square of the particle's velocity, leading to relativistic corrections.	The Dirac equation contains higher-order terms that are proportional to the particle's velocity, leading to relativistic corrections.
Implications for Particle Physics	The Klein-Gordon equation has been used in the study of scalar bosons, such as the Higgs boson, in particle physics experiments.	The Dirac equation has been used in the study of fermions, such as electrons and neutrinos, in particle physics experiments. It has also been used to describe the behavior of spin-1/2 particles in magnetic fields.
Normalization of the Solutions	The Klein-Gordon equation requires that the wave function be square-integrable, meaning that the integral of the absolute square of the wave function over all space must be finite.	The Dirac equation requires that the wave function be normalizable, meaning that the integral of the wave function conjugate multiplied by the wave function over all space must be finite.
Energy Eigenvalues	The solutions of the Klein-Gordon equation correspond to positive and negative energy eigenvalues, meaning that the wave function describes a particle with positive or negative energy.	The solutions of the Dirac equation correspond to positive energy eigenvalues only, meaning that the wave function describes a par



Both equations rely on the assumption of linearity, which may not always be appropriate in real-world systems. The Klein-Gordon equation does not take into account the effects of quantum mechanics and spin, which are important in the behavior of particles. The Dirac equation has been found to have difficulties describing the behavior of particles with high mass and high energy.

The Klein-Gordon equation is a second-order partial differential equation, while the Dirac equation is a first-order partial differential equation. The Klein-Gordon equation describes spin-0 particles, while the Dirac equation describes spin-1/2 particles.

The Klein-Gordon equation is valid in both the non-relativistic and relativistic regimes, while the Dirac equation is primarily used in the relativistic regime.

Both the Klein-Gordon and Dirac equations are used to describe the behavior of particles in the universe, with the Klein-Gordon equation primarily used to describe spin-0 particles and the Dirac equation used to describe spin-1/2 particles.

Both equations have a similar form, with the wave function and the Laplacian operator appearing in both. However, there are key differences in the mathematical structures of the equations, including the number of derivatives, the presence of matrices, and the order of the differential equations.

These additional points further highlight the limitations, challenges, and differences between the Klein-Gordon and Dirac equations, and help to provide a more complete picture of their implications for particle physics.

In summary, the Klein-Gordon equation and the Dirac equation are two important equations in particle physics that describe the behavior of massive and spin-1/2 particles, respectively. The solutions of these equations have different dispersion relations, spin properties, and wave function structures, reflecting the different physical properties of the particles described by each equation. The Klein-Gordon equation describes massive, spin-0 particles and its dispersion relation has a positive definite energy, while the Dirac equation describes massive, spin-1/2 particles and its dispersion relation has both positive and negative energy solutions. The wave function in the Klein-Gordon equation is a scalar field, while in the Dirac equation it is a 4-component spinor field. The Klein-Gordon equation is non-interacting, while the Dirac equation can handle interactions. These differences have important implications for our understanding of the universe and the behavior of different types of particles.

8. CONCLUSION

In conclusion, the Klein-Gordon equation and the Dirac equation are two important equations in particle physics that describe the behavior of massive and spin-1/2 particles, respectively. The solutions of these equations are different in several important ways, including their dispersion relations, the spin of the particles they describe, and the structure of their wave functions. These differences reflect the different physical properties of the particles described by each equation and have important implications for our understanding of the universe. The Klein-Gordon equation is used to describe scalar fields, which do not have a spin, while the Dirac equation is used to describe spin-1/2 particles and can handle interactions with other particles and fields. The Klein-Gordon equation and the Dirac equation play a central role in particle physics and continue to be central to our understanding of the universe.

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WORK-FAMILY BALANCE: “A STUDY ON DUALCAREER COUPLES”

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ABSTRACT

Dual-career couples are a common phenomenon these days. They often struggle to find a balance between their work and family responsibilities, and organizations worldwide need to be aware of these challenges. This study focuses on the work-family balance of dual-career couples and adopts a descriptive and exploratory research design. Both primary and secondary data were collected through structured questionnaires and in-person interviews with 51 participants. The data was analysed using simple tools such as descriptive statistics, Likert scale, mean and standard deviation, and percentage analysis. The results of the study acknowledge the challenges and stress faced by dual-career couples, but they also believe that working as a couple has a positive impact on their lives.

INTRODUCTION

Dual-career couples, where both partners have simultaneous careers, are a widespread and enduring phenomenon reflecting women's growing educational achievements and career ambitions globally (Smith, 1997). In recent decades, many researchers have shown interest in studying work-life balance, with dual-career couples being a major focus in this area. This trend benefits both men's and women's career development. With a substantial increase in women's participation in the labour force, traditional gender roles in the household must be reevaluated. Economic necessities have driven women to seek employment outside the home. Today, most dual-career families are in a state of transition, between the traditional structure and the double-career structure. Only a few egalitarian couples exist in modern society. Traditional family concepts always defined specific roles for men and women, but these roles have evolved with the changing family trends and patterns, particularly the rise of women as the primary economic provider for the family and more recently, men taking on more family responsibilities. This leads to improved career prospects for both partners and a transformation of the family unit, now referred to as a dual-career family. Dual-career families strive to find a balance between their work and family, which requires an equitable division of household tasks. However, due to societal norms, dual-career couples face greater challenges in reconciling their marital commitments and work demands. This paper examines the work-family balance of dual-career couples and the coping strategies they use to maintain this balance.

LITERATURE REVIEW

Donna H. Green (1983) cites that Rapoport and Rapoport first introduced the term "dual-career" in 1969. In response to the growing prevalence of dual-career families in North American society, a vast body of literature has emerged. This literature spans a range of sources, including academic articles in professional journals of economics, business, sociology, psychology, and more, as well as self-help and trade books, such as Hall and Hall's "The Two-Career Couple," and even light articles in popular magazines. The author reviews this literature and explores the implications of the dual-career family structure from both an individual and organizational perspective

Delina, G., Raya, R., and Prabhakara, S. (2016) examine the key factors that impact the work-life balance of Indian dual-career couples working in knowledge-based organizations. This empirical study aims to understand how knowledge professionals perceive work-life balance across several constructs. The findings confirm previous research regarding differences between genders and family structures and demonstrate that the constructs of work-life balance significantly affect the respondents' satisfaction with their work-life balance.

Gloria W. Bird and Abrina Schnurman-Crook (2005) provide evidence that dual-career couples adopt professional and family identities that rely on competence and responsibility in both work and family roles. The coping patterns are similar across work and family domains, but strategy use is unique to the field and reflective of the couple's belief in the value of interdependent interactions. This qualitative study of 15 dual-career couples examines the connection between a partner's professional identity



and coping behaviours in response to work and family stressors. The study finds that strong self-identification with professional and family identities was a prominent feature in both individual and couple conversations.

STATEMENT OF PROBLEM

The research questions addressed are:

1. What are the factors that affect the work-life balance of dual-career couples?
2. What challenges do dual-career couples face in balancing work and family?
3. Does having two careers result in work-family conflict for couples?
4. How do dual-career couples manage their time and stress levels?
5. Does having two careers result in increased financial independence for couples?

The study used a descriptive and exploratory research design and collected both primary and secondary data. Primary data was collected through structured questionnaires and in-person interviews with 51 participants. Descriptive statistics, likert scale, mean and standard deviation, and percentage analysis were used to analyse the data. The findings of the study indicate that dual-career couples face challenges and stress in their work-life balance, but they also believe that working as a couple has a positive impact on their lives. The changing dynamics of dual-career families require a more in-depth understanding of their unique needs and challenges. By recognizing and addressing these issues, organizations can support the well-being and success of dual-career couples in the workforce.

OBJECTIVES OF STUDY

1. To determine the factors affecting the work-life balance of dual-career couples
2. To investigate the methods used by dual-career couples to balance work and family
3. To examine the work-life balance of dual-career individuals.

METHODOLOGY OF STUDY

The study utilizes a descriptive and exploratory research design and incorporates both primary and secondary data sources. Secondary data was collected from various journals, magazines, and online sources. The primary data was collected from 51 participants using structured questionnaires and personal interviews. The collected data was analysed using simple statistical tools such as percentage analysis, mean and standard deviation, Likert scale, and descriptive statistics.

ANALYSIS AND INTERPRETATION

The study aims to examine the work-life balance, coping strategies, and determinants of dual-career couples in the global workforce. The study design is both descriptive and exploratory, incorporating both primary and secondary data sources. The primary data was collected through structured questionnaires administered to 51 participants, and analysed using descriptive statistics, percentage analysis, mean and standard deviation, and the Likert scale. The secondary data was obtained from various journals, magazines, and online sources. The data was analysed using the SPSS software.

Profile of Respondents

In this study, 51 dual-career couples were surveyed, with a diverse range of careers such as chartered accountants, doctors, lawyers, and nurses. 49% of the respondents were in the age range of 20-30, and over half of them worked in the private sector. 50% of the respondents reported working five days a week.

Table 1, "Awareness of Spouse's Work Nature," indicates that all of the spouses were aware of their partner's work nature. This enhances the understanding between the couples.

Group	Frequency	Percentage
Yes	51	100
No	0	0

Table 2: Work family balance score of dual career couples.

	N	Minimum	Maximum	Mean	SD
WFB	51	2.40	4.80	3.67	.558
Responses	51				

The table shows the results of the analysis of the Work-Family Balance Score of the 51 respondents. The minimum score was 2.40, while the maximum score was 4.20. The mean score was calculated to be 3.67, with a standard deviation of .558. All variables were analysed to determine the work-family balance score.

Coping strategies adopted by Dual career couples

**Table 3: Proper communication with partners**

Do you have proper communication with your partner	N	Minimum	Maximum	Mean	SD
All of the time	4	3.16	4.56	3.97	.597
Most of the Time	2	2.40	3.33	2.86	.659
More than half of the time	1	3.30	3.30	3.30	.330
Less than half of the time	17	2.886	4.80	3.68	.415
Some of the time	27	2.53	4.80	3.69	.603

Table demonstrates the impact of proper communication with partners on the work-family balance score. It is evident that couples who have constant communication with their partners have a higher work-family balance score compared to couples who have limited communication. Effective communication serves as an effective coping strategy for dual-career couples as it reduces stress and enhances understanding and companionship between partners.

Table: 4 Practicing Yoga

Table shows the impact of exercise and yoga practices on work-family balance score. The results indicate that engaging in exercise and yoga activities have a significant impact on improving work-family balance. Hence, it can be concluded that incorporating exercise and yoga into daily routines is an effective coping strategy for dual-career couples in managing stress related to work and family and promoting better health.

Do you follow any exercise or yoga practices for reducing stress	N	Minimum	Maximum	Mean	SD
All of the Time	27	2.40	4.80	3.61	.492
Most of the time	5	3.16	4.56	3.61	.568
More than half of the time	5	2.76	3.96	3.57	.470
Less than half of the Time	9	2.86	4.73	3.77	.636

Table 5: Preparing to-do-list

Table illustrates the relationship between the work-family balance score and preparing a to-do list. The results show that there is no significant correlation between the two. However, respondents who prepare a to-do list more frequently tend to have a better work-family balance score compared to those who prepare it only sometimes.

Do you prepare any to-do-list for managing time	N	Minimum	Maximum	Mean	SD
All of the Time	15	2.40	4.13	3.47	.505
Most of the time	7	3.23	4.56	3.56	.465
More than half of the time	9	3.30	4.80	3.92	.525
Less than half of the time	10	3.16	4.73	3.78	.478
Some of the time	10	2.53	4.80	3.71	.746

Table 6: Weekend outings

Table clearly demonstrates that engaging in weekend outings is positively associated with high work-family balance. The mean deviation also shows a gradual increase in this case. This suggests that spending time together during the weekends by going out can help refresh the mind and reduce stress from work, leading to a better work-family balance score.

Do you engage in weekend outings with your family	N	Minimum	Maximum	Mean	SD
All of the time	23	2.40	4.56	3.53	.504
Most of the time	7	2.86	4.20	3.50	.469
More than half of the time	3	3.53	3.70	3.62	.083
Less than half of the time	10	3.16	4.16	3.69	.367
Some of the time	8	2.53	4.80	4.21	.792

Table 7: Correlation analysis of job satisfaction and work family balance

Table shows a positive correlation between work-family balance score and job satisfaction score. When the job satisfaction score increases, it has a positive impact on the work-family balance score.



Work family balance score			Job satisfaction score
WFBS	Pearson correlation	1	.312*
	Sig.(2-tailed)		.026
	N	51	51
JSS	Pearson correlation	.312*	
	Sig.(2-tailed)	.026	
	N	51	51

Table 8: Correlation analysis of paid working hours and work-family balance

Work family balance score			Paid work hours
WFBS	Pearson Correlation	1	-.184
	Sig (2-tailed)		.196
	N	51	51
Paid work hours	Pearson Correlation	-.184	1
	Sig (2-tailed)	.196	
	N	51	51

Table clearly shows a negative correlation between work hours and work-family balance score, although the correlation is not statistically significant. It indicates that as the number of working hour's increases, there is a decrease in the work-family balance score.

RESULTS AND FINDINGS

The majority of the respondents are satisfied with their jobs, which allow them to advance their careers and learn new skills, improving their work-family balance. All respondents were aware of the nature of their spouse's work. Over half of the respondents reported feeling stressed when considering their responsibilities both at work and at home. This stress has a moderate impact on their work-family balance. The main challenges faced by dual-career couples include time pressure and emotional and physical exhaustion during work hours. To mitigate these challenges, the couples utilize various coping strategies such as maintaining proper communication with their partners, practicing yoga and exercise, preparing to-do lists, and taking weekend outings. These strategies help improve the couples' work-family balance and foster better understanding and companionship within the family. Most companies provide maternity leave for their employees, and most dual-career couples view their situation positively. The mean value of the work-family balance score is 3.67, indicating an average balance. A positive correlation was found between job satisfaction and work-family balance, meaning that individuals are more satisfied with their work when they are able to maintain a good work-family balance. On the other hand, there is a negative correlation between hours spent at work and work-family balance, as longer work hours negatively impact the balance between work and family.

CONCLUSION

Achieving a healthy balance between work and life is essential for one's overall well-being and success. Today, dual-career couples are a common sight, with young couples entering the workforce and building their careers and families together. However, this lifestyle can bring about challenges in maintaining a work-life balance. This study aims to explore the experiences of dual-career couples and the strategies they use to achieve balance. The study analyses various factors that impact the work-family balance of dual-career couples, as well as the positive impact of their chosen coping strategies. Despite the challenges and stress that dual-career couples face, they view their dual-career lifestyles as a positive aspect of their lives.

By adopting effective coping strategies, dual-career couples can successfully balance their work and family responsibilities. As the number of dual-career couples continues to grow, it becomes increasingly important for families and organizations to support them in achieving a work-life balance.



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TRASH BOT MONITORING SYSTEM

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ABSTRACT

We are living in an age where tasks and systems are fusing together with the power of IoT to have a more efficient system of working and to execute jobs quickly. In the recent decades, Urbanization has increased tremendously. At the same phase there is an increase in waste production. Waste management has been a crucial issue to be considered. This paper is a way to achieve this good cause, due to negligence of authorities and carelessness of the public may lead to long term problems. Breeding of insects and mosquitoes can create nuisance around promoting an unclean environment. This may even cause dreadful diseases. The main objective of the project "Trash Bot" will keep the environment clean and also eco friendly. If the dustbin is not maintained then these can cause an unhealthy environment and can cause pollution that affects our health. Since the technologies are getting smarter day by day to clean the environment, we are designing a smart dustbin by using Arduino Opens and closes its lid if it sees any trash in front of it and the lid of the can will open automatically and will wait for you to feed it more than after a certain delay it'll automatically close. This will help toward health and hygiene. In this project we have designed a smart dustbin using ARDUINO UNO, along with an ultrasonic sensor, servo motor, and battery jumper wire. After all hardware and software connection, now Smart Dustbin program will be run. Dustbin lid will open automatically when someone comes near. Then will wait for the user to put garbage and close it. The main advantage in terms of society is that it will help toward health and hygiene.

I. INTRODUCTION

The old-style collection methods of waste used to be sufficient in cities but as there was a significant increase in the amount of produced waste due to the increasing population in cities, these methods turned out to be insufficient. The problems included the filling of reports, timetable, billing which led to the unstable waste collection activities (probably due to the incomplete waste when it was supposed to be collected or probably due to the irregularities in collecting the waste). These encountered issues led to the development of other methods of collection, such as smart waste management collection to solve the problems and reduce times and cost of collection. Although smart waste management collection is completely smart, does not need manual power, and allows a better working environment and it is also much quicker. However, it needs a larger budget and that is why it may be a problem for different countries with smaller budgets.

It developed with the development of technology buy led to the challenge of getting rid of the waste materials. The flow of materials in a technological society and the resulting waste generation are illustrates schematically. Wastes are produces through the mining and manufacture of raw materials, such as the tailings from a mine or the discarded husks from a cornfield. After the stage of eliminating raw materials, more wastes are obtained due to the production and consumption carried out by the community by using the mentioned raw



materials. So the most efficient method to create a better solution for this challenge is to decrease the waste produced. Nevertheless, people carry out more consumption in line with the life standards that they would like to increase. Consequently, new better ways for disposal of wastes are researched.

Among the entire possible hazards originating from the solid wastes, the main hazard to the human health, depending upon the category and characteristic of the solid waste, the health risk maybe of short term or long term. The agro-based solid waste may cause spontaneous fire during warmer seasons. In addition, during monsoon, rapid decomposition may cause odorous gasses and may become breeding ground for various insects. Furthermore, the domestic and municipal solid waste may be properly treated in order to reduce all feasible hazards. The solid wastes when separated, and sorted out, into 12 degradable and non-degradable, either at the source or during dumping, further reduces the risk of hazards and enhances the reuse or recycling process.

The main motivation of this project is the ongoing campaign Swachh Bharat. The clean India movement launched by the Prime Minister Narendra Modi is the largest ever cleanliness drive to clean the streets which in turn improves the infrastructure of the country.

II. LITERATURE SURVEY

In numerous application fields, for example, home, industry, environment and wellbeing, diverse Wireless Sensor Network (WSN) applications have been created to take care of administration issues with well-informed executions. The architecture is composed of three parts they are long range communication modules, server layer and user interface. The long range communication module contains an installed ARM processor and is programmed by utilizing the implanted open CPU. The server layer acts as a client and WSNs. The server modules make utilization of a daemon, which performs a pre-processing of the information which ensures the consistency of information. The second layer executes the information procurement when the GPRS association is absent. Finally the SMS is send to a passage hub, which has an advanced HTTP connection to get the SMS based information. The user interface gives two approaches they are custom programming customer and web application. A novel prototype and simulation model for real time solid waste Bin monitoring system (Al Mamun, et al., 2014). The architecture consists of three layers. The first group is mounted underneath and bin cover and the other in the bottom of the bin. The middle level of the data is measured by the sensors and sends the information through the Zigbee gateway and GPRS communication module. The upper level consists of a web server and database server. The gateway obtains the data sent by the lower level. It parses the data and stores the data to the local database. After establishment of GPRS connection the control stations pass the information to the upper level that contains servers. The server contains Daemon development which is responsible to make connections with the gateway when a connection request is arrived.

A smart waste management with self – Describing objects. The main goals of the system are reducing waste manufacture, check whether the waste being proposed are disposed, re-using and recycling disposed products. In this approach the waste items are identified by its essentials. The collective container waste management system contains an embedding computer system which processes the data. The data is analyzed on both the trash bags. The bag is built on RFID technology to sort out the waste materials.

The authors in the paper [6] have used solid waste management monitoring and planning by making use of the smart-M3 platform. The smart waste collection system contains different types of KPs for the light pole, control center, trucks and mobile devices of users. Each of the models cooperates and gives the part of data complete to the smart space. The model is constructed using the Raspberry PI which has two KPs: they are sensor light pole-KP and Cords light Pole-KP. The sensor light Pole KP updates the query on the smart-space. The sensor light pole- KP updates the sensor data within the smart space. The main advantage of using the system is that waste is collected on a regular basis. The resources collected are plastics, glass paper and general waste.

The authors [9] have equipped the smart bins with ultrasonic sensors. The ultrasonic sensor measures the level of the dustbin that is being filled up. The containers are portioned into three levels of garbage. Each and every time when the garbage crosses the level, the sensor receives the data. The data collected from the sensor are sent to the garbage analyzer through the GSM. The main drawback of the system is there are three ultrasonic sensors in the container which in turn increases the cost of the dustbin that is being designed. The sensors can also be damaged based on the rough action of the users. In order to overcome this drawback the SGS (smart garbage system) model is proposed to reduce the amount of food that is being wasted.

The author in the paper [10] represents the exchange of information using wireless mesh networks. In addition to the wireless network, mesh network and router are present to analyze the information. SGBs include various IoT devices which in turn increases the battery life through the two types of energy efficiency operations they are stand-alone and cooperation based operation. The proposed model measures this food waste could be decreased by 33%. The author in the paper [11] built a framework which consists of a camera.

The camera is placed at each end of the garbage collection point. The camera will take snapshots of the garbage at continuous intervals of time. A threshold value is set which compares the output obtained from the camera and the sensors. Finally the weight of the garbage can is calculated from the level of the garbage in the bin and from the load cell sensors. The information collected from the sensor is processed and the threshold level is checked. The major drawback of the system is convenient to use but economically the model is not reliable.

III. ARCHITECTURE

The following figure 3.1 represents the architecture diagram of the Trash bot monitoring system. It is an IOT based monitoring system that will bring a new and smart way of cleanliness. Here we use Arduino for code execution. Dustbin will open its lid when someone/object is near at some range then it will wait for a given time period then it will close automatically. Here the lid will close when you don't want to use it and it will only open when it is required. TRASH BOT, it works smartly or we can say that it is an automatic dustbin. It works like when you come in front of this dustbin it will open automatically with the help of a servo motor so there is some sensor work to detect the object in front of the dustbin. Our aim is also to make it cost effective so that many numbers of people can get the benefit from this. And it should be usable to anyone and helpful for them. To complete our project, we require some software as well as some hardware. The main advantage of using TRASH BOT will automatically open and close the lid. So, there is no foul smell near the bin. Moreover, there are no chances of trash being spread out in the street. Trash Bot cannot be stripped down by the animals. Since the lid of the bin is closed there is no breeding of mosquitoes thus avoiding the chances of diseases like Malaria. The TRASH BOT provides the information about the amount of trash that is being collected in the trash bin. The authorities can plan which bin should be collected first and which should be collected next. This reduces the manpower, fuel emissions and a lot of time.

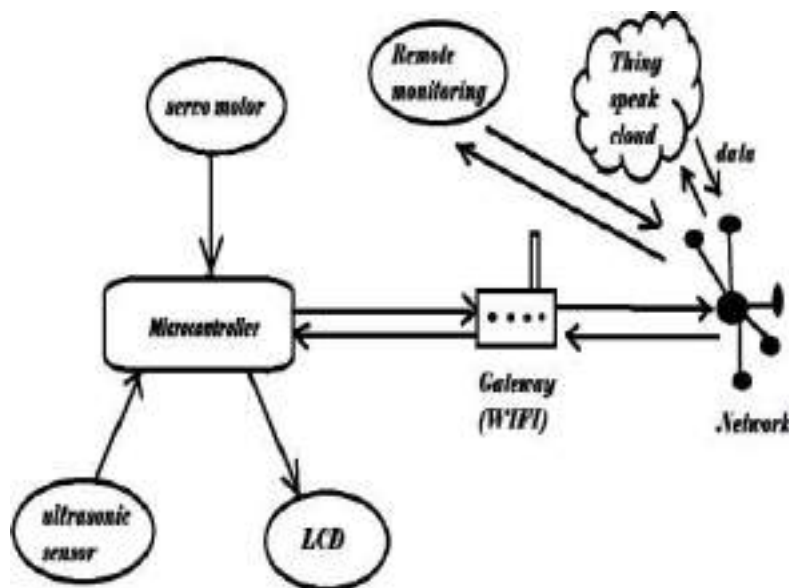


Figure 3.1 Architecture diagram of Trash Bot Monitoring System

IV. MODULE DESCRIPTION

The software requirements are **Arduino IDE**. It is a text editor mainly used for compiling the code to check if any errors are present. Finally the code is uploaded to the Arduino.

The hardware requirements are **Arduino UNO, Ultrasonic sensor, servo motor, LCD, jumper wires, Dustbin, buzzer and WIFI modules**.

4.1 ARDUINO UNO

The following figure 4.1 represents the pin diagram of the Arduino UNO. There are 32 pins available. The 22 pins are associated

with input and output. The 14 pins are IO pins which are configured to the application. The application is connected using the pinMode, digitalWrite and digitalRead functions. There are 6 analog input pins. The analog pins provide 10 bit resolution where the data can be read using analogRead () function. The analog pins convert the analog value into digital value which can be read from the processor. The digital IO pins are capable of producing 8-bit PWM signals. The crystal oscillator helps the Arduino in handling the time issues. The voltage regulator helps the Arduino in controlling the voltage and stabilizes the Dc voltage used by the processors.

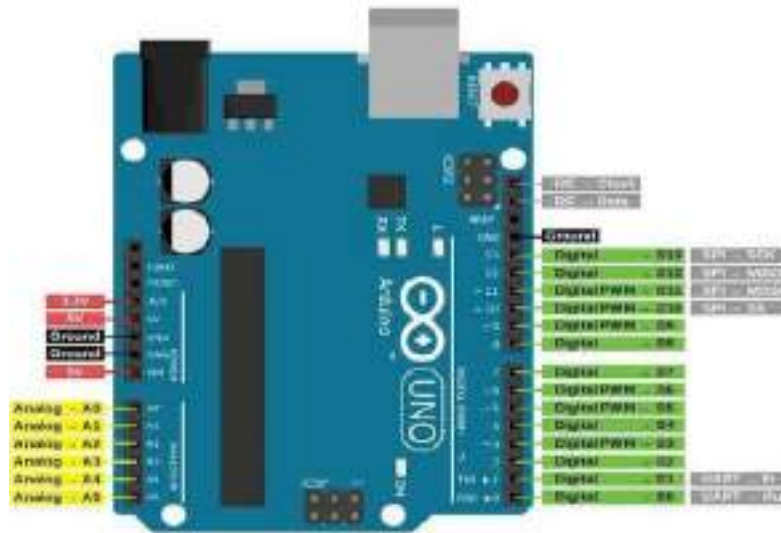


Figure 4.1 Pin diagram of Arduino Uno

4.2 SERVO MOTOR

The following figure 4.2 represents the servo Motor. The Servo motor is a small device that can be positioned to specific angular position by sending the servo a coded signal. The servo motors are small but they are extremely powerful. The servo motors are small and do not consume much energy. The motors contain a control circuit, motor and gears. The servo motors have three wires – power, ground and signal. The power wire is connected to a 5v pin on the Arduino board. The ground is connected to the ground pin on the board. The signal pin is connected to the PWM pin on the board.

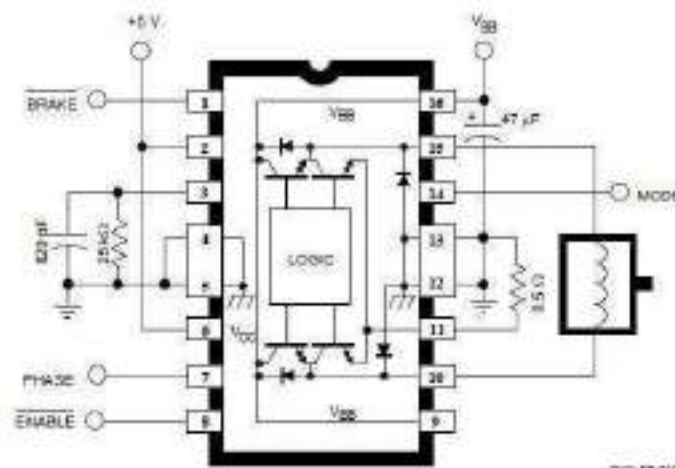


Figure 4.2 Pin Diagram of Servo Motors

4.3 ULTRASONIC SENSOR

The following figure 4.3 represents the Ultrasonic sensors. The ultrasonic sensor is used to measure the distance between an obstacle and sensor. The ultrasonic sensor provides non-contact range detection. The range detection provides high accuracy and stable readings between the range 2 cm to 400 cm. Therefore the ultrasonic sensor is not affected by any black materials or sunlight. The sensors come along with the transmitter and the receiver module. The ultrasonic sensor contains two parts they are trigger and echo pulse. The ultrasonic sensor sends out the sound wave called the trigger. The bounced back sound wave is the echo port.

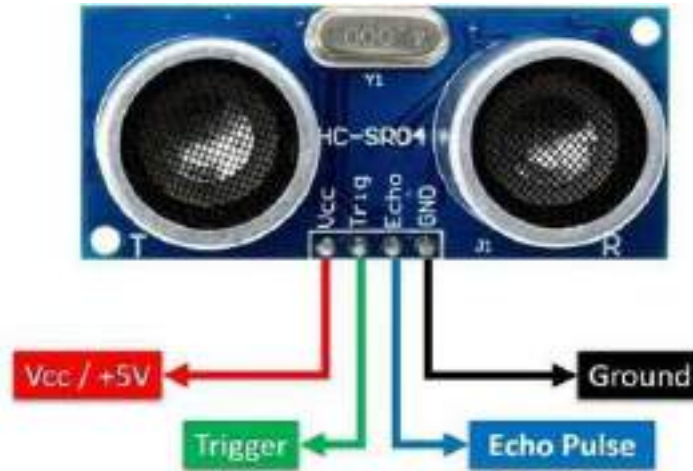


Figure 4.3 Ultrasonic sensor

4.4 WI-FI MODULES

The following figure 4.4 represents the Wi-Fi modules. The Wi-Fi module can be easily integrated with the Arduino board via a serial port. Wi-Fi modules contain 8 pins in total. RX and TX are mainly used for communication. RX is used for receiving data. TX is used for data transmission. It comes with 32-bit tensilica microcontroller antenna switches. It supports APSD which is mainly used for VoIP applications and Bluetooth interfaces. It contains an onboard regulator which provides 3.3v consistent power to the board.

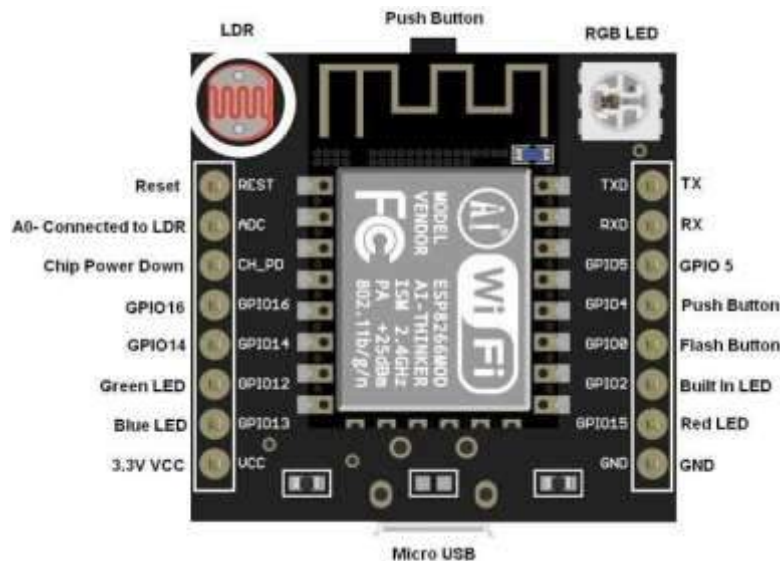


Figure 4.4 Wi-Fi Modules

4.5 LCD

The following figure 4.5 represents the LCD module that is used to display the content in place where there is less efficient display such as cathode ray tubes. LCD contains the following pins: they are register pin, read/write pin, enable pin and 8 data pins. The register pin allows either to select the data register or instruction register. The data register contains the data that goes on the display screen. The instruction register checks the instruction and decides what to do next. The read/write pins perform either reading or writing operation of the data. The enable pin writes the data to the registers. The 8-data pins may be in the high or low state. The 8 data pins will perform either reading the values from the register or writing the values inside the register. In addition to that we have a contrast pin, power supply pins and LED backlight.

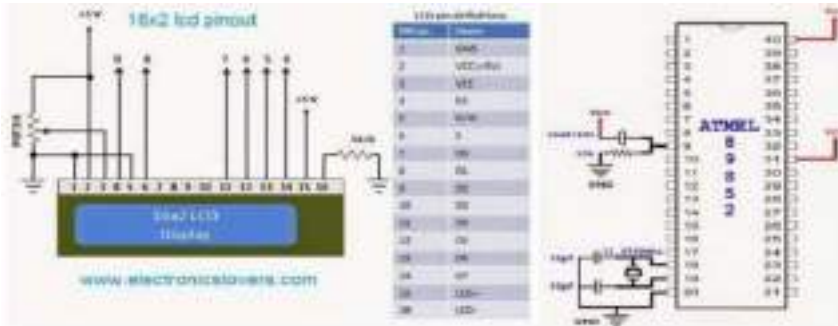


Figure 4.5 Pin diagram of LCD

4.6 THING SPEAK

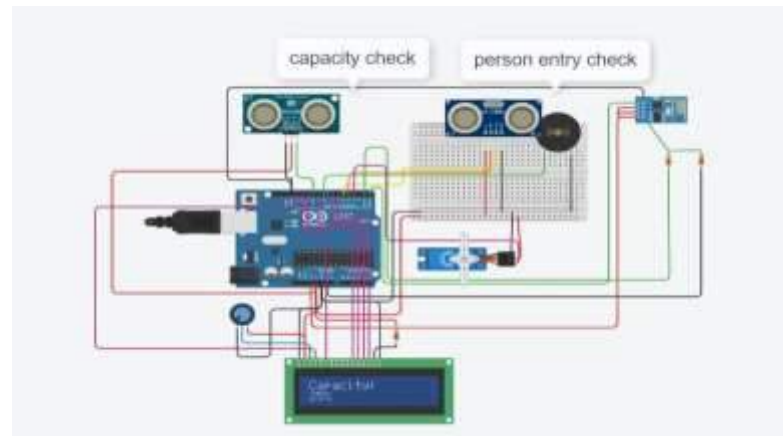
The thing that speaks is an open source Internet of things. Thing speak contains an API to store and retrieve the data using the HTTP protocol. Thing speak is mainly used for the tracking of locations in the application, and updates the status in the social networking applications. Thing speaking accounts need to be created. Once the login is created we need to go to the channel. Under the channel settings we need to give the title of the application and description in the project in the “name” and “description” field. In order to view the output i.e. the level of the waste in the dustbin we need to click on the API key. API key is copied and pasted in the program. Then finally the output can be visualized in the private view. The figure 4.6 represent the creation of thing speak account



Figure 4.6 Thing speak account Creation

V. RESULT ANALYSIS

The following figure 4.7 represents the capacity check and the person entry check. The ultrasonic sensor starts sensing for the range of human motion. When it senses the human motion nearing the bin it will open the lid of the dustbin using the servo motor. The lid will be open for some time and it will automatically close.



· Figure 4.7 Capacity Checks and person entry

The following figure 4.8 represents the capacity status of the trash bin. As the trash bin is starting to get full the (Weight Sensing Sensor) will track the amount of waste that is being present in the bin. There is also an LCD which will show the amount of trash inside the bin for the people so that they can dump their garbage in the bin. When the trash bin is full the buzzer will give an alarm indicating that the trash bin is full.

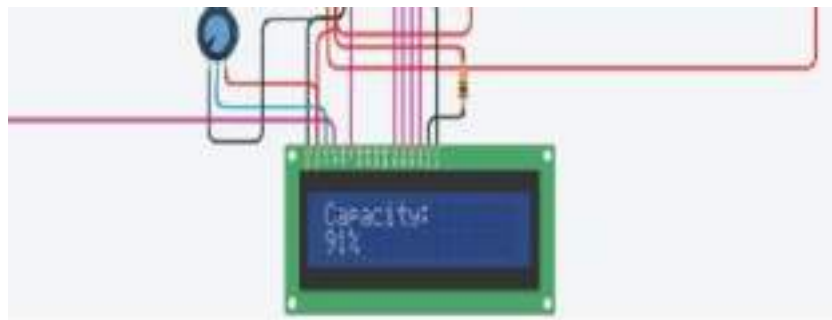


Figure 4.8 Capacity status of Trash Bin

The following figure 4.9 represents the capacity of the bin in the graphical format. The graph is plotted against the capacity to fill against the date and time.

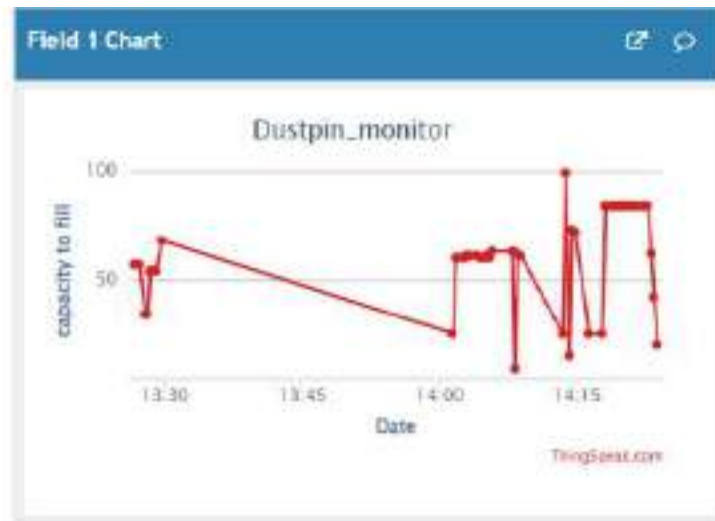


Figure 4.9 Graphical Representation of Trash bot

VI. CONCLUSIONS

This “TRASH BOT MONITORING” will help the society and environment to be much healthier and safer. This model is developed in such a way that it is cheap and affordable for many people.

VII. FUTURE ENHANCEMENT

The advantage of the system is that it reduces pollution. The problem like dustbin getting over flow or animals, birds trying to take the waste from the dustbin can be overcome. Future enhancement can be done by separating the dry waste, wet waste and collecting the plastics separately. In order to implement the above concepts we need two sensors in addition they are methane and smell sensors which in turn can reduce the requirement of manpower.

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THE CULTURAL AWARENESS IN THE POETRY OF P. K. MISHRA

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ABSTRACT

In this paper, I have tried to make a bit critical estimation of cultural awareness in the poetry of Prof. Prafulla Kumar Mishra whose works have been compiled under the title named *Chitrakurangi, Tava nilaye, Brahmanabhik, Konarke, Catvari srnga, Manojangame, Tathapi satyasya mukham, Godhulih, Chaitrarajani*.

ABOUT THE POET

Prafulla Kumar Mishra was born in a traditional Bramhin family at the district of Puri in the state of Odisha on 20th Feb 1954. His mother's name was Srimati Pramila Sundari Devi, who was an ideal teacher and his father is Sri Kashinath Mishra, is a renowned advocate at Puri district.

CULTURAL AWARENESS IN THE POETRY OF P.K. MISHRA

The prime symbol of Odia identity is Lord Jagannatha. In "*Chitrakurangi*", poet describes about Jagannatha culture and Navakalevara. He speaks about the Navakalevara and odia culture and tradition in the poem '*Darujibah*'. Navakalevara is a symbolic recreation of the wooden forms of three Hindu deities like Jagannatha, Balabhadra, Subhadra at Jagannatha temple, Puri.

In the collection of "*Tavanilaye*", poet also describes historic culture. In the poem '*Kharavela*', the poet describes about the king of kalinga in present day situation. Kharavela was one of the most popular king of Ancient India, who ruled during the first and second century BC. It is known from Hatigumpha inscription, Khandagiri. The poet describes the historic culture, tradition and personality of king Kharavela. In the voice of poet-

The another collection of poem "*Brahmanavi*" (who poses the Brahma in Navel), is based on different themes including some cultural and philosophical aspects of life. It reminds us the concept of lord Jagannatha. The poet wants to say that the throbbing is supposed to occur in the naval and not outside. Today everybody has some sort of pain in his heart. Many of which expressed anywhere. However, the throbbing of that pain cannot be stopped and it can be experienced in heart. This throbbing is meant for creating and spreading consciousness.

In the poetry "*Konarke*", all poems express the cultural aspects of life. The sun temple Konarka is one of the famous heritage in India and abroad and it reveals the legend of Lord Surya. The sun temple is the symbol of our Odia culture. It presents the symbolic language, aesthetic expression of the sculpture of Konark and all the aspects of human life as *Dharma, Artha, Kama* and *Mokhya*. It is based on the four dimensions, which is based on cultural life. Poet speaks-

Men think every moment something new and tend to do, but the cause of failure and success depends upon his work. The work which proofs himself successful or unsuccessful. Every human begins to their journey of development according to their intelligent skills. But it is questionable to meet each point at one point of the journey. Then he tries to find human success in wealth. The origin of river can be one but the destination and direction are mandatory to be limited by the beaches. Therefore, the human reaches all plots but cannot reach the same level of rites of wisdom and heart simultaneously. Similarly the poet has shown status of success and failure. So that the poet says- success is hidden in hard work. But labour is also two types. One favourable and other is



unfavourable. Success resides in the solitary cavity of mountain and merges speaking into the house of laziness. The person takes the form of promoter. But its emotional nature is ready to destroy its true nature. Everything is possible by the reaction of the outer nature and inner nature of human beings.

The poet doesn't preach in this poem. Being familiar with the poet's personal life, I can say that poet Mishra accepts the preaching of poet's weakness. All actions of conscious human beings are persuasive by value. The poet has also shown the value generated through the medium. There is two types of value, one is the created and the other is targeted value. The fabric of the mullet is the object that means for some other purposes.

When we discuss about the value of food it is known that it is the mean to satisfy the hunger, therefore which is an objective and secondary value. The objective value is that which is the self-centred rather than for any other purpose. The ups and downs of life are very unique. It becomes difficult to think or say something. Just as the trunk of trees are connected differently like pour from leaves, flowers from leaves, fragrance from flower and the fragrance covered all trees with its elements. The fragrance developed from the greenery of the branches, the greening of leaves, the flowers are one of many colours saffron pollen etc. are covered in the same clarifying the highest growth of the whole tree. Similarly the material life is in the physical body. The poet says about all those things as

“Aho vichitramidam yatra sakalam
Madhuram taralam garalayte /
Supriyam mitram mantharayate
Na bhayam jivanenaraghatake//

The sun, moon, the clouds moving in the eternal sky, the lightening and the huge water flowing on the earth, rain storm are all interrelated and relatives. All of work, behaviour and nature is a fixed and regular movement. But man can't decide where he wants to go. This is what the poet *efkeA³eogjb ieceveb ceoer³ece* has shown in this poem '*Kiyadduram madiyah gamanam*'. Life journey is sitting in a long from. Normality and certainty is a personal illusion of one's consciousness.

Poet Prafulla Kumar Mishra is an experienced poet. He has meticulously analyzed and explored spiritual, cultural experiences, actions and value and explained the ultimate value of life, spirituality which is visible in his lines.

In the poem '*Samudra darpane*' the poet has realized the central perception. He feels that his desire has been recognized as his whole identity. That is to say- '*kasya mukham prapashyami samudrasfy fenile darpane*'.

It means life has no meaning. When the mirror is clean and beautiful then the face also looks clean and tidy. When a man becomes disoriented, then nothing is suggested to him. He does not understand what will happen when. Such as fear, loneliness all are wasted him and he starts to realize. In this poem the character of Svetaketu is alone here. The poet has inflicted his torture. Here the poet highlights the complexity of mind and varied forms of torture. In order to satisfy the thirsty creatures and the dangling trees, everything is sacrificed.

In the collection of modern Sanskrit poem, "*Tathapi Satyasya Mukham*", the poet focuses the poetic images which are some sort of a mixture of some classical and modern imagination. In this poem the poet expresses the cultural aspects of our life. In the poem '*Paraparsve*', we can find the influence of Jayadeva's Gitagovinda. And the other hand we can found the modern usages which identifies our cultural thoughts.

In "*Godhulih*", the poet describes the cultural life of the society. *Godhulih* is not a symbol of old age but also a symbol of rural life. The poet roams about the major cities of the world but he is despaired not finding the evening dusk of the India. It identifies our Indian culture and tradition. Dusk happens to be a reminder of the cultural village lifelines. It has a great power to create the heartier images of life. We can see it in the poem *Godhulih -3*, what the village dusk means to be.

CONCLUSION

Thus, Poet Prafulla Kumar Mishra is a poet who forms a bridge between the ancient stalwarts and the modern stalwarts. The contents of his poem are full of both modern and traditional themes which gives him a distinguished place or recognition.



OPPORTUNITIES TO IMPROVE THE EFFECTIVENESS OF TEACHING ENGLISH IN DISTANCE EDUCATION

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ANNOTATION

The article is devoted to the use of modern ICT technologies of distance learning (DL) in the educational process for the preparation of quality personnel in the education system. In addition, it shows the possibilities of a radical improvement in the quality of personnel through the use of the Internet and ICT in the process of teaching English through the acquisition, storage, transfer of new knowledge and making practical decisions. The use of multimedia technology, information and computer networking (ICT) tools in teaching English through distance learning has had a positive impact on the education system.

KEY WORDS: *English, modern education, distance learning, information and communication technologies, traditional education, online, publicly available open online courses.*

INTRODUCTION

In our country, on the basis of the tasks defined in the Action Strategy for the further development of the Republic of Uzbekistan, the fundamental improvement of the quality of general secondary education, the use of interdisciplinary communication and an integrative approach in the organization of in-depth study of important and high-demand subjects, foreign languages, computer science, mathematics, physics, chemistry and biology. is considered a guarantee factor of quality development.

If we take into account the role and importance of education in the development of human capital, the educational system remains the focus of reforms in our country today. Thus, the changes in the chain of events also affect education, resulting in the emergence of different types of education. In particular, the increase in the types of education in the world creates the basis for their improvement. The increase in the number of students and the current demand for them leads to the widespread use of the form of distance education. That is, the introduction of modern information and communication technologies into the educational process led to the creation of a new form of education - distance education, in addition to traditional teaching methods.

LITERATURE REVIEW

Today, with the use of modern information technologies, the possibilities of placing, storing, processing and delivering information at any distance, size and content are unlimited. In this case, pedagogical, meaningful and structural organization of educational material is in the first place in distance education. The main methodological problem of teaching is actually related to ensuring the achievement of the goal and monitoring the progress of the learning process by the teacher. The goal of distance education is to encourage students to learn the necessary information, to deepen their understanding of course topics, which leads to the development of critical thinking, organization, diligence and goal-orientedness in the student. In this regard, foreign scientists such as S.Arafeks, A.V.Bates, M.Bullen, T.Morgan, A.Qayyum in their research on the impact of information and communication technologies on distance education, distance education in a knowledge-based society, and the use of digital technologies in higher education stops around. Also, research related to global ICT and the process of teaching via the Internet was carried out by Russian professors-scientists A.S. Karpov, P.V. Sysoev, L.P. Vladimirova, M.N. Evstigneev, I.A. Zimnyaya, L.G. .Averkiva, R.K. Potapova, T.V. Karamysheva. N. Yu. Pakhomova, Yu. A. Chaika, L. P. Petrova and others also studied

RESEARCH METHODOLOGY

Distance education is the most important and developing form of modern education in the world today. Distance education is a new modern form of education that develops the student's ability to think independently, assess the situation, and draw conclusions. It teaches the student to learn independently, to search, to think.

The advantage of distance education is that everyone will be able to learn at a convenient time, in a convenient place and under convenient conditions. Due to this, this educational system is widely popular in the world today.



This form of teaching consists of a goal-oriented interactive process of interaction of learners and teachers with each other and with teaching tools, in which the learning process does not depend on their geographical spatial location [2:-B.5-7]. The educational process consists of small systems, that is, it takes place in a unique pedagogical system that includes such elements as the purpose of education, content, methods, tools, organizational forms, control, educational-material, financial-economic, regulatory-legal and marketing.

In the current period, the spread of the coronavirus- Pandemic, digitization of many areas of society is entering a completely new stage. In this regard, the transfer and education of digital knowledge to the general public is of great importance

In particular, today there are great opportunities for critical thinking, development and use of new methods of teaching, but the use of digital media, especially for teachers, helps to thoroughly explain the content of the lesson in the use of new forms of teaching. Today, foreign language teaching has brought significant positive changes in the content and methods.

In particular, learning a foreign language with the help of computer programs arouses great interest among students. It can be used effectively in all kinds of applications. For example:

- vivid communication of students in real time by using e-mail or chat, that is, when organizing a real written conversation between partners;
- Interaction of a student with a computer as an interactive dialogue, that is, as a human-machine conversation;
- listening, viewing and listening to audio and video recordings;
- Reading and understanding texts, questions or tests about them [3: -B.5-7]

Distance education is a convenient form of education for people who, for certain reasons, do not have the opportunity to study in full-time departments of educational institutions, for example, those who do not require health, who intend to change their specialty, or who are old and intend to improve their skills.

ANALYSIS AND RESULTS

Why is distance education necessary? - is a natural question. The following can be listed as an answer to this question [4: -B.67-68]:

- New opportunities in education (affordability of education, independence of time and place, etc.);
- Limited number of student admissions to educational institutions;
- Increase in the number of people who want to study;
- Emergence and development of quality information technologies;
- Increasing international integration.

The conditions and opportunities listed above indicate the need for distance learning.

There are different models and forms in the educational system of distance learning, which are distinguished by the following conditions of use:

- Geographical conditions (for example, the territory of the country, location away from the center, climate);
- The general level of informatization and computerization of the country;
- Level of development of communication and means of transport;
- Level of use of information and communication technologies in the educational process;
- Traditions used in education;
- The availability of scientific pedagogic personnel for the distance education system and their potential, etc.

In general, the goals of distance education include:

- To create the same opportunity for education for all regions of the country and all students, students, and those who want to study abroad.

Improving the quality of education by using the scientific and educational potential of leading universities, academies, institutes, training centers, retraining institutions, professional development institutions and other educational institutions.

- Creating the opportunity to receive additional education in parallel with basic education and basic work.
- Satisfying the learning needs of learners and expanding the learning environment.

Creating lifelong learning opportunities.

- Ensuring a new principle level of education while maintaining the quality of education.

CONCLUSION/ RECOMMENDATIONS

Summarizing the above, it can be said that the introduction of elements of distance education in educational institutions will be beneficial in all respects. In today's information age and pandemic, it is important to form a distance education system in higher education institutions.

In order to train quality personnel in the educational system of many countries, the training process uses the form of distance education (MT) based on modern ICT. Experiences of the educational system show that the possibilities of radically improving the quality of personnel due to the acquisition, storage, transfer of new knowledge from the Internet system and ICT in the educational process, and the use of practical decision-making tools are increasingly expanding.



To conclude, it is necessary to develop the concept of distance education. Today, it is necessary to develop organizational and legal "Roadmaps" aimed at improving the scientific foundations of distance education, its innovative educational and methodological system and foundations, effective use of the advanced experience of foreign countries in this regard, and increasing the effectiveness of distance education in education.

The use of new digital technologies in education requires the improvement of its normative legal framework, which, in turn, serves to unify legislation in the field of innovative distance education and increase the effectiveness of its direct application in practice.

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RESEARCH ORIENTATION AND PROFESSORIAL PERFORMANCE OF LSPU SCC FACULTY: BASIS FOR 21st CENTURY FACULTY RESEARCH INTERVENTION WORK PLAN

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ABSTRACT

This study sought to determine the research orientation and professorial performance of LSPU SCC faculty in the nine (5) Colleges and considered the result as the basis of developing an acceptable intervention work plan for them. In particular, it described the demographic profile of the respondents, their research orientation, and research performance. It also ascertained the difference in the research orientation and performance of the respondents based on their profile and by colleges. Using the mixed method of research, a checklist survey questionnaire, and structured interview, data were gathered from the 59 professors. Percentage, weighted mean, multiple regression, and ANOVA were also used to analyze the statistical data gathered in the study. It was revealed that the LSPU- SCC professors have very high levels of awareness on the research agenda, self-motivation, research capabilities, and methodological skills and have high levels of community engagement and fund generation. Further, there is a significant difference in the research awareness, research capabilities, and community engagement of the LSPU-SCC professors; but there is no significant difference in their self-motivation and methodological skills. Only a few of the professors have published in refereed or non-refereed journals, presented papers in different levels, have research copyright, research utilized, and awards received. Thus, an intervention work plan was developed and evaluated as highly acceptable in all its parameter. The LSPU – SCC professors, being aware of the research agenda are motivated to do research using a very high level of methodological skills and research capabilities, and community partnership.

KEYWORDS: *LSPU-SCC Professors, Research Orientation, Research Performance, Colleges, Work Plan*

INTRODUCTION

In many countries, the role and functioning of universities are changing and so is what is expected of the faculty, the university is increasingly perceived not only as a source of intellectual progress, but also as a transversal problem solver that can produce solutions to the problems that challenge the world (Bloom et al, 2008). Moreover, the faculties are not only the proper administrators of the university but are the primary components of the university itself (Sellari, 2015). Thus, the professors have the usual responsibility, as part of their employment, to be creative and independent outside of class in their intellectual scholarly life. The position of a professor requires an “employee” who researches and writes not to promote a particular viewpoint of the employer, but one who engages in an independent search for truth and knowledge (Springer, 2010).

In the Philippines, the higher education sector ensures that the academic environment nurtures and supports Filipino research talents. Research is one of the main functions of the higher education sector and policies are crafted to enhance the institutions and the individual capacity to conduct independent, collaborative, and productive research. The professors at LSPU – SCC is encouraged, oriented, trained, mandated, and are expected to conduct disciplined-based, policy-oriented, technology-directed, or innovative/creative research that is locally responsive and globally competitive. They do this not only for personal and professorial advancement but also to uplift the prestige of the university and contribute to national development.

As a result, the success as a university faculty member is dependent on having a clear understanding of how to combine the elements of teaching, research, and original creative work, and service in a way that makes the best use of the time and resources available (Sampson et al, 2010). Individual faculty are expected to demonstrate significant contribution in the areas of research activity, teaching effectiveness, and service to the university. LSPU-SCC professors are expected to perform high in research more than their counterparts in the other learning areas and value its importance in contrast with business and some other fields.



STATEMENT OF THE PROBLEM

The study specifically intended to answer the following objectives: Determine the demographic profile of the respondents in terms of age, sex, civil status, length of service, educational attainment, academic rank, and training in research. Find the research orientation of the respondents in terms of awareness on research agenda, self-motivation, research capabilities, community engagement, methodological skills, and fund generation. Assess the research performance of the respondents in terms of research publication, paper, presentation, patent/copyright, research utilization, and awards received. Determine which demographic profile of the respondents can predict their research orientation and performance. Establish the significant difference in the research orientation of the respondents by colleges. Determine if there is a difference in the performance of the respondents by colleges. Develop an intervention work plan for the LSPU – SCC Professors. Evaluate the intervention work plan for the LSPU – SCC Professors

REVIEW OF RELATED LITERATURE

The research orientation of the LSPU-SCC professors is reflected in their awareness of research and self-motivation to conduct research activities, research capabilities, community engagement, methodological skills, and fund generation.

Higher education in the Philippines is expected to strengthen their research productivity. This follows the mandate of the UNESCO World Declaration on Higher Education for the 21st Century that accents the important role of research in higher education. HEIs employ different strategies to strengthen their research productivity in all disciplines, including the human and social sciences and arts, given their relevance for development (NHERA2, 2009).

With the new typology mandated by CHED, particularly putting research as an agent towards human and social development, research productivity among educational institutions has significantly become an important criterion for gaining university status, the center of excellence, autonomous/deregulated statutes, institutional quality, and opening of graduate programs (CHED Memorandum Order No. 25, Series of 1998, Priority Research Areas). Therefore, universities and colleges that are serious in transforming themselves into research institutions must look at the elements of research culture that contribute to research productivity (Clemeña & Acosta, 2008).

The research orientation of the LSPU-SCC professors pertains to their ability to display research writing confidence (Bay & Clerigo, 2013) and having self-motivation, essential skills and experience to do research (Lertputtarak, 2008). This also pertains to the professors' commitment to participate in both external and internal research activities (Bland *et al.*, 2008) and sharing of research-related values and practices. This entails courage, determination, and enthusiasm (Itaas & Mirasol, 2011) to participate in collaborative training in research (Zea & Belgrave, 2009) and the ability to identify sources of funds.

The performance of a university is measured by the number of publications of its individual faculty members. For individual performance, the professor benefits from their publications in refereed or CHED-recognized journals. They earn points for every publication whether in local, national, regional, or international journal. In the study of Garcia- Gallego *et al.*, (2012), it was found that professors who conduct research are better professors than those who do not.

METHODOLOGY

The mixed method of research is used in this study. It is a sequential explanatory design that involves collecting, analyzing, and integrating quantitative and qualitative research (Creswell & Plano, 2008); (Kennedy, 2009) to predict likely outcomes. This design will help explain, interpret, or contextualize quantitative study, hence, allowing the proponents to easily describe the gathered data and report the corresponding results. The quantitative findings will base on the gathered data using the questionnaires. In this study, 59 faculties who have an academic rank from assistant professor, associate professor and full – pledge /university professor will be chosen. Gathered data will be analyzed using frequency and percentage, weighted mean, multiple regression analysis, and ANOVA.

RESULTS AND DISCUSSION

In this study, data were gathered that describes the research orientation and research performance of LSPU – SCC Professors with the aim of developing an intervention work plan for faculty.

**Table 1. Frequency and Percentage Distribution of the Demographic Profile of the Respondents**

Demographic profile	N	Frequency	Percentage
Sex			
Male	57	11	18.3%
Female		46	76.7%
No Response	4		5%
Age			
24 – 31	53	4	6.70%
32 – 39		7	13.21%
40 – 47		16	30.19%
48 – 55		20	37.74%
56 – 63		6	11.32%
No response	8		0.84%
Civil Status			
Single	55	6	10%
Married		49	81.70%
No Response	6		8.3%
Length of Service			
5 – 12	44	9	20.45%
13 – 20		14	31.82%
21 – 28		16	36.36%
29 – 36		4	9.09%
37 – 44		1	2.27%
No Response	17		0.01%
Educational Attainment			
MA/MA units	51	18	30.00%
PhD/PhD units		33	55.00%
No response	10		15%
Academic Rank			
Asst/Asso Prof	53	48	80.00%
Professor		5	8.30%
No Response	8		11.7%
Training in Research			
Local			
1 to 2 trainings	34	14	23.3%
3 to 4 trainings		3	5.00%
Regional			
1 to 2 trainings		6	10.00%
3 to 4 trainings		3	5.00%
International			
1 to 2 trainings		7	11.7%
3 to 4 trainings		1	1.7%
No response	27		66.6%

The demographic profile of the LSPU – SCC Professors covers their age, sex, civil status length of service, educational attainment, academic rank, and training in research. As shown in table eleven (11) of the professors are male while forty-six (46) of them are female. This means that majority of the LSPU -SCC professors are female and most of them are in their middle age and married. Age is one of the determinants of the ability and adeptness of individuals to learn. Regardless of gender, professors are expected to perform well in research, publish research papers, and patent/copyright their research outputs. This may be implied that the LSPU -SCC professors had very little exposure to research-related training. As highlighted by Salazar – Clemena & Almonte-Acosta (2006), both the faculty and students must be exposed to research activities on how to publish academic works or present papers in conferences. in this way, they may better contribute to the development of research institutions.

**Table 2. Frequency and Weighted Mean Distribution on the Level of Research Orientation of the Respondents as to Awareness on Research Agenda**

Awareness on research agenda	VHA (5)	HA (4)	MA (3)	LA (2)	VLA (1)	Mean	QD
1. I am oriented that research agenda may help me in my short-and-long-term professional goals.	37	23	0	0	0	4.62	VHA
2. I believe research agenda are plan that focuses on issues and ideas in my field of education.	30	29	0	0	0	4.51	VHA
3. My research agenda is constantly changing due to the constantly changing demands in my specialization.	30	22	6	2	0	4.33	VHA
4. I habitually engage in productive conversations with my colleagues about viable research agenda.	19	32	7	2	0	4.13	HA
5. I am aware of the research agenda of my college and institution	29	25	6	0	0	4.38	VHA
6. the university research agenda is disseminated in different colleges through meetings, announcements in bulletin boards, and other forms of media dissemination.	18	35	6	1	0	4.17	HA
7. I am aware of the DOST Research Agenda.	13	32	11	4	0	3.90	HA
8. I am aware of the CHED Research Agenda.	14	31	13	2	0	3.95	HA
9. The research I conduct are aligned with the research agenda of my college and institution.	21	32	4	0	0	4.30	VHA
10. As a professor, I consider DOST research agenda in conducting my research.	22	26	6	0	0	4.30	VHA
Average Weighted Mean						4.26	VHA

The faculty are very highly aware of the college or institution's research agenda and that the research agenda is constantly changing due to the changing demands in their specialization, as this focuses on current ideas and issues in their field of education. They are also very highly aware that they must conduct research aligned with the college and institution's research agenda while also taking into consideration the research agenda of the DOST.

Also, the faculty is highly aware that the university research agenda is disseminated in different colleges through meetings, announcements in bulletin boards, and other forms of media dissemination and they habitually engage in productive conversations with their colleagues about viable research agenda. Moreover, they are highly aware of the CHED research agenda as well as the DOST research agenda.

The overall weighted mean of 4.26 signifies that the LSPU SCC faculty have very high research orientation as they are aware of the college institutions, CHED, and DOST 's research agenda.

Table 3. Frequency and Weighted Mean Distribution on the Level of Research Orientation of the Respondents as to Self-Motivation

Self-motivation	VH (5)	H (4)	MH (3)	L (2)	VL (1)	Mean	QD
1. I have high level of self-motivation in doing research.	16	33	5	3	0	4.09	H
2. I believe that I have the potential skills to conduct significant research in my field of specialization such as commitment, content knowledge, autonomy, and work habits.	22	33	4	0	0	4.31	VH
3. I am determined and enthusiastic to participate in collaborative research.	24	31	4	0	0	4.34	VH
4. I display research-writing confidence in coming up with relevant research.	18	34	4	3	0	4.14	H
5. I understand the norms and expectations in conducting research.	19	36	4	0	0	4.25	VH
6. I am motivated to contribute to society through my innovation, discovery, and creative works.	19	33	7	0	0	4.20	VH



7. I have passion to do research even beyond the call of service.	18	33	5	3	0	4.12	H
8. I believe that I have the commitment to share significant knowledge with my students, colleagues, and other stakeholders in my research.	22	35	2	0	0	4.34	VH
9. I feel proud whenever I present papers here and abroad.	22	31	4	0	1	4.26	VH
10. I am now more confident as I willingly participate in research mentorship.	25	29	4	1	0	4.32	VH
Average Weighted Mean						4.24	VH

The items with the highest weighted mean are on the determination and enthusiasm of the faculty to participate in collaborative research as well their commitment to sharing knowledge with students, colleagues, and other stakeholders. The faculties' self-motivation is very high particularly in being confident to participate in research mentorship, believing in their own potentials, content knowledge, and work habits, and being proud whenever they present papers in different venues.

The average weighted mean of 4.24 indicates that the faculties have a very high level of self-motivation to participate in research undertakings.

Table 4. Frequency and Weighted Mean Distribution on the Level of Research Orientation of the Respondents as to Research Capabilities

Research Capability	VH (5)	H (4)	MH (3)	L (2)	VL (1)	Mean	QD
1. I participate in research training and conferences either at the local, regional, national, or international levels.	21	28	10	0	0	4.19	H
2. I believe that participating in research training and conferences strengthen my research capability.	31	24	4	0	0	4.46	VH
3. I participate in in-house reviews to evaluate and improve my research output.	30	25	4	0	0	4.44	VH
4. I conduct research works aligned with the thrusts, vision, and mission of the institution in which I am affiliated with.	27	26	5	0	0	4.38	VH
5. I endeavor on research works addressing the most urgent issues of the country at present time.	19	32	8	0	0	4.19	H
6. I help foster strong personal and professional relationships among colleagues in the context of research development.	22	31	6	0	0	4.27	VH
7. I have the knowledge and skills to utilize the results of my research training.	14	37	7	0	0	4.12	H
8. I can provide technical assistance, guidance, and encouragement to any of my colleagues seeking to fulfill and enhance their research expectations.	17	37	5	0	0	4.20	VH
9. I am adept with strategies on how to gather necessary data effectively and efficiently for my research endeavor.	17	35	6	0	0	4.19	H
10. I know I can effectively disseminate the key findings of my research works to my colleagues in the discipline and the community.	20	30	8	0	0	4.21	VH
Average Weighted Mean						4.27	VH

As reflected in the table, the LSPU faculty have a very high level of research capability as they participate in research training and in in-house reviews. They conduct research aligned with the thrust of the institution, foster strong personal and professional relationships with colleagues, disseminate key findings from research conducted while providing corresponding guidance and encouragement to their colleagues.



On the other hand, the faculty perceive that they have a high level of research capability when it comes to research strategies, addressing societal issues, participation in training and conference whether locally or abroad, and the use of knowledge gained during training. The overall weighted mean of 4.27 indicates a very high level of research capability among LSPU faculty.

Table 5. Frequency and Weighted Mean Distribution on the Level of Research Orientation of the Respondents as to Community Engagement.

Community Engagement	VH (5)	H (4)	MH (3)	L (2)	VL (1)	Mean	QD
1.I communicate about the latest research inquiry from senior researchers in the community.	13	30	14	0	0	3.96	H
2. I share research-related values and practices within the community.	10	31	16	0	0	3.69	H
3. I can easily adapt the linkage mechanisms with the community partners.	9	33	15	1	0	3.86	H
4. I follow definite resource allocation procedures with partners in the community.	11	33	12	1	0	3.95	H
5. I collaborate with community stakeholders or with outside partners to improve my research.	13	30	13	2	0	3.93	H
6. I am determined to improve my research skill through the help of experts in the community.	25	25	7	0	0	4.32	VH
7. I maintain a strong sense of commitment to the community-based researchers, whether these are conducted personally or institutionally, through sustained monitoring and upgrading.	19	32	7	0	0	4.21	VH
8. I participate in the community engagement of the academic institution such as community-based participatory research, training, and technical assistance.	14	33	9	2	0	4.02	H
9. I can improve my research in partnership with community stakeholders.	21	30	8	0	0	4.22	VH
10. I can provide technical assistance to my colleagues in the community in terms of conducting research.	16	33	10	0	0	4.10	H
Average Weighted Mean						4.03	H

It can be gleaned from the table the LSPU faculty have a very high level of community engagement as they seek the help of experts to improve their research skills and try to improve their research partnership with the community. The faculty maintains a strong sense of commitment to the community-based researchers, whether these are conducted personally or institutionally, through sustained monitoring and upgrading.

Table 6. Frequency and Weighted Mean Distribution on the Level of Research Orientation of the respondents as to Methodological Skills

Methodological Skills	VH (5)	H (4)	MH (3)	L (2)	VL (1)	Mean	QD
1.I have deep knowledge of quantitative methods that can improve my research.	21	28	10	0	0	4.19	H
2. I have the skills to understand and evaluate research-based information.	21	30	8	0	0	4.22	VH
3. I have a high understanding of the procedures in conducting research.	22	29	7	0	0	4.26	VH
4. I know how to approach a research problem and which methods correspond to it.	21	33	5	0	0	4.27	VH
5. I have the knowledge on how to gather the necessary data for my research.	25	29	3	0	0	4.34	VH



6. I can identify the prospective respondents and sources of research information.	24	31	4	0	0	4.34	VH
7. I can do confirmatory and exploratory data analyses.	20	31	8	0	0	4.20	VH
8. I am aware of new approaches in research analysis like data mining and theory development.	19	34	6	0	0	4.22	VH
9. I can draft effective research proposals which are approved by a panel of experts.	19	35	5	0	0	4.24	VH
10. I am proficient in constructing data-gathering instruments, doing statistical treatments, interpreting findings, and writing research manuscripts.	16	35	8	0	0	4.14	H
Average Weighted Mean						4.24	VH

It can be noted from the data, that the extent of research orientation in terms of methodological skills is very high as the LSPU SCC faculties have the knowledge on how to gather the necessary data and identify the prospective respondents and sources of research information. This may be hypothesized that the very high level of methodological skills of the LSPU SCC faculty that they learned how to analyze available data and the procedures in conducting research and can consume which comprises the skills to find, read and understand the previous research and know-how to approach a research problem.

Table 7. Frequency and Weighted Mean Distribution on the Level of Research Orientation of the Respondents as to Fund Generation

Fund Generation	VH (5)	H (4)	MH (3)	L (2)	VL (1)	Mean	QD
1. I participate in beneficial research that are organized as networks, instead of standalone projects.	8	38	8	3	0	3.89	H
2. I conduct research that dovetails and complements with R&D initiative of other government agencies.	8	37	12	2	0	3.86	H
3. I can convince prospective donors on the achievability of my research.	5	38	11	1	4	3.66	H
4. I have tried outsourcing and resource generation prior to conducting a research study.	6	30	16	3	4	3.53	H
5. I use available information in the University as a basis to maximize resource utilization.	12	35	10	1	1	3.95	H
6. I am familiar with the procedures to be followed in requesting to the securing of research funds from funding agencies.	9	35	13	1	1	3.85	H
7. I generate assistance from the university in terms of the research facilities and materials.	12	35	7	0	4	3.88	H
8. I use available University amenities and honorarium in my research.	12	32	10	1	1	3.80	H
9. I coordinate with the universities R&D Center in identifying possible sources of funds for my research projects.	20	26	9	0	4	3.98	H
10. I have been a part of block grants, grants-in-aid, or commissioned research.	8	18	20	3	9	3.22	MH
Average Weighted Mean						3.76	H

The source of funds for research is an important aspect that would help the faculty in SUCs come up with quality research. The extent to which the LSPU SCC faculty generate funds for their research is shown in the table. The items rated as high include the ability of the faculty to coordinate with the university's R&D Office in identifying possible sources of funds and using the available information in the University as a basis to maximize resource utilization.



In this study, the indicators of research performance of the LSPU SCC faculty include the number of research publications, paper presentation, patent/copyright, the extent of research utilization, and the number of awards received in research.

Table 8. Frequency and Percentage Distribution of the Research Performance of the LSPU SCC Faculty

Performance	N	Frequency	Percentage
Publication in Refereed Journal			
1 to 3		12	20.00%
4 to 6	16	3	5.00%
More than 6		1	1.67%
No responses	45		72.33%
Publication in a non-refereed journal			
1 to 3	19	16	26.67%
4 to 6			5.00%
No responses	42	3	68.33%
Paper Presentation local/international)			
1 to 3		18	30.00%
4 to 6	36	14	23.33%
7 to 9		2	3.33%
10 to 12		2	3.33%
No responses	25		40%
Paper presentation international			
1 to 3	26	23	38.33%
4 to 6		3	5.00%
No responses	35		56.67%
Number of copyrights			
1 to 3	21	20	33.33%
More than 3		1	1.67%
No responses	40		65%
Number of research with patent			
1 to 3	1		1.67%
No responses	60	1	98.33%
Number of pending patents			
1 to 3	3	2	3.33%
4 to 6		1	1.67%
No responses	58		95%
Local utilization of research output			
1 to 3	19	17	28.33%
4 to 6		2	3.33%
No responses	42		68.34%
National utilization of research output			
1 to 3	3		5.00%
No responses	58	3	95%
International utilization of research output			
1 to 3	3		5.00%
No responses	58	3	95%
Local awards			
1 to 3	7	6	10.00%
More than 3			1.67%
No responses	54	1	88.33%
National awards			
1 to 3	6		10.00%
No responses	55	6	90%



International award			
1 to 3	2	1	1.67%
More than 3		1	1.67%
No responses	59		96.66%

In terms of publication, in a refereed journal it may be interpreted that the faculty lack confidence in publishing journals in local, national, and even international since there are not enough funds given to faculty and more work are tasked to the faculty when it comes to instruction and even other assignments tasked to them.

Lack of motivational support to the faculty is one of the problems that beset the faculty in publishing journals in refereed and even in non-refereed journals and less dissemination of publications is also a problem. Also, high subscription rates and limited circulation are also considered.

This may be inferred from less dissemination when it comes to presentation and lack of funding and even high rates in presetting and even in publishing research papers in local, national, and international. On the contrary, the faculty present their research outputs in national or international conferences due to different reasons.

In terms of the number of copyrighted materials, there were fewer training, seminars, and conferences given to the faculty when it comes to copyright and patents. This may be interpreted that not all faculty members could do research and have patent/copyright due to lack of skills to find, read and understand what to do and produce or to know what methods are needed and when and where to go (Itaas & Mirasol, 2011).

This may be hypothesized that not all faculty received awards in their research outputs because they are not encouraged and even motivated to conduct and invest in research because of their overworked in their assignments and even their family responsibility.

Demographic Profile as Predictors of Respondents Research Orientation and Performance

Table 9. Regression on the Demographic Profile as Predictor of the LSPU SCC Faculty Research Orientation as to Methodological Skills

Profile	beta	t-value	p-value	Analysis
sex	.372	2.082	.047	Significant
age	.166	0.847	.405	Not Significant
Civil status	-.211	-1.158	.257	Not Significant
Length of service	.158	0.815	.422	Not Significant
Educational qualifications	.046	0.250	.804	Not Significant
Academic rank	.144	0.796	.433	Not Significant

Adjusted R-square = .106

F-value = 4.336

Sig. = 0.047

Based on the findings, the hypothesis which states that the demographic profile of the respondents does not predict their research orientation is rejected.

Difference in the Research Orientation of the LSPU SCC Faculty by College

The difference in the research orientation of the faculty is reflected in the table. There is a significant difference in the level of research orientation of the faculty in colleges as to research awareness.



Table 10. Summary of Values on the Difference of the Research Orientation Among LSPU SCC Faculty wen grouped by the colleges

		Sum of squares	df	Mean square	F	Sig.	Analysis
Awareness Research Agenda	Between groups	342	4	85.740	3.737	.009	Significant
	Within groups	1261.97	55	22.945			
	Total	1604.933	59				
Self-motivation.	Between groups	246.685	4	6.671	1.030	.400	Not Significant
	Groups	3292.165	4	59.858			
	Within groups	3538.850	5				
	Total		59				
Research Capabilities	Between groups	27.565	4	156.891	3.122	.022	Significant
	Within groups	2764.085	5	50.256			
	Total	3391.650	59				
Community Engagement	Between groups	648.315	4	162.079	2.618	.045	Significant
	within groups	3405.419	5	61.917			
	Total	4053.733	59				
Methodological Skills	Between groups	160.409	4	40.102	0.634	.640	Not Significant
	Within groups	3479.525	5	63.264			
	Total	3639.933	59				
Fund Generation	Between groups	910.141	4	227.535	3.612	.011	Significant
	within groups	3465.109	5	63.002			
	Total	4375.250	59				

With these findings, therefore the hypothesis which states that there is no significant difference in the research orientation of the faculty by colleges is partially rejected. This may be inferred that there are allocated funds in a period of ten years specifically to provide a conducive policy environment for the management and administration of research, for technical assistance for research, and funding/financial assistance for research in higher education in the form of block grants, grants-in-aid, and commissioned research (NHERA, 2009).

Difference in the Performance of the LSPU SCC Faculty by Colleges

The difference in the performance of the LSPU SCC faculty by colleges is presented in the table.

Table 11. Difference in the Performance of the LSPU SCC Faculty by Colleges as to the Number of Training in Local/Reg¹/ Nat¹/ International Level.

Number of local trainings	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	2	14.3	4	36.4	0	0.00	3	20.0	0	0.00
2	1	7.1	2	18.2	0	0.00	2	13.3	0	0.00
3	0	0.00	3	27.3	0	0.00	0	0.00	0	0.00
Total	3	21.4	9	81.8	0	0.00	5	33.3	0	0.00
No answer	11	78.6	2	18.2	9	100	10	66.7	7	100



Number of regional/national training	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	1	7.1%	1	9.1%	0	0.00	0	0.00	0	0.00
2	0	0.00	1	9.1%	0	0.00	2	13.3	1	14.3
3	0	0.00	1	9.1%	0	0.00	0	0.00	0	0.00
4	1	7.1	1	9.1	0	0.00	0	0.00	0	0.00
Total	2	14.3	4	36.4	0	0.00	2	13.3	1	14.3
No answer	12	85.7	7	63.6	9	100	13	86.7	6	85.7

Number of international training	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	5	45.5	0	0.0	1	6.7	0	0.0
4	0	0.0	1	9.1	0	0.0	0	0.0	0	0.0
Total	0	0.0	6	54.5	0	0.0	1	6.7	0	0.0
No answer	14	100	5	45.5	9	100	14	93.3	7	100

It can be gleaned from the table that the faculty from college B attended the most local training, followed by those in college D and college A. The finding indicates that the faculty from college B had more local training than their counterpart from other colleges, particularly from college C and college E who disclosed that they did not attend any local training related to research. This implied that more training, workshop, and conferences were given and faculty are allowed and given time to attend for it will give the faculty a chance to improve and enhance themselves in providing more knowledge, confidence, and self-development when it comes to doing research.

Table 12. Difference in the Performance of the Faculty by Colleges as to Number of Publications in Refereed/Non-Refereed Journal

Number of Publication In Refereed journal	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	2	14.3	0	0.0	3	33.3	3	20.0	0	0.0
2	0	0.0	1	9.1	0	0.0	2	13.3	0	0.0
3	0	0.0	0	0.0	0	0.0	1	6.7	0	0.0
4	0	0.0	0	0.0	0	0.0	2	13.3	0	0.0
16	1	7.1	0	0.0	0	0.0	0	0.0	0	0.0
Total	3	21.4	1	9.1	3	33.3	8	53.3	0	0.0
No answer	11	78.6	10	90.0	6	66.7	7	46.7	7	100
Number of Publication in Non-refereed journal	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	1	7.1	0	0.0	4	44.4	2	13.3	1	14.3
2	0	0.0	0	0.0	0	0.0	2	13.3	0	0.0
3	0	0.0	2	18.2	2	22.2	1	6.7	0	0.0
4	1	7.1	0	0.0	0	0.0	1	6.7	0	0.0
5	0	0.0	1	9.1	0	0.0	0	0.0	0	0.0
total	2	14.3	3	27.3	6	66.7	6	40.0	1	14.3
No answer	12	85.7	8	72.7	3	33.3	9	60.0	6	85.7

This may be hypothesized that their research showed no evidence or are not in line with the thrusts of the research agenda they must publish. At the University of the Philippine system, an assistant professor must publish or produce creative of the quality and quantity necessary to satisfy the standards for tenure and promotion and in the required capacity as lead author or co-author of creative work (UP System Manual, 2004).

Table 13. Difference in the Performance of the LSPU SCC Faculty by Colleges as to the Number of Paper Presentations in the Local/National/International Level



Number of Presentation (local/national)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	2	18.2	1	11.1	2	13.3	0	0.0
2	3	21.4	1	9.1	2	22.2	2	13.3	1	14.3
3	1	7.1	1	9.1	3	22.2	0	0.0	0	0.0
4	1	0.0	1	9.1	1	11.1	1	6.7	1	14.3
5	0	0.0	2	18.2	0	0.0	4	26.7	1	0.0
6	0	21.4	1	9.1	0	0.0	0	0.0	0	0.0
7	1	7.1	0	0.0	0	0.0	0	0.0	0	0.0
8	0	0.0	0	0.0	1	11.1	0	0.0	0	0.0
10	0	0.0	0	0.0	0	0.0	1	6.7	0	0.0
12	1	7.1	0	0.0	0	0.0	0	0.0	0	0.0
total	7	50.0	8	72.7	7	77.8	10	66.7	3	42.9
No answer	7	50.0	3	27.3	2	22.2	5	33.3	4	57.1
Number of Presentation (international)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	2	14.3	1	9.1	5	55.6	4	26.7	1	14.3
2	1	7.1	2	18.2	0	0.0	2	13.3	0	0.0
3	2	14.3	0	0.0	1	11.1	1	6.7	1	14.3
4	0	0.0	0	0.0	1	11.1	1	6.7	0	0.0
6	0	0.0	0	0.0	1	11.1	0	0.0	0	0.0
total	5	35.7	3	27.3	8	88.9	8	53.3	2	28.6
No answer	9	64.3	8	72.7	1	11.1	7	46.7	5	71.4

As the data reflect, the performance of the faculty for the last three years, one faculty from college A had a total of 12 paper presentations. The faculty disclosed that they participate in in-house reviews in their respective colleges, this is counted as local paper presentations. The table also shows the difference in the performance of the faculty by colleges as to the number of paper presentation in the international level. The faculty from college C and college D had the highest number of paper presentation in the international level.

Table 14. Difference in the Performance of the LSPU SCC Faculty by Colleges as to the Number of Research Copyright, Research Patent and Pending Research Patent

Number of Research Copyright	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	1	7.1	2	18.2	3	3.33	8	53.3	1	14.3
2	0	0.0	1	9.1	0	0.0	2	13.3	0	0.0
3	0	0.0	1	9.1	0	0.0	1	6.7	0	0.0
16	1	7.1	0	0.0	0	0.0	0	0.0	0	0.0
total	2	14.3	4	36.4	3	33.3	11	73.3	1	14.3
No answer	12	85.7	7	63.6	6	66.7	4	26.7	6	86.7
Number of Research Patent	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	0	0.0	0	0.0	1	6.7	0	0.0
total	0	0.0	0	0.0	0	0.0	1	6.7	0	0.0
No answer	14	100	11	100	9	100	14	93.3	7	100
Number of Pending Research patent	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	1	9.1	0	0.0	1	6.7	0	0.0
4	0	0.0	0	0.0	0	0.0	1	6.7	0	0.0
total	0	0.0	0	0.0	0	0.0	2	13.3	0	0.0
No answer	14	100	11	100	9	100	13	86.7	7	100

The faculty from college D had the greatest number of research copyright. The five colleges follow a system of innovation and one of these is creating a mechanism for intellectual property rights (UNESCO, 2009). This only showed that the faculty in



college D, as well as the R&D Office and even the administration, had provided training, seminars, and workshop with regards to copyright, and even funding is also given to those who are and are willing to do so.

Table 15. Difference in the Performance of LSPU SCC Faculty by College as to the Number of Research Utilized in the Local/National/International Level

Number of Research utilized	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	3	21.4	1	9.1	1	11.1	6	40.0	0	0.0
2	0	0.0	1	9.1	0	0.0	1	6.7	0	0.0
3	0	0.0	1	9.1	1	11.1	1	6.7	0	0.0
total	3	21.4	3	27.3	2	22.2	8	53.3	0	0.0
No answer	11	78.6	8	72.7	7	77.8	7	46.7	7	100
Number of Research Utilized (national)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	1	9.1	0	0.0	1	6.7	0	0.0
2	0	0.0	1	9.1	0	0.0	0	0.0	0	0.0
3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
total	0	0.0	2	18.2	0	0.0	1	6.7	0	0.0
No answer	14	100	9	81.8	9	100	14	93.3	7	100
Number of Research Utilized (International)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	0	0.0	0	0.0	2	6.7	0	0.0
2	0	0.0	1	0.0	0	0.0	0	6.7	0	0.0
3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
total	0	0.0	0	0.0	0	0.0	2	13.3	0	0.0
No answer	14	100	10	90.9	9	100	13	86.7	7	100

the table shows that faculty from college B reported that there is research in their university that was utilized at the national level while there is one from college D. The three other disclosed that there is no research in their university that were utilized in the national level.

Table 16. Difference in the Performance of the LSPU SCC Faculty by Colleges as to the Number of Research Awards in the Local/ National/ International Level

Number of Research awards (Local)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	2	14.3	1	9.1	0	0.0	0	0.0	0	0.0
2	0	0.0	1	9.1	0	0.0	0	0.0	0	0.0
3	0	0.0	1	9.1	0	0.0	1	6.7	0	0.0
9	1	7.1	0	0.0	0	0.0	0	0.0	0	0.0
total	3	21.4	3	27.3	0	0.0	1	6.7	0	0.0
No answer	11	78.6	8	72.7	9	100	14	93.3	7	100
Number of Research Awards (National)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	0	0.0	1	9.1	1	11.1	2	13.3	0	0.0
total	0	0.0	1	9.1	1	11.1	2	13.3	0	0.0
No answer	13	92.9	10	90.9	8	88.9	13	86.7	7	100
Number of Research Awards (International)	College A		College B		College C		College D		College E	
	f	%	f	%	f	%	f	%	f	%
1	1	7.1	0	0.0	0	0.0	1	6.7	0	0.0
total	1	7.1	0	0.0	0	0.0	1	13.3	0	0.0
No answer	13	92.9	11	100	9	100	11	93.2	7	100

The faculty from colleges C and E disclosed that they did not receive research awards in the local level. This means that college A and D of the faculty invest and conduct research that led to the enhancement of academic programs as well as contribute to



the country's initiatives towards inclusive and globally competitive development. The faculty's awards reflect the characteristics that are most important to an institution.

This may be hypothesized that faculty have built a sense of community such that all faculty and students have access to the current research and vitality of the university. This recognition also serves as models for other faculty to emulate and to aspire to as well (Silverman *et al.*, 2011).

Developed Intervention Work Plan for the LSPU SCC Faculty

Based on the findings of the study, the researcher developed a series of activities that focus on an intervention work plan for the research performance of the LSPU SCC Faculty in the five colleges.

Evaluation on the Intervention Work Plan for the LSPU SCC Faculty

The intervention work plan for the LSPU SCC Faculty was evaluated by the faculty from the five colleges of LSPU system. It was then validated, and pilot tested by the faculty from Eulogio Amang Rodriguez Institute of Science and Technology (EARIST), Manila. The following discussions revealed its evaluation based on the objectives, content, significance, usability, and ethical values.

From the table, the respondents find the objectives of the research intervention work plan highly acceptable for being specific and clear, providing techniques for continuous development, and achievable within the specified time.

Table 17. Weighted Mean Distribution on the Evaluation of the Intervention Work Plan as to Objectives.

Objectives	Weighted Mean	Standard Deviation	Verbal Interpretation
1. Specified and clearly stated.	3.40	0.490	Moderately acceptable
2. designed to respond to the needs of the College faculty to improve research performance.	3.45	0.497	Highly acceptable
3. Provide techniques for research and publication of information necessary for the continuous development of the faculty.	3.55	0.497	Highly acceptable
4. objectively measures the improvement of the research skills of the faculty.	3.45	0.497	Highly acceptable
5. achievable within the specified time.	3.60	0.490	Moderately acceptable
Overall Weighted Mean	3.49 Highly Acceptable		

Legend:

4.20 – 5.00 Very Highly Acceptable

3.40 – 4.19 Highly Acceptable

2.60 – 3.39 Moderately Acceptable

1.80 – 2.59 Lowly Acceptable

1.00 – 1.79 Not at all Acceptable

The overall weighted mean of 3.49 reveals that the objectives of the research intervention work plan are highly acceptable. Being clear and specific, it provides techniques for continuous development among the faculty.

Table 18. Weighted Mean Distribution on the Evaluation of the Intervention Work Plan as to Content.

Content	Weighted mean	Standard deviation	Verbal interpretation
1. Clearly expresses goals and the means to express goals and objectives.	3.50	0.500	Highly acceptable
2. Appropriate for all the concerned individuals.	3.50	0.500	Highly acceptable
3. Present topics in scientific and orderly manner.	3.70	0.458	Highly acceptable
4. Develop College faculty researchers' passion for continuous learning.	3.65	0.477	Highly acceptable
5. Reflect strategies to complete tasks on time.	3.55	0.497	Highly acceptable
Overall Weighted Mean	3.58	Highly Acceptable	

Legend:

4.20 – 5.00 Very Highly Acceptable

3.40 – 4.19 Highly Acceptable



2.60 – 3.39 Moderately Acceptable

1.80 – 2.59 Lowly Acceptable

1.00 – 1.79 Not at all Acceptable

The evaluation on the content of the intervention work plan was all highly acceptable which means that they are all acceptable and meaningful for the intervention work plan of the faculty that provide information, strategies, and techniques to the development of the faculty as well.

Table 19. Weighted Mean Distribution on the Evaluation of the Intervention Work Plan as to Significance

Significance	Weighted mean	Standard deviation	Verbal interpretation
1.It is designed to allow faculty researchers to participate in activities that are consistent with the college research agenda	3.60	0.490	Highly acceptable
2. It is designed to support training activities for all LSPU faculty.	3.55	0.497	Highly acceptable
3. It specifies human and non-human resources to be employed in the achievement of goals.	3.55	0.497	Highly acceptable
4. It is designed to complement other government and non-government agencies' research agendas.	3.60	0.490	Highly acceptable
5. It has provisions for the gradual improvement in the research performance of the faculty in the college.	3.45	0.497	Highly acceptable
Overall Weighted Mean	3.54	Highly Acceptable	

Legend:

4.20 – 5.00 Very Highly Acceptable

3.40 – 4.19 Highly Acceptable

2.60 – 3.39 Moderately Acceptable

1.80 – 2.59 Lowly Acceptable

1.00 – 1.79 Not at all Acceptable

This may be implied that the intervention work plan gives full support, knowledge, and confidence in the research performance. The emphasis on research productivity in the faculty enhances teaching and faculty members and administrators support this belief (Neumann in Prince *et al.*, 2007)

Table 20. Weighted Mean Distribution on the Evaluation of the Intervention Work Plan as to Usability.

Usability	Weighted mean	Standard deviation	Verbal interpretation
1.Useful to the current needs and practices of the college.	3.45	0.497	Highly acceptable
2. Is applicable to the college's current trends mission, vision, goals, and objectives.	3.70	0.458	Highly acceptable
3. Encourage university, faculty, staff, students and community as well to be more aware and equipped of the research agenda of the institution.	3.35	0.477	Highly acceptable
4. Provide clear information in an efficient and effective plan to be used.	3.55	0.497	Highly acceptable
Give long-term benefits to University's Administrative and staff, faculty, students, and community as well.	3.60	0.490	Highly acceptable
Overall Weighted Mean	3.53	Highly Acceptable	

Legend:

4.20 – 5.00 Very Highly Acceptable. 3.40 – 4.19 Highly Acceptable 2.60 – 3.39 Moderately Acceptable 1.80 – 2.59 Lowly

Acceptable 1.00 – 1.79 Not at all Acceptable



From the table, the faculty rated the research intervention work plan as highly acceptable. It is applicable to the university's current trends, mission, goals, and objectives and provides clear information in an efficient and effective plan to be used. This means that all statements are acceptable as to faculty and are highly acceptable in all the research undertakings that would lead them to a higher level of research performance.

Table 21. Weighted Mean Distribution on the Evaluation of the Intervention Work Plan as to Ethical Value

Ethical Value	Weighted mean	Standard deviation	Verbal interpretation
1.The intervention work plan recognizes ethical implications.	3.75	0.497	High
2. Develop the capability of the University's administrative and research staff in improving the institution's research performance..	3.70	0.458	High
3. Seek truth in order to improve the competence of the faculty to present or publish their scholarly works.	3.40	0.477	High
4. Take safe and spiritual concerns to improve the required scholarly writing skills of the faculty in the University.	3.50	0.497	High
5. Encourage the development value competence, and practices in writing and engaging in research.	3.65	0.490	High
Overall Weighted Mean	3.60	High	

Legend:

4.20 – 5.00 *Very Highly Acceptable*

3.40 – 4.19 *Highly Acceptable*

2.60 – 3.39 *Moderately Acceptable*

1.80 – 2.59 *Lowly Acceptable*

1.00 – 1.79 *Not at all Acceptable*

The table reveals that the ethical value of the research intervention work plan is high. It develops the capability of the University's administrative and staff in improving the institution's research performance and recognizes ethical implications. This may be inferred that the developed intervention work plan gives importance and may be of great help in writing and engaging faculty in doing research and that they may be guided spiritually and morally.

CONCLUSIONS

From the results of the study, the following conclusions are stated as most of the faculty are female, most of them in their late adulthood, married, and are enjoying either Assistant or Associate Professor rank. Most of them have been in the service for a considerable length of time and are pursuing a higher level of education. They are exposed to minimal training either in the local, national, or international training. The faculty is aware of the research agenda is motivated to do research, using a very high level of methodological skills and research capabilities. they have less ability to generate funds for their research and build community partnerships. The faculty have few publications in refereed or non-refereed journals and paper presentation in the local, national, or international level. Only a few have research copyright and research utilized or awards received in the different levels. The methodological skills of the faculty correlate with their sex. However, regardless of age, civil status, length of service, educational qualifications, and academic rank the faculty are motivated to do research and aim to enhance their research capabilities. There are variations on how the faculty from the five colleges were oriented on the research agenda of the institution and other partner agencies and on how their research capabilities, community engagement, and fund generation are enhanced. The faculty in college B has the greatest number of local /regional/international training. Those from college A have the greatest number of papers published in a refereed journal, paper presentations at the local/national level, and awards at the local level. The greatest number of publications in non-refereed journals, papers presented at the international level, research copyright, research utilized at the local level, patent and pending patents, awards at the national or international level came from college D. the developed intervention work plan is commendable for implementation and/or adoption. The intervention work plan has well-defined objectives, comprehensive content, is significant to the target beneficiaries, is highly usable, and carries high ethical values.

RECOMMENDATIONS



From the findings and conclusions, the recommendations states that the faculty may be exposed to training that focus on writing skills and the use of statistical tools for quantitative research, and the methodologies for qualitative research for them to be intensified. The R&D Office and other university officials may assist faculty researchers, particularly those with less ability to generate funds for their research and build community partnerships. Tapping the expertise of senior researchers from other colleges and universities with good track records is also a viable means to upgrade the research capabilities of the faculty from the five colleges. Of LSPU SCC. The faculty may be exposed to training on intellectual property and other related laws to better guide them in copyrighting or patenting their research outputs. Financial assistance may be granted by the university particularly in paper presentation, publication, and patenting. The faculty career advancement may be given a push by the administration through scholarships grants, to elevate their level of education. Participation in research activities is a relevant means for their professional advancement. It is suggested to include the faculty in the roster for collaborative researchers. Holding orientation among the faculty in the university is a big help to advocate the institution's research agenda. Collaboration with partner agencies will likewise boost the research capability of the faculty and better inform them of the partner agencies' research agenda. The faculty must be guided and supervised by the concerned authorities from the drafting of the proposal, writing the manuscript, paper presentation, and publishing the output in a prestigious refereed journal. The research incentive scheme may be communicated well to them to inspire and to venture into research activities. Bestowing awards to deserving researchers is also a good motivational strategy. The implementation and/or adoption of the developed intervention work plan in the five colleges are likewise recommended. It is highly suggested that the developed intervention work plan be subjected to another evaluation by future researchers, taking into consideration other aspects aside from its objectives, content, significance, usability, and ethical values.

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CACAO (*Theobroma cacao*) and JACKFRUIT (*Artocarpus heterophyllus*) SEEDS AS AN ALTERNATIVE CHOCOLATE DRINKS

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ABSTRACT

The study sought to determine the acceptability of cacao and jackfruit on their sensory qualities as to appearance, aroma, taste, and solubility and another finished product be produced and, in some manner, help chocolate lovers, teachers, and children be healthy through diet and boost energy levels. It involved the process of making Cacao and jackfruit seeds as an alternative chocolate drink. It also ascertained the difference in the level of acceptability and the ratings given by a group of respondents in terms of its sensory qualities such as appearance, aroma, taste, and solubility. Using the experimental method of research, a checklist survey questionnaire and sensory quality evaluation sheet data were gathered from 30 selected chocolate lovers, selected teachers, and selected children as well. Weighted mean, standard deviation, and t-test were also used to analyze the statistical data gathered in the study. It was revealed that Cacao and Jackfruit seeds have a high level of acceptability in appearance, aroma taste, and solubility. Further, there was no significant difference in the group of respondents on the acceptability of cacao and jackfruit seeds as alternative chocolate drinks. Thus, the finished product Cacao and Jackfruit Seeds as an alternative chocolate drink was evaluated as highly acceptable in all its parameters. The researchers used Cacao and jackfruit seeds in the alternative chocolate drink as a healthy drink and can be of great help for chocolate lovers, teachers, and children as well.

KEYWORDS: *Cacao Seeds, Jackfruit Seeds, Chocolate drinks, Appearance, Aroma, Solubility*

1. INTRODUCTION

The Philippines is one of the blessed countries. Many nutritious fruits can be found here because of their good climate. And have you ever wondered why your child's coach tells young athletes to drink chocolate milk after a hard practice? It may sound a bit strange, but actually, chocolate low-fat milk has been shown to help young athletes recover needed nutrition. Cacao (*Theobroma cacao*) and Jackfruit (*Artocarpus heterophyllus*) are two good examples of nutritious fruits in this country that can be used as alternative chocolate drinks which are cheaper and readily available. Cacao also called cocoa, a tropical evergreen tree grown for its edible seeds whose scientific name means "food of the gods" in Greek. Its seeds called cocoa beans are processed into cocoa powder, cocoa butter, and chocolate. Jackfruit, on the other hand, locally known as langka or nangka is recognized as the "jack of all fruits" because of its enormous benefits. Almost all parts of it can be used up except for the seeds which most people considered as waste and just throw it away (Salazar, 2011).

People are unaware of the valuable benefits of these two fruits' seeds. Cacao is high in flavonoids, and antioxidants, and is anti-inflammatory. Cacao protects our heart and cardiovascular system. It is good for the elasticity of our blood vessels and increases blood flow throughout our body including the brain. It is also rich in minerals like potassium, which plays a vital role in our energy production and is found to reduce diabetes. Cacao also has a positive effect on mood, focus, and creativity. It makes us happy, reduces stress, and increases our focus and creative flow. Likewise, jackfruit seeds are high in carbohydrates, dietary fiber, and vitamins A, B, and C. It is also packed with minerals like calcium, zinc, and phosphorous (Readers Digest 2017). In addition, Brusco (2013) reveals the micronutrient contents of jackfruit seeds in a 100-g serving or about 3.5 ounces of jackfruit seeds there are about 184 calories, 7 grams of protein, and 38 grams of carbohydrates, including 1.5 grams of fiber, but has less than 1 gram of fat. Fiber can help to lose weight and may lower the risk of heart disease and high blood pressure.

For these reasons, the researchers will transform cacao seeds and jackfruit seeds into a more useful and profitable product that will surely be beneficial to everyone.

Since the Philippines have plenty of cacao and jackfruit, the researcher utilizes these fruits as the main ingredients of chocolate drinks. This will also help the country to minimize waste management disposal.



1.1 Statement of the Problem

The study aims to determine the acceptability of cacao (*Theobroma cacao*) and jackfruit (*Artocarpus heterophyllus*) seeds as an alternative chocolate drink.

Specifically, the study aims to:

1. To determine the level of acceptability of cacao and jackfruit seeds mixture as an alternative chocolate drink in terms of its sensory qualities such as:
 - 1.1. Appearance
 - 1.2. Aroma
 - 1.3. solubility
 - 1.4. taste
2. To determine the overall level of acceptability of cacao and jackfruit seeds as alternative chocolate drinks.
3. To determine the significant difference in the level of acceptability of cacao and jackfruit seeds as an alternative chocolate drink in terms of their sensory qualities as rated by:
 - 3.1. Chocolate lovers
 - 3.2. Teachers
 - 3.3. Children

2. METHODOLOGY

2.1 Research Design

The experimental method of research is used in the study to determine the acceptability of cacao and jackfruit seeds as an alternative chocolate drink on its sensory qualities as appearance, aroma, taste, and texture as rated by the respondents. The researchers use cacao and jackfruit seeds as an alternative chocolate drink for having available in abundant amounts and at a low price the seeds are very tasty and healthy having high nutritional potential. The methods of preparation are the following:

The first step is the collection of good-quality cacao and jackfruit seeds. Washing of seeds using water to remove foreign objects is the next step. It will be followed by sun-drying of seeds. After drying for 7-10 days, the coat of the seeds is removed, and the seeds are roasted until the color is achieved. Using a blender, mortar, and pestle, grind the seeds and the powdered form of the product obtained. Then with the strainer, sift the cacao and jackfruit powder to eliminate the slightly big granules of jackfruit powder.

Lastly, put the filtered seeds powdered in a resealable plastic and labeled it indicating the name and information of the product.

Table 1 gives the time frame plan for making cacao and jackfruit seeds as an alternative chocolate drink.

Time Frame Plan

Table 1: Time Frame Plan in Making Cacao and Jackfruit Seeds as an Alternative Chocolate Drink

Steps in making chocolate drinks	Time frame
1. Collection of good-quality cacao and jackfruit seeds.	1 to 2 weeks
2. Sun-drying of cacao and jackfruit seeds	7 – 10 days
3. Removing of seed coat	1 hour
4. Roasting of cacao and jackfruit seeds	1 hour
5. Grinding of roasted cacao and jackfruit seeds with the use of mortar and pestle and blender	1 day
6. Sifting the cacao and jackfruit seeds powder to eliminate the slightly big granules.	1 hour
7. Packaging and labeling the products.	3 hours

**Table 2: Materials, Utensils, and Equipment**

Materials, Tools, Utensils and Equipment	Function
1.cacao seeds, jackfruit seeds	The main ingredients of chocolate drink
2. drying tray or bilao	Use to dry the seeds under the sun.
3.strainer	Use to separate the big granules in the powdered cacao and jackfruit seeds.
4.blender/mortar and pestle	Use to achieve the finest texture of chocolate drink
5. stove/oven	Use to roast cacao and jackfruit seeds in a quick manner.
6. flipper	Utensil use in mixing the cacao and jackfruit in the frying pan.
7. Frying pan	Use in roasting the seeds.
8.Measuring spoon/weighing scale	Use in measuring the amount of sugar/creamer to be added in the chocolate drink

Table 2 shows the materials, tools, and ingredients needed in preparing cacao and jackfruit seeds as an alternative chocolate drink. It also includes the function of the materials. In making the product, use gloves to avoid unwanted microorganisms. Use a mechanical dryer for an easy, convenient, sanitary way of manufacturing chocolate drinks.

Table 3: Try-outs and Revision of Cacao and Jackfruit Seeds as an Alternative Chocolate Drink

Trials	Defects	Revision
1	Presence of molds in the seeds when air drying was used	The seeds were dried under the sun
2	Seeds coat did not dissolve completely when mixed with hot water	Removing of seed coat before roasting cacao and jackfruit seeds
3	The chocolate powder did not dissolve completely	Grind the seeds powder for 10 -15 minutes, to attain the fine texture of chocolate
4	Perfectly done	No revisions were made

Table 3 shows defects and revision of cacao and jackfruit chocolate drink. In making cacao and jackfruit chocolate drinks, the researchers encountered some difficulties. Trials and revisions were done to obtain the desired results. Put the cover on the tray while drying the seeds under the sun to avoid contamination

Table 4. Cost Analysis of Cacao and jackfruit Chocolate Drinks

Quantity	Unit	Description	Unit Cost	Total Cost
200	grams	Powdered cacao and jackfruit seeds	Php 147.00	Php 147
500	grams	Brown sugar	55 /kg	Php 55.00
450	grams	Creamer	Php78/450g	Php 26.00
30	pcs	Resealable plastic	Php 40/100pcs	Php12.00
		Yield: 30 packs	Php 18/pc	Php 240.00

Table 4 reveals the quantity, unit description, and cost of the ingredients used in the preparation of cacao and jackfruit seeds and chocolate drinks. Cost analysis is needed to find out if the experimental product would meet the economic minimum cost.



Research Instrument

The sample of cacao and jackfruit seeds as alternative chocolate drinks is rated using the rating scale below to evaluate the product's sensory qualities such as appearance, aroma, taste, and solubility.

Rating Scale.	Remarks	Verbal Interpretation
4.51 - 5.00	Strongly Agree (SA)	Highly Acceptable
3.51 - 4.50	Agree (A)	Acceptable
2.51 - 3.50	Moderately Agree(MA)	Moderately Acceptable
1.51 - 2.50	Less Agree (LA)	Less Acceptable
1.00 - 1.50	Very Less Agree (VLA)	Not Acceptable

Statistical Treatment

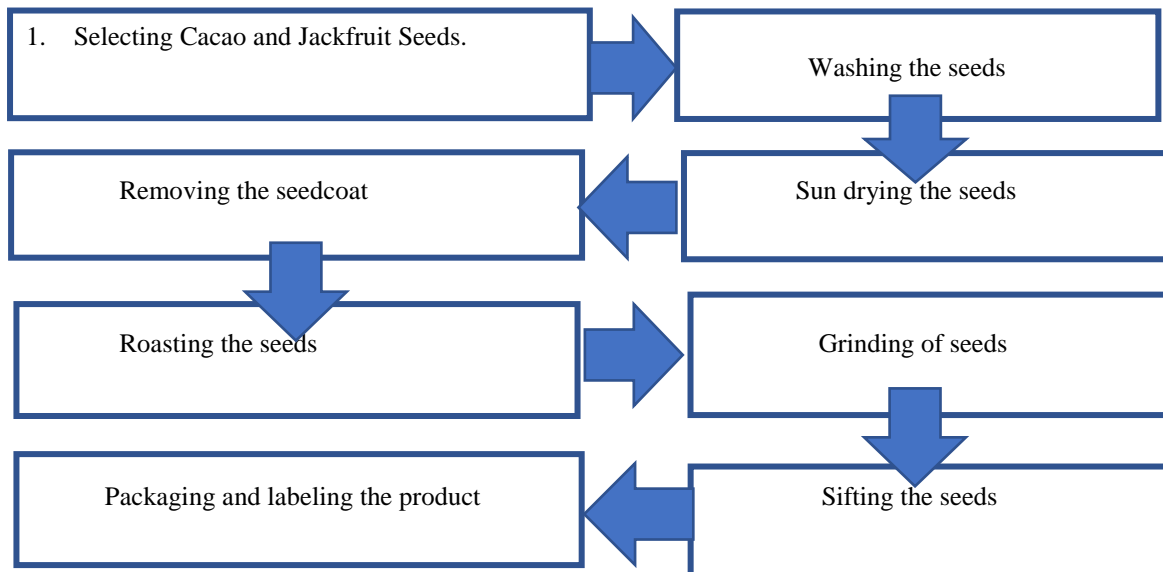
The acceptability of the sample cacao and jackfruit seeds as an alternative chocolate drink was evaluated in terms of appearance, aroma, solubility, and taste. The data gathered was analyzed and interpreted to get the overall rating of the product. The weighted mean and standard deviation was employed to find the level of acceptability of cacao and jackfruit seeds as alternative chocolate drinks.

t-test was used in order to know the significant difference between the ratings of the two groups of respondents

3. RESULTS AND DISCUSSION

In this study, data were gathered from the scorecard on the acceptability of Cacao and Jackfruit seeds to their sensory qualities in terms of appearance, aroma, taste, and solubility.

Methods in Making Cacao and Jackfruit Seeds as an Alternative Chocolate Drink



The methods used in making Cacao and Jackfruit seeds as an alternative chocolate drink were selecting the cacao and jackfruit seeds, washing, sun drying, removing the seed coat, roasting, grinding, sifting, packaging, and labeling the product as to alternative chocolate drink. Compare with other tropical fruits, jackfruit seeds are packed with many important nutrients including resistant starch, protein, thiamine, riboflavin, and antioxidants. In addition, jackfruit seeds were capable of mirroring chocolate aromas and could serve as a viable replacement for the aroma of cocoa powder or chocolate.

On the other hand, the researchers personally added cacao seeds as it provides carbohydrates, fats, protein, and minerals. Its theobromine and caffeine content produce a mildly stimulating effect and makes excellent high-energy food. Studies have shown the many uses of cacao beans processed for obtaining chocolate powder, and solid coated chocolate foods. The beans produce pleasant sharp flavors blending well in many foods and confections.

Acceptability of Cacao and Jackfruit Seeds as Alternative Chocolate Drink in terms of its Appearance.



Table 5. Acceptability of Cacao and Jackfruit Seeds As An Alternative Chocolate Drink in Terms of its Appearance

Chocolate Drink...	Chocolate Lovers			Teachers			Children		
	M	SD	R	M	SD	R	M	SD	R
1.is attractive into the eye	4.10	0.91	A	4.45	0.51	A	4.00	0.65	A
2.shows uniqueness	4.10	0.79	A	4.10	0.72	A	4.15	0.81	A
3.looks neat and safe to consume	4.40	0.75	A	4.25	0.75	A	4.20	0.70	A
4.achieved the desired color	4.05	1.15	A	4.30	1.15	A	4.20	0.70	A
5.dissolved completely with hot water	3.15	1.39	MA	3.20	1.39	MA	3.40	1.14	MA
Overall Mean	3.96	1.00		4.06	0.90		3.99	0.80	
Overall Description	Acceptable			Acceptable			Acceptable		

Legend:Scale	Remarks	Descriptions
4.51-5.00	Strongly Agree (SA)	Highly Acceptable (HA)
3.51-4.50	Agree (A)	Acceptable (A)
2.51-3.50	Moderately Agree (MA)	Moderately Acceptable (MA)
1.51-2.50	Less Agree (LA)	Less Acceptable (LA)
1.00-1.50	Very Less Agree (VLA)	Not Acceptable (NA)

In terms of appearance, cacao and jackfruit seeds as an alternative chocolate drink were acceptable as reflected by the weighted mean scores of 3.96, 4.06, and 3.99 with the standard deviation of 1.00, 0.90, and 0.80 respectively. The table above proved that cacao and jackfruit were attractive and show uniqueness to the eye and look neat and safe to drink. However, the data also showed that cacao and jackfruit seeds as alternative chocolate drinks were not completely soluble in hot water which was proven by the ratings given. Morgan (2015) emphasized the main reason why appearance is important in serving food. Eye or sight is one of the five senses that the body has. Stimulation that the eye affects greatly on brain responses and the brain will tell to choose the safest option that people have.

Table 6. Acceptability of Cacao and Jackfruit Seeds As An Alternative Chocolate Drink in Terms of Aroma

Chocolate Drink...	Coffee Lovers			Teachers			Children		
	M	SD	R	M	SD	R	M	SD	R
1.is appetizing	4.15	0.88	A	4.30	0.80	A	3.90	0.64	A
2.smells delicious	4.10	0.79	A	4.15	0.81	A	4.20	0.70	A
3.smells relaxing	4.05	0.89	A	3.65	0.93	A	4.15	0.81	A
4.has a strong aroma	3.95	0.94	A	3.65	1.09	A	4.05	0.94	A
5.is dulcified	3.40	0.99	A	3.35	1.18	A	3.60	1.00	A
Overall Mean/SD	3.83	0.90		3.82	0.96		3.98	0.82	
Overall Description	Acceptable			Acceptable			Acceptable		

Legend: Scale	Remarks	Description
4.51 – 5.00	Strongly Agree (SA)	Highly Acceptable (HA)
3.51 – 4.50	Agree (A)	Acceptable (A)
2.51 – 3.50	Moderately Agree (MA).	Moderately Acceptable (MA)
1.51 – 2.50	Less Agree (LA).	Less Acceptable (LA)
1.00 – 1.50	Very Less Agree (VLA).	Not Acceptable (NA)

Table 6 affirms that the aroma of cacao and jackfruit seeds as alternative chocolate drinks was acceptable as assessed by the coffee lovers, teachers, and children with weighted mean scores of 3.83, 3.82, and 3.98 respectively. Therefore, the data above portrayed that cacao and jackfruit seeds as an alternative chocolate drink have an appetizing, relaxing, and dulcified strong aroma based on the evaluation given by the three respondents. Jackfruit seeds create chocolate aroma and has a potential cocoa substitute according to research, that when fermented, roasted, and converted to flour imparts a chocolate aroma.



Table 7. Acceptability of Cacao and Jackfruit Seeds As Alternative Chocolate Drink in terms of Solubility

Chocolate Drink...	Coffee Lovers			Teachers			Children		
	M	SD	R	M	SD	R	M	SD	R
1. the powdered cacao and jackfruit seeds chocolate drink relatively dissolved in hot water	2.8	0.56	MA	4.2	0.48	A	4.2	0.48	A
2.No sediments had been seen in the dissolved cacao and jackfruit seeds chocolate drinks.	3.0	0.47	MA	4.2	0.48	A	4.2	0.48	A
Overall Mean/SD	3.83	1.092	A	4.2	0.421	A	4.2	0.421	A

Legend: Scale	Remarks	Description
4.51 – 5.00	Strongly Agree (SA)	Highly Acceptable (HA)
3.51 – 4.50	Agree (A)	Acceptable (A)
2.51 – 3.50	Moderately Agree (MA).	Moderately Acceptable (MA)
1.51 – 2.50	Less Agree (LA).	Less Acceptable (LA)
1.00 – 1.50	Very Less Agree (VLA).	Not Acceptable (NA)

The table revealed that the solubility was acceptable as rated by the respondents that the powdered cacao and jackfruit seeds chocolate drinks relatively dissolved in hot water and no sediments had been seen in the dissolved powdered cacao and jackfruit seeds chocolate drinks. Whether as a perfect to start the day a very special production process, the cocoa is perfectly soluble in both cold and warm milk or milk alternatives.

Table 8. Acceptability of Cacao and Jackfruit Seeds As Alternative Chocolate Drinks in terms of their taste

Chocolate Drink	Coffee Lovers			Teachers			Children		
	M	SD	R	M	SD	R	M	SD	R
1.Has an appetizing flavor	4.05	1.19	A	4.30	0.80	A	4.05	0.76	A
2.cacao and jackfruit when combined resemble a balanced flavor	3.45	1.32	A	4.15	0.81	A	3.90	1.17	A
3.the taste resemble the traditional chocolate drinks	3.55	1.18	A	3.80	1.06	A	3.65	1.18	A
4.the finished product had improved taste due to the presence of the ingredients.	4.25	0.91	A	4.50	0.61	A	4.00	0.92	A
Overall Mean/SD	4.13	0.91	A	4.45	0.73	A	4.32	0.70	A

Legend: Scale	Remarks	Description
4.51 – 5.00	Strongly Agree (SA)	Highly Acceptable (HA)
3.51 – 4.50	Agree (A)	Acceptable (A)
2.51 – 3.50	Moderately Agree (MA).	Moderately Acceptable (MA)
1.51 – 2.50	Less Agree (LA).	Less Acceptable (LA)
1.00 – 1.50	Very Less Agree (VLA).	Not Acceptable (NA)

As indicated in the table the cacao and jackfruit seeds as the alternative chocolate drink was acceptable as rated by the three groups of respondents. The table gave an idea that chocolate drink has a well-balanced flavor. The evaluation made on the cacao and jackfruit chocolate drink was related to the findings of Quidlat et al. (2018) on Durian Coffee and proved that Durian was acceptable in terms of its sensory qualities as rated by fourth-year students. The table also reveals that the taste was acceptable as rated by the coffee lovers, teachers, and children which distinguished the real flavor of chocolate and the finished product had improved the taste due to the presence of their ingredients by the computed mean of 4.51 with the standard deviation of 0.91

Table 9. Test of Significant Difference in the Ratings of the respondents on Cacao and Jackfruit as Alternative Chocolate Drinks in the level of acceptability of Cacao and Jackfruit Seeds as Alternative Chocolate Drinks

Type of Respondents	Mean (X)	Mean Difference	Computed t-value	Critical t-value	Verbal Interpretation
Coffee Lovers	3.95	0.12	1.664	2.042	Not Significant
Teachers	3.75				
Children	3.83				



The table discusses the difference among the ratings given by the three groups of respondents on the acceptability of the finished product such as cacao and jackfruit as alternative chocolate drinks in terms of their appearance, aroma, solubility, and taste. The table revealed that there was no significant difference between the evaluation made by coffee lovers, teachers, and children on the acceptability of cacao and jackfruit as alternative chocolate drinks. On the other hand, the teachers gave the lowest ratings on the chocolate drinks. This means that the right choice of a group of respondents is very important to have accurate and reliable results. The result was similar to the findings in the study of Alibudbud (2019) entitled "Versatility of Squash" that the ratings given by the students, faculty members, and housewives on the acceptability of squash ice cream in terms of aroma, taste, and appearance have no significant difference at 0.05 level of significance. Another research on 'Malunggay Seeds Coffee, Tea Juice Drink' (Marquez, 2019) indicated that the sensory qualities such as aroma, taste, and texture were acceptable as revealed by the average mean of 4.26, 4.23, and 4.70 with SD of 0.27, and 28 respectively.

4. CONCLUSIONS AND RECOMMENDATIONS

The findings gathered led to the formulation of the conclusion that there is no significant difference in the mean level of acceptability of cacao and jackfruit as alternative chocolate drinks in terms of their sensory qualities such as appearance, aroma, solubility, and tastes assessed by the coffee lovers, teachers, and students

People are unaware of the valuable benefits of these two fruits' seeds. Cacao is high in flavonoids, and antioxidants, and is anti-inflammatory. Cacao protects our heart and cardiovascular system. It is good for the elasticity of our blood vessels and increases blood flow throughout our body including the brain. It is also rich in minerals like potassium, which plays a vital role in our energy production and is found to reduce diabetes. Cacao also has a positive effect on mood, focus, and creativity. It makes us happy, reduces stress, and increases our focus and creative flow. Likewise, jackfruit seeds are high in carbohydrates, dietary fiber, and vitamins A, B, and C. It is also packed with minerals like calcium, zinc, and phosphorus (Readers Digest 2017). In addition, Brusco (2013) reveals the micronutrient contents of jackfruit seeds in a 100-g serving or about 3.5 ounces of jackfruit seeds there are about 184 calories, 7 grams of protein, and 38 grams of carbohydrates, including 1.5 grams of fiber, but has less than 1 gram of fat. Fiber can help to lose weight and may lower the risk of heart disease and high blood pressure.

For the recommendations: 1. Conduct a test on the content of the product and shelf life through the assistance of the Department of Science and technology. 2. Develop the packaging presentation of the product to bring out its best appearance. 3. Future studies should be done along this line considering other locally available solid waste which can be utilized for the benefit of mankind and the environment. 4. Study on the marketability of the product is recommended.

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A STUDY ON RESILIENCE, ESSENTIAL CHARACTERISTICS, AND IMPROVING SKILLS

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ABSTRACT

The ability to overcome challenging or demanding life events, notably through mental, emotional, and behavioral flexibility and adaptation to internal and external difficulties, is known as resilience. To understand and overcome hardship, resilience is essential; it is important. People with low levels of resilience find it difficult to cope with stress and may use unhealthy coping strategies. This study focuses on signs, types of resilience, Factors that help build resilience, essential skills that make resilience, the 7 c's of resilience, characteristics of a resilient person, building and cultivating resilience, and tips for improving resilience.

KEYWORDS: *Physical resilience, Mental resilience, Emotional resilience, social resilience, Gratitude, Self-compassion, Optimism.*

INTRODUCTION

Resilience, according to the American Psychological Association, is both the process and the outcome of successfully responding to unfavorable or difficult conditions in life (APA). The APA defines it as the ability to adjust mentally, emotionally, and behaviorally to both internal and external events. The Resilient Option program's creator and executive director Amit Sood, MD, says that resilience is "your capacity to overcome hardship, bounce back, and thrive despite life's setbacks." How well people adapt to adversity depends on a number of elements, the most important of which are:

- the perspectives and interactions that people have with the world
- the extent to which and the caliber of social resources
- certain coping mechanisms

The resources and abilities linked to more positive adaptation (i.e., more resilience) can be developed and exercised, according to psychological studies. It's critical to keep in mind that you must gradually build your skill set to become resilient. You have to work hard to build resilience, and there will probably be challenges along the road. It depends on both internal and environmental elements, including interpersonal relationships and self-esteem. Even people who are resilient experience pain, turbulence, and stress. It takes resilience to endure emotional pain and sorrow. Resilient individuals rely on their assets and network of allies to overcome obstacles and find solutions.

Everyone will experience twists and turns in life, from routine difficulties to horrific incidents with longer-lasting effects, such as the loss of a loved one, a life-changing accident, or a serious disease. Life may not come with a map. Every change has a varied impact on individuals, bringing with it a distinct onslaught of ideas, potent emotions, and uncertainty. However, resilience plays a key in how successfully people often adjust over time to stressful and life-changing experiences.

Resilience is the ability to adapt successfully in the face of adversity, trauma, tragedy, threats, or severe sources of stress, such as issues with family and relationships, serious health issues, or challenges in the financial and professional spheres. As much as overcoming these challenging events by "bouncing back," resilience can also result in significant personal development.

THE OBJECTIVE OF THE STUDY

1. To study the signs of resilience and types of resilience.
2. To study the characteristics of a resilient person.
3. To provide the essential skills that make resilience.
4. To provide ways to build and cultivate resilience.
5. To provide tips to improve resilience.



SIGNS OF RESILIENCE

People with a survivor mentality consider themselves survivors. They are aware that if difficult circumstances do emerge, they can overcome them. The ability to successfully control one's emotions under stress is a trait of resilience. Figure 1 shows the signs of resilience.

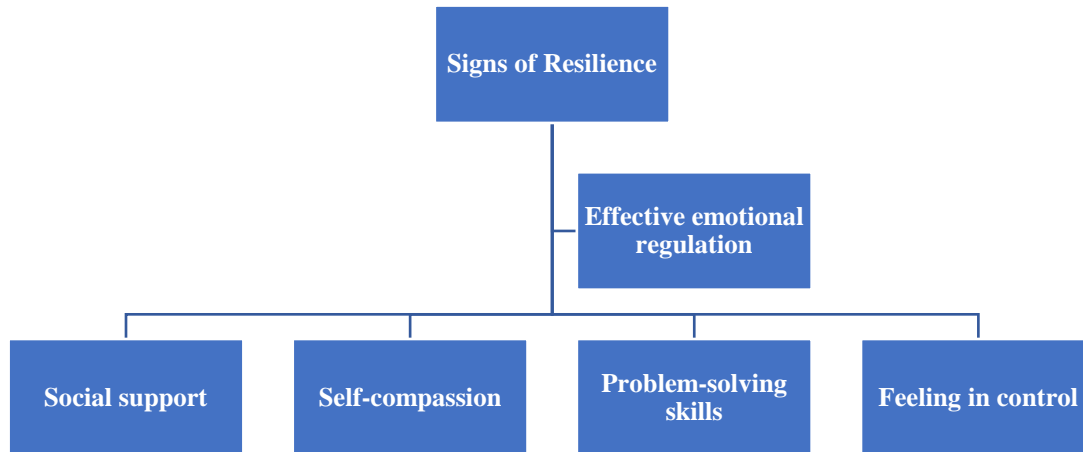


Figure-1

EFFECTIVE EMOTIONAL REGULATION

This is not to say that those who are resilient don't feel intense emotions like fear, grief, or rage. It indicates that they understand those emotions are fleeting and can be controlled till they pass.

- **Feeling in control:** People who are resilient frequently have a strong internal locus of control and believe that their choices can influence how things turn out.
- **Problem-solving skills:** Resilient people think critically about issues and try to come up with solutions that will make a difference.
- **Self-compassion:** Being compassionate toward oneself and accepting of oneself are additional signs of resilience. Resilient people are compassionate to themselves, even in trying circumstances.
- **Social support:** Having a strong support network is another sign of resilience. People who are resilient understand the value of support and when to seek assistance.

TYPES OF RESILIENCE

There are four types of resilience. Figure2 describes the types of resilience



Figure-2



PHYSICAL RESILIENCE

Physical resiliency is the body's capacity to overcome obstacles, keep its strength and endurance, and heal swiftly and effectively. It refers to a person's capacity to carry out daily activities and bounce back after accidents, illnesses, or other physical demands. As people deal with physical pressures and medical problems, research indicates that physical resilience is crucial to good aging. Physical resilience is influenced by a variety of factors, including healthy lifestyle choices, relationships with friends and neighbours, deep breathing, wise rest and recovery time, and enjoyment of enjoyable activities. The ability of the body to adapt to change and recover from physical pressures, diseases, and injuries is known as physical resilience. According to research, this kind of resilience is crucial for good health. It affects how people age, how they respond to physical stress, and how they handle medical issues. By choosing a healthy lifestyle, people can boost their physical resistance to some extent. By obtaining enough sleep, eating a balanced diet, and exercising frequently, one can develop this type of resilience.

Mental Resilience

Mental resilience is the capacity of a person to adapt to change and uncertainty. Such adaptable people remain calm and collected under pressure. They rely on their mental toughness to get through challenges, keep moving forward, and keep their positivity. Psychological resilience is the capacity to mentally handle or adjust to hardships, adversity, and uncertainty. "Mental fortitude" is another name for it. Psychologically resilient people learn coping mechanisms and coping abilities that allow them to remain composed and on task throughout a crisis and recover without suffering anguish or worry over the long run.

Emotional Resilience

The Children's Society states that everyone has a different way of handling stress and adversity emotionally. Some people are more or less susceptible to change by nature. Some people may experience a wave of emotions in response to a circumstance, whereas others may not.

People that are emotionally strong are aware of their feelings and their motivations. Even in times of crisis, they maintain a sense of realistic optimism and take the initiative to use both internal and external resources to survive. They are competent at effectively controlling both their own emotions and outside stimuli.

Being able to maintain emotional control under stress requires emotional resilience. Resilient people are frequently in touch with their inner selves and aware of their emotional reactions. People are thus also able to calm their minds and control their emotions when faced with unfavourable situations. People with this form of resilience are also better able to maintain their optimism in trying situations. They know that hardship and challenging feelings will pass because they have emotional resilience.

Social Resilience

The ability of a community to overcome hardship is referred to as social resilience, also known as community resilience. It requires engaging with others and working together to find answers to problems that affect people both individually and as a group. Social resilience includes coming together after disasters, helping one another out socially, becoming aware of the risks the community faces, and cultivating a sense of community. Such measures may be essential in the face of challenges like natural disasters that affect large populations or communities.

Factors that help build resilience

Social assistance According to research, one's supportive social networks—which may include one's immediate or extended family, the community, friends, and organizations—help one develop resilience in the face of adversity. **Self-esteem** In the face of difficulty, one might avoid feeling helpless if they have a healthy sense of self and confidence in their abilities. Self-esteem and resilience were found to be closely associated, according to a study published in *Frontiers in Psychology* in November 2020.

Coping skills

Coping abilities A person who needs to work through adversity and conquer hardship gains empowerment from having coping and problem-solving skills. According to research, employing productive coping strategies (such as optimism and sharing) might support resilience more so than ineffective ones.

Communication skills

Talents in communication People can seek assistance, mobilize resources, and take action when they are able to communicate simply and effectively. According to research, those who can communicate with others, demonstrate empathy for them, and foster their confidence and trust are more likely to be resilient. **remarkable personal development emotional control** A study published in *Frontiers in Psychology* in November 2017 revealed that the ability to control potentially overpowering emotions (or seek support to work through them) helps people remain focused when facing a problem and has been connected to better resilience. Research



on resilience theory shows that people don't exclusively draw on their resilience during extreme adversity. As people are constantly exposed to stimuli of all types, it increases.

Essential Skills That Make Resilient

Our capacity to overcome obstacles in life and move on is what we refer to as resilience. It shows a little youngster with a disability persevering in the face of a challenge. Despite his own battles with depression, the nurse is helping patients with a smile. It's a cancer patient who has an advanced disease and decides to be grateful every day. It involves keeping the house clean, making the necessary payments, doing the laundry, getting to work, and making time to have fun with your loved ones, even when you don't feel like it. Figure 3 shows the essential skills that make resilience.



Figure-3

Composure

- Life offers various situations that upset our equilibrium, including a sudden diagnosis, a stalled elevator, a flat tire, and lost money. Our thinking can change from reasonable to reactive in response to certain situations, especially upsetting ones.
- Stop, acknowledge the disturbance and take a moment to consider your response if you want to be more resilient. Choose strategies that uphold your ideals and advance your interests. Taking a few slow, deep breaths can also aid in calming the adrenaline rush.

Patience

- Being patient when the other person shares something we don't want to hear or when we'd like to be the one speaking tests our ability to listen. Resilience is indicated through patience.
- We become better listeners and thus more resilient when we give others our entire attention while they are speaking, hold off on making judgments, and allow others to finish their thoughts without interruption. Your two ears are your most effective tools for mending others; keep in mind that listening to others makes them feel better and more deserving.

**Optimism**

- Hope is having faith in a brighter day ahead. The hopeful live longer, are happier and are even healthier. While it's undoubtedly simpler for the majority of us to be upbeat on days when the world is kind to us, it's equally crucial to maintain optimism when things are tough.
- Remember joyful memories, the people who support you, your abilities, your purpose, and what you believe in to improve your ability to recognize the positive aspects of difficult situations (and to be resilient). Although the hope is partially natural, it is largely a matter of decision.

Gratitude

- The toppings on a pizza are gratitude. Although we don't need it, having it makes the experience much more pleasant. Gratitude improves our interpersonal connections and general well-being.
- Practice being thankful in both big and little situations to improve your ability to enjoy your victories and see the remarkable in the everyday. Think of something basic to be grateful for, such as a full breath, a drink of water, an original thought, a smile, a hug, or an item that arrives on time.

Acceptance

- The majority of us enjoy having control, but life is so unpredictable. You may either let uncertainty frighten you or accept it as a fact of life. The latter will increase resilience.
- Taking on the unknown with creativity requires accepting uncertainties. Make it happen by being accepting and open to anything that comes your way. You are embracing life, all the wonderful and painful aspects.

Kindness

- We make the decision to be kind, and doing so requires strong determination. Our ability to behave gently toward others and toward ourselves is decreased by physical disease, fear, losses, insecurities, and the majority of energy-draining experiences. (Consider your temper when your back hurts or you're under pressure at work.) However, refusing to be kind to one another prevents us from dealing with, recovering, and solving issues.
- Decide to treat others and yourself with kindness (even when it takes more effort). Even though it first requires some extra effort, being kind in trying circumstances eventually comes naturally.

Sense of Purpose

- Knowing our purpose gives us direction, keeps us motivated, increases our capacity for optimism, gives us bravery, and, you guessed it, strengthens resilience. A pursuit of helping others or adhering to a set of ideals can give one a sense of purpose.
- Think about it to determine what gives your life meaning and purpose. Put it in writing. It might be a significant event. There could be a huge amount of little issues. If it makes you grin, gives you strength, and inspires you to experience the day feeling inspired, you've found it.

Forgiveness

- No matter how fantastic your friends, family, and co-workers are, there will be miscommunications and times when they let you down. You can either find healing or let the resulting hurt fester. By lightening the burden of your hurts, forgiveness allows your mind to focus on the things that give your life value and joy.
- In order to be resilient, you must regain control over the person who injured you by letting go of the grudge, at least for today, and channelling your energy into things that help you achieve your life's goals.

Connection

- Being alone doesn't imply that we don't have somebody to interact with or who is around. In a party of 100 people, we may feel lonely, yet in the presence of one or two close friends, we may feel deeply connected. Being truly isolated from others is loneliness, which is bad for both our bodies and minds.
- Develop your resilience by building a few, solid relationships. They can improve physical health and longevity in addition to helping you cultivate optimism and courage.



The 7 Cs of Resilience

Figure 4 shows the seven Cs of resilience

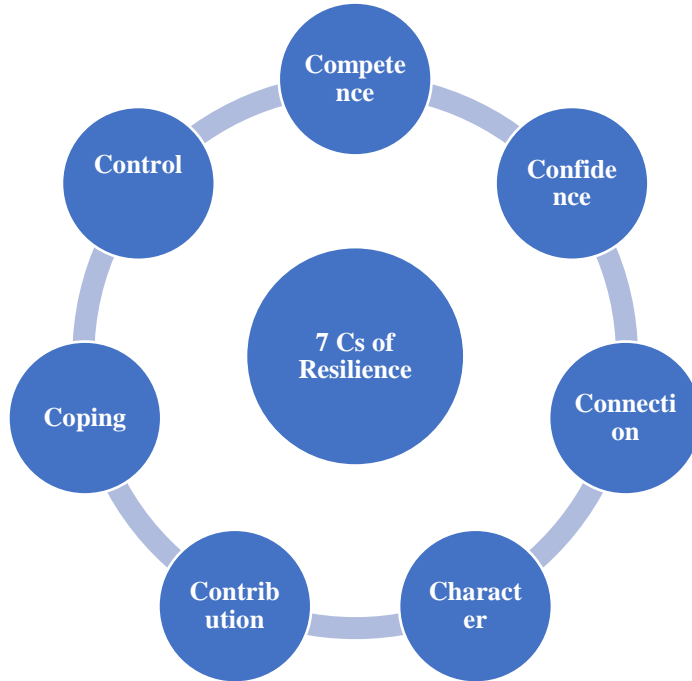


Figure-4

- ❖ **Competence:** This is the capacity to comprehend how to address circumstances successfully. People acquire a set of abilities that will enable them to trust their judgment and make ethical decisions as they increase their competence.
- ❖ **Confidence:** True self-confidence, according to Dr. Ginsburg, is based on competence. By showcasing their skill in everyday settings, people build their confidence.
- ❖ **Connection:** Close ties to family, friends and the community offer a sense of safety and belonging.
- ❖ **Character:** To make moral decisions, contribute to society, and feel worthy of themselves, people need a basic understanding of right and wrong.
- ❖ **Contribution:** Ginsburg asserts that a strong motivator is having a sense of purpose. Giving back to one's community strengthens reciprocal bonds.
- ❖ **Coping:** People who develop excellent coping mechanisms for stress are better equipped to deal with difficulty and setbacks.
- ❖ **Control:** Understanding internal control enables people to address problems instead of acting as victims of circumstance. People are more inclined to regard themselves as capable and confident when they realize that they have influence over the results of their decisions.

Characteristics of a Resilient Person

People who are resilient learn to embrace emotional pain and stress as normal parts of life and refuse to let their struggles define them. Instead, they accept their emotions, acknowledge the issues they are dealing with, have faith in their capacity to handle those issues, and have confidence in their ability to keep their emotions in check. Resilience starts with recognizing that certain things change. A flexible and accommodating mindset will enable you to concentrate on new plans or new dreams when your goals, plans, ideas, or ambitions are dashed due to unavoidable events. You can focus your efforts on the things you can change and control if you accept the ones, you cannot.

- assessing the opportunity or difficulty of change
- Commitment
- Recognition of limits to control
- Engaging the support of others
- Close, secure attachment to others
- Personal or collective goals
- Self-efficacy
- Strengthening effect of stress
- Past successes



- Realistic sense of control/having choices
- Sense of humor
- Action-oriented approach
- Patience
- Tolerance of negative affect
- Adaptability to change
- Optimism
- Faith
- good communication skills
- A center of control that is internal
- having great emotional intelligence and being skilled at handling emotions
- having confidence in oneself and one's talents
- having the ability to create and keep to realistic plans
- believing they are fighters, not victims of circumstance
- acknowledging the transience of setbacks.
- distorting failures as chances to improve.
- identifying incorrect beliefs in cognitive distortions.
- controlling irrational and intense feelings.
- concentrating on things under your control.
- not considering oneself a victim.
- dedicating yourself to all facets of your life.
- having a growth attitude and adopting a constructive outlook on the future.

Building and Cultivating Resilience

People can improve their ability to reframe their mental processes and use a strengths-based strategy to overcome challenges through this process.

It takes time to develop resilience as a process, and even if you already have it, you have to strive to keep it up. The actions listed below can help you gradually increase your level of resilience. Figure 5 shows the building and cultivating resilience.



Figure-5

Get Together. Speak to your parents and, yes, even your pals. Even while it may seem like your parents were always older than you, keep in mind that they may have more life experience than you have. If you are going through particularly difficult circumstances, they can be afraid for you and find it more difficult to talk about it than you do. Even if your parent or a friend holds a different opinion, don't be hesitant to voice it. Pose queries and pay attention to responses. Join a club, a sports team, a high school organization, or a religious organization to become more involved in your community.

Give yourself a break. When something negative occurs in your life, the stress you are already experiencing may get worse. Hormones and bodily changes may have already caused your emotions to be all over the place, but the uncertainty that comes with a tragedy or trauma can make these changes feel even more dramatic. Be ready for this and a little kinder to your friends and yourself.

Establish a stress-free area. Create a "hassle-free zone" in your room or apartment; you don't have to barricade yourself in, but there should be no tension or worries there. However, be aware that if a significant event has recently occurred in your life, your parents and siblings may be experiencing their own pressures and may want to spend a little more time with you than usual.



Adhere to the plan. Let home be your constant because being in high school or on a college campus implies having more options. Plan a schedule and follow it when under a lot of stress. Don't forget the routines that bring you comfort, whether they are the things you do before class, going out to lunch, or making a call to a buddy every night. You may be trying a lot of new things.

Ensure your own well-being. Make careful to look after your physical, mental, and spiritual well-being. Get sound sleep. If you don't, you can be more agitated and anxious when you need to be focused. There's a lot going on, and it will be difficult to deal with if you keep nodding off while standing.

Take charge. You can make progress toward your goals by taking baby steps even when tragedy or extreme uncertainty is present. Even if all you can do in a particularly trying period is get out of bed and go to school, doing so can be beneficial. Consider what you have control over and what is out of your control but something you can change. We often feel out of control when things are bad; regain some of that control by acting decisively.

Describe yourself. Tragic events and substantial problems can trigger a range of conflicting feelings, but there are times when it's just too difficult to express them to others. If talking doesn't work, try writing in a notebook or doing art to express your feelings.

Help someone out. Nothing helps you focus on solving other people's issues more than your own. Try cleaning up around your home or apartment, doing some community or school volunteer work, or assisting a friend with their homework in person or online.

Put things in perspective. It's possible that everyone is talking about the same subject that's making you anxious right now. However, things do turn around and hard times pass. If you're unsure of your ability to go past this, consider a time when you overcame your reservations, such as when you applied for a job or asked for a date. Learn some relaxing strategies, such as picturing a serene setting, thinking of specific music when stressed, or simply taking a deep breath to relax. Consider the significant items that haven't changed despite the outer world's changes. Make sure to discuss both positive and terrible times when you talk about difficult occasions.

Switch it off. You want to be informed, and perhaps your schoolwork involves watching the news. But occasionally, the news can exacerbate the impression that nothing is going well because of its emphasis on the dramatic. Try to minimize the quantity of news you consume, whether it comes from the internet, television, newspapers, or magazines. One news report is informative; watching it again only increases stress and provides no fresh information.

Tips for improving Resilience

Build your connections

Prioritize relationships first. When facing challenges, connecting with sympathetic and understanding people can serve as a reminder that you're not alone. Find someone who will listen to you with compassion and trust, since this will help you develop resilience talent.

Some people may choose to withdraw themselves as a result of the agony of traumatic experiences, but it's crucial to accept support and assistance from others who care about you. Try to give priority to actually connecting with people who care about you, whether you schedule a lunchtime outing with a friend or a weekly date night with your spouse.

socialization. organizations along with one-on-one interactions, some people discover that participating in community activities such as civic associations, religious communities, or other regional organizations offers social support and can help you regain hope. Look into community organizations that could provide you with support, a sense of direction, or joy when you need them. Foster wellness

Take good care of yourself. Although it may be a trendy buzzword, self-care is a valid practice for improving resilience and mental health. This is because stress affects both the body and the mind. Promoting healthy lifestyle habits like a balanced diet, enough sleep, water intake, and regular exercise will help your body become more resilient to stress and lessen the impact of negative emotions like anxiety or sadness.

Engage in mindfulness. Yoga, mindful writing, and other spiritual disciplines like prayer or meditation can also foster relationships and rekindle hope, which can better prepare people to handle adversity. Remember your blessings and express your gratitude even in the midst of personal difficulties when you journal, meditate or pray.

Avoid negative outlets. It may be tempting to use alcohol, drugs, or other substances to dull your pain, but doing so is like applying a bandage to a serious wound. Instead of attempting to completely eradicate the sense of stress, concentrate on providing your body with the tools it needs to manage stress.

Find purpose

Assist others. You can gain a sense of purpose, nurture self-worth, connect with others, and directly help others by volunteering at a local homeless shelter or by simply offering support to a friend in need. All of these things can help you become more resilient.



Take initiative. During difficult times, it's necessary to acknowledge and embrace your emotions, but it's also crucial to encourage self-discovery by asking yourself, "What can I do about a problem in my life?" If the issues seem too enormous to tackle, divide them into smaller, more manageable portions.

For instance, if you lost your job, you might not be able to persuade your supervisor that it was a mistake to fire you. However, you can spend an hour every day honing your greatest assets or focusing on your résumé. Taking action can increase your likelihood of persevering through difficult circumstances again by serving as a reminder that you can find the drive and a purpose even during stressful situations.

Work toward your objectives. Create some achievable objectives, and do something consistently—even if it feels like a minor accomplishment—that helps you go in the direction of your goals. What is one activity you know you can complete today to advance in the direction you want to go? rather than concentrating on things that seem unreachable. For instance, you might join a grieving support group in your neighborhood if you're coping with the loss of a loved one and wish to move on.

Look for chances to learn more about yourself. People frequently discover that their struggles have helped them grow in some way. People have, for instance, experienced improved relationships and a stronger sense of self following a catastrophe or adversity, while feeling vulnerable. They may feel better about themselves and have greater respect for life as a result.

Focus On What Is Within Control

It is easy to become overwhelmed by situations that appear completely out of our control when faced with a crisis or difficulty. Instead of wishing there was a way to change the past or the present, try focusing on what we can actually change. Adults can also aid children in learning this ability by talking with them about their issues and helping them come up with a plan for how to respond. Even when all appears lost, taking action can improve the situation. No matter how small they may seem, these behaviors can help you feel more resilient and in charge.

EMBRACE HEALTHY THOUGHTS

Observe the broader picture. How you believe can have a big impact on how you feel, as well as how resilient you are in the face of challenges. Try to recognize areas of irrational thinking, such as a propensity to catastrophize problems or believe that everyone is out to get you, and develop a more reasonable and balanced way of thinking. For instance, if you feel helpless in the face of a challenge, tell yourself that what happened to you isn't a predictor of what will happen in the future. A highly stressful incident may not be something you can alter, but you can alter how you perceive it and react to it.

Recognize change. Recognize change as a natural element of life. Negative circumstances in your life may make some ambitions or ideals no longer attainable. Focusing on the situations that you can change will be made easier by accepting the circumstances that cannot be changed.

Keep a positive mindset. Being optimistic when things aren't going your way is difficult. A positive mindset gives you the confidence to anticipate wonderful things in your life. Instead of focusing on what you fear, try picturing what you want. Keep track of any slight changes in how you feel as you navigate challenging circumstances.

Take lessons from your past. You could learn how to react skilfully to upcoming challenging situations by reflecting on who or what was supportive during earlier difficult times. Remember those times when you were able to rely on them, and consider what you learned from them.

- Never allow somebody to make you feel less valuable. Trust in those who have faith in you. Consider yourself from the perspective of those who embrace and adore you without conditions.
- Ask yourself if petty irritants will matter in five years. Perhaps it isn't worth upsetting your calm now if it won't matter in five years.
- Spend quality time with someone who inspires you at least once a week.
- Volunteer. According to research, volunteering is linked to improved mental, emotional, and even physical health as well as longer life.
- Consider the holistic view of your life. Spend each day in accordance with that sense of purpose.
- Accept your gullibility. Be genuine. Recognize that occasionally feeling down is normal.
- Recognize that most people are having difficulties in their own particular way. When it comes to asking for forgiveness, keep it low.

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PROBLEMS OF IMPROVING DIDACTIC PRINCIPLES OF TEACHING LATIN AT MEDICAL UNIVERSITIES

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ANNOTATION

In this article, the author focuses on the methodological foundations of Latin language teaching in higher medical schools and makes certain scientific opinions.

KEY WORDS: *teaching Latin, methodology, didactics, competence-based approach, students' skills and abilities, knowledge, occupation.*

ПРОБЛЕМЫ СОВЕРШЕНСТВОВАНИЯ ДИДАКТИЧЕСКИХ ПРИНЦИПОВ ОБУЧЕНИЯ ЛАТИНСКОМУ ЯЗЫКУ В МЕДИЦИНСКИХ ВУЗАХ

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Аннотация

В данной статье автор акцентирует внимание на методических основах преподавания латинского языка в высших медицинских учебных заведениях и высказывает определенные научные мнения.

Ключевые слова: *преподавание латыни, методика, дидактика, компетентностный подход, умение и навыков студентов, знание, занятие.*

Стремительное развитие медицины в мире увеличило потребность в преподавании латыни. Учитывая развитие языкового мышления у студентов медицинских вузов, актуальным является проведение научных исследований по развитию абстрактно-грамматического мышления на дистанционных онлайн-открытых курсах на основе овладения грамматическими формами и категориями латинского языка на основе на овладение античной культурой. На сегодняшний день особое значение приобретает учебно-методическое обеспечение углубленного обучения латинскому языку в медицинских вузах. В связи с этим он объясняет необходимость модернизации методического обеспечения обучения латинскому языку в медицинских вузах



на основе компетентностного подхода, совершенствования дидактических основ интеллектуально-культурного развития студентов на основе фундаментальных и практических знаний по принципу концентризм, уточнить таксономию систематизации учебных материалов интеллектуально-культурного описания.

В 2022-2026 годах Стратегии действий по приоритетным направлениям развития Республики Узбекистан в « Годом заботы о человеке и качественного образования» государственной программы «Республики привлечены ведущие специалисты профильных медицинских центров, научно-исследовательских институтов и клиник высших учебных заведений. Определены такие важные задачи, как профилактика и раннее выявление распространенных заболеваний. Это, в свою очередь, в области здравоохранения и фармацевтики, углубленное изучение латинского языка в комплексе с профильными предметами, совершенствование дидактических принципов, развитие языковой и культурологической компетентности учащихся имеет большое значение.

Основной целью нашей статьи является совершенствование дидактической основы интеллектуального и культурного развития студентов медицинских вузов при обучении латинскому языку.

Задачи статьи путем обобщения материалов педагогических и психологических источников выяснить, что интеллектуальное и культурное развитие учащихся является социальной необходимостью; Анализ дидактических возможностей предмета «Латинский язык и медицинская терминология» и подбор учебных материалов культурологического характера; разработка эффективных форм, методов и средств реализации технологического подхода к процессу интеллектуального и культурного развития учащихся на занятиях и внеурочно при обучении латинскому языку; Он заключается в разработке научно-теоретических предложений и рекомендаций по результатам опытно-экспериментальной работы и исследований по интеллектуальному и культурному развитию обучающихся.

Исходя из особенностей предмета «Латинский язык», его терминологического наполнения и культурно-содержательной специфики целесообразно определить понятие и реальность как системообразующие компоненты передачи лингвострановедческого материала на занятиях.

При таком подходе понятие рассматривается как крупная единица материала (предмет, широкое понятие), а реальность рассматривается как его более конкретное и обособленное проявление (конкретное понятие, слово). Такой подход соответствует педагогическим принципам последовательности и градации в обучении и позволяет учителю свободно систематизировать и изменять уровень сложности в зависимости от учебного материала, его объема, задач урока и возможностей учащихся. В процессе работы с латинскими текстами студенты приобретают профессиональные компетенции на основе анализа и сопоставления данных страноведения и культурологии. Процесс работы с текстами должен быть организован на основе алгоритмической последовательности и должен отражать следующие уровни в содержании всех этапов изучения латыни.

I уровень - лексический. Овладевая словами и их значением, развивается мыслительный процесс. Например, происхождение слова деньги - *rescipia* от слова животное - *rescus* позволяет сделать вывод о взаимосвязи товарно-денежных отношений.

II уровень - терминологический (терминология). В ходе исследования были изучены термины, отражающие разные сферы античной жизни, термины социально-политического характера (например: *civitas, respublica, imperator, consul, Princeps, Patentus, cliens, Triumphus* и др.), юридические термины (*jus, legislatio, advocatus, causa, iudicium* и др.), религиозные (*deus, augur, auspicia, templum, ara, pontifex, vestalis* и др.), художественные (*ars, pictor, columna, porticus, arcus, statua, simulacrum* и др.), литературные (поэма, против, стилус и др.), бытовые (тога, туника, схола, фамилия, матрона, матримониум и др.), естественнонаучные (целла, растворение, ядро, железо, реакция, турбулентус, исчисление, фактус, *effectus, quantus* и др.) познакомиться с терминами, относящимися к области.



III уровень – афористический (ознакомление и разбор мудрыми словами). Мудрые слова связаны с определенной исторической реальностью, и в процессе их толкования учащийся обращается к культурной жизни, например, выражение *tabula rasa* («чистый лист») относится к рассказу о способе письма на воощеных дощечках. с помощью стилуса; *dues ex machina* ("бог в машине") - о греческом театре, его устройстве и драматургическом принципе; *Divide et impera* («разделяй и властвуй») — об имперской политике Рима по отношению к своему зависимому государству; *veni, vidi, vici* («пришел, увидел, победил») — об известном эпизоде битвы Цезаря с царем Фарнаком Потинским; *scio me nihil scire* («Я знаю, что ничего не знаю») — об основах философии Сократа и др.

Контекстно-концептуальная технология обучения латинскому языку определяется на основе логического, абстрактного, творческого мышления и прагматических компонентов интеллектуально-культурного развития учащихся. В этом случае эффективно предоставление учащимся алгоритма, основанного на понятиях и реальности в процессе работы с латинскими текстами. В качестве концепта выбирается идея, лежащая в основе текста, а затем отдельные концепты, связанные с этой идеей, интерпретируются отдельно как реальность. Желательно внедрять и внедрять индивидуальные и дифференцированные технологии обучения в процессе работы учащихся с понятиями и реалиями.

Каждый студент может выбрать одно или несколько понятий медицины или фармакологии по своему интересу, может предложить альтернативные идеи относительно основных выделенных понятий, предложенных преподавателем, свои варианты классификации выученных, переведенных предложений; выявление с помощью учебника, пособия, словаря нескольких комментариев, относящихся к одному понятию, перевод предложений на узбекский язык, активное использование полученных знаний по грамматике и лексикологии; уточнить узбекский вариант выбранных понятий; обсуждать и анализировать основные понятия в ходе обсуждения; необходимо проанализировать выражение медицинского понятия в русском и английском языках и представить его в кластерной форме

Сделан вывод о высокой эффективности интеллектуальной игры и образовательного проекта в интеллектуальном и культурном развитии студентов медицинского вуза в ходе внеаудиторных занятий. Усвоение архаичных слов и неологизмов в латинском языке совершенствуется по системе субъект-объект и субъект-субъект, основанной на лингвокультурологической парадигме. Эта система реализуется следующим образом: использование интеллектуальных игр; Разработка и реализация образовательного проекта «Виртуальное путешествие»; технологический алгоритм организации и проведения практических занятий. Интеллектуальные игры типа «Речевые фрагменты», «Продолжи беседу», «Работа над картинкой», «Откуда взято предложение?», «Поговорим на разных языках» проводились с использованием интеллектуальных игр в курсе латинского языка. занятия по изучению языков в высших медицинских учебных заведениях. Например, при изучении раздела «Страноведение» предмета «Латинский язык» игра «Работа над картиной» использовалась следующим образом: участники делились на две группы и получали задание составить рассказ по мотивам реальность отражена в картине. В этом процессе использовались изображения, связанные с бытом и культурой людей древнего мира. В процессе создания рассказа требовалось использовать слова, подсказанные одной группой другой. Одна группа представила слова, принадлежащие к группе существительных, а другая группа представила слова, принадлежащие к группе прилагательных. В процессе игры развивалось логическое мышление учащихся, устная и письменная речь.

В результате проведенного исследования нами были сделаны следующие выводы:

1. Латинский язык, преподаваемый в медицинских вузах, занимает важное место в культурно-интеллектуальном развитии и профессиональном становлении студентов. На основе анализа формы и значения слов латинского языка можно обогатить мышление учащихся, сформировать историческую память на основе фактов, связанных с историей человечества. Также изучение структуры слов в синхронном режиме



развивает аналитическое мышление учащихся, развивает способность к глубокому и точному восприятию языковых форм, ассимиляций, архаичных слов и неологизмов.

2. Исходя из культурно-медицинских терминологических особенностей латинского языка, необходимо учитывать единство понятия и действительности как важных компонентов структурирования материалов языкознания и страноведения. При таком подходе понятие рассматривается как крупная единица материала (тема, широкое понятие), а реальность рассматривается как более конкретное и обособленное ее проявление (конкретное понятие, слово), а при обучении латинскому языку, 22 уровня сложности свободно определяются в зависимости от учебных материалов, их объема и возможностей учащихся, позволяет систематизировать и изменять.

3. В организации процесса работы с латинскими текстами, страноведческими и культурологическими сведениями, понимания их значения (лексики), общественно-политического характера, отражающего различные области древнего быта, и овладения медицинской терминологией (терминологией), определенной исторической реальностью. и области медицины Необходимо ознакомиться с мудрыми словами о (афористическом) алгоритме.

4. Подбор текстового материала, категоризация тем, анализ понятий и реалий, встречающихся в тексте, заучивание мудрых слов (афоризмов) при обучении латинскому языку; чтение и перевод оригинального текста; сравнительный анализ древней и национальной культуры с культурно-лингвистической точки зрения уместен.

5. Привлекайте студентам концепциями и реалиями преподавания латыни.

Все это служит повышению эффективности преподавания латинского языка в медицинских вузах.

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DEVELOPMENT OF INDEPENDENT CREATIVE ACTIVITY OF STUDENTS OF A NON-LANGUAGE UNIVERSITY IN THE PROCESS OF TEACHING THE RUSSIAN LANGUAGE

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ANNOTATION

The article is devoted to the study of methods and ways of developing the skills of independent creative activity in the process of teaching the Russian language, which also contributes to the formation and development of students' intellectual abilities, which will increase the effectiveness of the educational process.

KEY WORDS: *Russian language, independent work, lexical, grammatical, spelling skills, methodology, extracurricular activities.*

РАЗВИТИЕ САМОСТОЯТЕЛЬНОЙ ТВОРЧЕСКОЙ ДЕЯТЕЛЬНОСТИ СТУДЕНТОВ НЕ ЯЗЫКОВОГО ВУЗА В ПРОЦЕССЕ ОБУЧЕНИЯ РУССКОМУ ЯЗЫКУ

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Аннотация

Статья посвящена изучению методов и способов развития навыков самостоятельной творческой деятельности в процессе обучения русскому языку, что также способствует формированию и развитию интеллектуальных способностей студентов, что повысит эффективность учебно-воспитательного процесса.

Ключевые слова: *Русский язык, самостоятельная работа, лексические, грамматические, орфографические навыки, методика, внеурочная деятельность.*

Русский язык как иностранный официально преподавался в Узбекистане на протяжении столетий, а записи о материалах для обучения языкам насчитывает более 150 лет. Обучение русскому языку связано с развитием как мышления, так и эмоций и других сфер человека.

В методической литературе последних лет по обучению русскому языку подчеркивается важность и необходимость включения мотивационной и эмоциональной сфер личности студентов. Овладение языком в искусственных условиях, то есть вне той среды, где на нем говорят, требует создания воображаемых ситуаций, способных стимулировать общение на языке. Узнанное также связано с развитием иммиграции.

Самостоятельная работа рассматривается как специфическая форма учебной деятельности студентов, характеризующаяся всеми ее особенностями. По сути, это форма самообразования, связанная с учебной



деятельностью студентов в аудитории. Различные виды индивидуальной и коллективной деятельности студентов подразумевают самостоятельную работу. Они выполняются ими на уроках и внеурочной деятельности дома по заданию без непосредственного участия преподавателя.

Изучение русского языка дома и в другом месте вне аудитории предполагает в качестве основы рассмотрение самостоятельной деятельности студентов. Она представляет собой различные виды деятельности по воспитанию и воспитанию самого воспитанника, его самостоятельная работа должна осуществляться как свободная по выбору, внутренне мотивированная деятельность. Она предполагает выполнение учащимся ряда входящих в нее действий, осознание цели деятельности, принятие учебной задачи, придание ей личностного смысла, подчинение других интересов выполнению этой задачи и формы занятий ученик.

Овладение русским языком связано с формированием у учащихся произносительных, лексических, грамматических, орфографических и других навыков. Это основа способностей понимать устную речь, совершенствовать устную речь, чтение и письмо. Насколько известно, навыки вырабатываются только при регулярном выполнении определенных действий учебного материала, т. е. таких действий, которые позволяют многократно слушать, говорить, читать и писать на изучаемом языке.

Устная речь и прежде всего разговорная практика осуществляется непосредственно в присутствии собеседников, роль которых в вузе выполняют преподаватель и однокурсники. Однако предполагается, что обучение говорению имеет определенные этапы, для которых самостоятельная работа является наиболее адекватной формой.

Также необходимо включить в самостоятельную работу определенные звенья работы над языковым материалом - знакомство с ним и частично обучение его использованию. Что касается чтения, то этот вид деятельности совершается читателем преимущественно наедине с собой, следовательно, ему вполне соответствует самостоятельная работа. Внимательное прослушивание русской речи теперь происходит не только в аудитории, без подготовки, в присутствии преподавателя, с его голоса или в фонограмме, но есть и аудиотексты для самостоятельной работы студентов, и такая форма работы вполне применимы к данному виду речевой деятельности. Обучение письму также предполагает определенные этапы. Если говорить о самостоятельной работе и работе студентов в аудитории, то первое значение имеет большее значение.

Ролевая игра является эффективной и продуктивной формой обучения. Использование художественных произведений русской литературы на уроках русского языка совершенствует произносительные навыки студентов, способствует созданию коммуникативной, познавательной и эстетической мотивации. Подготовка к выступлению – это творческая работа, которая способствует развитию навыков языкового общения студентов и раскрытию их индивидуальных творческих способностей.

Такая работа активизирует мыслительную и речевую деятельность студентов, развивает их интерес к литературе, способствует лучшему усвоению культуры страны изучаемого языка, а также расширяет язык. Современный подход к изучению русского языка предполагает не только получение какой-либо суммы знаний по предмету, но и выработку собственной позиции, собственного отношения к чтению: взаимное удивление, эмпатия и интерфейсы.

На уроках русского языка студенты анализируют выбранную проблему, отстаивают свою позицию. Студенты должны уметь критически оценивать прочитанные произведения, излагать в письменной форме мысли по поставленной проблеме, учиться отстаивать свою точку зрения и понятно принимать собственное решение на занятии.

Такая форма урока развивает мыслительные функции студентов, логико-аналитическое мышление и, что немаловажно, умение мыслить на русском языке.

Урок в форме музыкального представления способствует развитию социокультурной компетенции и знакомству с культурами России. Методические преимущества песенного творчества в обучении русскому



языку очевидны. Это способствует эстетическому и нравственному воспитанию студентов, полнее раскрывает творческие способности каждого студента. Благодаря музыке на уроке создается благоприятный психологический климат, снижается усталость, активизируется речевая деятельность. Во многих случаях он служит также разрядкой, снижающей давление и восстанавливающей работоспособность студентов.

В последнее время метод проектов приобретает все больше сторонников. Она направлена на развитие активного самостоятельного мышления студента, на обучение его запоминанию и воспроизведению знаний, которые дает ему вуз, и умению применять их в будущем на практике.

Техника проектирования в работе отличается кооперативным характером проекта. Осуществляемая деятельность творческая по своей сути и ориентирована на личность студента. Это предполагает высокий уровень индивидуальной и коллективной ответственности за выполнение каждой задачи по разработке проекта. Совместная работа группы студентов над проектом неотделима от активного коммуникативного взаимодействия студентов. Методика проектирования является одной из форм организации исследовательской познавательной деятельности, в которой студенты занимают активную субъектную позицию. Тематика проекта может быть связана с одной предметной областью или носить междисциплинарный характер. При выборе темы проекта преподаватель должен руководствоваться интересами и потребностями студентов, их возможностями и личной значимостью предстоящей работы, практической значимостью результата работы над проектом.

Выполненный проект может быть представлен в самых разных формах: статья, рекомендации, альбом, коллаж и многое другое. Формы презентации проекта также разнообразны: доклад, конференция, конкурс, праздник, выступление. Главным результатом работы над проектом будет актуализация имеющихся и получение новых знаний, навыков и умений и их творческое применение в новых условиях. Работа над проектом осуществляется в несколько этапов и обычно выходит за рамки учебной деятельности на уроках: выбор темы или задачи проекта; формирование группы исполнителей; разработка плана работы над проектом, определение сроков; распределение заданий между студентами; обсуждение результатов выполнения каждого задания в группе; оформление совместного результата; отчет по проекту; оценка выполнения проекта.

Работа по методике проектирования требует от студентов высокой степени самостоятельности поисковой деятельности, согласованности их действий, активного исследовательского, исполнительского и коммуникативного взаимодействия. Роль преподавателя заключается в подготовке студентов к работе над проектом, выборе темы, в оказании помощи студентам при составлении расписания, в текущем контроле и консультировании студентов по ходу выполнения проекта с функцией соучастника.

Итак, основная идея метода проектов заключается в переносе акцента с различного вида упражнений на активную мыслительную деятельность студентов в ходе совместной творческой работы.

Указанные формы работы понятны на всех занятиях. Естественно, что ее объем и характер управления ею со стороны педагогов различаются.

В методике принято выделять следующие уровни самостоятельной работы:

- Воспроизведение (копирование);
- Полукреатив;
- Креатив.

Воспроизводящий уровень самостоятельной работы очень важен при обучении русскому языку, так как он лежит в основе других его уровней и отвечает за формирование произносительно-лексической и грамматической базы, за создание образцов в памяти студентов.

Самостоятельная работа может проводиться в различных организационных формах: индивидуально, в парах, в малых группах и всей аудиторией. Каждая из названных форм призвана формировать и развивать организаторские, информационные, познавательные и коммуникативные способности студентов. Эти способности обеспечат продвижение молодёжь в овладении языком в единстве с развитием его методов.



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CURRENT ISSUES USING WEB QUESTS IN RUSSIAN LESSONS AT NON-LINGUISTIC HIGHER EDUCATION INSTITUTIONS

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ANNOTATION

The purpose of the scientific study is to identify the effectiveness of using the web quest technology as a tool to increase the motivation of foreign students of the advanced stage of education to learn the Russian language.

KEY WORDS: *Russian as a foreign language, methodology, Internet resources, project activities.*

АКТУАЛЬНЫЕ ВОПРОСЫ ИСПОЛЬЗОВАНИЕ ВЕБ-КВЕСТОВ НА ЗАНЯТИЯХ ПО РУССКОМУ ЯЗЫКУ В НЕЯЗЫКОВЫХ ВУЗАХ

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Аннотация

Цель научного исследования - выявление эффективности использования технологии веб-квеста как инструмента повышения мотивации иностранных слушателей продвинутого этапа обучения к изучению русского языка.

Ключевые слова: *русский язык как иностранный, методика, интернет-ресурсы, проектная деятельность.*

The use of web quests has become more relevant than ever, not only in regular classes, but also in a remote format. Project activities posted on the Internet provide opportunities for the use of authentic materials, various forms of work, and ensure the autonomy of students. How to involve students in project activities? What tasks can the web quest format offer? We'll talk about this in the article.

Methods that introduce new technologies into the educational process are widely used. Among modern innovative methods in teaching the Russian language, one of the most productive, based on the individualization and autonomy of students, is a web quest.[1,27]

The word "quest" is better known as a kind of game, but in education it implies the performance of certain tasks by students. Like any educational method of Russian as a foreign language, it is aimed not only at acquiring knowledge, but also at their practical use. Web quest (WebQuest) in pedagogy is a problematic task with elements of a role-playing game, for which information resources of the Internet are used.

A web quest is the most complex of the existing formats of educational Internet resources; in terms of its structure, it belongs to electronic projects. There are two types of web quests: for short-term and long-term work. A



feature of educational web quests is that some or all of the information for independent or group work of students is located on various sites.

The developer of the web quest as an educational task is B. Dodge, professor of educational technologies at the University of San Diego (USA).[2,58]

Each webquest includes the following elements:

An introduction that clearly describes the main roles of the participants or the scenario of the quest, a preliminary work plan, an overview of the entire quest.

A central task that is understandable, interesting and doable. The final result of independent work is clearly defined (for example, a series of questions are asked that need to be answered, a problem is written that needs to be solved, a position is defined that must be defended, and other activities are indicated that are aimed at processing and presenting results based on the collected information).

List of information resources needed to complete the task. This list must be annotated.

Description of the work procedure that each participant in the quest must do when completing the task independently (stages).

Description of the criteria and parameters for evaluating a web quest. Evaluation criteria depend on the type of educational tasks that are solved in the quest. It is important to give rubrics for assessment so that students can independently evaluate their results, as well as understand how the teacher did it.

The Action Guide shows how to organize and present the collected information. These can be guiding questions that organize educational work. In this part of the web quest, the teacher determines the time frame, recommendations for the use of electronic sources, and presents drafts of web pages.

Conclusion, which summarizes the experience that participants will gain when doing independent work on a web quest.

The scenario of the project activity is compiled by the teacher. The number of participants may vary depending on the task and goals of the quest. The web quest technology is applicable to various topics, provides for multi-level problem tasks, as a result of which the development of oral and written speech occurs, since the presentation of the results can be presented in various forms, for example, oral presentation, computer presentation, essay, web page. The use of web quests leads to the development of systematized communicative and speech skills.[3,11]

- Reading: students learn to highlight the necessary facts; to separate the main information from the secondary; determine the temporal and causal relationship; predict developments or results; summarize the events described; evaluate the importance/novelty/reliability of information.

- Speaking: students participate in conversation; learn to request information and exchange information; express their point of view; learn to take the initiative in a conversation; briefly or in detail state what is read or heard; give a reasonable description of the facts and events; learn to present a socio-cultural portrait of their country and the country of the language being studied.

- Writing: students learn to describe facts and phenomena; communicate or request information; express one's own opinion; Briefly or extensively convey the content; to record the necessary information - to compose abstracts / essays / abstracts; generalize and systematize information obtained from various sources.

- Listening: students must determine the topic of what they hear; highlight facts and arguments in accordance with the questions or problems raised; summarize the information contained in the text; determine your attitude to what you hear.

B. Dodge offers the following types of tasks for web quests: retelling, project, compilation, puzzle, investigative journalism, creative task, consensus, persuasion, self-knowledge, analytical task, assessment and scientific work.[2,45]

Consider how we can adapt these assignments to the context of teaching Russian as a foreign language.



1. Retelling is the most simple and well-known exercise from which you can start your first acquaintance with the web quest technology. A classic example of a task for students is to familiarize themselves with the materials and demonstrate the understood material in the form of an oral or written presentation. The difference between a web quest and a simple retelling is that the material presented to students does not contain direct answers to the problematic question posed, for which critical and analytical skills must be applied. Students must prepare a retelling by analyzing information about the author, about the book, analyze various reviews of the work and put forward their point of view.

2. Compilation. The main task for students is to study information from various sources and transform them into one common format. The results of the work can be both in digital and non-digital format. For example, a cookbook of traditional Russian recipes can serve as such a task.

3. Puzzle. Everyone loves secrets. If the task that the students face is presented in the form of a puzzle or a mystical story, then this will certainly draw the students' attention to the issue under study. Of course, this task will be especially popular at the initial stage of training, but at later stages it can be transformed into puzzles related to solving more practical issues. So, an example is the solution of the Stonehenge riddle or the authorship of Shakespeare, i.e. students study theories about which scientists do not have a common opinion. Thus, students must learn to draw reasoned conclusions based on the conflicting data they have found on the Internet.

4. Journalistic investigation. This form is applicable provided that there is an event (preferably in real time) that students need to study. They are tasked with covering this event. Students act as reporters: they collect, organize facts and present them in the news genre. The criterion for evaluating the work is accuracy, not creativity. An example of a web quest in the form of a journalistic investigation can be the report "Prince William's Wedding", "Opening of the new theater season", etc.

5. Design. The task of a web quest in the form of design is to create a product or action plan that is defined by goals and works in specific conditions. Within the framework of this form, it is possible to complete the following web quests: "Vacation in Moscow" - students develop a route that meets the set conditions and interests of students; "Dream House" - they create the design of an ideal home by studying vocabulary on the topic and drawing up their own project, etc.

6. Creative task. The creative task is similar to the design format described above, it also involves the creation of a product in the format of a plan, presentation, poster, collage or even a song, however, unlike the design, the creative task has a looser structure and an unpredictable final presentation of the material. The main criteria for evaluating these tasks will be creativity and self-expression in the presentation and choice of genre. This form can be used when compiling web quests dedicated to the events of Maslenitsa, the Christmas market, and require writing not only scripts for events, but also the selection of musical accompaniment, handouts. As with the design format, constraints are key and will differ depending on the scope for creativity in completing assignments.

7. Consensus. Students are asked to consider a controversial issue. Due to the fact that value systems differ, the essence of the task is to achieve consensus. This form allows you to form and develop skills and abilities to solve problematic issues both in the learning process and in future professional and personal activities. Different points of view will be encountered by students in all areas of activity, and therefore it is necessary to teach them how to argue their point of view, highlight weaknesses and strengths, and also teach them to listen to opponents and, as a result, find common ground.

8. Persuasion. The situation of disagreement arises in our life all the time, and often we try to convince the interlocutors that we are right. It is for the formation and development of skills and abilities of persuasion that this web quest exists. The purpose of this exercise goes beyond



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FEATURES OF RUSSIAN AND UZBEK FOLK PROVERBS AND SAYINGS

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ANNOTATION

In this article, the author expressed certain views and analyzed the specifics of Russian and Uzbek folk proverbs and sayings.

KEY WORDS: *proverbs, sayings, folklore genre, thinking, proverb language, folk morality, and folk didactics.*

ОСОБЕННОСТИ РУССКИХ И УЗБЕКСКИХ НАРОДНЫХ ПОСЛОВИЦ И ПОГОВОРОК

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Аннотация

В данной статье автор высказал определенные взгляды и проанализировал специфику русских и узбекских народных пословиц и поговорок.

Ключевые слова: *пословицы, поговорки, фольклорный жанр, мышления, язык пословицы, народная нравственность, и народная дидактика.*

Пословицы и поговорки, являющиеся шедеврами народного творчества и считающиеся самыми маленькими произведениями народного творчества и они всегда обогащали сокровищницу мирового фольклора.

Пословицы и поговорки веками служили развитию духовных ценностей человечества.

Пословицы и поговорки всегда побуждали людей к добру. Эти небольшие произведения передавались из языка в язык и оттачивались. Поэтому пословицы и поговорки многих народов очень близки друг другу.

Пословицы и поговорки всегда почитались как уникальная форма народной мудрости. Не будет преувеличением сказать, что фольклорные произведения столь небольшого размера живут долго и служат народу.



Язык- хранитель культуры, с его помощью культура наследуется новыми поколениями людей данного общества.

Сам термин «культура» должен пониматься здесь достаточно широко. Это не только богатства литературы и искусства, накопленные в течение многих веков развития данного общества, но и традиции человеческого общежития, обряды, обычаи, общепринятые формы повседневной деятельности. Все эти проявления культуры бывают в значительной степени национально-своеобразными.

Пословица – образное законченное изречение, имеющее назидательный смысл, обычно характеризующееся особым ритмоинтонационным и фонетическим оформлением (параллелизм построения, стихотворный размер, звуковые повторы, рифмы и т. п.

Волков бояться- в лес не ходить. Любишь кататься –люби и саночки возить. Попытка не пытка, а спрос не беда. Ученье -свет, а неученье -тьма.

Поговорка -образное, иносказательное выражение, метко определяющее какое- либо жизненное явление, лаконичное по форме, в отличие от пословицы не заключающее в себе прямого поучительного смысла, с чем часто связана синтаксическая незаконченность.

Между пословицами, поговорками и крылатыми словами размещается обширный тип образных фразеологических словосочетаний. Фразеологическое словосочетание стоит близко к поговорке; оно отличается от поговорки лишь тем, что один из его компонентов употреблен в своем прямом значении.

Пословицы и поговорки- это тот жанр фольклора, которым каждый из нас пользуется ежедневно, часто даже того не замечая. Их называют алмазными гранями народной мудрости.

Древнейшая мудрость народа прекрасно вписывается в современность, она отражает отстоявшуюся в веках народную философию, национальный и общечеловеческий исторический опыт. Ведь хотя каждый народ имеет свои особенные пословицы и поговорки и тем не менее свои особенные пословицы и поговорки и тем не менее у другого народа обязательно находятся подобные им по смыслу, а иногда они и просто совпадают, хотя создавшие и пользующиеся ими народа живут чуть ли не на географически полярных расстояниях. Объясняется это и общностью исторического опыта и идеологии на одних и тех же ступенях общественного развития, этническим и языковым родством, экономическими и культурными контактами.

Ведь то, что разделяет людей на те или иные народы, гораздо меньше того, что объединяет их под общим названием человечества.

Идея нового мышления, сформулированная недавно, еще раз напоминает нам об этой истине.

В этих коротких изречениях отражены и бытовые реалии народа, и животный мир, и природа его родной страны, и социальные условия, в которых он живет, и его историческое прошлое, его отношения с соседями, друзьями, врагами. Узбекский народ, как и другие народы, обладает огромной сокровищницей пословиц и поговорок, которая составляет важнейший элемент его духовной культуры.

Вот, например: «Посадивший тутовое дерево, сто лет жемчуга собирает».

Казалось бы, всего две строчки. А в них и реалии народной жизни, и отношение народа к труду, и общее, и национально-специфическое.

В предметно-образном строе узбекских пословиц нашли отражение его история и экономика, бытовые и правовые нормы, обычаи, верования и суеверия, т.е. вся его жизнь вчерашняя и сегодняшняя, а возможно, и будущая.

Книга узбекских пословиц и поговорок «Вместе -рекой быть, врозь - ручейками» в переводе Н.Гацунаева знакомит широкого читателя с узбекской народной мудростью, осуществляя тем самым функции дружеских связей между народами, обретших особую актуальность в наше время важнейших социальных сдвигов.



В пословицах не может быть внешней или внутренней подлинности, подлинность в пословице едина.

Народные пословицы не устаревают и не умирают. А главное, они всегда современны. Десятилетия и века отшлифовывали этот жанр народного творчества, и, разумеется, переводчик, понимая это, не стане, не позволит себе вносить в текст принадлежащий не одному человеку, а целому народу свою личную, пусть даже удачную мысль.

Язык пословицы должен быть современным, без архаизации, однако он ни в коем случае не должен быть лишен национального своеобразия.

Переводчик узбекских пословиц воссоздал мысль, образ эмоцию, т. е. всю конкретность, стоящую за словом с учетом выразительных средств, многозначности слова. Естественно, здесь передается и смысл, и художественные оттенки, идиоматичность словесного выражения.

Узбекский народ, как и народы всего мира, владеет огромным паремиологическим наследием. Вопросы сбора, систематизации тщательного изучения этого наследия, опубликования его в виде цельных сборников находятся в центре внимания узбекских фольклористов.

Пословица – и народная нравственность, и народная дидактика, поучение, не сводящееся к унылой нравоучительности. В любом переводе переводчик не может не испытывать влияния оригинального текста, так как должен истолковать законченную мысль, передать идеи и образы оригинала:

- *Аввал йўлдош, кейин йўл.*

- *Сначала попутчик, а потом дорога.*

- *Одоб бозорда сотилмас.*

- *Учтивость не продается на базаре.*

- *Одобни беадабдан ўрган.*

- *Учись воспитанности у невоспитанного (т.е. смотри на него и делай наоборот).*

- *(Кўза синдирган азиз) Сув келтирган хор-зор.*

- *Принёсший воду – в унижении, а разбивший кувшин – в почете.*

- *Ўринсиз газаб – ўзингга азмойиш.*

- *Неуместный гнев – мука самому себе.*

- *Айбини яширган ўнганмас.*

- *Кто скрывает свою вину, тому нет удачи.*

- *Ёлғиз йигит алп бўлар, алп бўлса-да, қалб бўлар.*

- *(буквально: -Один джигит может быть богатырем, но хоть он и богатырь, он –(богатырь не настоящий).*

Народные пословицы не устаревают и не умирают. А главное, они всегда современны. Десятилетия и века отшлифовывали этот жанр народного творчества, и, разумеется, переводчик, понимая это, не стане, не позволит себе вносить в текст принадлежащий не одному человеку, а целому народу свою личную, пусть даже удачную мысль.



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USE OF INFORMATION TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES

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ABSTRACT

In this article, the author reflects on the specific features of the use of information technologies in the effective teaching of foreign languages.

KEY WORDS: *information technologies, training, knowledge and skills, education, teachers, educational institutions.*

ИСПОЛЬЗОВАНИЕ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В ОБУЧЕНИИ ИНОСТРАННЫМ ЯЗЫКАМ

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Аннотация

В данной статье автор размышляет об особенностях использования информационных технологий в эффективном обучении иностранным языкам.

Ключевые слова: *информационные технологии, обучение, знания и навыки, образование, педагоги, образовательные учреждения.*

At the end of the 20th century, humanity's entry into the new information society made a significant contribution to the educational process. The transition from the traditional, accustomed form of study to the form of education based on advanced educational technologies has created a basis for a number of considerations.

Currently, the classical technologies of education are rarely used in the educational process, because these technologies do not allow the full use of the achievements in the field of information and communication technologies. The fact that the lesson using classical technologies is not interesting for the younger generation was reflected in the researches. Today, information technologies are one of the most important factors affecting the development of our society. is one. Information technology has been present at various stages of human development. A characteristic feature of today's information society is that information technologies occupy a leading position among all existing technologies, in particular, among new technologies. Wide use of didactic materials that determine the effectiveness of information technology and technical tools is one of the main features of modern pedagogical technologies. In the national program, special emphasis is placed on this important tool for managing the educational



process. The level of use of information tools (computer, electronic communication, radio, television) is determined by two factors:

1. Development of didactic materials on the topics where informational tools are effective for the educational process.
2. Checking the readiness of teachers to use technical tools and didactic materials methodically correctly in their practical activities.

Information technology plays an important role in the educational process and helps to solve the following tasks:

- development of individual abilities consisting of unique qualities characteristic of each person, formation of cognitive abilities, striving for self-improvement;
- to ensure the comprehensive study of events and phenomena, the closeness of interdependence between technical, social, humanitarian sciences and art;
- constant dynamic updating of content, forms and methods of educational processes.

In order for the teacher to help his students overcome the existing shortcomings with the correct approach in time, he must be able to accurately diagnose his students, that is, it is necessary and necessary to know the character of his students as fully as possible. Completing these and similar tasks is much more complicated than the traditional teaching method, which requires a very high level of competence and skill from the teacher.

The use of computers and information technologies in the course of the lesson is not the only goal, but another way to understand the world of young people.

Based on this, it is necessary and necessary for modern professors and teachers, that is, trainers, to keep up with the times. The use of computers in the course of the lesson provides teachers and students with new and unique conveniences related to interactive teaching aids. The operative combination of the computer with other educational tools, such as a projector, electronic boards, using visual aids, increases the volume of information and thus creates an opportunity for the teacher to use the class time effectively.

More use of computer technology elements in the course of the lesson, helping to increase the diversity of the educational process, saves students and listeners from the "disease" of boredom, raises the quality of education to new, higher levels, provides impeccable textbooks, helps personal development, students and forms the teacher's creative potential and cognitive activity, increases their interest in learning and life.

In our opinion, the use of computers in the course of the lesson is effective in the following cases:

- to justify new material and unfamiliar terms. The main thing here is the summary of the lecture and presentation. While the teacher is showing the presentation slides, he can show various pictures, formulas and graphs, and make the lecture short and concise. At the same time, the student sees the concepts he is hearing with his own eyes. It is known that most of the information is received by sight.

The use of electronic tests included in the computer for generalization and strengthening of the subject taught in the lesson and for deep and thorough learning, in turn, forms the skills and abilities of the students in this subject. They develop interest in new computer programs.

The use of computers in current, intermediate and final control lessons is highly effective. This is a computer-assisted test at the university's internal testing center. These tests can vary. For example, test questions can be displayed on the screen of a computer monitor with the help of multimedia, which, in turn, arouses the interest of students to pass the tests in this way. Performing virtual laboratory work saves time and saves people from all kinds of harmful and dangerous consequences for human life.

The computer also plays a major role in students' scientific work activities. For example, students can be tasked with developing an effective and interesting way of preparing presentations on a specific topic or preparing virtual laboratory work as project work. To do this, they first need to study this topic in depth, collect materials related to the topic, after collecting them, they need to systematize them, then summarize and prepare a presentation by



putting pictures, graphs and tables in their place, and learn to prepare animations. It forms the technique and technology of communicating with a computer in students.

Modern information and communication technologies have created a wide opportunity to develop new forms and methods of teaching. At the same time, the problem of in-depth teaching of information and communication technologies, students' reception of large amounts of information, processing and independent work is emerging. Many students entering higher education institutions lack the skills to think and work independently.

Gone are the days of traditional lecture-based classes. At a time when the speed of information flow is accelerating, it is difficult to attract the student's attention to knowledge if every lesson is not colorful. For this, the teacher needs to be constantly searching and creative.

In this case, it is especially effective to move the lesson based on the game-based viewing system. Games should be chosen based on student psychology. The method of pushing to be the first always pays off. Because children always want to show themselves, to be one step ahead of their peers.

Before introducing new information in the lessons, the teacher clarifies and organizes their previously acquired knowledge and ideas. One of the main elements of the educational work carried out in the class is that students perform independent, free-thinking educational and practical tasks on the basis of mutual activity, which definitely leads to maturity in life.

Any interactive methods used in lessons have an educational character and help to strengthen, clarify and expand students' knowledge, generalize and systematize it. Students learn from each other through mutual discussion. The organization of lessons through interactive methods increases the efficiency of students' learning. When it comes to the work being done to improve the quality of education, we liken the process of education to a bridge of virtue, and we consider it the duty of professors and teachers to take our students across this bridge as knowledgeable and broad-minded people. The theoretical and practical part of the lessons are conducted in small groups, using effective methods of pedagogical technology to increase students' interest. Monitoring the progress of the lessons and giving the necessary advice will help the lessons to be carried out effectively in small groups.

In modern conditions, the main attention is focused on improving the quality of education. Therefore, it is necessary to use modern computer and new pedagogical technologies regardless of whether it is a lecture, a practical training or a laboratory lesson.

In modern conditions, the main task of education is not only to impart the specified knowledge, but also to teach the forms and skills of independent knowledge acquisition.

The use of information and communication technologies in the course of the lesson can be seen in the following ways:

- as a means of obtaining research results;
- as a source of additional information on academic subjects;
- as a means of providing employment and independent education;
- as a tool that allows the teacher to provide personalized education;
- as a means of increasing the level of activity and space of a person.

Thus, the effective use of information technologies in the course of the lesson has a direct effect on increasing the interest of students and students in the lesson and improving the quality of education.

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THE EVOLUTION OF THE SOCIOLOGY AND ITS ROLE IN THE DEVELOPMENT OF THE WORLD

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ABSTRACT

The evolution of sociology and the social science subjects took many years by following social and traditional cultures and the contributions made but the several social reformers, sociologists, they tried to explore the new ideas, reforms for the social development of the states in the world, usually in the eastern world we can find the evidence of evolution of sociology ideas, thinking's in the scientific way. The evolution of Sociology concepts and social science took many years and it was the initial stage in the development of scientific ideas, innovations, political science and the social-economy in the world. The evolution of sociology took its time by the contribution of various social thinkers like "Karl Marx, Max Webe, Émile Durkheim, Herbert Spencer, Auguste Comte, Bruno, Gunnar Myrdal, Elsie Clews Parsons and Talcott Parson's etc, their contributions was the significant step In the evolution of sociology. The research paper explains the evidences for the evolution of the sociology, as a part of social science, which explains the human development in the social thinking and the socio-political and socio economic development in the states.

KEY WORDS: *Sociology and its evolution, Scope of sociology, the role of sociology and Social science.*

INTRODUCTION OF SOCIO-CULTURAL EVOLUTION

The process of change and development in human societies that results from cumulative change in their stores of cultural information available (Lenski and Lenski, 1970). For Lenski and Lenski, sociocultural evolution occurs on two levels within individual societies; the 'worldsystem of societies' in general as part of a process of intersocietal selection. Theorists such as Lenski and Lenski regard symbols as playing an analogous role (the transmission of information) within sociocultural systems and sociocultural evolution to that played by genes and natural selection in biological systems and biological evolution: in both processes continuity.

While biological evolution is characterized by continuous differentiation and diversification (like the branching of a tree), it is characteristic of sociocultural evolution that societies merge or are eliminated, resulting in fewer rather than more societal types (differentiation, however, is an increasing feature within complex societies); in biological evolution simple species are not eliminated but in sociocultural evolution they tend to be; in sociocultural evolution heritability involves transmission between generations which preserves useful learned behaviour, in biological evolution such acquired characteristics are not transmitted (see also LAMARCK); as a consequence, in comparison with biological evolution, sociocultural evolution is rapid and the potential exists for this to be brought under rational control.

REVIEW OF LITERATURE AND DEFINITIONS

Karl Marx:

According to Karl Marx, sociology is formed by his economic analysis of ruling class structures within capitalist societies. Sociology is the academic study of social behavior and societies. In Marx's sociological theory, society is determined and structured by economic systems. Therefore, Marx and Marxism critically analyze *capitalism* as an economic system that shapes and forms society. Although Marx specifically critiques capitalism, Marx states that all societies, from slave/slave-owner societies through feudal societies until contemporary capitalist societies, are societies built on class struggle. Furthermore, all class struggle is a political struggle.



What Is Sociology?

Sociology: The systematic study of the relationship between the individual and society and of the consequences of different types of relationships.

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The role of war in the development of states and societies

Particularly since the end of the Cold War, there have been a growing number of scholars in the social sciences and humanities who came to complement the more presentist neo-evolutionary research with studies into the more distant past and its human inhabitants. A key element in many of these analyses and theories is warfare, which Robert L. Carneiro called the “prime mover in the origin of the state”. He theorizes that given the limited availability of natural resources, societies will compete against each other, with the losing group either moving out of the area now dominated by the victorious one, or, if the area is circumscribed by an ocean or a mountain range and re-settlement is thus impossible, will be either subjugated or killed. Thus, societies become larger and larger, but, facing the constant threat of extinction or assimilation, they were also forced to become more complex in their internal organization both in order to remain competitive as well as to administer a growing territory and a larger population.

Norman Yoffee

Norman Yoffee has criticized such theorists who, based on general evolutionary frameworks, came to formulate theories of the origins of states and their evolution. He claimed that in no small part due to the prominence of neo-evolutionary explanations which group different societies into groups in order to compare them and their progress both to themselves and to modern ethnographic examples, while focusing mostly on political systems and a despotic élite who held together a territorial state by force, “much of what has been said of the earliest states, both in the professional literature as well as in popular writings, is not only factually wrong but also is implausible in the logic of social evolutionary theory

THEORIES FOR THE EVOLUTION OF THE SOCIOLOGY

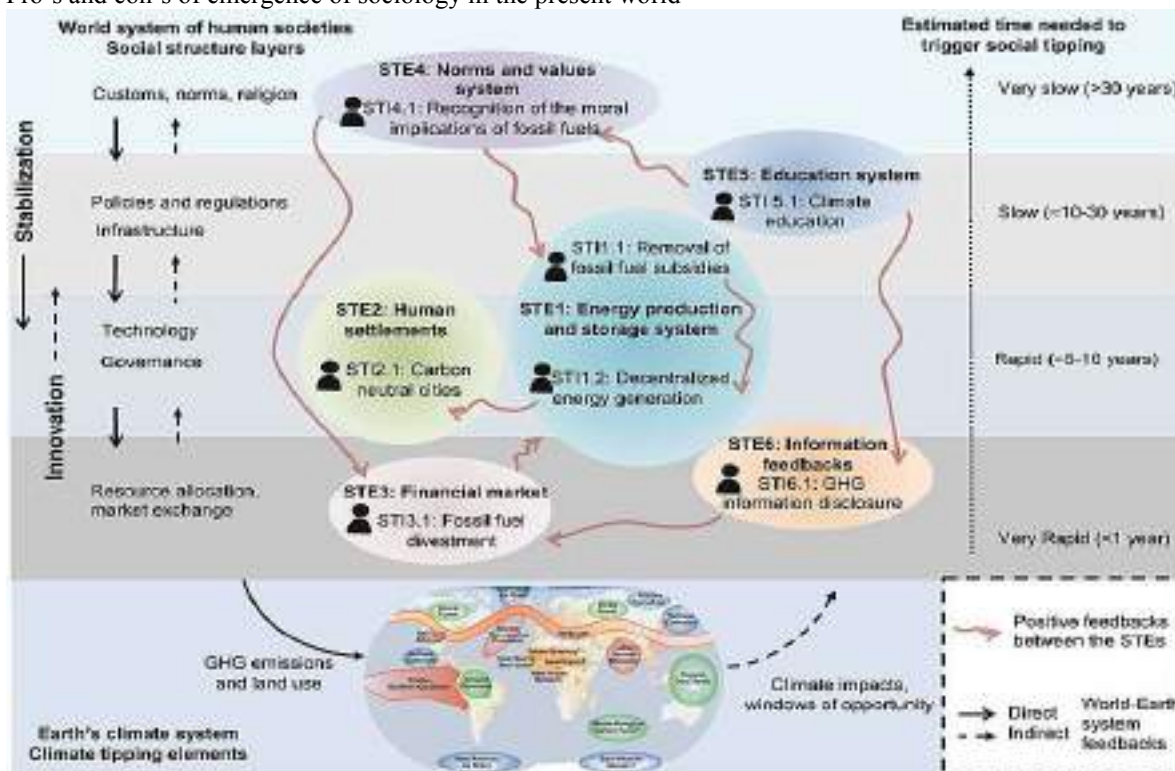
Cultural theory

- They did this by developing specific methods for the study of society. French sociologist Émile Durkheim (1858–1917), prominent in this regard, argued that various kinds of interactions between individuals bring about certain new properties (sui generis) not found in separate individuals. Durkheim insisted that these “social facts,” as he called them—collective sentiments, customs, institutions, nations—should be studied and explained on a distinctly societal level (rather than on an individual level). To Durkheim the interrelations between the parts of society contributed to social unity—an integrated system with life characteristics of its own, exterior to individuals yet driving their behaviour. By positing a causal direction of social influence (from group to individual rather than the reverse, the model accepted by most biologists and psychologists of the time), Durkheim gave a much-needed framework to the new science of sociology. Some writers called this view “functionalism,” although the term later acquired broader meanings.

- Durkheim pointed out that groups can be held together on two contrasting bases: mechanical solidarity, a sentimental attraction of social units or groups that perform the same or similar functions, such as preindustrial self-sufficient farmers; or organic solidarity, an interdependence based on differentiated functions and specialization as seen in a factory, the military, government, or other complex organizations. Other theorists of Durkheim's period, notably Henry Maine and Ferdinand Tönnies, made similar distinctions—status and contract (Maine) and *Gemeinschaft und Gesellschaft* (Tönnies)—and predicted that civilization would progress along the lines of specialization, contractual relations, and *Gesellschaft*.
- Later anthropologists, especially Bronisław Malinowski and A.R. Radcliffe-Brown, developed a doctrine of functionalism that emphasized the interrelatedness of all parts of society. They theorized that a change in any single element would produce a general disturbance in the whole society. This doctrine eventually gained such a following among social anthropologists that some advocated a policy of complete noninterference, even with objectionable practices in preliterate societies (such as cannibalism or head-hunting); for fear that eliminating the practice might produce far-reaching social disorganization.
- The gap between empirical research and theory persisted, in part because functionalist theory seemed divorced from the empirical research programs that defined mid-20th-century sociology. Functionalism underwent some modification when sociologist Talcott Parsons enunciated the “functional prerequisites” that any social system must meet in order to survive: developing routinized interpersonal arrangements (structures), defining relations to the external environment, fixing boundaries, and recruiting and controlling members. Along with Robert K. Merton and others, Parsons classified such structures on the basis of their functions. This approach, called structural-functional analysis (and also known as systems theory), was applied so broadly that Marion Levy and Kingsley Davis suggested it was synonymous with the scientific study of social organization.

OBJECTIVES

- To learn about the evolution of the society and the science
- To understand the contributions made by numerous social thinkers or sociologists from past to present
- To extract the beneficial values from the traditional theories and to implement it in the present social ideas and the society.
- Pro's and con's of emergence of sociology in the present world





- Explain why sociology emerged?



The figure People have been thinking like sociologists long before sociology became a distinct academic discipline: Plato and Aristotle, Confucius, Khaldun, Voltaire, and Mary Wollstonecraft set the stage for modern sociology. (Credit: A, B, C, and E Wikimedia Commons; D: publicdomainfiles.com.)

- For millennia, people have been fascinated by the relationships between individuals and societies. Many topics studied by ancient philosophers in their desire to describe an ideal society are still studied in modern sociology, including theories of social conflict, economics, social cohesion, and power in a continued attempt to describe an ideal society (Hannoum, 2003). Although we are more familiar with western philosophers like Plato and his student, Aristotle, eastern philosophers also thought about social issues.
- Until recently, we have very few texts that are non-religious in nature that theorize about social life. From 4th century through the 19th century, the Catholic Church was the seat of power from today's Turkey in the east to western and northern Europe, including the British Isles. Only monks who were charged with rewriting holy texts by hand and the aristocracy were literate. Moreover, the Church consolidated power. In the year 800, Pope Leo III named Charlemagne, the king of Francia (today's France, Belgium, Netherlands and Germany) emperor of the Holy Roman Empire, giving one individual control over most of Europe. Doing so gave the Catholic Church the power to maintain its own traditions safeguard them from the influence of people practicing other religions. If any social patterns challenged any belief of the Church, those practitioners were massacred, burned at the stake, or labeled heretics. As a result, the records that we have are extremely subjective and do not offer an unbiased view of social practice.
- In the 13th century, Ma Tuan-Lin, a Chinese historian, was the first to record, in his seminal encyclopedia titled *General Study of Literary Remains*, the social dynamics underlying and generating historical development.
- In the 14th century, the Tunisian historian Ibn Khaldun (1332–1406) set the foundation for both modern sociology and economics. Khaldun proposed a theory of social conflict and provided a comparison of nomadic and sedentary life, an analysis of political economy, and a study connecting a tribe's social cohesion to its capacity for power (Hannoum, 2003). Khaldun often challenged authorities. As sociologists continue to study and report on social issues and problems, they often find themselves in the center of controversy.
- From 1347 to 1522, the bubonic plague ravaged Europe, killing up to 35% of population (Armstrong, 2019). The plague dealt a major blow to the credibility of the Catholic Church. Out of this chaos emerged the work of Copernicus, Galileo, Leonardo, Newton, Linnaeus, and other philosophers whose work sometimes contradicted church teachings. Events once held to be the product of the divine hand could be analyzed by human reason and observation and could be explained by scientific, testable, and retestable hypotheses. As literacy spread through conquests and colonization, more records and literature became available for sociologists and historians to put social puzzles together.
- In the 18th century, Enlightenment philosophers developed general principles that could be used to explain social life. Thinkers such as John Locke, François-Marie Arouet (Voltaire), Immanuel Kant, and Thomas Hobbes responded to what they saw as social ills by writing on topics that they hoped would lead to social reform. Mary Wollstonecraft (1759–1797) wrote about women's conditions in society. Like Harriet Martineau and Jane Addams, her works were long ignored by the male academic structure, but since the 1970s, Wollstonecraft has been widely considered the first feminist thinker of consequence. Ideas about economic systems, the family, health and hygiene, national offense and defense, were among the many concerns of social life.



- The early 19th century saw great changes with the Industrial Revolution, increased mobility, and new kinds of employment. It was also a period of increased trade, travel, and globalization that exposed many people — for the first time—to societies and cultures other than their own. Millions of people moved into cities and many people turned away from their traditional religious beliefs. Ideas spread rapidly, groups were created, and political decisions became public decisions. Among a new generation of philosophers, there were some who believed they could make sense of it all.

Creating a Discipline: European Theorists



Figure: Early major European theorists. Top row, left to right: Auguste Comte, Harriet Martineau, and Herbert Spencer. Bottom row, left to right: Georg Simmel, Émile Durkheim, and Max Weber. (Credit: Wikimedia Commons; Julius Cornelius Schaarwächter/Public domain.)

**Auguste Comte (1798 – 1857)**

The term sociology was first coined in 1780 by the French essayist Emmanuel-Joseph Sieyès (1748–1836) in an unpublished manuscript (Fauré et al. 1999). In 1838, the term was reintroduced by Auguste Comte (1798–1857). Comte originally studied to be an engineer, but later became a pupil of social philosopher Claude Henri de Rouvroy Comte de Saint-Simon (1760–1825). They both thought that social scientists could study society using the same scientific methods utilized in natural sciences. Comte also believed in the potential of social scientists to work toward the betterment of society. He held that once scholars identified the laws that governed society, sociologists could address problems such as poor education and poverty (Abercrombie et al. 2000).

Comte named the scientific study of social patterns **positivism**. He described his philosophy in a series of books called *The Course in Positive Philosophy* (1830–1842) and *A General View of Positivism* (1848). He believed that revealing the laws by which societies and individuals interact would usher in a new “positivist” age of history. While the field and its terminology have grown, sociologists still believe in the positive impact of their work.

Herbert Spencer (1820–1903)

In 1873, the English philosopher Herbert Spencer published *The Study of Sociology*, the first book with the term “sociology” in the title. Spencer rejected much of Comte’s philosophy as well as Marx’s theory of class struggle and his support of communism. Instead, he favored a form of government that allowed market forces to control capitalism. His work influenced many early sociologists including Émile Durkheim (1858–1917). Spencer, using Charles Darwin’s work as a comparison said, “This survival of the fittest, which I have here sought to express in mechanical terms, is that which Mr. Darwin has called ‘natural selection,’ or the preservation of favoured races in the struggle for life.” (Spencer, 1864) The statement is often misinterpreted and adopted by those who believe in the superiority of one race over another.

Georg Simmel (1858–1918)

Georg Simmel was a German art critic who wrote widely on social and political issues as well. Simmel took an anti-positivism stance and addressed topics such as social conflict, the function of money, individual identity in city life, and the European fear of outsiders (Stapley 2010). Much of his work focused on micro-level theories and analyzed the dynamics of two-person and three-person groups. His work also emphasized individual culture as the creative capacities of individuals (Ritzer and Goodman 2004).

Émile Durkheim (1858–1917)

Émile Durkheim helped establish sociology as a formal academic discipline by establishing the first European department of sociology at the University of Bordeaux in 1895 and by publishing his *Rules of the Sociological Method* in 1895. In *Division of Labour in Society* (1893), Durkheim further laid out his theory on how societies transformed from a primitive state into a capitalist, industrial society. According to Durkheim, people rise to their proper levels in society based on merit.

SOCIAL POLICY AND DEBATE***Should We Raise the Minimum Wage?***

During his hard-fought 2020 campaign, President Joe Biden promised Americans that he would raise the federal minimum wage. Opponents of raising the minimum wage argue that some workers would get larger paychecks while others would lose their jobs, and companies would be less likely to hire new workers because of the increased cost of paying them. Biden and other proponents of raising the minimum wage contend that some job loss would be greatly offset by the positive effects on the standard of living of low-wage workers and reducing the income gap between the rich and poor.

Sociologists may consider the minimum wage issue from differing perspectives as well. How much of an impact would a minimum wage raise have for a single mother? Some might study the economic effects, such as her ability to pay bills and keep food on the table. Others might look at how reduced economic stress could improve family relationships. Some sociologists might research the impact on the status of small business owners. These could all be examples of public sociology, a branch of sociology that strives to bring sociological dialogue to public forums. The goals of public sociology are to increase understanding of the social factors that underlie social problems and assist in finding solutions. According to Michael Burawoy (2005), the challenge of public sociology is to engage multiple publics in multiple ways.

CONCLUSION

Finally, cultural theories of the 1930s emphasized human ability to innovate, accumulate, and diffuse culture, socio-economical change, and socio-political change. Heavily influenced by social and cultural anthropology, many sociologists concluded that culture



was the most important factor in accounting for its own evolution and that of society. By 1940 cultural and social explanations of societal growth and change were accepted, with economic, geographic, and bio psychological factors playing subsidiary roles. Early schools of thought/ Early functionalism Scholars who established sociology as a legitimate social science were careful to distinguish it from biology and psychology, fields that had also begun to generalize about human behaviour. So there was an essential for the social development, ethical and moral development for the social and society development and growth in the world economy.

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DIGITAL CITIZENSHIP EDUCATION IN NIGERIAN SECONDARY AND TERTIARY INSTITUTIONS

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ABSTRACT

The use of the internet and digital tools have become part of our lives in recent years as necessitated by the COVID-19 pandemic. Students use these digital tools extensively both in their school lessons and at their home to enhance their learning. Students' intensive daily use of technology has increased the need for training them in a way to establish safe online communication and collaboration. Hence the need for bringing the concept of digital citizenship to the fore. This paper, therefore, provided an overview of the concept of digital citizenship education in the Nigerian context. This paper sheds light on the education of young learners on the concept of citizenship and how to use technologies appropriately. An overview of digital citizenship education in secondary and tertiary institutions was the focus and it was suggested that awareness training and orientation should be periodically organized for students and teachers on the concept of digital citizenship and the safe use of technology. Also, education policymakers in Nigeria should restructure the existing curricula to include technology-based practices to enhance students' technological expertise and facilitate the appropriate use of technology as an effective learning tool.

KEYWORDS: *Digital citizenship education, digital tools, technological behaviour, digital native students.*

INTRODUCTION

The need for a transition in educational efforts from knowledge absorption to knowledge consumption and generation is driven by the growing interconnectedness of the world. Education no longer merely aims to prepare students for an effective life in their immediate society but to prepare them for life in a fast-changing world driven by technology. The development of information and communication technology over the past few years has had a big impact on various sectors, including education. Technology has impacted education to the extent that teaching and learning can be done ubiquitously defying the constraints of time, distance and space thanks to technological innovation. In terms of education, the pre-ICT era's limitations on the time and location at which learning could take place for both students and teachers have been broken by increasing access to the internet and better availability of learning resources and technical tools. With varying degrees of success depending on the unique characteristics and difficulties present at the geographical locations where it has been implemented, the undeniable growth in the educational system brought on by the use of the internet and the accessibility of digital outlets like audio and video, CDs, virtual platforms, tele and video conferencing platforms among others has primarily been implemented at secondary and tertiary institutions.

In Nigeria and at the peak of the COVID-19 pandemic secondary and tertiary institutions were encouraged to transition to online learning as an alternative to traditional face-to-face learning in a bid to limit physical contact in order to halt the spread of the Coronavirus. Online learning is basically driven by the internet with lots of advantages but usually exposes students to the whims and caprices of the online digital space. Although students are digitally savvy, many risks are present in the digital world that they should be protected from. These risks include sexual exploitation, cyber-bullying, phishing, and identity theft, to mention but a few. Therefore, it is necessary for students in secondary and tertiary institutions to adequately equip themselves with appropriate digital citizenship behavioural traits that will enable them to cope in the digital space as they participate in their online learning classes. There should be no assumptions that students in secondary and tertiary institutions are fully equipped for online learning. This is because, in Nigerian educational institutions, it is crystal clear that digital immigrants i.e., persons who were raised before the digital age, are the decision makers and the teachers of the digital natives and there might be some unintentional procedural gaps in the entire online teaching and learning processes of the digital natives. Digital natives are individuals who were born during or after the integration of technology within the classroom, or the "digital age." The term digital native was originally defined as being born on or after 1980,



however, some scholars define individuals born between 1980 and 1990 as the “first generation of digital natives” (Helsper & Eynon, 2009).

The digital natives can be likened to the natives of a country or geographical space who are expected to understand and speak the language of that country to get the full benefits as citizens. As aptly opined by Fomsi (2021), digital natives speak the digital language - the language of computers, smartphones, tablets, the Internet, Web 2.0 technologies, and online video games, just to mention a few. They are required to follow the recommended code of conduct for that geographical space or region. This code of conduct contains vital information on the acceptable behaviour of the citizens that will enhance the mutual coexistence of all the stakeholders. Comparatively, looking at the digital world of the internet and online learning, there are vital pieces of information on the ethics and affordances of the digital space. Such knowledge will help all the navigators in the digital environment to maximally benefit and mutually coexist. This is referred to as digital citizenship.

Digital citizenship simply means competent and acceptable online behaviour. According to Leustig (2019), educating students about digital citizenship involves teaching them how to use technology responsibly, safely, and with good behaviour both inside and outside of the classroom. It is the capacity to communicate effectively in ways that respect both human rights and the online environment while participating critically, positively, and ethically in the digital sphere.

According to Ribble (2020) and Fomsi (2021), there are nine components to digital citizenship behaviour. Digital Access is the first and fundamental component. It speaks of a person's access to and rights within the digital sphere. Tayseer (2018) argues that since society is constantly utilizing technology, everyone should have equal access to it and to e-support in order to reap its benefits. For digital native students to effectively engage in online learning as recommended by the government, they ought to have access to digital technology. It is the responsibility of the members of society and the management of institutions to ensure that students have access to technological devices. However, having access to digital technologies is not enough, students must also know how to use these devices (digital literacy).

Digital literacy refers to the ability of a person to utilize technological devices competently. Students need to know how to use digital devices for educational and other social purposes so that they can behave properly during online learning. The right conduct while using these digital tools, such as social media, internet browsers, word processing apps, learning management systems and so on, is anchored on the knowledge and competency of students in the use of digital devices.

Also, digital communication is another element of digital citizenship. It refers to the transmission and comprehension of information. Students need to understand the different communication media to effectively participate in online learning because, with the push of a button or the click of a mouse, sensitive information can be shared unsafely. Students also need this skill to be able to make choices on which communication medium to use when working independently on assignments. It is important to caution students about what is suitable to share via digital channels as this can help reduce their exposure to unwanted online attacks (Roberto, 2019).

Increased online communication has fostered an increase in digital commerce. Buying and selling online have soared tremendously ever since the lockdowns. Students need to know the rules of digital commerce to adequately benefit from it and be protected from cyber-attacks in the digital space. Furthermore, students are usually distracted by pop-up advertisements on things that might interest them when they are learning online. They may yield to the distraction or face a cyber-attack. This attack may be traumatic to the student thereby causing him to lose concentration while learning. There might also be dangerous activities such as illegal downloads, gambling, drug deals, pornography, plagiarism, and so forth (Tohid, 2017). Therefore, it is particularly important to ensure that students have digital commerce skills.

Another element of digital citizenship behaviour is digital etiquette and it refers to understanding the standard of behaviour and practice expected of persons using a digital platform. Students ought to have good conduct as they relate with one another in an online space. This quality or value can be learnt by deliberate teaching of digital citizenship values. Therefore, knowing how to respond to harsh comments from classmates on an online platform is a great quality that students need to have.

Becoming a digital citizen means that a person is aware of the digital laws that govern the activities in the digital space. Students should be socially responsible. They are expected to ensure that their online actions; downloads, purchases, texts, and so on, conform to digital laws. Digital laws ensure that digital crimes are punished adequately. Students should be aware of these laws and abide by



them. Digital law is linked to another element which is digital rights and responsibilities. This enables students to know their rights and responsibilities in the digital global world. It further protects them from predators during online learning.

Digital health and wellness refer to how users of technology pay attention to ergonomic factors while using technology. Students ought to be aware of certain practices that are detrimental to their health and wellness. Long gazing at the computer screen, sitting in a place for a long time, playing games too often and so on could affect the students' health and they need to be adequately informed before navigating the digital space during online learning. Digital security is also very crucial in becoming digital citizens. Students need to know how to protect themselves from the internet and online threats and attacks.

Justification of the Paper

The COVID-19 pandemic has made it necessary for individuals to use the internet and other digital technologies that have recently impacted their lives, and students in both secondary and tertiary institutions have begun to use these tools heavily both in their classrooms and at home. The idea of digital citizenship is becoming a hot topic in education because of how frequently students use technology and the necessity to teach them how to collaborate and communicate safely online. In this paper, the theoretical framework of the concept of digital citizenship is x-rayed, as well as other related concepts reported in the literature regarding digital citizenship and its teaching.

CONCEPTUAL CLARIFICATIONS

Concept of Digital Citizenship

As contemporary cultures advance and make greater use of technology, the idea of digital citizenship has expanded. New definitions of the appropriate use of technology have emerged in response to new uses and abuses of technology. Alberta Education (2012), referenced in Jones and Mitchell (2016), defines citizenship as belonging to a social, political, or national community. This definition can help one to better comprehend the idea of digital citizenship. As a result, the concept has the community at its core; in other words, citizenship occurs within a community and entails both rights and obligations. Citizenship has historically been used to describe belonging to a geographic physical limit. Citizenship provides people living in a geographical region with civil, social-political and economic rights. Citizens are expected to obey the laws governing the geographical space they belong to. Citizenship is a legal status and an identity. Digital citizens recognize and value the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they engage in safe, legal and ethical behaviours. A digital citizen refers to a person utilizing information technology in order to engage in society, politics, and government. Haller, Li and Mossberger, (2011), define digital citizens as those who use the internet regularly and effectively. It is a concept which helps teachers, technology leaders, and parents talk about what all users should know regarding appropriate technology use. Digital Citizenship is more than just a teaching tool; it is a way to prepare students/technology users for a society full of technology. Too often we see technology users misuse and abuse technology because they are unaware of what is appropriate. The goal of this paper is to explicitly dissect what is appropriate and what could be harmful. The term "digital citizenship" describes citizenship in the digital sphere. Several authors have provided definitions of it. Digital citizenship, according to Ribble (2020), is the accepted standard of conduct for using technology in daily life. Digital citizenship may also be referred to as the norms of behavior with regard to technology use. According to Zook (2019), it involves using technology, computers, the internet, and other electronic gadgets responsibly to engage society's citizens. It implies that technology users should behave responsibly when interacting online. Digital citizenship is a comprehensive notion that includes safe behaviours when engaging in digital activities. It means healthy technology use, as well as ethical technology use. According to Digital Respons-Ability (2020), "digital citizenship" is a broad term that encompasses a variety of topics, such as maintaining one's online health, participating in civic and political activities online, maintaining one's online safety, having effective communication, and media literacy. It includes everything a person needs to know to perform responsibly in a world where technology is pervasive. As a way of understanding the complexity of digital citizenship and the issues of technology use, abuse, and misuse, Ribble, (2020) opined that the idea of digital citizenship came about because people will need to behave responsibly and respectfully as good citizens since there will be more online activities. Ribble (2020), also asserted that many students utilize technology and might not be aware of certain behaviours that should be encouraged or discouraged. He further proposed the Digital citizenship framework for educators to follow to encourage digital citizenship behaviour in the classroom. The framework, as shown in the figure below divides digital citizenship into three broad aspects which are further divided into nine elements.



Figure 1: Nine Elements of Digital Citizenship (Source: Adapted from <https://edusites.uregina.ca/missdayman/am-i-a-digital-citizen/>)

Concept of Digital Citizenship Behaviour

Digital citizenship behaviour refers to the standards of proper conduct when using technology (ISTE, 2022). In order to practise forms of social involvement that are respectful of human rights and dignity through responsible use of technology, digital citizenship requires the capacity to engage constructively, critically, and skilfully in the digital environment. The structure depicted in figure 2 can be used to illustrate digital citizenship in more detail. According to this framework, there are three main categories of digital citizenship components. As follows:

- educate yourself and others,
- respect yourself and others
- protect yourself and others

Ribble (2020) divided digital behaviour into three categories in order to adequately define digital citizenship behaviour: Treat others with respect, educate yourself and others, and safeguard yourself and others. Maintaining a secure online environment for instruction and learning is the responsibility of both teachers and students (Philips & Lee, 2019). Therefore, educators must understand how to instruct students on how to respect, inform, and defend themselves when using digital technologies. According to Ribble, respecting oneself and others means following digital law, digital etiquette, and access to the internet. Digital commerce, digital communication, and digital literacy are all parts of educating oneself and others. Digital Rights and Responsibilities, Digital Health and Wellness, and Digital Security are all parts of protecting oneself and others online.



Furthermore, according to the Council of Europe (2019) in figure 2 there are ten digital domains underpinning the overall concept of digital citizenship. These are divided into three areas namely: Being Online, Well-Being Online and Rights Online.

Being Online: This considers Access and Inclusion, Learning and Creativity as well as Media and Information Literacy.

Well-Being Online: Refers to Ethics and Empathy, Health and Well-being as well as e-Presence and Communication as the central focus of this category.

Rights Online: This sector of digital citizenship domain considers Active Participation, Rights and Responsibilities, Privacy and Security as well as Consumer Awareness.

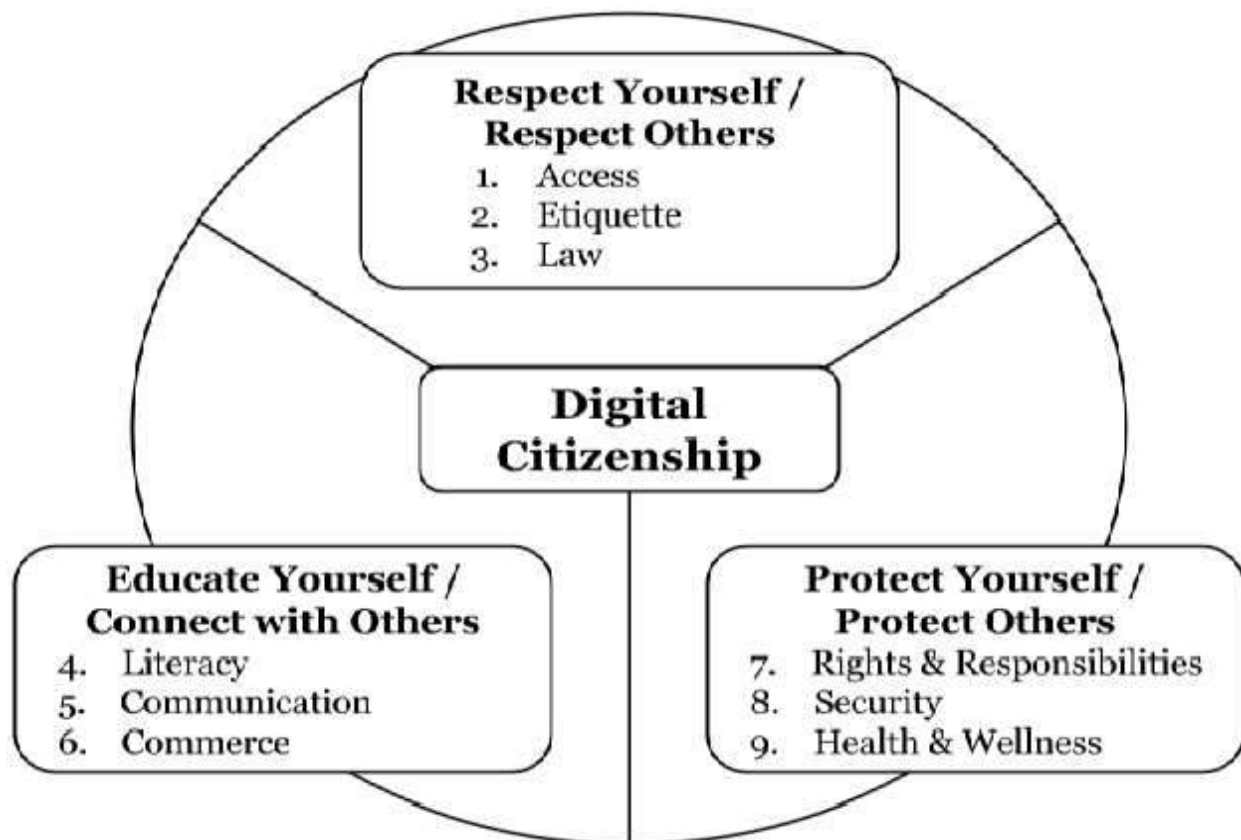


Figure 2 Digital Citizenship Framework (Source: Adapted from https://www.researchgate.net/figure/The-three-dimensions-of-digital-citizenship-As-shown-in-Fig1-Ribble-and-Miller-17_fig1_319053548)

Need for Digital Citizenship Education in Nigerian Secondary and Tertiary Institutions

Digital citizenship has become a priority for societies that see technology integration as a major teaching and learning strategy for preparing students to live and work in the 21st century. The concept aims to prepare students, who are new or immature in the digital world in which they live, for a society using technology. According to Ribble and Bailey (2007), the concept of digital citizenship is gained from an early age. For this reason, citizenship education should evolve to suit the needs of young citizens and the social, political and communication worlds they live in (Bennet, Wells & Rank, 2009). The COVID-19 pandemic that struck various parts of the world had an impact in the form of changes in various sectors of life, including the education sector. With the COVID-19 pandemic, learning that was originally always carried out face-to-face was transitioned online meaning that very young learners must use the internet and other digital tools to continue their learning. Also, the demand for higher education driven by technological innovation is expanding exponentially throughout the world and thousands of young people in Nigeria seeking higher education. E-learning has proved to be a viable option, especially in higher education though it is not a new phenomenon in promoting education in



some parts of the world. Presently, some institutions in Nigeria are using it to promote distance education and lifelong learning. According to Ayodele (2010), many developed nations of the world have in recent times, applied the use of e-learning which means the use of wireless electronic technology to deliver and receive knowledge and skill. However, Nigerian secondary and tertiary institutions can be said to be behind in the adaptation of these technologies as there is evidently an extremely low rate of diffusion of e-learning and as a consequence, a low rate of usage. There is also the concern of students having the analytical abilities they need to analyse, comprehend, and interpret material from the internet, which is extremely harmful. In addition to optimizing learning in the pandemic era, the application of the concept of digital citizenship through online learning is due to the increasing moral degradation in the use of technology. This is confirmed by the findings from different studies that the behaviour patterns of children and adolescents in using the internet tend to provide their personal information on digital media, a large number of students and adolescents in Nigeria are exposed to pornographic content, intentionally or unintentionally, lack of parental supervision of digital activities. What students do also encourage "deviations" in internet use, bullying behaviour, and the ease of issuing swear words on social media pages on the internet. Some scholars have asserted that poor online behaviour, such as cyberbullying or harassment, maybe an individual's way of escalating their popularity or seeking validation by making others feel weaker or victimized (Farmer, 2011). When students do not receive education about how to interact with others, online or in person, they lack the capacity to relate to others, especially those with differing ideas, cultures, or belief systems, and they do not develop a moral or ethical code based on respect and understanding (Snyder, 2016). Therefore, unguided technology use in educational institutions may result in a lowered moral compass and a higher rate of negative interactions between humans. Therefore, in view of this, the implementation of digital citizenship education in secondary and tertiary education in Nigeria is one of which is oriented towards the ability of students to use technology responsibly this is because digital citizenship is not solely a list of behaviour for using technology, but instead is a concept that impacts all students, teachers, parents, school and community leaders, and the greater world by establishing norms or codes of behaviour for how individuals learn to get along in an increasingly connected world.

CONCLUSION

Young people have been reliant on the internet, computers and other digital technologies for learning and communication in recent times but it seems that policymakers in education rely on parents more than curricula for raising awareness among students regarding the use of technology. Based on the scholarly literature reviewed in this paper, it is significant to merge efforts between secondary schools and universities to bridge the gap between technologies as a life tool and as an academic proper usage. Thus, this paper sheds light on the education of young learners on the concept of citizenship and how to use technologies appropriately.

SUGGESTIONS

In this paper, an overview of digital citizenship education in secondary and tertiary institutions was the focus and the following suggestions were put forward:

1. Awareness training and orientation should be periodically organized for students and teachers on the concept of digital citizenship and the safe use of technology.
2. Education policymakers in Nigeria should restructure the existing curricula to include technology-based practices to enhance students' technological expertise and facilitate the appropriate use of technology as an effective learning tool.
3. Massive computer training for all teachers and students should be organized by the government nationwide through in-service training of workshops and conferences.

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A COMPREHENSIVE REVIEW ARTICLE ON FINERENONE

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ABSTRACT

Finerenone is a Novel selective Non-steroidal Mineralocorticoids Receptor Antagonist. Finerenone is indicated for the treatment of Chronic kidney disease (stage 3 and stage 4) associated with type 2 diabetes in adults. Finerenone blocks the MR receptor so that the progression of chronic kidney disease is control. Finerenone belongs to the BCS class-II, low solubility and low half life and bioavailability.

KEYWORDS : *Finerenone, Chronic kidney disease, Solubility, BCS Class.*

INTRODUCTION

Finerenone belongs to BCS class –II (Low solubility and High Permeability). Finerenone having a molecular weight about 378 gm/mol and about 211-218°C. Finerenone is chemically called as (S)-4-(3-cyano 5-methoxyphenyl)-5-ethoxy-2, 8-dimethyl-1, 4-dihydro-1, 6-naphthyridine-3-carboxamide. Finerenone (BAY94-8862) is a novel non steroidal MRA with more potential than spironolactone and greater affinity than eplerenone in vitro. Finerenone structural activity has a strong binding mode within Mineralocorticoid Receptor MR. Finerenone is white crystalline powder and odourless.

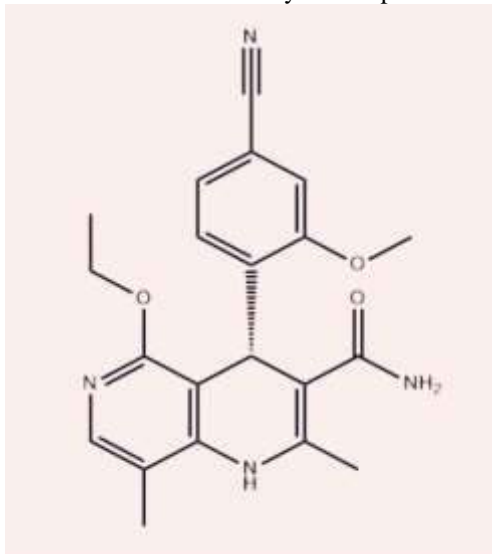


Image No.1 structure of Finerenone

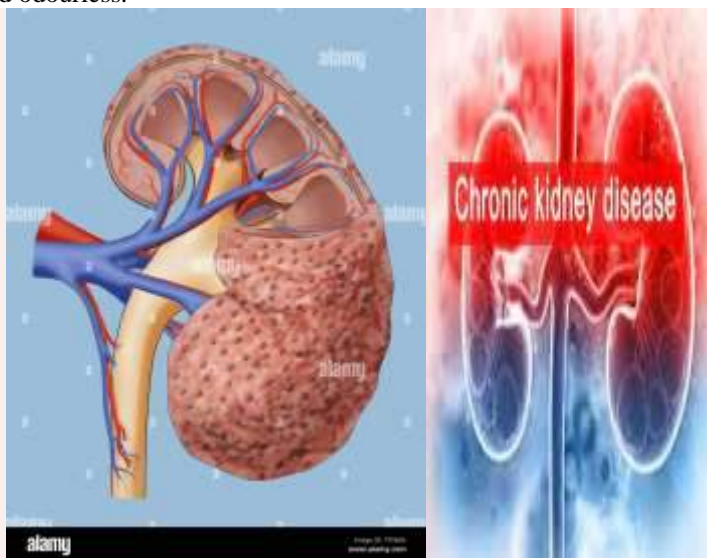


Image No.2 & 3 Kidney damage in Chronic kidney disease



FINERENONE PHYSICOCHEMICAL, PHARMACOKINETICS AND PHARMACODYNAMICS PROPERTIES.

Finerenone has a physicochemical property like high lipophilicity and Polarity, low solubility which govern high plasma protein binding, transport, tissue penetration and distribution. Finerenone has a low dissolution and having a less bioavailability which show at 10, 20mg dose in twice in day as per requirement of patients and its stored in a room temperature.

Finerenone is metabolized by CYP3A4 (90%) and CYP2C8 (10%). However, renal dysfunction alters clearance of the medication. Patients with different creatinine clearances (CrCl) had the same maximum serum concentration, but elimination half-life was prolonged in those with worse kidney function: < 30 ml/min/m² (3.0 h), 30–50 ml/min/m² (2.88 h), 50–80 ml/min/m² (2.34 h), and > 80 ml/min/m² (2.23 h). Given its significant protein binding capacity, Finerenone is also impacted by serum albumin levels; thus, hypoalbuminemia (e.g., nephrotic syndrome, malnutrition) may result in increased blood levels of the drug. The investigator found that Finerenone was rapidly absorbed during fasting condition (more absorbed with 10-40 mg PEG) with a median time to maximum plasma concentration (t_{max}) of 0.5–1 h, exhibiting dose-linear pharmacokinetics and rapid elimination from plasma (geometric mean terminal half-life (t_{1/2}) of 1.7– 2.83 h). In the postprandial state, the elimination rate from plasma was affected, but not the absorption. They also concluded that Finerenone did not influence laboratory parameters such as urinary electrolytes, serum aldosterone, and AGII. Finerenone was found to be tolerable with favorable pharmacokinetics despite the prandial state.

COMPARISON BETWEEN NONSTEROIDAL MR ANTAGONIST (FINERENONE) AND STEROIDAL MR ANTAGONISTS

As detailed in a recent scholarly review, there are many distinct differences between the nonsteroidal MRA (finerenone) and steroidal MRAs (spironolactone and eplerenone). They differ with respect to the mode of MR antagonism, tissue distribution, pharmacokinetics, effects on cofactor recruitment, and effects on inflammation and fibrosis in rodent models of cardiac fibrosis and CKD. For the purposes of the present review, 3 attributes will be highlighted:

1. Pharmacokinetics: Finerenone has no active metabolites and a short half-life and low solubility. In contrast, spironolactone is a prodrug with multiple active metabolites with long half-lives. Eplerenone has no active metabolites but has a half-life of 4–6 h
2. Effect on inflammation and fibrosis: Finerenone (at equi-natriuretic doses to eplerenone) manifests strong inhibition of inflammation and fibrosis
3. Effect on cofactor recruitment in the absence of aldosterone in vitro: Finerenone acts as an inverse agonist (inhibits cofactor binding in the absence of aldosterone). In contrast, both spironolactone and eplerenone act as partial agonists for cofactor recruitment.
4. Animal studies showed that finerenone has anti-inflammatory and anti-fibrotic effects and consequently beneficial cardiorenal effects.

MECHANISMS OF ACTION

Finerenone inhibits the effects of mineralocorticoids like aldosterone and cortisol when the MR is overactivated, possibly reducing inflammation and fibrosis in the heart and kidney. Aldosterone is produced when the renin-angiotensin-aldosterone system pathway is activated, and this pathway has a role in regulating blood pressure and sodium and fluid retention.

ADVERSED EFFECT

Finerenone may cause electrolyte imbalances that must be resolved by a healthcare professional. In the case of potassium, patients taking Finerenone may experience a higher level of potassium in the blood. Symptoms that correlate to this clinical finding include nausea, weakness, chest pain and loss of movement.^[14] Another common electrolyte imbalance which may occur for patients on Finerenone is that patients may have low sodium, which can manifest as headaches, confusion, weakness and feeling off balance for patients.



MARKETED FORMULATION



Finerenone (Kerendia) 10,20 mg

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THE CONTENT OF THE ORGANIZATION OF EXPERIMENTAL WORK ON OPTIMIZATION AND IMPROVEMENT OF TUTORS' ACTIVITIES IN UZBEKISTAN HIGHER EDUCATIONAL INSTITUTIONS

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ABSTRACT

The article discusses the following issues: 1) the formation of an active creative position of tutors; 2) the use of various methods of updating ideological attitudes; 3) the preparation and implementation of the tutor's work plan with students; 4) productive forms of the tutor's work with students; 5) the formation of professional competencies among students; 6) analysis of the results of diagnostic procedures.

KEYWORDS: *motivational-target stage; methods of actualization of ideological attitudes; organizational-activity stage; establishment of subject-subject relations; school of tutors.*

INTRODUCTION

In our research, we mainly tried to identify *the motivational-target stage*, according to which it is determined the need for the formation of a stable motive and focus on high-quality professional education among tutors; the formation of confidence that in pedagogical activity tutors will be able to realize themselves as individuals and professionals, to satisfy their material needs. At this stage, it is important to form an active creative position of tutors, assuming that they are ready to participate in various events, which is a prerequisite for the effective implementation of the tutor's activities aimed at improving the quality of professional training of students.

To implement the above tasks, the EG (Experimental groups) tutors used methods of actualizing worldview attitudes ("Who is tutor?", "My reflected Self", etc.), aimed at forming students' own theory about their uniqueness and individuality, identifying qualities that distinguish them from each other.

In addition, discussions and consultations of tutors with teachers of leading departments were organized, the content of which was the message to tutors of the professional training program, the results they should achieve, the life prospects that their practical activities will open up to them. Topics of conversations-consultations, debates and discussions conducted by us with tutors were: "Pedagogical activity as a profession", "Features of pedagogical communication", "Tutor ethics", "Professionalism and self-development of the tutor's personality", etc.

The Strategic Idea of the Organizational and Activity Stage is the preparation and implementation of the tutor's work plan with students for the current academic year, based on a long-term work plan for the entire period of professional training of students.

Having determined the main directions of work with the student group, the tutor creates conditions for students to acquire value orientations and norms, form a stable professional orientation; establish subject-subject relations, develop creativity, initiative and purposefulness.

The most productive forms of work at this stage were:

- Techniques aimed at relieving tension, fatigue, ensuring emotional stability and painless adaptation to university studies;
- tasks focused on the formation of students' skills of independent work (analysis of texts, work with primary sources, comparison of learning systems in the Republic of Uzbekistan and in the West countries, etc.);
- Events that promote group cohesion ("Dating Evening", "Birthday of the group", "Designing of the group stand", etc.), intellectual games ("Zakovat", "Intuit", etc.);
- quizzes ("Teacher profession", "Drama competition", etc.), the annual inter-faculty competition of professional skills "Me and my profession", "How to celebrate Teacher's Day", etc.



The Informational and Analytical Stage involves the collection and analysis of information about the work of the tutor and students for the current period. The efficiency and correctness of the processing of tutors' information depends on the effectiveness of its provision and execution by students, which directly affects the process of professional training.

The Reflexive Stage accompanies all stages of tutors' activity and students' professional training. Reflection implies self-observation, self-knowledge, self-analysis of the results achieved. Among the reflexive techniques used by the tutors of the experimental groups after each event, one can distinguish: "Unfinished sentence", "Conversation on paper", "Mood", etc.

MAIN PART

The implementation of each of the designated stages of the tutor's work with the group contributes to the formation of students' professional competencies (cognitive, diagnostic, organizational, creative, etc.), professionally significant personality qualities, aspirations for independence, self-actualization, self-disclosure and creative self-realization in pedagogical activity.

Thus, at the stage of experimental research, we analyzed the results of diagnostic procedures, which indicate that the introduction of the developed software model and the implementation of the content of the tutor's practical activities affect the process of professional training of students and contribute to improving its quality. At the same time, based on the analysis of theoretical ideas and provisions, criteria (motivational, cognitive and professional-personal), indicators and levels of professional training of tutors have been developed.

The results of diagnostics of the level of professional training of tutors for practical activities are presented in Table 1. 34 tutors participated in the experimental group (EG) of the "School of Tutors". Among the control group (CG), 30 tutors participated.

Table 1. Diagnostics of the level of professional training of tutors for practical activity (EG – 34 people) (KG – 30 people)

The Ascertaining Stage of the Experiment						
Criteria Levels	Motivational		Cognitive		Professional and personal	
	EG	CG	EG	CG	EG	CG
Low	47%	54%	53%	55%	53%	61%
Medium	48%	40%	45%	42%	44%	35%
High	5%	6%	2%	3%	3%	4%
The Final Stage of the Experiment						
Low	7%	26%	9%	27%	5%	22%
Medium	70%	60%	71%	63%	72%	69%
High	23%	14%	20%	10%	23%	9%

Comparative analysis showed that the number of tutors with a low level of motivation for practical activity significantly decreased by the end of the experiment and amounted to 7% (EG) and 26% (CG), respectively.

The average level of motivation was characterized by the situational need of tutors in practical activities, a superficial idea of the directions of tutor activity. At the end of the experimental study, representatives of the experimental group at the average level had a deep need for pedagogical activity (70% - EG), in the control groups this indicator is lower and is (60% - CG).

Thanks to the work of the "School of Tutors" on the formation of practical work organization skills, in the experimental group the percentage of subjects with a low level of cognitive competence was only 9%, while in the control groups such a significant improvement did not occur (27%). It should be noted that at the beginning of the experiment, a high level of mastery of psychological and pedagogical theory, the development of pedagogical thinking was recorded only in 2% of EG tutors and 3% - CG. By the end of the experimental work, the percentage of tutors with a high level of cognitive competence was 20% in EG, and only 10% in CG. This fact confirms the positive effect that the work of the "School of Tutors" gives in the field of improving the quality of professional training in practice.

Based on the analysis of the data of professional and personal training of tutors, it was found that at the beginning of the experiment, the number of subjects with a low level of development of professionally significant personality traits prevailed (53% of students in the experimental group and 61% of the control group). The introduction of the author's program model of tutors' activity in the experimental group contributed to the fact that this indicator decreased to 5% for EG tutors, whereas in the control group it was 22%.

It should also be noted that the formation of professional and personal readiness in the experimental group was more dynamic: a high level was observed in 3% of respondents at the beginning of the experiment and amounted to 23% by the end of the experiment. There was no such significant positive dynamics in the control group (initially 4% - eventually 9%).



Thus, a comparison of the results of improving the quality of professional training of tutors at the beginning and end of the experiment definitely indicates the presence of positive dynamics in the formation of general and professional competencies, motivational and personal qualities of the experienced tutors of the experimental group (EG).

Summing up the points scored by tutors for each of the indicators allows you to determine the level of professional training and identify the effectiveness of the "School of Tutors" aimed at improving the quality of professional training of tutors. The results of improving the quality of professional training of tutors in the practical activities of student groups are presented in Table 2.

Table 2. The results of improving the quality of tutors' professional training for practical activities

Groups	EG (34 people)		CG (30 people)	
	Beginning	The end	Beginning	The end
Level	Quantity of people (%)	Quantity of people (%)	Quantity of people (%)	Quantity of people (%)
Low	61%	9%	60%	35%
Medium	36%	71%	38%	61%
High	3%	20%	2%	4%

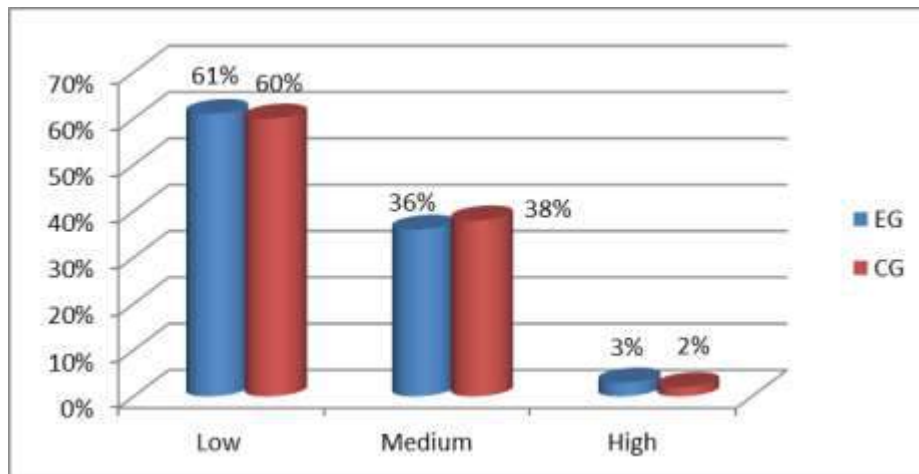


Figure 1. Diagram of the results of improving the quality of tutors' professional training for practical activities (beginning of the experiment)

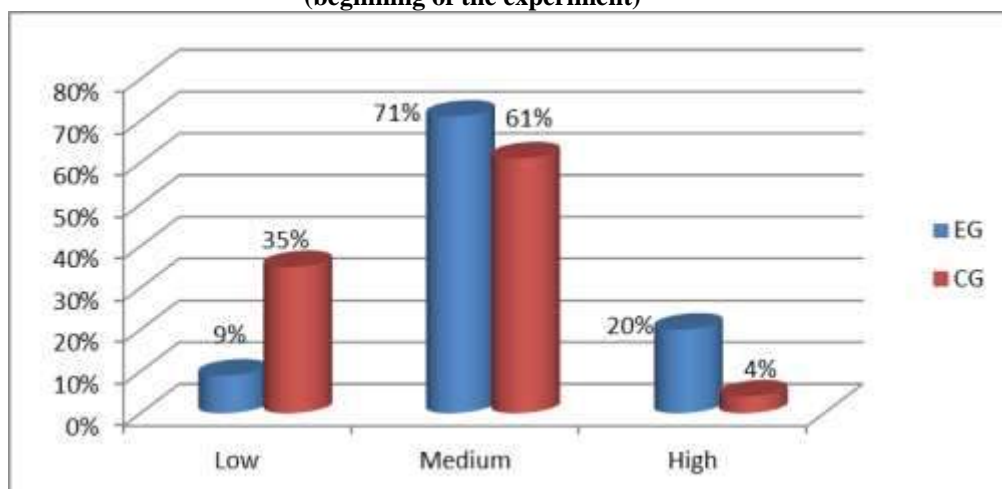


Figure 2. Diagram of the results of improving the quality of tutors' professional training for practical activities (end of the experiment)



The analysis of the obtained results indicates that the level of professional training of tutors in the experimental group (EG) has significantly increased in comparison with the control group. Thus, on average, the number of students with a low level of professional training decreased by 52% (25% in the control group). On average, the number of EG students carrying out practical activities at a high level has increased by 17% (2% in CG). 71% of EG students are characterized by an average level of professional training, whereas in CG this indicator is only 61%. The effectiveness of the practical activities of the tutor-student groups in the experimental group can be characterized as quite high, whereas in the control group the result of the tutor's work barely reaches the average level. The growth rates for each of the levels of professional training of students in the experimental group are higher than in the control group.

Thus, the results of the research work showed that in a specially organized educational process there was a development of subject-subject relations in the interaction of the tutor and the student group. The presented data experimentally recorded and confirmed the effectiveness of technology and pedagogical conditions for the development of subject-subject relations.

CONCLUSION

The conclusions obtained in the study do not claim to be an exhaustive solution to the problem under consideration. Further study of the process of development of subject-subject relations in the practical interaction of the tutor and student groups is possible in the direction of studying the influence on him of individual components of the cultural and educational environment of the faculty, University and region. The potential of the polysubject approach allows us to develop the foundations for optimizing and improving relations between subjects of various spheres of human activity.

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THE ROLE OF DIGITAL TECHNOLOGIES IN TEACHING ENGLISH IN THE EDUCATIONAL SYSTEM OF UZBEKISTAN

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ANNOTATION

In this article is discussed the use of qualitative methodology to investigate the role of digital technologies in second language acquisition and teaching. The results of the study show that the use of technology has a significant impact on students' second language learning. Although some teachers pointed to the negative impact of modern technology on student engagement, it was found that there were more positive opinions. Teachers have now demonstrated how the use of technology in teaching a foreign language can promote student engagement in the learning process. In general, this study provides the reader with an overview of student and teacher participation in digital media, as well as the effectiveness of teaching a second language through technology in higher education institutions in Uzbekistan. In the future, it is necessary to separately compare the views of teachers and students in the same specialty on a larger sample and identify the main factors influencing the teacher's decision to choose traditional methods.

KEY WORDS: *technology, digital education, teacher, student, media, technical means, perception, factor, education, second language.*

INTRODUCTION

The rapidly developing digitalization of our time requires education systems to adequately prepare everyone for emerging challenges. Various participants in education systems often see this solution in digital media education or computer education. Over the past decade, technology has become an integral part of the teaching and learning environment. This technological evolution of our lives is an important part of integrating students into the digital world with the help of teachers who facilitate the learning process. At present, almost all branches of Uzbekistan are trying to adapt to the globalizing world, including all levels of education. The Action Strategy for the Further Development of the Republic of Uzbekistan defines priority tasks, such as "radical improvement of the quality of education, in-depth study of foreign languages"[1].

Not all educational institutions are equipped with appropriate educational equipment, including projectors, interactive whiteboards, laptops and other related equipment. English teachers face challenges trying to make ELT lessons more effective and fun using digital technology. The level of teachers' awareness of the use of ICT is generally low. Most teachers in Uzbekistan use simple technological tools. They find ways to use some of the findings through social media or websites. In addition to the above, they try to use additional learning platforms that help students develop the pace of language learning, as well as repeat and consolidate their knowledge by getting the necessary information at home on the Internet. Nowadays, both teachers and students have access to the external environment through a variety of Internet browsers or applications. For example, Skype promotes the improvement of oral communication skills and creates new opportunities for the development of the communicative competence of students, since users must actively pay attention to the interlocutor's answer[7]. This means that it is not an exaggeration to say that modern technologies make it easier for us to learn a foreign language. At this stage, both students and teachers need to use multimedia in the appropriate places with the help of various technological devices. Digital technologies are one of the most important factors of language changes in the modern era. The tradition of teaching English has changed dramatically over the past decade with its remarkable introduction as a medium of instruction. Several scholars, including Graddol, say: "Technology is at the heart of the process of globalization; affects education, work and culture. The study of English grew rapidly after 1960. Currently, the role and status of the English language is such that it is the language of social context, politics, socio-culture, business, education, industry, media, libraries, cross-border communication and the main subject. in the curriculum and the language of instruction"[3].

"Technology has become an important aspect of society, helping students understand the world more broadly than what they are taught in schools and teachers in the classroom"[9]. Digital technologies are electronic system tools, devices and



resources that produce, store or process information. Notable examples include social media, online gaming, multimedia, and mobile phones. Digital education is any type of education that uses technology. This can happen in all areas of the curriculum.

Of course, advanced technologies can replace traditional methods. Comparing foreign language teaching with Europe, the majority (90%) of teachers in Europe use IT to prepare their lessons (Chhabra, 2012). Outside the EU it seems to be the same story. In the US, the Institute of Educational Technology has developed the National Education Technology Plan to transform education through technology[4]. It can be seen that IT plays a crucial role in the teaching and learning of English in most countries. Even in the United States, we are seeing educational reforms to bring technology into English classes. How are digital technologies used in teaching English? Digital technologies help language teachers provide timely and relevant feedback while guiding the development of the four language skills: listening, reading, speaking and writing. Every teacher should be equipped with a set of necessary technological competencies that can be used to integrate digital technology into the classroom. Key digital tools available to educators to enhance classroom learning.

During the pandemic, we actively used the use of digital technologies in all aspects of education. Digital tools for learning are evolving every day, and the introduction of technology in education is no longer an option, but a requirement. New requirements create new standards. New standards create new problems. Instant video lectures are no longer new to classrooms, classrooms, and classrooms, but the benefit of this change is that teachers have more room to be creative about how to improve their classrooms

As teachers, we can ask ourselves the following questions: How can we follow the progress of the class? How can we involve our students in the virtual world? How can I implement feedback by focusing on our students? What options do we have to make a class interactive?

Many studies have now been carried out to find answers to this basic question, and most of them have proven the importance of using digital technologies in English classes. For example, a study of teachers in Iran found that they had a positive attitude towards the use of technology in their classrooms[5]. Researchers from Saudi Arabia came to the same conclusion: there is a positive relationship between teachers' participation in computer use and computer-assisted language learning (CALL) and positive attitudes towards the use of information and communication technologies (IT) and methodologies[2]. In addition, Korean EFL teachers believe that computer technology is a useful teaching tool that can easily support their teaching methods, providing students with a variety of language information and empowering students in learning in real life situations[6]. According to Chong, the benefits of using the Internet in English classes are to provide students with authentic materials, introduce students to local online friends, and facilitate teacher-student communication[10]. Teachers' personal interest in using the Internet, the ability of teachers to integrate Internet resources into classroom assignments, and computer equipment and technical support in schools were the three main factors influencing the use of the Internet in foreign language classes[8]. All participants in the current study emphasize the importance of digital opportunities to support teachers and students. We preferred to find answers to several questions in the course of our research. Including:

1. Advantages of digital technologies in English.
2. Difficulties in the process of understanding and developing the idea of technology in ESL classrooms, not the older generation of teachers, because the new generation of teachers grew up with digital technologies and they entered their lives. During the experience, schoolchildren and students emphasized the importance of certain digital devices and their use. During the practice, we used several digital technologies. English lessons (tape-recorder, video presentations, online dictionaries, speakers and poster electronic devices, high-speed Internet and personal laptops).

As one of the technological tools, the audio recorder is said to be useful for improving language skills such as listening and speaking. Some educators claim that by using technology tools, students can identify errors in pronunciation and sentence structure when listening to their own English speech, using video presentations for almost every new material. If we use presentations correctly during our classes, they can provide learning opportunities that help us understand and assimilate new material easily. The results show that language teaching and the use of digital technologies are interrelated and can be seen as an integral part of the language learning process. After analyzing the data obtained, we were able to highlight some important points regarding the use of technology in the classroom among teachers of different age groups.

1. Digital technologies as a tool to facilitate ESL teaching. Research questions were asked to determine the assistive aspects of technology in terms of second language learning. The interviews showed that there is a real connection between teaching a second language and using digital technologies. All teachers noted that the use of digital technologies brings great benefits to both teachers and students, and called it a requirement of modern systems.



Computers and projectors are widely used for listening exercises or presentations.

Projectors are an effective tool for teaching any language, but many teachers say they are sorely lacking in classrooms. Currently, the use of electronic dictionaries shows the possibility of saving time for both students and teachers. The most missing tool is the lack of facilities equipped with electronic devices necessary for translation practice.

However, the study found that schools in remote areas lack high-speed internet and personal laptops for students. However, we must ensure that the use of technology tools provides teachers with authentic materials and language contexts that can be influenced.

In the minds of some educators, there is no thought that many years ago good results were achieved even without the use of technology, but we must not forget that we live in an age of technological development. Digital devices have both positive and negative sides. When discussing the negative effects of such devices, all teachers point to at least one drawback. He noted that although most English learners have advantages in teaching and learning a second language, it can also distract students from the main subject. Since technology has become a major attraction for young people, it can be abused during lessons. There were no cases of distraction to other applications instead of functions that should be used in the lesson. This is especially observed in the 6th and 7th grades, because it is natural for students to be interested in something during this period.

CONCLUSION

Digital technologies: such as laptops, tablets and phones dominate classrooms with positive results. Software, websites and learning management systems allow people to enjoy hybrid virtual learning.

We're not just adding digital tools to the classroom, we're using them to create a whole new learning experience. What are digital classroom tools? Digital classroom tools include apps, software, and devices that enable virtual collaboration between students. We use multimedia, social media, games, and interactive learning to engage students with online content. Simply put, digital student tools are any technology that adds a virtual dimension to education. For example, a common digital medium is a telephone. This is the main advantage of digital learning tools used in the classroom: they bridge the gap between the local and virtual worlds. Acquiring strong technological skills prepares students for their future careers and improves the skills needed for entry-level jobs.

Variety of digital tools for the school The main benefit of using many types of digital tools for the classroom is the ability to fully customize your classroom or implement a hybrid model to meet student learning needs. Since 90% of students in Uzbekistan prefer blended learning styles to traditional learning environments, it is better to have a choice when it comes to digital tools. Here it is appropriate for us to plan a more active use of digital means.

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IMPACT OF ARTIFICIAL INTELLIGENCE ON CONSUMER BEHAVIOUR: AN EMPIRICAL STUDY IN THE RETAIL SECTOR IN MANGALORE CITY

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ABSTRACT

Artificial intelligence is creating drastic change in business and is emerging as a potential tool to reach customers. This paper makes an attempt to understand the concept of AI and also makes an attempt to identify the role of demographic variables like age, gender, income and educational qualification on consumer behaviour. The study results show that age do not influence consumer behaviour. But other variables like gender, qualification and income influences consumer behaviour.

1. INTRODUCTION

The retail sector has gone through a digital transformation and has become more dynamic. These technologies aid in making their performance better. One such technology is artificial intelligence. Artificial intelligence helps company understand and target the customers in a better way and also helps in customizing the marketing action. Artificial intelligence benefits the customers, company and the marketer in creating, optimizing and distributing the value. Artificial intelligence is gaining importance in the present business world and is efficiently used in many areas. Artificial intelligence has brought drastic change in the way consumers interact with the companies. Understanding the impact of artificial intelligence helps the marketer use this technology. Artificial intelligence in the area of marketing helps in predicting and changing consumer behaviour starting from need recognition to post-purchase behaviour.

Technological disruptions such as artificial intelligence, internet of things, big data analytics have offered digital solutions for attracting and maintaining the customer base (Anshari, Al-munawar, Lim, 2018). These emerging trends and techniques are providing a competitive edge by facilitating the customers' products and services. Artificial intelligence is a widely used emerging technology that helps organizations track real time data to analyze and respond swiftly to customer requirement (Wirth, 2018). Artificial intelligence provides knowledge about consumer behaviour which is needed for attracting new customers and retaining existing customers. Artificial intelligence can help in predicting customers' action. These tools are useful to deduce customer expectation and navigate the future path (Shabbir,2015).

Artificial intelligence has found its path in different context. With the advancement of technology, world has become a web of interconnected networks. Adoption of artificial intelligence in marketing is still in the basic level.

2. REVIEW OF LITERATURE

2.1. Retail Sector

Retail refers to the selling of goods and services directly to the final consumers. Retailing takes place in retail stores or service establishments. It involves the sale of goods from a single point directly to the consumer for his use. It is a transaction of goods between the seller and the end consumer in small quantities to satisfy his needs. It can be in the form of door-to-door sales or electronic channels too. Retail sector includes banking, tourism, insurance, private healthcare, publishers etc.

2.2. Impact of advertisement on retail sector

Promoting a brand is more important than opening a store. Advertisement helps in promoting a brand and creating brand awareness amongst the people. The retailer through various ways of advertising promotes the brand and makes them visit the stores often. Advertisement acts as a catalyst in bringing the customers to the stores. Advertising quickens the turnover and also helps in reducing the risk of dead stock and can proportionately reduce the overhead expenses. Advertising stabilizes the price and thus avoid losses to



the retailers through the price change. Advertising creates awareness and motivates people to buy products which in turn creates demand for the product and thus increases the sales.

2.3. Artificial Intelligence (AI)

AI has entered all fields including those which were exclusively handled by human beings. AI provides the salesperson with accurate predictions and intelligent recommendations through analyzing the past data and priorities that are likely to convert (Avinaash, 2018). AI is related to computers with capabilities that can think and act more efficiently than humans do.

It can recognize image or voice, decision-making and translate language (CXPA, 2018). AI can detect, decide and develop (Sterne, 2017). Detection is the ability of AI to identify the most expected and predominant characteristics in a subject matter. Decision is the ability of AI to decide after evaluating a huge number of characteristics and then determine the most important one. Development refers to the power AI has to program by taking into account new data and the analysis of research along with how it evaluates each factor and then modify its view.

2.4. Impact of AI on Marketing

AI plays a vital role in B2B and B2C marketing. The KRC research report proves that AI is more effective than social media and creates better customer experience. AI plays a significant role in marketing (Jarek and Mazurek, 2019). AI is the technology that will be adopted by marketers because it will affect the face of retailers' marketing strategies and customer behaviour (Davenport *et al.*, 2020).

AI provides the consumer with a new experience, through automatic recommendations and pertinent product suggestions, the customer service personalization and after-sales service. AI improved the relationship between consumer and the brand. AI gives the consumer a chance to test the product virtually. Most of the consumers believe that AI will make their life better by solving complex problems, while others see that AI will take away their jobs (PwC, 2017).

2.5. Impact of AI on Consumer Buying Behaviour

Consumer Buying Behaviour is the process of decision making where customers decide the product or services to purchase, use and dispose off which will satisfy their needs. The analysis of such a process can help in predicting future behaviour (Qazzafi, 2019). Consumer decision making process includes five stages which the consumers pass through before deciding the product. Consumers can skip one or more stages. It depends on their mind (Kotler, *et al.*, 2017).

Understanding consumer buying behaviour is not easy as it involves psychological concept. In the digital era, consumers show their needs, wants and attitudes in different forms like search, comments, blogs, videos and conversations through several channels like web, mobiles or face-to-face (Court, *et al.*, 2009). AI can convert such data into meaningful consumer insight (Kietzmann, 2018). AI depends on such insights to recommend retailers about product displays and cataloging (Avinaash, 2018). AI can help marketers to understand and reach consumers at many stages of the consumer journey (Kietzmann, 2018).

3. OBJECTIVES OF THE STUDY

Based on the literature review and the rapid changes taking place in business the following objectives are framed:

1. To understand the role of artificial intelligence in advertising.
2. To identify the relationship between artificial intelligence and consumer buying behaviour.

4. SCOPE AND LIMITATIONS OF THE STUDY

The study aims at understanding the concept of AI and its role in advertisement. The study makes an attempt to analyze how marketers can use AI in advertising so as to increase the effect of advertisement.

The study is restricted to the retail sector and therefore the findings cannot be generalized. The study is also restricted to Mangalore city.

5. RESEARCH METHODOLOGY

The study uses both primary data and secondary data. Primary data was collected from 385 respondents using a structured questionnaire. Random sampling technique was used to collect the data. The data thus collected was analyzed using SPSS. Correlation



and Regression analysis was used to understand the association between AI and consumer buying behaviour. Secondary data like magazines and journals related to advertisement and AI were used to understand the concept of AI and its applicability in marketing.

6. MEANING OF ARTIFICIAL INTELLIGENCE

In the words of Demis Hassabis, “AI is the science of making machine smart”. AI refers to the ability of a computer or a computer-enabled robotic system to process data and produce results in a manner similar to the thought process of humans in learning, decision making and solving problems”. AI can solve complex issues using logics and reasoning just like a human. AI is something which transfers human intelligence to the machines so that it can handle simple and complicated tasks. AI includes three basic concepts namely machine learning, deep learning and neural learning.

AI is defined by several authors in several ways. But all have highlighted the main feature of non-human intelligence programmed to perform specific job. When AI was introduced, it was considered as a rapidly evolving, reading, speaking, learning and feeling emotions. AI is the theory and development of computer system capable of performing task which generally require human intelligence (Ransbotham, 2017). The main point highlighted is that AI can perform most of the tasks which humans do in the workplace and in the society at large.

6.1. ROLE OF ARTIFICIAL INTELLIGENCE IN ADVERTISING

Impact of AI on advertising is a challenging task. AI in advertising requires consumer insight discovery, ad creation, media planning and ad impact evaluation. This has resulted in introduction of new techniques of advertising based on consumer preferences.

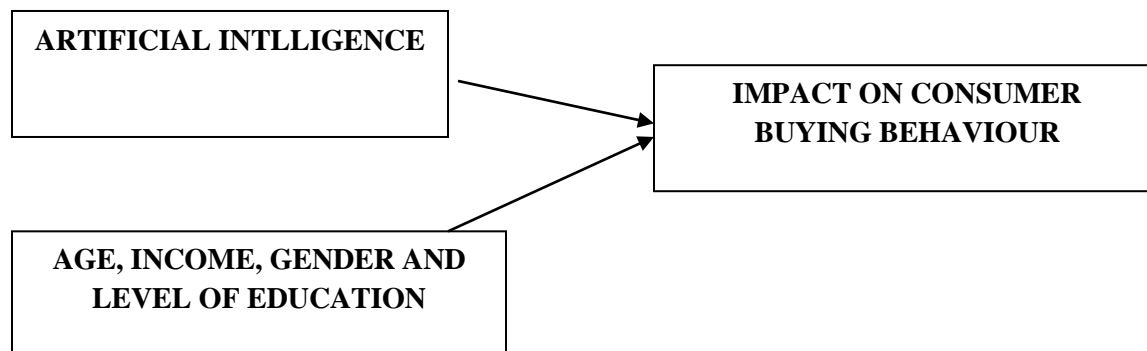
Production of advertisement using AI technology can categorize, combine sources of information, create new ideas and execute intelligent marketing. AI can increase advertising efficiency by grabbing customer attention and also aids in reducing advertising cost. Using AI, marketers can target their advertisements by selecting effective time, place and medium by analyzing the target users. This leads to cost control and improving advertising efficacy.

Brand marketing will become more accurate and effective as AI advances in the advertising business. Advertisement content related to the target audience can be created from various sources using AI and content marketing. AI has significantly improved the customer experience by using human body, intellect, cognition and emotion.

7. CONCEPTUAL MODEL

AI has entered all fields including those which were exclusively handled by human beings. AI provides the salesperson with accurate prediction and intelligent recommendations through analyzing the past data and priorities leads that are likely to convert (Avinaash, 2018).

Figure 1. Conceptual framework showing impact of artificial intelligence on consumer buying behaviour



Source: Developed by the researcher

Figure 1 shows the impact of artificial intelligence on consumer buying behaviour mediated by demographic factors like age, gender, educational level and income.

8. HYPOTHESIS

The following hypothesis is framed for understanding the role of artificial intelligence in influencing consumer buying behaviour.

H₁: There is significant relationship between artificial intelligence and consumer buying behaviour.



H₂: Demographic variables like age, gender, educational level and income influences consumer behaviour.

9. DATA ANALYSIS

ANOVA					
	Sum of squares	DF	Mean square	F	sig
Impact of AI on Consumer Buying Behaviour	2.068	1	2.068	2.308	0.02
Impact of AI on gender	50	48	0.616	3.553	0.058
Impact of income on Consumer Buying Behaviour	50	48	1.982	3.884	0.023

The above table shows that there is significant difference in the mean square. Hypothesis is rejected in the first and last case as the significance value is lesser than 0.05. Alternate hypothesis is accepted which means that AI has an impact on consumer buying behaviour. Income also has an impact on consumer buying behaviour. But in the second case hypothesis is accepted which means that AI does not have any impact on gender.

10. CONCLUSION

AI can influence the business by adopting the updated technologies. AI can influence society, business and people. AI can create a better platform for business. AI is an emerging concept and will further grow in the upcoming days. Therefore, company and people need to prepare themselves and adapt to the changing and innovative business platforms.

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INTERLOCKING PLASTIC BLOCK – A REVIEW

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ABSTRACT

The plastic waste is the hazardous problem in today's world. This is most dangerous problem in front of World. The most hazardous type of wastes are HDPE and PTE and the plastic below 50micron is also causing a serious problem. This plastic mixed in the soil; it directly effects on fertility of the soil. Nowadays, the large amount of plastic is deposited into sea. This plastic wastes gives hazardous effect on the aquatic life and quality of seawater also polluted by this plastic. So, we try to finding efficient way to solve this problem of plastic waste. So, we added this plastic wastes into the bricks and create the bricks by using plastic wastes. It is most economical solution present in the construction industry and it is also economical and environment friendly solution of the Plastic Wastes. This material is made of a combination of single use plastics mixed with eco-friendly industrial waste. By using these blocks, construction costs are reducing from savings made by the material itself and from labour. Interlocking designs make it easy to build with and requiring less manpower to do so. The same principle can also be used in building sidewalk pavers, interlocking posts, fences and other construction materials.

INTRODUCTION

Plastic began to gain traction as an important consumer good. Plastic has now not only replaced numerous items made of wood, leather, paper, metal, glass, and natural fibres in various uses, but it has also aided in the development of whole new product categories, the environmental impacts of which vary greatly. Plastic bags discarded carelessly clog drains, impede soil pores, and disrupt ground water recharge. If used correctly, this resource has the ability to usher in a new era for you, society, and the globe as a whole. This easily accessible resource might provide a great source of cash for our community. By reducing plastic pollution, decreasing the need for new plastic items, and eliminating the Plastic garbage, as a source of raw materials, has the potential to significantly improve worldwide lifestyles.

It is estimated that the pace of expansion doubles every ten years because to fast population increase, urbanisation, developmental activities, and changes in lifestyle, which result in widespread littering on the environment. Hence, the disposal of waste plastic is a huge worldwide concern since it is non-biodegradable, and studies have discovered that plastic components can exist on Earth for 4500 years without breakdown.

Throughout the last two decades, new techniques have been added to the brick-making process to mitigate the disadvantages of previous ones. One such technology is the interconnecting brick. This is seen as an alternate component for sustainable development in specific applications, such as building or dwellings and water infrastructure. But, in order to present an example, Sustainable technology must be employed in its manufacturing to ensure a straightforward, environmentally friendly, time- and energy-efficient approach. This is expected to result in superior interlock bricks that are also more sustainable in a variety of ways.

SCOPE OF WORK

- Provision of a Sustainable Source of Raw Materials.
- Reducing hazardous material from the environment.
- Sustainable development with scrap plastic waste.
- Development of construction with scrap.
- Advance utilization of scrap in construction.



MATERIAL AND METHOD

3.1 Material

1) **Waste Plastic:** Plastic trash, also known as fictile waste, is the build-up of plastic objects (such as plastic bottles) in the earth's ecosystem, which has a negative impact on animals, wildlife habitat, and people. It also refers to the large volume of plastic that is not recycled and ends up in landfills or, in the developing world, in uncontrolled dump sites.

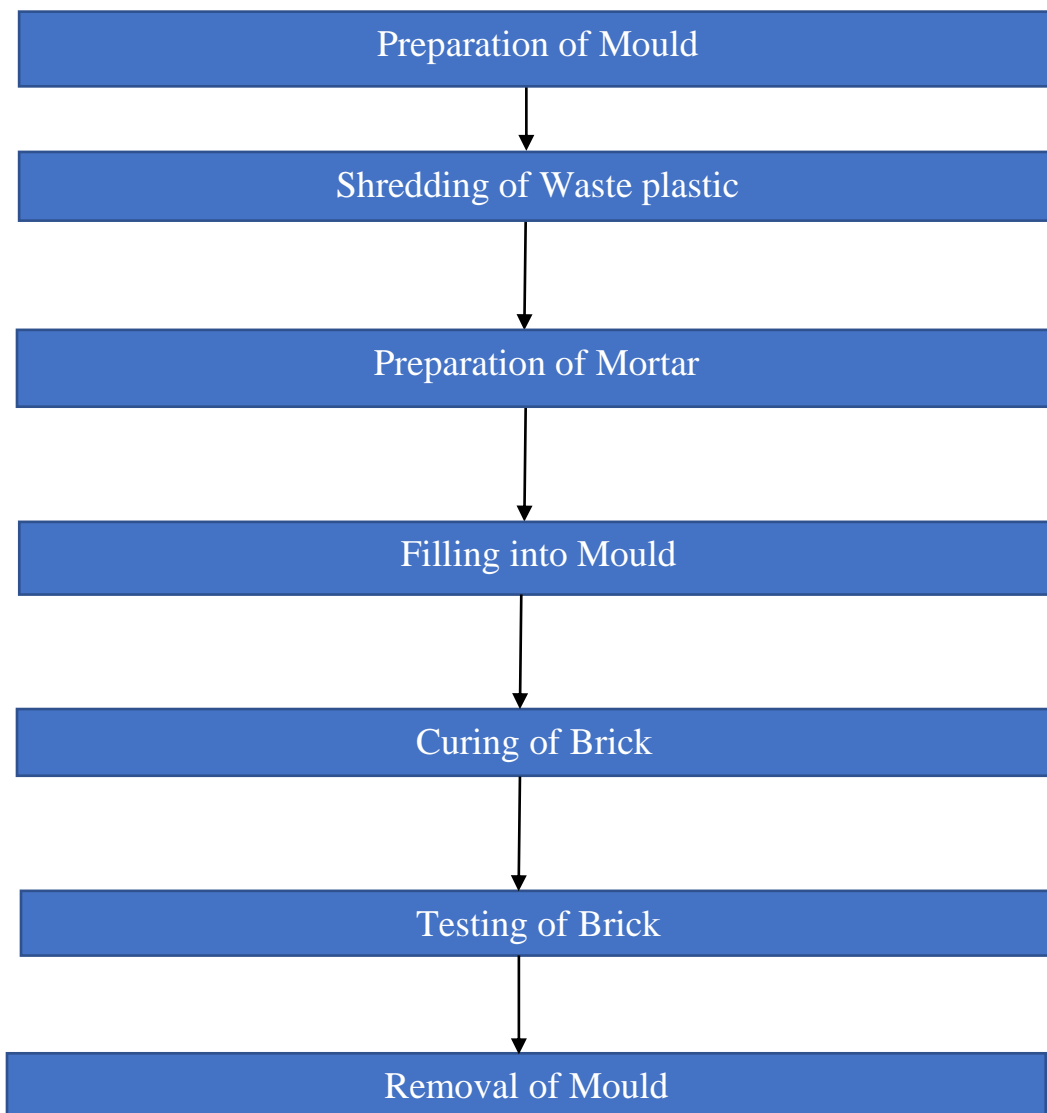
2) **Mould:** A container into which a liquid or material is poured. The liquid then solidifies (sets) into the same form as the container. In our capstone project, we're making use of a stainless steel mould.

3) **Cement:** - A cement is a binder, a chemical substance used for construction that sets, hardens, and adheres to other materials to bind them together. In this our capstone project we use M53 grade of cement.

4) **Fine Aggregate:** - Fine aggregates are essentially any natural sand particles won from the land through the mining process. Fine aggregates consist of natural sand or any crushed stone particles that are 1/4" or smaller. This product is often referred to as 1/4" minus as it refers to the size, or grading, of this particular aggregate.

5) **Water:** - We use locally available water for mixing our mortar.

METHODOLOGY





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USER'S ADOPTION OF E-PAYMENT SYSTEM IN HARYANA

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ABSTRACT

In today's global financial transactions, electronic payment systems have emerged as the most preferred method of payment. This is because it is timely, convenient, and effective. The goal of the study is to determine the most popular e-payment mode and what drives people to use the system. 250 participants in the study filled out the questionnaire. The respondents were chosen using a combination of stratified random and judgmental sampling techniques. According to the study's findings, banking cards and mobile wallets are the two most popular modes of e-payment. There was a paucity of infrastructure, so few people voiced their displeasure. Certain areas of Haryana are reluctant to adopt a cashless system because of a lack of digital literacy, which prevents people from using coupons and earning cashback incentives, security concerns, poor internet connectivity, and other unfavourable attitudes. According to the study's findings, educational institutions and other organizations routinely offer digital literacy programs in order to inform individuals about cashless transactions, particularly those in the low-income sector who are totally dependent on cash.

KEYWORDS: cashless payment; online payment; digital payment; mobile payment; electronic payment

INTRODUCTION

Technology has revolutionized payments and done away with the need for actual cash transfers. Money isn't king anymore. The world is changing into a society that is more empowered by technology due to the swift uptake of e-payments. The Indian government has been implementing a number of initiatives to support and promote electronic payments there. The government wants to establish a "technology-driven" society that is "faceless, paperless, and cashless" as the cornerstone of the "Digital India" campaign (Kolte & Humbe, 2020). Moreover, Haryana is actively encouraging a cashless society. The state of Haryana is being fully digitalized by the administration. E-payments come in many different forms and configurations. Use of debit and credit cards, online banking, mobile wallets, and other methods are a few of them. UPI is quickly becoming the most widely used and fastest-growing form of payment in India. It was created by the National Payments Corporation of India and is based on IMPS technology. The biggest attraction of this system is how easy it is to transfer money. On November 8, 2016, the Indian government launched demonetization, a significant social engineering move. With immediate effect, two large denomination currencies worth Rs. 1000 and Rs. 500—which together made up almost 86 percent of India's real currency—were demonetized. Due to demonetization, e-payment systems have quickly emerged as a means of conducting business on a worldwide scale. They provide a quick and easy way to acquire or sell goods and services. E-payments provide benefits in terms of cost, convenience, and speed of transactions, but they also come with a variety of drawbacks, including infrastructure requirements, digital literacy requirements, and risks associated with data security and cyber theft. The current survey looks at the most popular payment methods and focuses on the various reasons that motivate people to make electronic payments.

REVIEW OF LITERATURE

"Paper-free Payment Systems in India—An Analytical Analysis," a study conducted by Subramanian in 2014, analyzed how electronic payment systems had proven to be advantageous in India over the course of the investigation. Also, this poll discovered that all electronic forms of payment have significantly increased as compared to conventional paper-based payments like checks and draughts. Kumar (2015) conducted research on "A Study of the Growth Trend of Cashless Transaction Systems." It became clear that in addition to explaining the Cashless Transaction System to users, they also needed to be made aware of its unique features. Visa and Mastercard routinely advertise their products, which increases awareness. Major delivery channels, including net banking, mobile account management, and others, have created a win-win situation for clients by providing outstanding comfort and a variety of options. Banks have employed innovation to reduce costs while boosting productivity, profitability, and customer service at the same time. In their research article titled "E-Payment System on E-Commerce in India," Kaur and Pathak (2016) provided a detailed description of the many types of cashless transaction mechanisms, along with information on how they



operate and are processed. They have found that, while difficult, recommending the best payment method is not impossible. Some systems are quite similar, with only minor differences. As a result, a number of variables affect how e-commerce payment methods are used. A study on mobile payment technologies was examined by Jeffus et al. in 2017. In the meantime, several technologies are competing for acceptance in the retail market. While each service has benefits and drawbacks, one seems to be gaining popularity in the market. They consider a variety of viewpoints before drawing a conclusion about the direction that mobile electronic payment will take. Ranjith et al. reviewed “A Literature Analysis of Consumer Perspective on Digital Payment Methods in India” in 2021. In this era of interconnected technology, the study aims to assess customers’ opinions about the security of online transactions and digital payments. The study is qualitative in character and analyses the idea of digital transactions through literature review. The results show that digital transactions are legal in India and that usage is rising annually. The study established the benefits and difficulties that consumers encounter when using digital payments. Pandey (2022) conducted a study on the digital payment system and consumer perception. The study looked at the evolution of various digital payment systems over time as well as how COVID-19 affected Indian digital payment systems. According to the data, in addition to the increase of 44.2% that occurred the year before, digital payments in India saw a significant increase of 26.2% in volume from 2020 to 21. Furthermore, it has been observed that during the COVID-19 epidemic, individuals shifted to this mode out of concern for health constraints and an aversion to cash transactions, which resulted in an increase in the usage of various digital payment systems.

RESEARCH OBJECTIVE

- To find out the most preferred mode of e-payment by the users.
- To find out the reasons which motivate users to use e-payment.

RESEARCH METHODOLOGY

The current study is based on primary data. A developed questionnaire was sent to several e-payments users in various districts of Haryana via emails and WhatsApp to collect primary data. The study’s methodology is empirical. 250 respondents entered their responses. The data was examined using SPSS version 21 software.

DEMOGRAPHIC DETAILS OF RESPONDENTS

The demographic statistics for the users are shown in the table below:

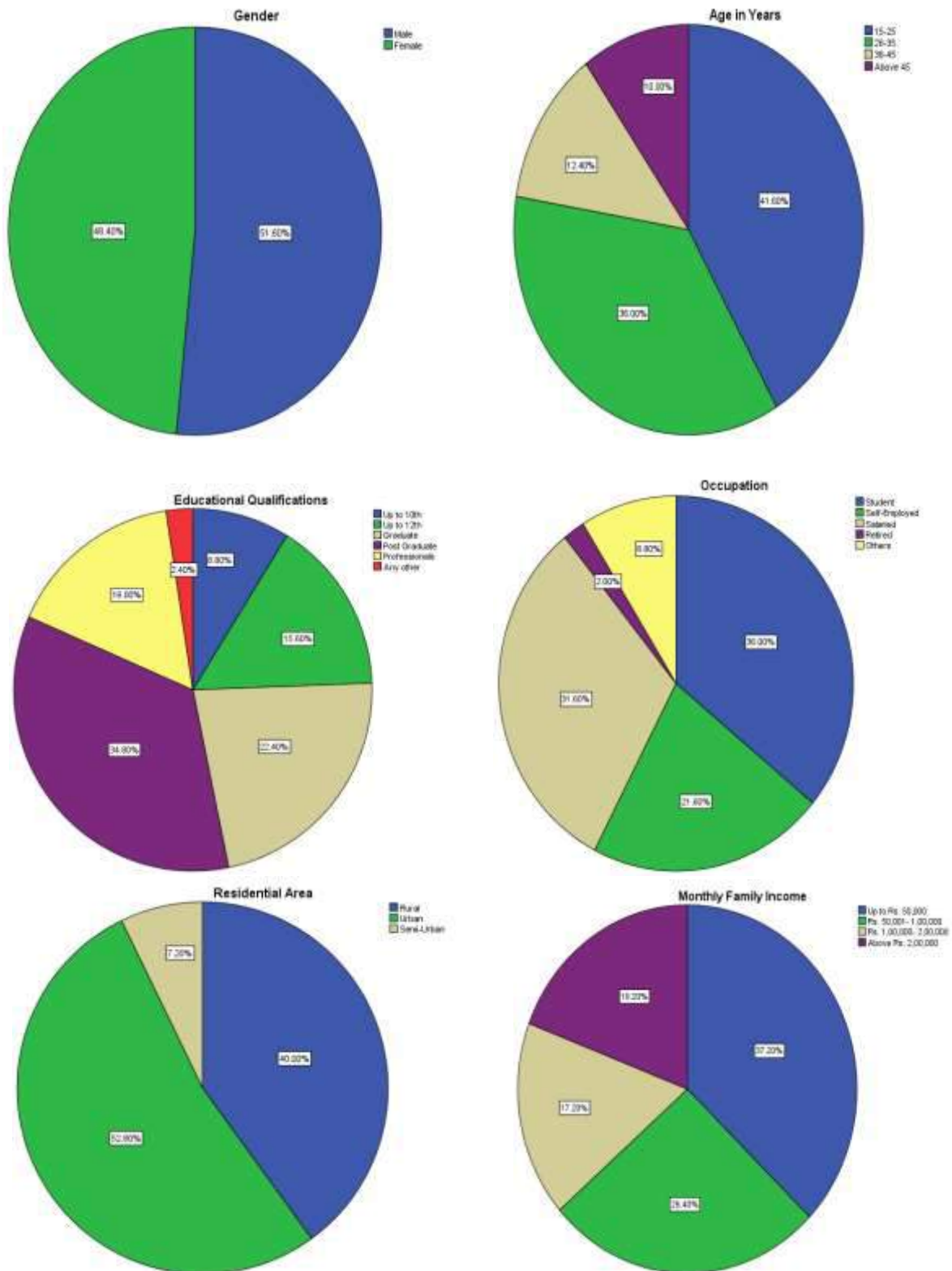
Table 1. Demographic Details of Respondents

Variable	Characteristics	Frequency	Percentage
Gender	Male	129	51.6
	Female	121	48.4
Age (Years)	15-25	104	41.6
	26-35	90	36.0
	36-45	31	12.4
	Above 45	25	10.0
Educational Qualifications	Up to 10th	22	8.80
	Up to 12th	39	15.6
	Graduate	56	22.4
	Post Graduate	87	34.8
	Professionals (CA, CS, Dr., etc.)	40	16.0
	Any other	6	2.40
Occupation	Student	90	36.0
	Self Employed	54	21.6
	Salaried	79	31.6
	Retired	5	2.0
	Others	22	8.80
Residential Area	Rural	100	40.0
	Urban	132	52.8
	Semi-Urban	18	7.20
Monthly Family Income	Up to Rs. 50,000	93	37.2
	Rs. 50,001 - 1,00,000	66	26.4
	Rs. 1,00,000 - 2,00,000	43	17.2
	Above Rs. 2,00,000	48	19.2

Source: Compiled from Primary Data



Figure 1. Demographic Details of Respondents



Source: Compiled from Primary Data



Table 1. reveals the demographic details of the respondents. 48.4 percent of users were female, while 51.6% were male. 41.6% of users are between the ages of 15- 25, 36% are between the ages of 26-35, 12.4% are between the ages of 36-45, and 10% are above 45. 8.80% of users had completed the 10th grade, 15.6% had completed the 12th grade, 22.4% had graduated, 34.8% had completed a postgraduate degree, 16% of users were professionals, and 2.4% had fallen into another category. In terms of residential location, 40% of users reside in rural areas, 52.8% in urban areas, and 7.2% in semi-urban areas. In terms of monthly family income, 37.2% of users fall under the Rs. 50,000, 26.4% fall between Rs. 50,001 and Rs. 1,000, 17.2% fall between Rs. 1,00,001 and Rs. 2,000, and the remaining 19.2% fall over the Rs. 2,00,000.

ANALYSIS OF VARIOUS MODE OF E-PAYMENT

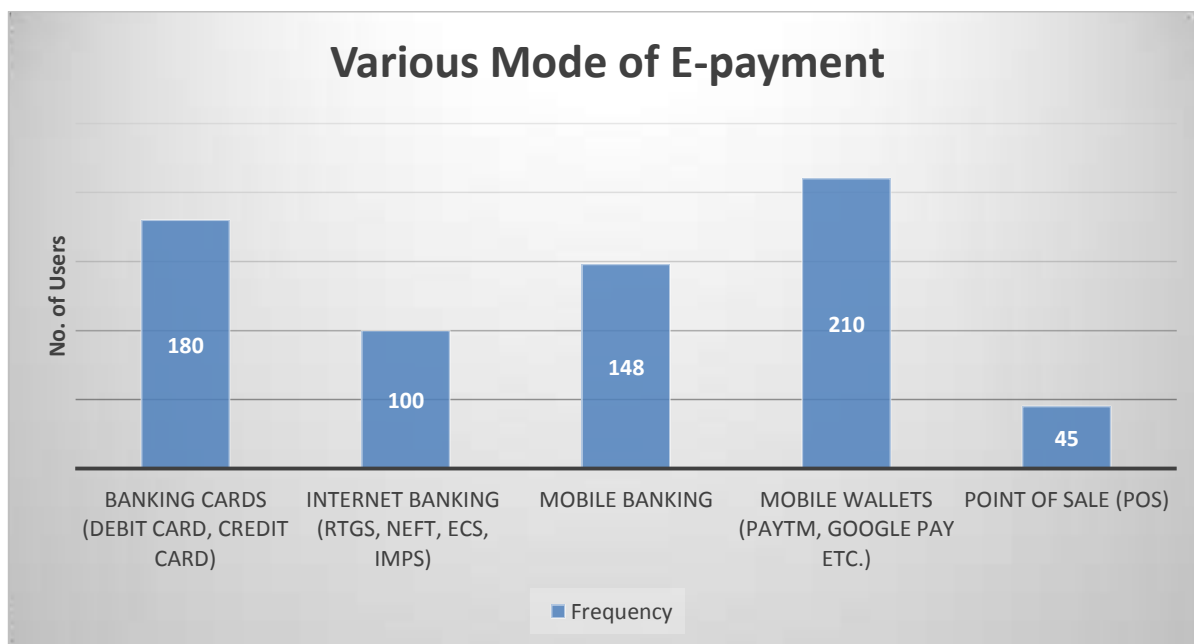
Table 2. lists the various e-payment modes along with their frequencies, percentages, and rankings. The respondents were asked to select among the various e-payment options that they utilize to conduct their financial transactions. The majority of respondents ranked mobile wallets first (N = 210, 84%), with banking cards coming in second (N = 180, 72%). Mobile banking (N = 148, 59.2%) and Internet banking (N = 100, 40%) are the two next-most popular e-payment methods. Point of Sale is the fifth most prevalent mode (N = 45, 18%).

Table 2. Various Mode of E-payment

S. no.	Various Mode of E-payment	Frequency	Percentage	Ranks
1	Banking Cards (Debit Card, Credit Card)	180	72	2
2	Internet Banking (RTGS, NEFT, ECS, IMPS)	100	40	4
3	Mobile Banking	148	59.2	3
4	Mobile Wallets (Paytm, Google Pay etc.)	210	84	1
5	Point of Sale (POS)	45	18	5

Source: *Compiled from Primary Data*

Figure 2. Various Mode of E-payment



Source: *Compiled from Primary Data*

REASONS THAT MOTIVATE USERS TO USE E-PAYMENT

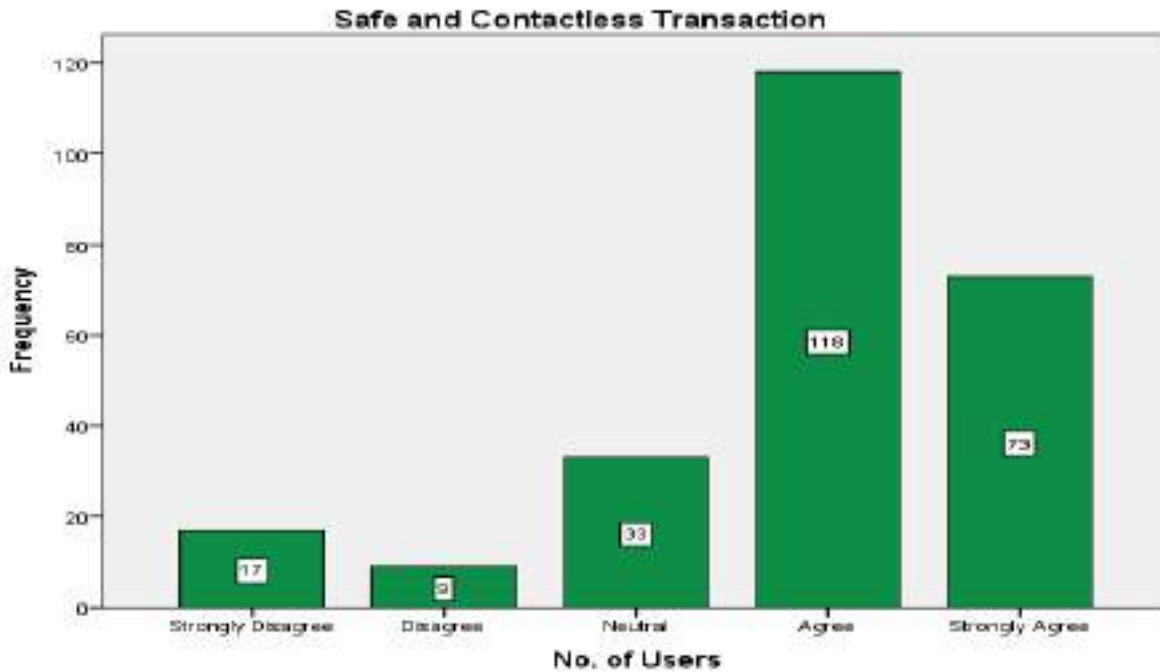
Users are motivated to use e-payment for a variety of reasons. These reasons were given in a questionnaire using a five-point Likert scale. Users are required to express their opinions on the stated claim. Moreover, the following statements and responses are shown in a bar chart:

- **Safe and contactless transaction:** As the name suggests, contactless payments are those in which the purchaser does not need to touch any actual currency. Its use is expected to increase in the coming years due to the COVID-19 pandemic, and health and hygiene concerns. It has also proven to be the most practical type of payment method. Figure 3. reveals that the



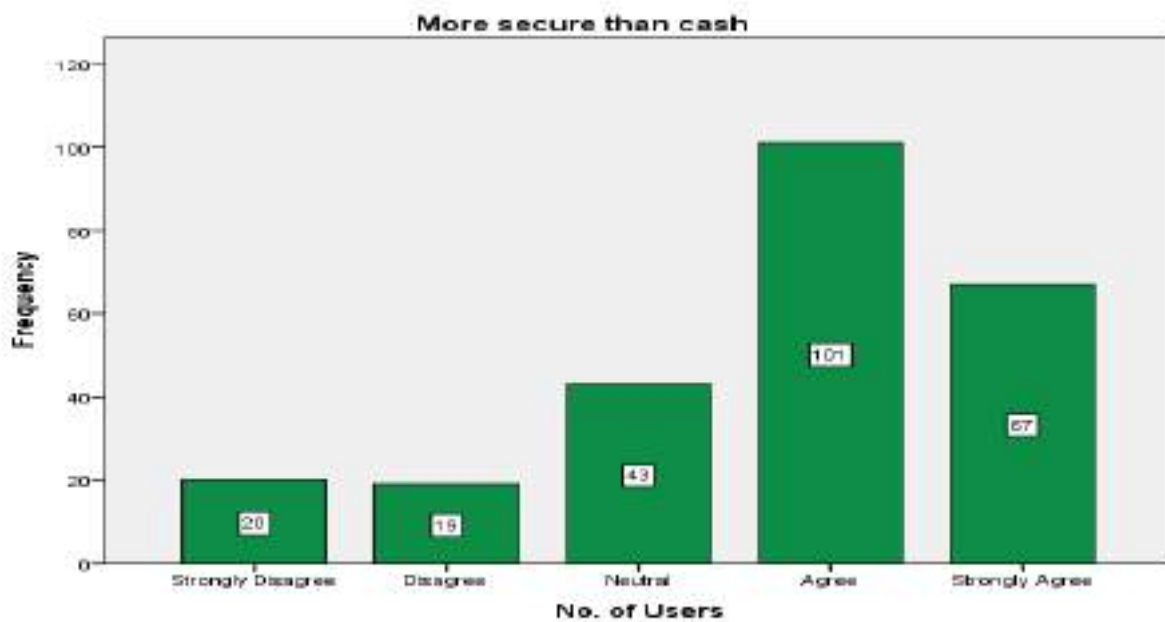
majority of Haryana respondents agreed with the statement that contactless electronic payments are secure. There are 33 responses that are neutral about this statement, while 17 people strongly disagree with it.

Figure 3. Responses towards Safe and Contactless Transaction



➤ **More secure than cash:** Cash is practically untraceable, a handy weapon for criminals, and easier to exploit than electronic currency, which can be rapidly shut down if it gets into the wrong hands. As a result, electronic payments are more secure than cash. Advocates of electronic transactions often highlight how much easier it is for people and businesses to manage their money on a daily basis. There is no longer a need to keep actual currency in storage or to withdraw or deposit it. Figure 4. shows that 101 respondents agreed that using electronic payments is more secure than using cash, 20 strongly disagreed, and 19 disagreed because they might have had an unpleasant experience using electronic payments.

Figure 4. Responses towards More secure than cash





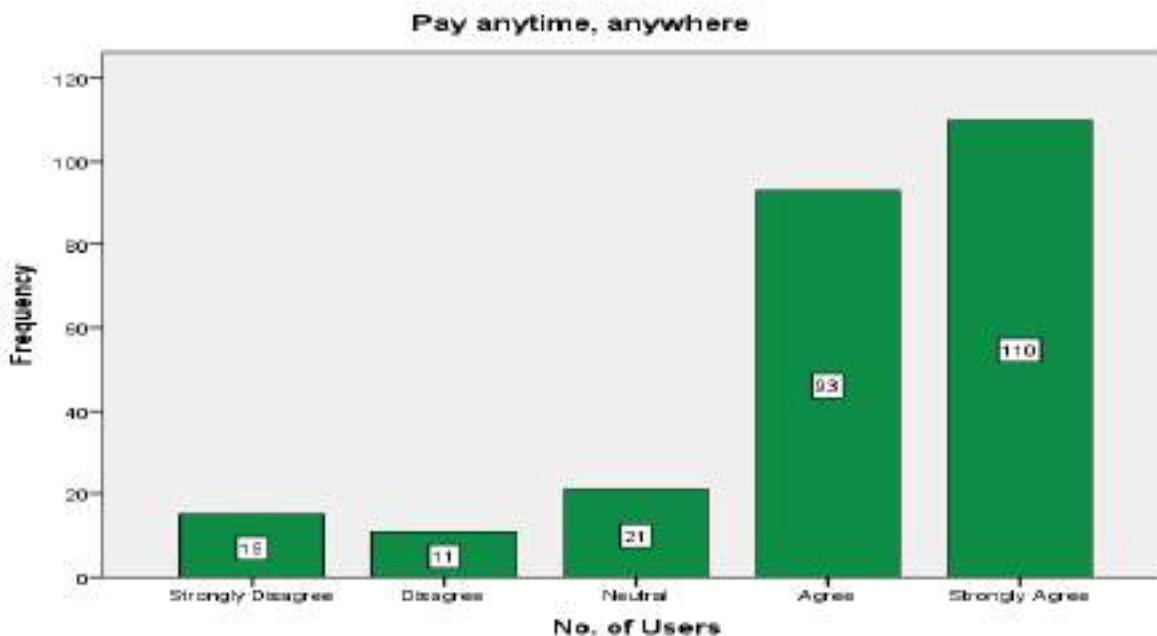
➤ **Access to coupons/rewards/discounts:** Customers that use online payment apps and e-wallets are frequently offered coupons, rewards, and discounts. Many e-payment banks offer tempting cash-back incentives. Customers benefit from this, and it serves as an encouragement to stop using cash. Figure 5. reveals that 94 respondents agreed with this statement, 59 respondents had a neutral viewpoint, and 27 respondents disagreed. Lack of digital literacy may be the source of disagreement because users are unable to take advantage of the benefits offered by coupons.

Figure 5. Responses towards Access to coupons/ rewards/ discounts



➤ **Pay anytime, anywhere:** Traditional payment methods like cash are substantially slower than electronic payments. You are not restricted by time or place when making online payments. Paying is simple and accessible from anywhere in the world at any time. Figure 6. demonstrates that the majority of respondents believe that consumers can make payments whenever and wherever they choose via e-payment. Due to the fact that Haryana's rural respondents lack internet availability, just 15 respondents strongly disagreed, which may be cause for concern.

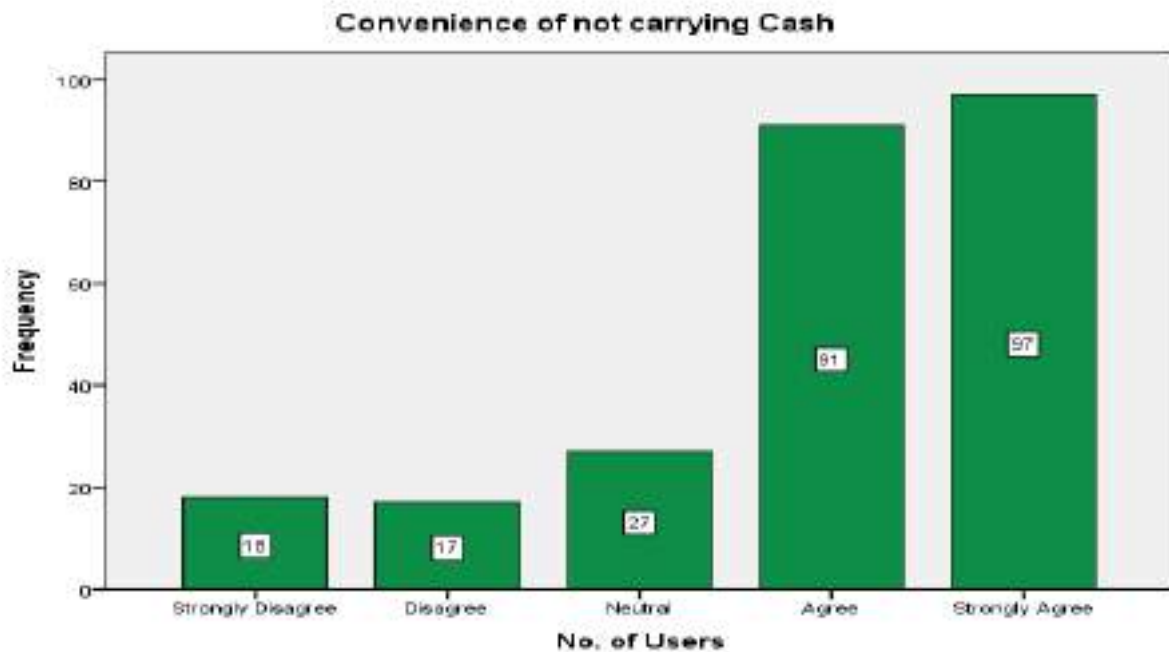
Figure 6. Responses towards Pay anytime, anywhere





- **Convenience of not carrying cash:** E-payments should be prioritized based on how easily they can be made and received. Online payments eliminate the need to carry cash and also save time because customers and company owners do not need to stand in line to buy train tickets, toll road tickets, etc. Due to e-payment, cash theft is no longer a concern in modern society. Figure 7. illustrates that the majority of respondents strongly agreed with the stated opinion. Because electronic payments are not accepted in many places in Haryana, such as on the government's buses, 18 respondents strongly disagreed with this assertion. In some areas of Haryana, cash is still king.

Figure 7. Responses towards Convenience of not carrying cash



FINDINGS

The outcomes show that individuals are becoming more accustomed to electronic payments and think that a cashless system is simple and practical, reduces the risk of carrying cash, and speeds up transactions. Mobile wallets are the most popular e-payment method, followed closely by banking cards. People are encouraged to use e-payment for a variety of reasons. Due to a lack of infrastructure, only a few people expressed dissatisfaction. The lack of digital literacy, such as not knowing how to access coupons and earn cashback incentives, security issues, inadequate internet connectivity, and other negative attitudes are preventing some sections of Haryana from embracing a cashless system. By minimizing corruption and illicit activity, cashless transactions can boost the nation's economy, but there are some misconceptions about electronic payments that prevent people from embracing them. In fact, there is a long way to go until everything is digital. And India is progressing admirably and in the correct path.

CONCLUSION

After demonetization and COVID-19, the door to electronic payments has opened. To get India ready for a cashless economy, the government needs to take several regulatory measures to safeguard cyber security from internet frauds. In order to educate people, especially those in the low-income segment who are completely dependent on cash, about cashless transactions, digital literacy programs are frequently offered through educational institutions and other organizations. The lack of financial literacy discourages people from using digital platforms, and even those who are educated find it difficult to transact money online. As a result, the electronic payment system needs to be improved, simplified, and made more user-friendly in order to increase the safety and security of consumer financial transactions. Moreover, digital payment systems should reduce customer transaction risk and take the necessary steps to avoid unjustified delays in their procedures.

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FROM PHILIPPINES TO THE UNITED STATES: REFLECTIONS OF FULBRIGHT FOREIGN LANGUAGE TEACHING ASSISTANTS

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ABSTRACT

Fulbright Foreign Language Teaching Assistants (FLTAs) all over the world play a vital role in teaching language and promoting culture. Every year, the Fulbright Commission sends hundreds of FLTA to various academic institutions in the United States to teach their language and to raise awareness about their culture. For 2022-2023, five Filipino scholars were designated to the states of Washington, Michigan, Pennsylvania, California, and Illinois. This autoethnographic paper reflects these scholars' journey as teachers, students, and cultural ambassadors. Presented herein are their insights on their classroom and community encounters and their overall experience with the FLTA program of the Fulbright Commission. This serves not only as a diary that future FLTA scholars can base on but also a compendium of the scholars' lifeworld that can give the Fulbright Commission with its counterparts in the home country and even the host institutions ideas on potential program improvements in the future.

KEYWORDS: *Fulbright, Foreign Language Teaching Assistant Program, exchange programs, autoethnography*

INTRODUCTION

The Fulbright Commission provides opportunities worldwide for scholars to study, teach, and promote culture in the United States. One of these programs is the Fulbright Foreign Language Teaching Assistant (FLTA) program sponsored by the United States Department of State Bureau of Education and Cultural Affairs (ECA). This program immerses scholars to a different kind of cultural experience by deepening their understanding of the American culture while teaching their home language and promoting their culture (Fulbright Commission, 2023). For nine or ten months, chosen scholars study, teach, and serve as cultural ambassadors.

Annually, the Philippine-American Educational Foundation (PAEF) selects young language educators, aged between 23 to 29, to undergo the nine-month program in teaching Filipino language and culture in the United States. The 2022-2023 cohort is composed of five scholars assigned to various universities across the U.S. As per the Fulbright Commission (2023), the selection process includes complying with all the required documents, writing essays, undergoing rounds of interviews, and passing a required TOEFL or IELTS test.

Scholars experience different rewarding and challenging encounters in their journey in the Fulbright program, and these need to be documented. Perreault and Dimitrova (2022) cites that Fulbright experiences are significant in addressing world issues. This poses the necessity to continually improve programs such as the FLTA to provide future scholars better experiences. Also, documenting the experiences of young language educators will also help in creating a better understanding of the needs for improvement in the field of language teaching (Apercho & Payot, 2022).

In this paper, the researchers discuss their experiences of being FLTA scholars. They talk about their rewarding and challenging experiences and reflect on their overall program journey. This paper is hoped to provide Filipino educators insights on the program and expectations when undergoing this. This paper can provide ideas on what future scholars, even from other countries, a basis that will give them ideas how to best maximize learning opportunities while in the United States.



METHOD

This biographical research documents the researchers' experiences as Fulbright FLTA scholars in the United States of America in 2022-2023. Due to the more personal approaches of eliciting information which consisted of reflective writing and photovoice, the autoethnographic method of qualitative research was used. The reflections included in this paper were based on the researchers' experiences in the Fall 2022 semester only or the first five months of their stay in the U.S. The analyses of the reflections were also based on the Language Socialization Theory of Uzum (2017). Biographical, contextual, and dialogic factors influence a teacher's beliefs and practices. *Biographical factors* include the following: (a) the teacher's personal history, (b) past experience as a learner of other languages, and (c) professional experience as an English as a Foreign Language (EFL) teacher in home country. On one hand, *contextual factors* pertain to those in the U.S. educational setting such as (a) teacher's interactions with students and (b) interactions with institutional resources. Lastly, the *dialogic factors* are composed of the teacher's making sense of theory in the practice of teaching such as (a) theoretical knowledge base and (b) the interplay of theory and practice.

RESULTS AND DISCUSSION



Figure 1. The Fulbright FLTA Cohort (2022-2023)- Philippines

Ryan in California

Any aspiring Fulbright scholar would have a positive impression about the Fulbright programs such as the FLTA. This is why Ryan sees the FLTA program an opportunity for him to experience international education. He narrated how he was inspired by the experiences of his former professors. Ryan believed that his experience being an FLTA scholar is rewarding in many aspects such as personal and professional. He expressed that the FLTA experience gave him the chance to enjoy travelling abroad and meeting people from various profiles.

One aspect that he loved the most about his FLTA journey is being able to travel around the U.S. and visit different communities. For him, this aspect is insightful as this allowed him to experience new things in life. Ryan also narrated how he was able to take part in professional opportunities that he considered rewarding as well. This taught Ryan important skills useful in his line of work back in the Philippines. Networking is also one of the advantages of having been involved in this kind of professional development activity. He also pointed out how important this chance has been in honing his teaching skills, especially when it comes to considering linguistic and cultural diversities in a language classroom.



Besides the academic and professional growth that Ryan experienced being an FLTA scholar, rewarding teaching experiences are also part of his joys. His exposure to an American classroom allowed him to better appreciate diversity and inclusion. He also became more passionate about teaching the Filipino language. This projects the fulfilling experience Ryan had as an FLTA scholar in California. He appreciated more how fulfilling it is to see learners become more interested in learning the Filipino culture. Also, he saw it as a learning opportunity to have taught with someone in a classroom who has unquestionable expertise in the field of ethnic studies, which is a useful discipline in Filipino language and culture teaching as well.

In a reflective writing, Ryan also shared three instances when he felt that he was at his best in delivering his functions as an FLTA scholar. For him, improving his multimodal communication skills, helping students connect to their roots, and sharing about the mission of Fulbright are rewarding.

Apparently, FLTA experience for Ryan had been so rewarding. As what he shared, his overall experience at his host institution is “very fulfilling and evolutionary.” However, he also expressed some challenges that impacted him as a Filipino scholar. Being foreign to the place where he serves as a teaching assistant (TA), he encountered some difficulties as well. For example, he noticed how students are already knowledgeable of their identities as Filipinos because of their prior exposure in history classes and immersion in various community events. Aside from this, he also observed how challenging it was to communicate with the people around because he has been used to academic English registers rather than the casual ones. He also mentioned that there were problems with student attendance.

Looking closely into Ryan’s personal embodied experiences, it can be gleaned how he had experienced both rewarding and challenging circumstances that molded him to being a better professional. His exposure to these allowed him to better appreciate his journey as an FLTA scholar and see the opportunity for him to build networks, deepen knowledge, and be more aware of his potential improvements as a language educator.

As an FLTA scholar, one primary function is to either serve as a teaching assistant or a primary teaching in a language classroom in a host institution. For Ryan’s case, he served as a teaching assistant, providing help to a primary instructor who takes charge of the Filipino classes. As a TA, Ryan also helps in implementing language- and culture-related programs that help in promoting the Filipino language and culture in the academic community. As a TA, Ryan did encounter some learning challenges as well, as observed in his students’ academic performance and learning progress in class. Ryan noticed how students had a challenging time focusing on their language classes due to their divided attention between work and school. Working at the same time schooling is common in the U.S., so Ryan saw this as rather normal. However, this reality also impacts their wellbeing as students. As a TA, Ryan works closely with his primary teacher and supervisor to ensure that concerns related to student learning would be addressed appropriately.

Ryan employed various means to ensure that problems are easily resolved. Communicating and collaborating with his primary teacher was his primary way in pointing out potential improvements. Another is soliciting feedback from students, which Ryan saw as one effective tool to assure students that they were also given the voice to suggest points for improvement or adjustments as far as language instruction or curriculum is concerned.

Overall, Ryan considers his entire FLTA experience as a platform to build connections. He realized that what Fulbright does is to bridge the gaps among nations, and it has been successful in bringing people more closely to experience more cultural exchanges that truly matter.

Representing the Philippines on the world stage and being a cultural ambassador gives me a sense of pride and honor. The Fulbright FLTA experience has given me an opportunity to explore the world and learn things from a new perspective, yet the most rewarding was being able to show the world the beauty and majesty of my country.

Ryan believes that the entire Fulbright FLTA experience taught him the importance of making authentic connections where understanding and respect are both fostered. In Fulbright, this is what he experienced because he met people along the way that made him see his worth as a language educator and a cultural ambassador of the Philippines. His overall experience manifests a reflection that is heavily based on not only what made him joyful but also on what made him tearful and frustrated. The complement and supplement relationship between what is rewarding and challenging is what Ryan believes to have made his Fulbright journey even more meaningful.

Candice in Michigan

Candice sees the Fulbright Program as a prestigious scholarship opportunity. More than just being an academic platform, Candice considers Fulbright as an avenue to be engaged with people and to foster diversity and inclusion. This was her impression of the FLTA program prior to her application. Her experience as a Fulbright FLTA scholar has been fulfilling as well,



considering that she made friends and was immersed to a totally diverse group which made her appreciate cultural diversity even more.

For Candice, her FLTA experience was a way for her to motivate herself even more to do her best in her Filipino class given that her students work hard not for economic reasons but for cultural and familial purposes. As mentioned, Candice enjoyed the moments when she met wonderful connections and created friendships with these individuals. She felt that she had a strong support system in her journey as an FLTA scholar in Michigan whenever she was around these peers.

Her rewarding experiences were not purely personal as she also had the chance to enjoy a lot of fascinating things when it comes to her professional or academic growth. She narrated how her exposure to American education shaped her research skills as a language educator and how this made it possible for her to establish connections with scholars in the field of linguistics and language education.

Candice noticed the values and attitudes that her professors and classmates showed in class. This made her even more motivated to improve her craft and to connect more with individuals who could help her grow as a professional or an academic. She also noted how her professors' teaching styles created an open room for everyone, especially her, to share insights on concepts discussed in class. For her, these styles fostered critical thinking; and she appreciated this so much.

Candice functions as a primary teacher in the host institution where she was designated at in Michigan. As a primary teacher, it was her role to devise teaching contents for her students to learn the Filipino language and culture. As a primary teacher, Candice enjoyed the rewarding experiences that went with her functions as an instructor.

Since she has a small class, Candice saw this as a chance to form closer academic relationships with her students, giving them much attention in teaching them language and culture. One good thing about this setup that she appreciated was the opportunity to be more innovative and dynamic with the teaching strategies. She was able to implement fun activities that made the class even more meaningful for the students.

Further, Candice shared about three instances where she felt that she did well in her functions as an FLTA scholar. For her, these experiences were fulfilling. The first one was her speaking engagement with two other FLTA scholars to promote Filipino language and culture in a school in Washington State. This speaking event allowed Candice to share her insights on Visayan culture. As an FLTA scholar, she felt that this was one way for her to promote her local culture as well. Another fulfilling event that Candice shared was a forum that she considered memorable because of an encounter with one of the attendees. This event was insightful for both Candice and the student, and in this encounter, Candice showed the values that Filipinos possess when it comes to being appreciated. Another concrete example of Candice sharing the Filipino culture to her students was during a special event where *arnis*, a Filipino sport, was taught. Promoting culture is one of the functions of an FLTA scholar; hence, teaching Filipino sports and games is one way to effectively share about the wonderful practices that Filipinos have. Candice sees these events fulfilling not only because she was able to teach the language and culture but also because she touched lives in ways she might have not imagined.

Candice considers her overall FLTA journey "challenging but rewarding," so it is also vital to talk about her challenging experiences. Her challenges dwelt in instruction such as the content, guidance, and materials. First, she talks about how unnatural it had been for her to teach the Filipino language considering that she teaches English back in the Philippines. She shared,

I have always taught English. Participating in the Fulbright program was the first time I had to teach Filipino, my first language. I assumed that it was going to be easy because it was my first language, but I was wrong! Teaching Filipino felt like having to teach someone how to breathe. How do I teach something that comes so naturally to me? Sometimes, students would ask me grammar questions and I wouldn't know how to answer because it had never occurred to me to ever think about the rules governing Filipino.

One challenge that Candice encountered was the difficulty in talking about the Filipino grammar. Although Filipino is her first language (L1), teaching this seemed to be unnatural and challenging on her end as she studied English for her undergraduate degree. For her, getting acquainted with the grammatical rules and teaching them to the students was one of the hard parts being a primary instructor. Aside from this, she also expressed how the absence of a primary instructor became a problem for her because she had no one to guide her as far as Filipino language teaching was concerned. Although Candice shared about having a great support system in the community, she felt that she lacked guidance in teaching Filipino itself. Because of the disparity in time since the last year the language was offered at her school, she found it very challenging to implement a curriculum that was already in effect long time ago and had commenced its implementation only five years after. As an FLTA scholar, Candice saw that the lack of guidance in this aspect made her adjustment to her classroom instruction challenging for her. In relation to this, Candice also considered the lack of enough materials as one of her concerns. The lack of instructional materials such as books that are levelled to the students' language needs was one of Candice's challenges as a primary instructor. Although proper teaching approaches could have been used,



the inappropriateness of teaching and learning materials and references could also impact the quality of learning, impeding language learners from effectively learning the target language, e.g., Filipino. Hence, it is important to properly identify the references to be used in class to ensure that there would be alignment of goals and expected competencies from the language learners.

Candice, reflecting on her overall experience, she felt bittersweet because she was about to end her journey as an FLTA scholar and would be going back to the Philippines. She also felt fulfilled, realizing that she made it to the prestigious Fulbright FLTA program and would be completing it soon. For her, the overall experience of meeting people and communities that she loved so much in Michigan made her stay in the U.S. more rewarding.

Gianinna in Pennsylvania

Gianinna, just like any other professional educators, sees the Fulbright program as a prestigious opportunity. For her, the FLTA program is a way to engage educators to become global citizens through immersing them to another culture. Unlike Ryan and Candice, Gianinna prepared for her application for a long time. This was her mechanism to ensure that she would get a spot in the application process. She believed that her FLTA journey would bring her growth and develop her as a more competent educator in the Philippines. Gianinna saw her experience rewarding because she was able not only to pursue her volunteer works but also to travel in her dream destinations in the U.S. For her, the whole experience was like hitting two birds with one stone in which she got to have other things checked in her bucket list. Her experience served as a door for her to pursue volunteer works in Philadelphia. In fact, she was able to commit her time and service in helping homeless Americans through organizations. This is why she became very active in volunteer works alongside her FLTA functions in her host school. Gianinna had also been invited in numerous speaking engagements that allowed her to share her skills, identity, and culture as a Filipino. Invitations from institutions in the Philippines and the U.S. flourished, so she had numerous platforms to share about her identity.

Her experience in these speaking opportunities sharpened her professional skills as well when it comes to doing presentations, and this became possible because of her FLTA journey that connected her to institutions. Because of these chances as well, she was supplied with the opportunity to talk about her local identity as a Filipina from Marinduque. Apart from these, Gianinna also sees her teaching journey as an FLTA rewarding. She felt that she was lucky because of her hardworking students in an Ivy League school. More than the excellent academic performance showed by her students, the close ties she was able to form with them was one thing she was grateful for.

One fulfilling part in her teaching stint was being able to teach Filipino students and reconnect with their roots. Also, she felt rewarded knowing that she had students from other cultures who also piqued interest in understanding Philippine language and culture. Another aspect of her teaching that made her more fulfilled is the mutualism between her and her class who also made her learn more about the American culture and adjust to the kind of life in Philadelphia.

Giannina also shared more about the rewarding parts of her teaching journey as an FLTA scholar. First, she believes that her role as an FLTA scholar is essential in progressing her students in learning the language and culture. She also finds it rewarding to have been invited in schools in the community and even in New York to discuss Filipino culture. Above all, her volunteer works complement well with her purpose of being a Filipino cultural ambassador in Philadelphia because she got to showcase the compassion and *bayanihan* spirit that Filipino communities possess.

Although Gianinna considers her experience “pleasant and rewarding,” she also had her share of struggles in teaching, especially when it comes to defining her role as either the primary teacher or the teaching assistant. One salient struggle that Gianinna had was with her primary instructor because it was the first time that the institution hosted a Fulbright FLTA scholar for Filipino. Since it was the first time yet, Giannina saw it as rather a potential improvement for future scholars. Since for FLTA scholars, clearly defined functions and scope of work are important, and Gianinna might have not been provided these, hence the struggles in her initial months of teaching in her host school. One good thing that she acknowledged though was the prompt response by her supervisor that resulted in the resolution of the existing confusion and avoidance of future problems as far as teaching was concerned.

Although Giannina sees her FLTA journey challenging because of missing her family so much and hoping that she was enjoying all the opportunities in the U.S. with the people she loves. She also had deep reflection as regards her overall FLTA experience, and this is encapsulated in this statement.

Life as a scholar in the United States comes with its own rewards and struggles. But I chose this photo because I feel that it illustrates my sense of accomplishment and fulfillment with actually being here; of being granted to opportunity to learn and work in a country that holds so much promise for young people like me. I have random moments of reflection where I am struck by thoughts of how I never thought that an island girl raised in poverty would someday be representing her community



and her country and working with an Ivy League university. I am simply just happy to be here, and I am proud of what I have done so far.

Gianinna's experience is fulfilling for her because she realized how she rose from poverty and became an educator given the rare chance to represent the Philippines in a Fulbright program. For her, being an FLTA scholar is such a prideful moment; and she feels so proud for having accomplished this amidst the challenges she had to face before the selection process. She also realized how blessed she was considering that not everyone is given the chance to travel to the U.S. to teach, study, as well as travel.

Cristina in Illinois

Cristina, also called "Tin" by her friends, is an FLTA scholar in the state of Illinois, specifically in DeKalb. She sees her Fulbright experience as something prestigious and well-known to many in the academe. Her impression of the FLTA program led her to thinking that this was a rare chance that not everyone could have in their professional life. In fact, Tin sees the FLTA opportunity life changing. Tin also narrated how this FLTA stint could become one way for her to relax for a while from her burdensome job back in the Philippines. Tin added how enriching she envisioned the FLTA experience would be. She considered this stint as one good platform for her to promote the Filipino language and culture.

Apparently, her impressions of the FLTA journey became a reality when she herself had rewarding experiences on a personal level. First, she noticed how self-discovery became evident in her experience as an FLTA scholar in Illinois. This experience made her somehow realize her struggles adjusting to a new environment as well. The communication issues became apparent for her, but she managed it well by regaining herself and reconnecting with her inner self. After this event, she went back to being productive; hence, she successfully managed an activity that she considered rewarding.

Tin also considers her active involvement in various organizations rewarding as it was one way for her to recharge herself, especially her social battery. For her, appreciation is fundamental in achieving effective work productivity. Apart from her active involvement in curricular activities, she also values her experiences with the American education, having taken two credit courses in the Fall 2022 semester.

Tin also enjoyed her "firsts" while undergoing her FLTA journey. She remembered those times when she really enjoyed trying new things in the U.S. and doing activities that she never tried before. Apart from these experiences, Tin also found belongingness in a totally foreign place. Her community in DeKalb helped her a lot in adjusting to the American culture. She did not have a hard time battling her homesickness because she felt that she had like a home around her. She also mentioned how this support system aided her in addressing her anxiety and other mental health concerns.

Her rewarding experiences did not revolve around her personal life alone as she also had those in her professional or academic life. For example, she mentioned how the FLTA experience helped her a lot in molding her language teaching skills and provided her with various opportunities to share her language and culture. Although Tin admitted that she had no experience teaching the Filipino language back in the Philippines as she is an English language faculty by profession, she was still grateful knowing that the FLTA experience made her more insightful as far as teaching is concerned. She also felt that her journey as a scholar gave her more professional and academic development platforms such as conferences and fora which served as her whetstone in improving her skills. For example, her experience in writing activity proposals was fulfilling.

Aside from the rewarding experiences in her personal and professional life, Tin also acknowledged that she had those in her teaching life. As an FLTA scholar, Tin functioned as a teaching assistant where she worked with a primary instructor in all her Filipino language classes. As a teacher in Illinois, Tin considers the relationships she established with her students very rewarding. Seeing these students grow in the use of the target language was also fulfilling on Tin's part. When asked about her top three teaching experiences where she felt very fulfilled, Tin responded about balance, promptness, and connections. Albeit these, there were also aspects that she considered challenging. Commonly, these were on students' attendance, compliance, and apathy.

Dealing with problematic students, most especially when it came to attendance, was one of Tin's struggles. Considerate and strategic, she used all the means she could have to help the student concerned. However, she found the student to be non-cooperative, hence the failing mark. Apart from this problem, Tin also considers non-compliance to the set academic requirements as one of her challenging experiences. As an FLTA scholar, Tin found this issue an impediment to her performance as a teaching assistant. Assessment and monitoring became a challenge for her, most especially when there were communication issues on the end of the non-cooperative learners. Observably, students' issues in attendance and non-compliance could have been rooted from their apathy in learning the language. Students' apathy was manifested in Tin's class in many shapes such as lack of attention during classes or negative attitudes towards language learning. For Tin, it was a test of her skills as a language educator as she needed to devise ways to sustain fun language learning experiences so as to maintain interest and drive. For her, it was the proper venue to apply her knowledge



and competencies as a professional teacher back in the Philippines.

Amidst the challenges, Tin never failed to see the benefits of her FLTA journey. For her, the teaching and education she experienced in the U.S. with Fulbright had been so insightful; for it opened doors for her to self-discovery and cultural understanding. She thinks of her grant as a chance for her to intensify her love for the Philippines and to take pride of her identity. Because of this journey as well, she was able to segregate things that truly matter from those that do not; and this enhanced her decisiveness and critical thinking in important situations. Above all, she sees this opportunity as a moment for her to always carry the Filipino identity in whatever she does or wherever she goes. As for her, identity is something that must be carried as a person no matter what.

My overall insight/experience as an FLTA scholar in the United States can be represented by this Dandelion. When you blow its seeds off into the air, it disperses and goes everywhere and grows again. Likewise with my experience as an FLTA, this once in a lifetime blow of opportunity took me to several places, showed me a lot of realities on the other side of the globe, made me realize more important things that should matter and strengthened my sense of patriotism. If I were the seeds of this dandelion, I know that I will grow wherever the wind would take me. My FLTA journey equipped me with everything that I need to grow independently and to proudly carry our PH flag with pride wherever I go.

Tin's experiences had been a roller coaster ride for her, considering all the challenges she had to face and the fun times she enjoyed. For her, the overall FLTA journey brought her to places and connected her to relationships. Most of all, it helped her reconnect more strongly to her identity as a Filipino, that no matter where she goes and whatever she does, she will remain the prideful Filipino she is. Tin considers her journey eye-opening as well, having been exposed to cultural differences and various educational issues that beset American academic institutions. Her experience is already fulfilling and worth cherishing as described in her interviews, and this is supplemented by how she saw her challenges as potential points for improvement in the future.

Maico in Washington

The Fulbright program was an enticing scholarship opportunity for Maico, even when he was still a neophyte college instructor. When he heard about the Fulbright FLTA program from his former professors and acquaintances, he saw it as an excellent opportunity where he could apply three of my interests: language teaching, studying, and promoting culture and identity. Fast forward, he became part of the 2022-2023 Fulbright FLTA-Filipino cohort in the United States and was assigned at a university in the Washington State.

Maico's experiences had many rewarding instances. First, he found it rewarding to have finally gone outside of his comfort zone in terms of doing things independently and putting more self-trust in everything that he does. Travelling abroad for the first time was difficult for him, but he had to muster the much-needed courage to survive going to the U.S. Living alone in a community where he was clueless where to go or who to ask was also difficult for him, most especially when going about the daily routines such as grocery-shopping, getting a haircut, commuting, and even roaming around the community. Second, he considered his time as an FLTA scholar very rewarding in the sense that he enjoyed numerous opportunities to discover himself more. For instance, he got more reconnected to his faith by attending Sunday services and engaging in one-on-one and group Bible study sessions. Also, he was able to cater to his artistic side visiting museums and art exhibits, attending fairs, and witnessing orchestra and other theatrical performances in the locality. Lastly, he found joy in solitude. Whenever he did not have work or school, he would just stay in his apartment and enjoy his personal time. His solitude in the apartment and occasional isolation made him understand himself more. Because of this FLTA journey, there has been self-discovery and even reparation from his previous experiences.

As far as professional growth is concerned, he did maximize his break from employment in the Philippines by writing numerous research and presenting and publishing them in reputable peer-reviewed journals. His time in his apartment had always been productive because he was so engaged with research; this developed his writing skills and discovered stratagems to improve my craft in this aspect. He also felt rewarded when he finished his credit courses and got exemplary grades after.

As an FLTA scholar, he was the primary teacher. It felt revealing to him because he was given the liberty to implement whatever he wanted for the class for as long as he was hitting the necessary competencies and proficiency expected of the students at the end of every semester. As a teacher, what he found very rewarding was knowing that he contributed to his students' love for their identity, making them embrace more who they are or what made them fall in love with the Filipino language and culture. While not all his students were Filipinx, most of them used Filipino expressions in their random conversations, became more engaged in their Filipino organization, and incorporated their learning and language skills when they communicate with their Filipino family members or friends. This was very fulfilling on Maico's end, considering that his primary goal was not only to make them speak, write, or understand the language but also to make them embrace the Filipino culture.



Maico's experience also afforded him a lot of things that he would not have imagined accomplishing. For example, because of this stint, he was able to visit other states in the U.S. such as Washington DC, New York, and Illinois. He also had the opportunity to become a resource speaker in numerous events in the university. As a teacher, he felt like his connection with his students was the most rewarding because they had friendship even outside the classroom. He believes that his greatest contribution, so far, is bringing the Filipino identity in a language classroom that he deemed very essential in any language class. He ensured that his students would feel the Filipino identity so that they would not become apathetic in learning and become more interested and driven in finishing the course.

Even though he considers his FLTA journey rewarding and self-recharging, there were also challenging experiences. For instance, he had difficulties in condensing the content in one semester. As much as he would want to dwell in a topic for a week and make sure that his students would become well-versed in that aspect of language, he could not because there was a syllabus that needed to be followed. The pre-designed outline of topics was a bit loaded for him, more for his learners, hence he had a hard time catching up with the remaining topics in the semester. Maico also felt like he was in a community where access to resources was challenging. Although there were nearby Asian markets, it was sometimes difficult to look for Filipino products that could have helped him more in implementing the lessons. This also posed a struggle on his end because he often wanted to innovate, but resources seemed to be inaccessible, unless he purchased them online.

Amidst all these challenges, one good thing though was that he was able to polish his innovativeness and decisiveness on things that necessitated urgent solutions. He used strategies to ensure that student learning would not be affected and that his overall teaching performance was not impacted either. This prompted him to become very resourceful, considerate, and passionate about foreign language teaching. Realistically, this experience taught him to become a better-thinking language educator, ensuring that no matter what, he would remain critical in achieving the competencies his students ought to possess at the end of the semester.

Overall, Maico considers his FLTA experience one of his biggest milestones in life. He shared how he started dreaming to study abroad and ended up being a Fulbright scholar. He narrated,

I remember the times when I was rejected in several scholarship applications; I lost hope. But I kept in mind that God has a reason for everything, including my failures. I kept dreaming, I was never stopped. I kept honing my craft and did what I could to snatch an opportunity that I would treasure for a lifetime. Here I am now, enjoying the gifts of this Fulbright journey. This scholarship was more than just being in New York or Washington DC as this is about fulfilling a dream, enjoying a journey, and learning more about the self. Fulbright is not about the prestige or the credentials, it is about learning new skills, unlearning old habits, and relearning your strengths and weaknesses as a person and a professional.

Maico reflected on how fruitful his Fulbright FLTA journey had become. For him, his experience was transformational as he learned more about himself and discovered a lot of things about the world. Maico considers Fulbright programs to be a whetstone that polishes the scholars' cultural competence and global understanding. It indeed provides *exchanges that truly matter*.

CONCLUSION AND IMPLICATIONS

This paper shows how diverse Fulbright scholars' experiences could become. The experiences shared by the five FLTA scholars from the Philippines elaborate on the future similar experiences that Filipino FLTA scholars can also have, but acknowledging that experiences may be unique, this autoethnographic study can at least provide insights on what to expect and how to overcome challenges in the journey. Based on the scholars' narratives, the researchers recommend that the Fulbright Commission, along with its counterparts in the scholars' home country, be cognizant of the need to improve program experiences such as those related to housing, teaching functions, monitoring, and coordination with the host institutions. It would have been more helpful also for FLTA scholars that host institutions create stronger ties with the community (e.g., Filipino community) to establish a more participatory approach in teaching the language and culture. This paper is also one way to emphasize that the national governments of the scholars' home countries show appreciation for all the efforts of promoting the language and culture through education in the United States, which is one of the ways to foster strong international relations and to promote deeper cultural understanding among nations. The researchers highly recommend that Filipino educators of the English language apply for the Fulbright Foreign Language Teaching Assistant Program and be one of the selected ambassadors to promote the Filipino



language and culture on a global level. This is also a call for all other language academics from other countries to make use of this opportunity to showcase their cultures in the United States and to better understand the world through cultural immersions.

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DESIGN AND DEVELOPMENT OF FORWARDERS SPECIFIC SKILL TRAINING ON PHYSICAL FUNCTIONAL AND PERFORMANCE VARIABLES AMONG FOOTBALL PLAYERS (A PILOT STUDY)

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ABSTRACT

The perseverance of this study was to find out the effect of forwarder specific skill Training on physical functional and Performance Variables of School level football players. The research was carried out on a sample of 15 sub junior school students selected from various academy in coimbatore district and their aged between 14 and 17 years. Single group design. The pretests were conducted for all subjects on all selected variables to collect data. Forwards specific skill training group (5) would be undergone period of four weeks. All selected physical and functional variables were assessed by standard tests; speed by 50 meter dash, agility by 4x10meter shuttle run, flexibility through sit and reach test, balance by stroke balance test, leg explosive power through standing broad jump, Vo2 Max by cooper test, resting pulse rate by bio monitor, breath holding time through breath holding test, dribbling by Ronaldo speed dribbling test, passing by sir bobby Christo skill test, shooting by soccer assessment skill test and kicking McDonald soccer test. The four week forwarders specific skill training was conducted followed by post-test for all selected variables. Hence, the forwarders specific skill training program appears to be an effective way of improving physical functional and performance variables of school level football players.

KEYWORDS: Physical, Functional, Performance variables, Forwarders Specific Skill Training, Football Players.

INTRODUCTION

Football requires peak physical conditioning of its player to be played at the highest level. The only way to achieve this level of conditioning training, specifically football and the amount of running done in a match. Also, the better conditioned a player is the more likely perform with the same amount of skill necessary when passing, dribbling, kicking and shooting at the end of the game as the beginning. At any level above a school level, football limits the amount of substitutions a team can make. Football soccer is truly a global game. However, as a topic of scholarly research, the sport is still in its infancy. Its history is often examined and understood in local terms, rather than national or international ones. Even international competitions are often as not described as 'Us versus them' or as a chance to make contact with a distant other as in the proposed U.S.A v Iran match. Football players must work with strength training program as it brings about beneficial changes on the adaptation process had proved the implication of the positive relation between leg strength and kick performance. Before addressing specific positions, it's important to note that a given player should not initially focus too much on one position. Player should give themselves the flexibility of trying various positions; it will help them greatly down the road. This generalist approach allows a player to see how his strengths and weakness fit into the different positions in the game. All positions require players to both defend and attack, so the general principles of attacking and defending (discuss later in the book) will always apply. Coaches are now also beginning to train players across different team roles such as attackers and defenders as recent studies have advocated for this. **Laakso et al., (2019)** suggests that the manipulation of different team positions on the pitch should be practiced in training, as defenders have the capabilities to attack and dribble past the opposition.

**TABLE-I**

Characteristics of training groups (N=20) at pre training mean

Variable	FSST
Age (Y)	14-16
Height (cm)	150.30
Weight (kg)	51

METHODOLOGY

The impression of the study was to find out the forwarders specific skill training on physical, functional and skill performance variables among school level football players.. Five Physical active and interested school level football players were randomly selected as subjects and their age ranged between 14 and 17 years. Single group design was used. Forwarders specific skill training pilot study group (n = 5) would be undergone for a period of four weeks.

CRITERION MEASURES

The subjects of forwarders specific skill training pilot study would be assessed on the selected variables by the standardized test items before and after the training period of four weeks.

TABLE - II

S.No	Criterion Variables	Test items	Unit of measurements
PHYSICAL VARIABLES			
1.	Speed	50 Meter Dash	In seconds
2.	Agility	4x10meter Shuttle run	In seconds
3.	Flexibility	Sit and Reach Test	In Centimeters
4.	Balance	Stork Balance test	In Seconds
5.	Leg Explosive Power	Standing Broad Jump	In Meters
PHYSIOLOGICAL VARIABLES			
6.	Vo ₂ max	Coopers Vo ₂ Max Test	MI/kg/min
7.	Breath Holding Time	Breath Holding test	Seconds
8.	Resting Pulse Rate	Digital Heart Rate	Beats/min
SKILL PERFORMANCE VARIABLES			
9.	Dribbling	Ronaldo Speed Test	In Seconds
10.	Passing	Sir Bobby Charlton Soccer School of Australia test for Passing	In Points
11.	Shooting	Soccer-Team Skills Assessment Test	In Points
12.	Kicking	McDonald Soccer Skill Test	In Counts

TRAINING PROGRAMME

The forwarders specific skill training group underwent the experimental treatment for 4 weeks, 5 days and a session on each day with 60min duration. The training programme was lasted for 60 minutes for a session in a day, 5 days in a week for a period of 4 weeks duration. These 60 minutes included position wise specific skill training for 40 to 50 minutes and 10 minutes warm-up, and 10 minutes warm down. Four weeks of specific skill training was given to the selected subjects. Their training days and hours every week were from Monday to Friday from 6.00 to 7.30 am.

**TABLE – III
TRAINING SCHEDULE FOR FORWARDERS SPECIFIC SKILL TRAINING**

I to IV Week	
1. Dribble and release	4. Around the world
2. Pressure Shots	5. Grid Passing game
3. Throw ins pass & score	6. Sudden deth
Repetition	5-6
Sets	4
Rest in Between sets	90 Seconds
Rest in between Exercises	45 Seconds
Total	60 Minutes

STATISTICAL ANALYSIS

The means and standard deviations of forwarders specific skill training groups were calculated for physical, functional and performance variables for the pre as well as posttests. Statistical significance was set to a priority at $p < 0.05$. All statistical tests were calculated using the statistical package for the social science (SPSS).

TABLE - IV**COMPUTATION OF 'T' RATIO ON PHYSICAL FUNCTIONAL AND PERFORMANCE VARIABLES OF FOOTBALL PLAYERS ON FORWARDERS SPECIFIC SKILL TRAINING GROUP**

(Scores in beat/min/seconds)

S.No	Test items	Pre	Post	Standard Deviation	T ratio
1	Speed	6.91	6.69	0.13	2.85*
2	Agility	11.38	10.62	0.20	5.88*
3	Flexibility	27.69	29.07	0.91	5.12*
4	Balance	34.80	36.80	1.30	7.30*
5	Leg Explosive power	1.13	1.26	0.036	6.74*
6	Vo2 Max	41.41	42.62	0.35	3.97*
7	Resting Pulse rate	76.81	74.29	0.47	6.25
8	Breath Holding time	28.27	33.42	1.02	7.25*
9	Dribbling	27.03	25.53	0.93	8.04*
10	Passing	4.20	5.16	0.11	16.63*
11	Shooting	83.20	86.00	1.30	3.25*
12	Kicking	22.20	25.00	1.30	7.48*

*significant level 0.05 level (degree of freedom 2.77, 1 and 4)

Table II reveals the computation of mean, standard deviation and 't' ratio on Speed, Agility, Flexibility, Balance, Leg explosive Power, Vo2max, Resting Pulse Rate, Breath Holding Time, Dribbling, Passing, Shooting And Kicking of experimental and control group. The obtained 't' ratio on cardiorespiratory endurance were 2.85, 5.88, 5.12, 7.30, 6.74, 3.97, 6.25, 7.25, 8.04, 16.63, 3.25 and 7.48 respectively. The required table value was 2.77 for the degrees of freedom 1 and 4 at the 0.05 level of significance. Since the experimental group 't' values were greater than the table value of 2.77, it was found to be statistically significant.

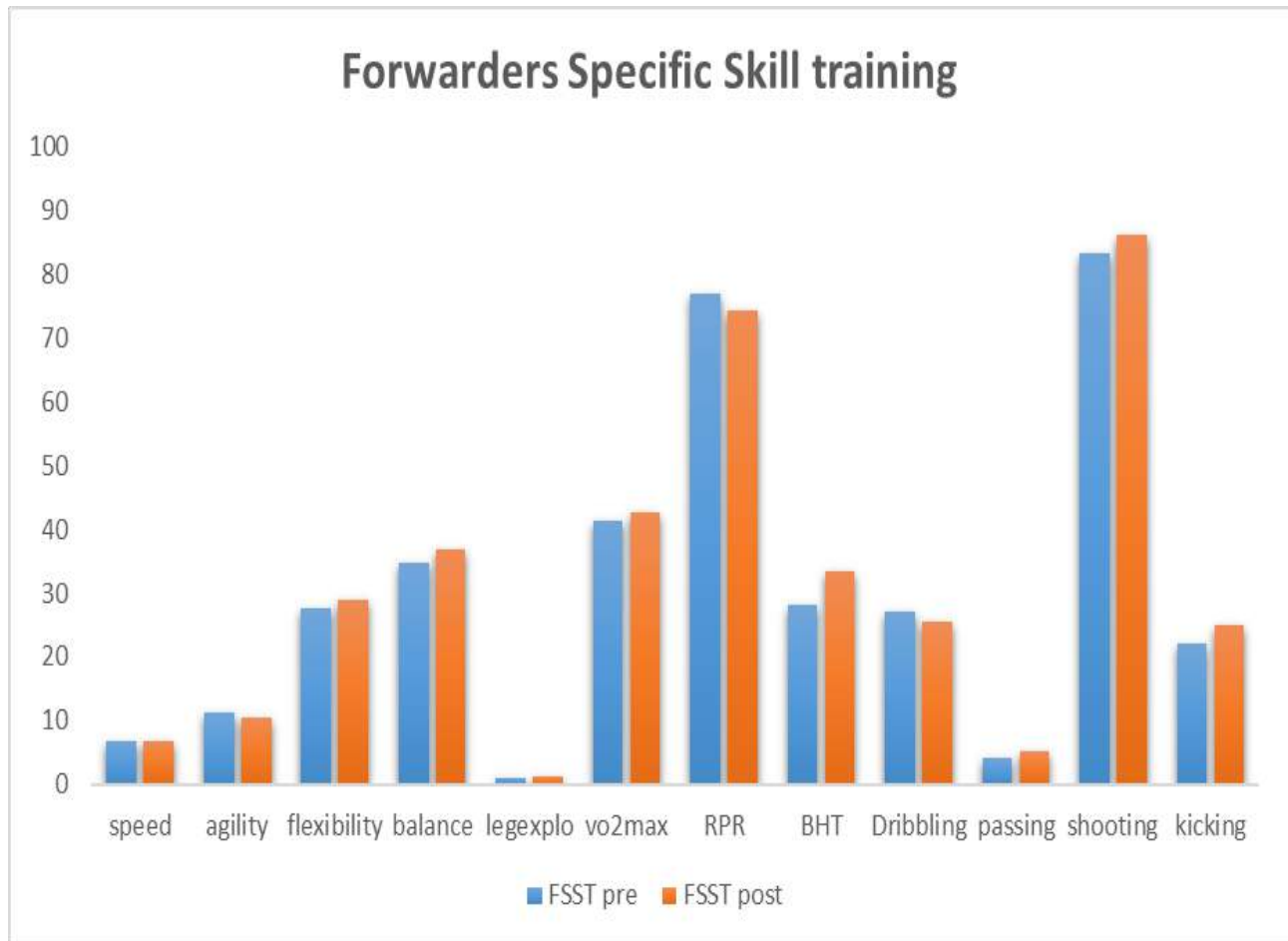


FIGURE- I

BAR DIAGRAM SHOWING THE MEAN VALUES ON PHYSICAL FUNCTIONAL AND PERFORMANCE VARIABLES OF FOOTBALL PLAYERS ON FORWARDERS SPECIFIC SKILL TRAINING GROUP

DISCUSSION ON FINDINGS

Position specific individual training is key to challenge, support and develop players. As we learn from all sports, marginal gains are key at the elite level and giving our players the best chance to be successful by preparing them for the game is vital. Allowing players to focus on their specific position played on the pitch is incredibly important for a coach to identify their strengths and weaknesses, in order for sessions to be adjusted and tailored towards players needs so that developments are seen. The present-day study considered the influence of four weeks of forwarders specific skill training on selected physical, functional and skill performance variables of footballers. The results of this study designated that forwarders specific skill training is more efficient to bring out desirable changes over the physical functional and skill performance variables of the footballers. Investigators have extended their interest to consider the speed, agility, balance, flexibility, leg explosive power Vo2 max, resting pulse rate, breath holding time, dribbling, passing shooting and kicking commencement from the way a footballers approaches the forwarders specific skill training.

Ahmed et al., (2022) At the end of 4 weeks of training, both groups showed improvement in their skills; however, the improvement in the experimental group was significantly better than in the control group. Core training improves football-specific Speed dribbling skills hence core training should be added to regular training of players.



Bush et al., (2015) The data demonstrates that evolving tactics in the EPL have impacted on the physical demands of wide players and the technical requirements of central players. These findings could be used for talent identification or position-specific physical and technical training.

Carling (2011) In general, the findings suggest that physical performance in the reference team was not greatly affected by opposition team formation. In contrast, skill-related demands varied substantially according to opponent formation and may have consequences for tactical and technical preparation and team selection policies.

Dellal et al., (2012) Subsequently, it is of importance for coaches to understand the different physiological demands imposed upon players by varying the rules of SSGs and to understand the differences between positional roles.

Kishore et al., (2016) From the result of the study it is speculated that skills and drills practice training is more efficient to bring out desirable changes over the kicking ability of High School Level male football players.

Miller et al., (2002) When individual training data were analyzed longitudinally, a nonlinear increase in performance in the PC, BP, and SQ was observed as training time increased, with the greatest rate of change occurring between the first and second semesters of training.

Robbins et al., (2011) The results of the present research present position-specific profiles for each of 15 positions. Coaches and practitioners will be able to use the findings of this research to better prepare athletes for entry into the NFL

Shendkar et al., (2011) While there was no significant difference found between positions in 10X 4 shuttle run and sit & reach. Hence it was concluded that there was difference in various components of fitness between the three positions.

Yuvaraj et al., (2020) The result revealed that there is no significant difference in coordinative ability variables, and there was a significant difference between the playing positions on anthropometric variables namely body height, body weight and leg length. It was observed that the defensive players are taller, heavier and have long leg than the players of other positions.

CONCLUSIONS

Based on the findings and within the limitation of the study it is noticed that practice of forwarders specific skill training helped to improve physical, functional and performance variables of football players at grassroots level. It was also seen that there is progressive improvement in the selected criterion variables of forwarders specific skill training group of football players after four weeks of specific skill training programme.

From the results of the present study, it is very clear that school level football players significantly difference in forwarders specific skill training of speed, agility, flexibility, balance, leg explosive power, vo2max, resting pulse rate, breath holding time, dribbling, passing, shooting and kicking.

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RESEARCH ON THE STUDY OF MODERN TAFSIR STUDIES

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ABSTRACT

The modern hermeneutic movement has set itself the noble goal of enlightening the people and making the members of society moral. In this article, the changes in society as a result of the emergence of modern exegesis and the scientists who conducted research in its development, as well as information about their research, are highlighted.

KEY WORDS: *Modern Tafsir studies, Safohat, Manor, commentator, Sayyid Qutb, Sirati Mustaqim.*

INTRODUCTION

Democratic views in modern tafsir studies and the transition to democracy in many Muslim countries affected the language of tafsir, as a result, a more modern language began to play an active role in the life of society. Due to the active participation of individuals in the society and the expansion of educational opportunities, it has become possible for everyone to read and understand the interpretation of the Qur'an. Accordingly, classical exegesis was heavily criticized for using unpopular language. The opinion of modern researchers can be summarized as "in the classical period, tafsirs had a scientific style and content, while in the new period, popular level tafsirs increased." However, it cannot be said that the classical commentators did not have the pain of appealing to the people. In our opinion, it is an unfair claim to say that the classical exegetes did not bother to appeal to the people. Because the writing of independent surahs such as Fatiha, Yasin, Mulk, Hamimlar, Naba, Fath, Ikhlos, and Muawvizatain clearly shows that the commentators of the classical era had the goal of reaching the masses. However, due to the increasing need in modern times, social goals have come to the fore. To this extent, the Hanafi school of thought argues that we need social interpretations based on the analysis of social experiences with more conscience-based interpretations in modern times.

It can be said that the modern hermeneutic movement has been influenced by pragmatic understanding. After all, the contemporary commentator constantly describes the realities of the community in order to apply them in practice and guide them. For this reason, some commentators such as Sayyid Qutb briefly stated many issues in classical commentaries on the basis that they are not of practical importance. However, as a result, some people did not see Fi Zilal as a commentary. Because "Fi Zilal", in general, did not touch on issues such as ishtiqq, tasrif and erab, which commentators paid attention to, and did not dwell on issues such as fiqh and usulul fiqh differences.

MAIN PART

The language of tafsir is not exempted from this, as many tasks are assigned to tafsir in the present era. For example, it can be said that in the commentaries of Sayyid Qutb and Mustafa Maraghii, the spoken language and the lecture language prevailed. In fact, according to some



researchers, it is very difficult to consider Sayyid Qutb's tafsir "Fi Zilalil-Qur'an" as a literal interpretation of the Qur'an, each volume of which is about 200 pages. It is a huge collection of lectures, warnings and recommendations. In Sayyid Qutb's commentary, one can see many slogans composed of phrases such as "Ignorance of the 20th century", "Ignorant and Toghut regimes", "False masters".

M. Akif Ersoy, who wrote the translation of the Qur'anic meanings in modern Turkey, used his poetry as a means of conveying to the masses and often used the language of sermons in his poetry.

In fact, if we look at the sections of the poetry book "Safihat", it can be seen that the second section is titled "Sulaimaniya's Chair", and the fourth section is "Fatih's Chair". Many of Okif's poems are in the nature of poetic interpretation. But he did not aim to provide information through interpretation, but to awaken the people, encourage them and call the nation. In general, he dealt with emotions and tried to activate the emotions of Muslims. In the modern tafseer movement, adapting the language of tafseer to the spoken language can be considered a natural manifestation of the desire to increase public awareness.

In modern times, one of the most prominent examples of efforts to communicate Islam to the public are magazines. In this regard, the magazines "Tahzib al-Ahlaq" in the Indian subcontinent and "al-Manor" in Egypt covered important aspects of the modern interpretation of the Qur'an. The purpose of the Manor magazine was to promote social, religious and economic reforms and to prove that Islam as a religious system was not contrary to the existing conditions. Another goal of establishing the Manor magazine was to continue the method of the magazine called "al-Urvatul-qusqo" published by Jamaluddin Afghani and Muhammad Abduh, and especially to continue the activities of this publication. These can be summarized as eliminating heresies and superstitions, non-sectarianism, false beliefs about saints, developing tolerance between different groups, increasing the educational level of the people, leading Muslim nations forward, ensuring progress through educational reform and cooperating with other countries in this regard, encouraging them to compete. In fact, many Egyptian media regularly publish articles on the Qur'an and its interpretation. For example, Bintish Shati is responsible for such articles in Al-Ahram newspaper.

Tafsirs published in magazines of this type also formed the core of the author's books of tafsir. This situation is also observed in the Maghreb. For example, Ibn Ashur's (d. 1392/1973) exegesis entitled "at-Tahrir wat-Tanvir" was based on his lectures in al-Jamiul-Azam in 1899 and his lectures in magazines such as "al-Hidayatul-Islamiyya wal Majallatuz Zaytuniyya". Since magazines were the most effective means of communication in that era, commentators also used its power. Journals played an important role both in raising the fame of commentators and in spreading their ideas. In particular, Rashid Reza made a great effort to distribute Manor magazine. At meetings, he praised the magazine as if he owned it. On the other hand, the magazine helped to make Rashid Reza popular and spread his views and ideas and interpretations. Rashid Reza realized this personally during his trips to Tunisia and Algeria. The dissemination of the knowledge of tafsir by modern commentators through magazines was also effective in transforming their language of tafsir into a spoken language.

The existence of hermeneutical journals at the beginning of the modern process in Turkey should not be overlooked. Among them, Abul-Ula Zainal-Obidin and Ashraf Adib published the magazine "Sirati Mustaqim" on August 14, 1324 (1908). Mehmed Akif was the chief editor of the magazine. Mehmed Akif was the chief editor of the magazine. Until 1912, the magazine was published under the name "Siroti Mustaqim" in 182 issues, later these were compiled into 7 volumes.



The magazine continued its activity under the name "Sabilu-Rashad" from issue 183. The first issue of "Sabilu-Rashad", i.e. issue 183 It was published in March 1912. The magazine was published continuously until March 5, 1925, when it was forced to take a break in issue 641. These published issues of "Sabilu-Rashad" are collected in 25 volumes. "Sabilu-Rashad" was published again after 22 years, at the request of the public, this time the magazine was published in March 1948 with a new letter. From that day until March 1965, it continued to be published continuously. Thus, all 359 issues of the magazine were collected into 15 volumes. Mehmed Akif said that the purpose of this magazine is to revive the science of tafsir sharif as much as possible.

Periodicals were also active in the Indian subcontinent. For example, in Pakistan, there was an active Islamic group formed under the leadership of Amin Islam and with many religious and scientific organizations. They are various scientific and social organizations, they published magazines such as Misoq, Tadabbur, Israaq, Mavrid and Renaissance and had their own publishing houses.

Magazines also played an important role in the debates between the Ahluz-Zikr va Al-Qur'an school led by Chakrlev (d. 1914) and the Ahl al-Hadith school, which strongly criticized this school. Chakrlev's magazines "Isha'atul Qur'an" and "Isha'atus sunna" of Ahl al-Hadith were used in the debates. In modern times, almost many commentators have started writing articles in magazines. In particular, the journalistic activities of some commentators such as Mawdudi had an impact on their method of interpretation.

Educational institutions have played an important role in communicating tafsir to the public in modern times. These institutions were established by different congregations. In this regard, the work done by madrassas, educational and research centers in the Indian subcontinent in the field of enlightenment and exegesis is worthy of praise.

New modern issues such as slavery, human rights, women's problems, which emerged with modernity, were also reflected in exegesis. However, it should be noted that words such as equality, women's rights, abolition of slavery reflected in the language of the modern world have also been deeply studied in modern tafsir studies. However, these are the values that the West has announced its internal problems to the world under the name of commonality.

The Western world, which, as a result of its mechanization, did not need human power, this time began to strengthen the position of the individual with anti-slavery rhetoric in order to find supporters for its capitalist system. If there was no need for customers, they would still be perpetuating the slave system.

On the other hand, with the entry of women into the social sphere, women's issues naturally came to the fore in the interpretation of the relevant verses. The issue of "woman" is one of the most obvious aspects of modern tafsirology that differs from classical tafsirology. This issue is almost a breaking point in the history of exegesis. Because "it is seen that the image of a woman illuminated in classical interpretations is changed in the opposite direction, and a new image is created in modern interpretations." For example, the verse of al-Baqarah (282) about the testimony of two women instead of one man is inconsistent with modern values emphasizing the equality of men and women, which has caused many disputes. This led to the examination of whether the "defect" on which the judgment was based corresponded to a "stable" or "variable" characteristic of women. Accordingly, the opinion that the quality justifying the sentence was not "natural" but "sociological" prevailed. Again, in these interpretations, contrary to what was done in classical times, the view that women are weaker than men in terms of intellect and memory is not much praised. There is even a view that the hadith, which is the basis for such explanations, is a topic (fabrication). In more modern



interpretations, it is emphasized that women's testimony is equal to that of men and that she can testify in all cases. Also, in Surah Nisa, "If you are afraid of not being able to do justice to the orphans, marry two, three or four of the women you like." If you are afraid of not being able to do it justice, take one (or make do with what you have). This is closer to the fact that you do not oppress" (3) the discussion of polygamy was not mentioned in the commentaries before the 19th century. In modern exegesis, the special emphasis on monogamy should not be overlooked. All of these interpretations stemmed from the changing roles of women in modern life, so the idea of equality between men and women also influenced the interpretation. But as a way to overcome all these problems, the idea of "renovation" came to the fore and an attempt was made to solve this issue from the point of view of historicity.

CONCLUSION

In today's new era, we have many problems inherited from the past and brought by modernity. Also, as a result of the spread of education to the masses and the urbanization (migration) of the population in Islamic countries, the number of qualified people has increased and there has been an opportunity to conduct many scientific studies in every field of Islamic knowledge, such as in the field of interpretation.

In the modern process, all commentators faced the challenge of secularization. In fact, the attitude of commentators to the problem of secularism was one of the decisive factors in their interpretation of the Qur'an. Because, as some researchers have pointed out, humanity has entered the secular stage of its history with a new era. Until this time, religion was a teaching that encompassed human life because it provided mankind with a system of concepts that inspired spiritual integrity. Today, a person has become a creature that has been separated from these complexes and has been expelled from his homeland. Consequently, secularism also showed itself in modern interpretation.

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ANALYSIS OF THE MANUSCRIPT OF ALAUDDIN BUKHARI'S WORK "RISOLA FIL-ITIQAÐ"

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ABSTRACT

Allama Alauddin Bukhari, who lived in the last quarter of the 14th century and the second quarter of the 14th century, wrote important works in almost all fields of Islamic sciences. In particular, his scientific heritage related to the science of Aqaid has been recognized by the representatives of the field, and until today three works such as "Muljimatul-mujassima", "Fadhatul-mulhidin wa nosihatul-muwahhidin", and "Risala fil-itiqad" have been found. In particular, the scientist's treatise "Risala fil-itiqad" is one of the important sources on the faith of the Ahl as-Sunna community. A manuscript copy of the work is kept in Shahid Ali Pasha Library in Turkey. In this article, the scientific analysis of the work "Risala fil-itiqad", its description, its importance in the teaching of Maturidiyya, and its sources will be covered on the basis of this manuscript.

KEYWORDS: *Alauddin Bukhari, Amir Temur, "Muljimatul-mujassima", "Fadhatul-mulhidin wa nosihatul-muwahhidin", "Risalah fil itiqad, Sa'duddin Taftazani, Azudiddin al-Ijji.*

INTRODUCTION

The role of written heritage in the history, ethnic formation and civilizational development of ancient peoples has gained great importance. From this point of view, it is also true that the written heritage has polished the cultural and educational life of peoples.

Today, in different regions of the world, funds of manuscripts are established and thousands of manuscripts are preserved. The study and research of the works kept in the world's funds shows that it is noteworthy that the cities that experienced the high stages of civilization culture were built several thousand centuries ago. For this reason, identifying the world's funds, researching their written heritage and applying it to practical life was recognized as one of the urgent tasks.

THE MAIN PART

Alauddin Muhammad ibn Muhammad Bukhari is one of the scholars who grew up in Bukhara and made scientific trips to different countries of the world and left a great written legacy. Alauddin Bukhari wrote about 10 works on jurisprudence, linguistics, aqeed and other sciences, which are currently preserved in various funds of the world. Identifying, researching, comparative analysis of works of scientists in international funds and forming scientific conclusions based on them are important tasks.

During the research of the information provided in the sources related to Alauddin Bukhari's scientific activity and the comparison of the scholar's written heritage found to date, his belief and related issues, "Muljimatul-mujassima", "Fadhatul-mulhidin wa nosihatul-muwahhidin", His works such as "Risala fil-e-tikidok" have been identified. Уларнинг барчаси ёзилиш методига кўра,



“матн” ҳамда “далилли раддия” услубларида битилган бўлиб, мотуридия таълимотининг XV асрдаги амалий ва назарий жиҳатлардан тараққиётида муҳим аҳамият касб этган [1:291].

In the 14th and 15th centuries, one of the works that served to objectively illuminate and preserve the pure creed of the people of the Sunnah community and to solve many problems in the science of the creed is "Treatise on Belief", which is a work written by a scholar in the text style.

From the research process until now, it was found that only one manuscript copy of the treatise is kept in the fund of Shahid Ali Pasha library in Turkey (as part of the Complex) with the inventory number #382 [2]. At this point, its description will be stopped.

This manuscript is the second work in the collection, and the collection consists of 52 pages in total. It contains 11 pages (7a-17a) of the work "Treatise on Faith". On its first page, the author's name is "Alauddin Bukhari" and the title of the work is "Risola fil-i-tikidok". At this point, it should be noted that it is considered the closest copy to the time when the scholar lived, and the scribe finished copying it in the year nine hundred and sixty one of Hijri [2:17].

The manuscript consists of 11 pages, and the number of lines on the page is 31. It is copied in the manuscript. Some words and phrases in the text are commented on in the margin. Also, there are cases where the spelling mistakes that occurred during the transfer process were corrected in the margin. For example, the main text and the font in the margin are the same. Sheets are stacked. Mant does not say who and where the manuscript was copied, but it is noted that the work was "completed on the 14th blessed Tuesday of the month of Safar, 961 Hijri" [2:17].

Headline:

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ صَلَّى اللَّهُ عَلَى سَيِّدِنَا مُحَمَّدٍ، وَآلِهِ وَصَحْبِهِ وَسَلَّمَ الْحَمْدُ لِلَّهِ كَمَا وَجِبَ لِكَبْرِيَّاتِهِ وَجَلَالِهِ، وَالشُّكْرُ عَلَى مَا غَمَرْنَا بِهِ مِنْ نِعْمِهِ وَنَوَالِهِ. أَحْمَدُهُ حَمْدَ مَنْ غَاصَّ فِي بَحَارِ مَعْرِفَةِ أَسْمَائِهِ وَجَمَالِهِ. أَشْكُرُهُ شُكْرَ مَنْ عَلِمَ أَنْ شَكَرَهُ مِنْ جَمَلَةِ آيَاتِهِ وَأَفْضَالِهِ.

Translation. I begin with the name of Allah, the Merciful and Merciful. May peace and blessings be upon Muhammad s.a.w. and peace be upon his family. All praises be to Allah, Whose glory is obligatory in Himself, and who covers us with His blessings and gifts. I praise him with the praise of one who dives in the seas seeking the enlightenment of his beauty and names. I thank Him with the gratitude of the one who is thankful, knowing the gratitude for His blessings and blessings [2:7].

The end of the piece:

... تمت كتابة هذا بعون الله الملك الوهاب، وإليه المرجع والمآب بتاريخ اليوم المبارك يوم الثلاثاء رابع عشر شهر صفر الخير، سنة إحدى وستين وتسعمائة، أحسن الله عاقبته بخير.

Translation. ... The transfer of this treatise was completed on Tuesday, the fourteenth of the month of Safar, in the year nine hundred and sixty-one of Hijri, with the help of al-Malik and al-Wahhab, the owner of the destination and destination. May Allah make the outcome good [2:17].

Alauddin Bukhari's "Treatise on Belief" in a short form, in which a total of forty-five doctrinal issues are covered. These issues began with the topic of "The first obligatory act for a dutiful servant" and ended with the issue of "refutation of the views of the Rafizi about the return of Ali (r.a.) and his descendants to the Earth" [2].

At the beginning of the work, the truth of things is fixed in the eyes of the people of truth, the evidence of the existence of Allah Almighty, the oneness of the creator of the universe, the antiquity of Him, the fact that He does what He wills, the knowledge of all things, the power of everything, He is the Hearer, the Seer, the Ever-Living, every issues such as the Being who is the organizer of the work, that He is neither substance, body, nor form [2:7] are explained.



Then, the author explained that none of the six aspects can be attributed to Allah Ta'ala, that he is free from color, taste, smell, mood and other such qualities, that he does not occupy any space, that he created light, that he has eternal qualities, the quality of speech, taqwin, seeing Allah Ta'ala [2:10].

Alauddin Bukhari, after explaining the attributes of Allah, guidance and misguidance, suggestion, sustenance of forbidden things, faith, the faith of the muqallid, the question of fate, the sin of the great ones does not make a servant from faith, the punishment of the grave, repentance, the sending of prophets, the ismat (innocence) of the prophets, the question of Imamate and concluded the work with a statement of some views of the Rofisians [2:13].

Allama begins many issues in the work with the word عالم - knowledge. After that, he first presents the problem and gives answers to it, sometimes briefly, sometimes in more detail. For example: "He (Allah) is not light, but the creator of light. Unlike Mushabbihas. Because they quote the verse "Allah is the light of the heavens and the earth" as a document.

For example: "He (Allah) is not light, but the creator of light. Unlike Mushabbihas. Because they quote the verse "Allah is the light of the heavens and the earth" as a document.

We refute them and say that Ibn Abbas (r.a.) says: "Indeed, He (Allah the Exalted) is the Enlightener of the heavens and the earth." Some of them say, "Surely He (Allah) is the guide of the people of the heavens and the earth." This is one of the other issues. - he sums up the matter briefly. It is noteworthy that the reason was that the scholar did not want to confuse one issue with another issue, and in this way he brought up the issue first and proved the religious view of the people of Sunnah in a short and concise way.

In this "Treatise on Philosophical Belief" Alloma clearly and concisely mentions every issue, and in the places where it is necessary to comment on some issues, there are such views in this category, but in fact, the intellectual scholars have noted that they are supporters of this view. It is emphasized that the mentioned issues are based on the Qur'an and the Sunnah, as well as supporting it with intellectual arguments. For example, in the work, when giving refutations to many mistaken categories on a scientific basis, in the "question-and-answer" style, forms such as "fnqwl", "андна", "qyl", "qlna", "qal" are used effectively. Also, the scholar expresses his opinion using the expression "qalwa al-hanfia" (the Hanafis say), directly quoting the opinion of the Hanafi scholars and expressing the true and correct meaning of the matter. In particular, he is Imam Abu Hanifa, Abu Mansur Moturidi, Abul Hasan al-Ash'ari (260/873-330/941), Abu Bakr Muhammad ibn al-Tayyib al-Baqilani, Imam Abu Ishaq al-Isfarani, Imam ash-Sharif al-Jurjani, Imam al-Haramayn al-Juwayni (419/1028-478/1185), etc., expressed his views based on the opinions of the scholars of the Sunnah community. In addition, the scholar directly quoted Al-Mawaqif by Al-Azudiddin Al-Ijji (ca. 708/1308-756/1355), which is considered the most famous source of the Hanafi sect. So, Alauddin Bukhari's reliance on the ideas of his teacher Sa'duddin Taftazani's teacher Azuddin Al-Ijji indicates that he paid great attention to the silsila system in matters of belief.

Of course, this work serves to preserve the faith of the people of Sunnah until today, as well as to find scientific answers to the complex questions of today in the scientific views of the scientist.

CONCLUSION

In conclusion, if the issues presented in Alauddin Bukhari's "Treatise on Philosophy" are easy to memorize in a short way, the broader interpretation of some issues served to eliminate the conflicts that arose. In addition, based on the scientist's scientific views, it is possible to identify the



controversial issues of that time, compare them with today's controversial issues, identify similarities and differences, and correct them through the scientist's scientific views.

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HANAFI HADITHIST ANWAR SHAH KASHMIRI

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ANNATATION

While researching hadith narrations, it was discovered that Anwar Shah Kashmiri (1875-1933), known as Allama in hadith, jurisprudence, and other sciences, was a Sunni community member, particularly of the Hanafi sect, and served as its protector. This is especially evident in the narrations about faith and Shariah rulings. In this section, we will look at how Kashmiri interprets narrations about ahkam and faith, as well as his ability to interpret hadiths.

KEYWORDS: *Hadith, analysis, commentary, madhhab, Hanafi, method, recitation, ablution, mash, "Fatiha", jurisprudence, proof, book.*

Whilst analyzing the hadith of Allama Kashmiri, who is the jurist and we will recognise how it will likely be. that is referred to as a result of research After Kashmiri hadith and the technology of kalam, it is the maximum fiqh wrote works. lots of his works are related to jurisprudential disputes similarly to clarifying problems,

Fatiha in the back of the imam in prayer to the topics of reciting surah and raising fingers in takbirs throughout prayer wrote two separate jurisprudential works. Anwar Shah's affiliation with the Hanafi sect changed into no longer blind or taqlid however primarily based on proof. Even some of them acted impartially in interpreting hadiths If he sees any mistake from the Hanafi scholars, he need to truly say so stated how it might be.

Using the excessive potential of Fiqh and Fiqhul Hadith, Hanafi aimed to help his sect with hadiths Kashmiri made considerable use of lecture circles and writing books for this cause. He devoted thirty years of his life to the improvement of the Hanafi sect Hanafiism in relation to the vicinity of allama spent with carrier who recommend arguments that show the superiority of his sect, and "realize that Allah despatched me to help the sect of Abu Hanifa created"¹ expressed his function. under is the Hanafi of Kashmiri how he used hadiths to guide his sect with proof let's examine a few examples:

The issue of no longer reciting Surah Fatiha after the imam of the Hanafi sect in topics of war between the sects intelligently looking for the hadiths that may be proof in his desire and selecting it another vivid instance of that is whilst he prays in the back of the imam it's far a be counted of congregation not reciting Surah Al-Fatiha. among sects Many books were written on this controversial problem among them, Imam Bukhari wrote a piece called "Al-qiraa kholfal imam". He collected the associated narrations in it.

The Hanafis are silent in this depend, the prayer chief does now not recite in the back of the imam individuals who emphasised that it'll stand. In opposition to this, the Shafi'is recite the obligatory prayer muqtadi became required to study "Fatiha" and plenty of books in this challenge

¹ Bannuriy. Nafhatul anbar, 92 p.



wrote. There are hadiths that Allama Kashmiri Hanafis use and Bukhari stated that he did not mention them in his book². Imam That Bayhaqi has criticized a Hanafi student in this matter taken into consideration that there is a want to write down a piece on the subject in reaction³.

Narrated by Anwar Shah Kashmiri Uboda ibn Somit (d. 34/654). Commenting on the hadith, "He who has now not examine Fatihatul Kitab" has no prayer"⁴. It emphasised problems:

The first is the decision of Fatiha, in line with Kashmiri Most of the Hanafis, it's far compulsory to read Surah Fatiha, and inside the different three madhabs and is a column.

The second issue is to recite "Fatiha" surah in the back of the congregational imam to take a look at or now not to have a look at.

Commenting on the primary difficulty with this hadith, Kashmiri says, assisting the Hanafi view, he cited the following narration as proof:

"Whoever worships the imam, the recitation of the imam is likewise a recitation for him"⁵.

"While the imam recites, stand quietly and listen"⁶. Then Ubaid ibn Jarrah passing directly to commenting on the narrated hadith, expression in the form of "there may be no ideal prayer" as some Hanafis say refused to reply and said the subsequent: "in my view such a solution is taken into consideration to open the door of objection to the advantage of the opposing celebration. Due to the fact studying "Fatiha" is obligatory for us. He said, "there is no ideal prayer."

In keeping with the answer, it follows that reading "Fatiha" in prayer isn't compulsory⁷.

Because in step with the students of Usul, whether it's far in phrases of proof or proof duty cannot be installed through a hadith that is proper" eight apparently, using the rules of the Kashmiri approach a hadith of the Hanafis that looks against the fatwa of the Hanafis protected inside the proof. also "camila" after "la solata"

To expect that the phrase "prediction" is not eloquent from the point of view of the Arabic language. Expressed his opinion announcing that he'll now not do it⁸.

Anwar Shah Kashmiri's verse "read as tons as you can from the Qur'an".

Pronouncing that there's a mutual settlement among the disputed hadith and states that the view of the Hanafis in this regard is extremely accurate and in the prayer, it's miles said that the ruling of Fatiha and zammi sura is the equal. Kashmiri that the Shafi'is say that reciting "Fatiha" is fard and the zammi surah is sunnah criticizing that the message of reciting those in prayer has been established with solidarity and in any such case it is not accurate to provide different sentences. In conclusion recitation in prayer in a fashionable sense, because the Hanafis say it's miles obligatory to do due to the verse, "Fatiha" and if it's far a zammi sura, the message is unified because it's miles fixed, it is the maximum accurate that the ruling of the two is obligatory counts"⁹.

Anwar Shah Kashmiri's aid of the Hanafi sect every so often by using proving hadiths that do not come to mind in the beginning look it is able to additionally be visible that it's miles carried out with the aid of bringing this is referred to as "Sunan".

An example is this hadith from Termizi: "A Muslim character while washing his face whilst appearing ablution, with the remaining drops of water flowing all the mistakes he made by looking

² Kashmiriy, Arfu-sh-shaziy, I, 302.

³ Kashmiriy, Arfu-sh-shaziy, I, 302-316.

⁴ Abu Dovud, Solat, 823. Text of Hadis: لا صلاة لمن لم يقرأ بفاتحة الكتاب

⁵ Ibn Moja. Iqomatu-s-solavat, 13; Bayhaqiy. Sunan. II, 160.

⁶ Muslim. Solat. 16, Nasaiy. Iftitoh. 30.

⁷ Kashmiriy. Maorifu-s-sunan. II, 385-386.

⁸ Kashmiriy. Maorifu-s-sunan. II, 385-386.

⁹ Kashmiriy. Arfu-sh-shaziy. I, 253-254.



with his eyes could be poured from his face. His arms all the mistakes he made along with his hands are the ultimate to run off his palms whilst he washes them a drop will waft with water"¹⁰.

After citing this hadith in brief, Kashmiri said, "He mash his head all of the mistakes he made along with his ears will be spilled"¹¹ also stated the appendix and stated the opinions of the Hanafis on this regard as follows: "This hadith indicates that because the pronouncing goes, the ears are the same as the judgment of the pinnacel. Taking water isn't always mandatory" thirteen

The Hanafis are evidence that the ears are under the guideline of the pinnacle in ablution After doing so, it's miles sufficient to mash the ear with the water taken for the head, and it's miles new people who counseled not to drink water and stated "Ears are from the pinnacle"¹² those who proved the hadith. Kashmiri, as you could see, is sincerely ablution.

A narration in which the virtue is referred to is an evidence in favor of the sect as a end result. This is also in Kashmiri's argument suggests his talent.

In conclusion, the hadith of Kashmiri with fiqh, fiqh that he understood in harmony with the hadith, taken into consideration them as bases that complement every other and aid each other, and that during practice we witnessed in the above examples that he proved it. Also Kashmiri's moderation in interpreting hadiths, discussion neither too long nor too hard to understand, it is able to be visible that it is not a brief one with little evidence.

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¹⁰ Kashmiriy. Maorifu-s-sunan, II, 394-395.

¹¹ Termiziy. Tahorat, 2.

¹² Molik ibn Anas; Muvatto. Tahorat, 6.



DESCRIPTION OF THEMES OF ISHARATUL-MAROM'S WORK

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ANNOTATION

The subject is the analysis of the themes of Kamaluddin Bayazi's work "Isharatul-Maram min Ibarotil-Imam Bai Hanifa", Abu Hanifa met Noman ibn Thabit (r.a.) with seven companions, learned from seventy of his subordinates, and lived in the presence of his teacher Hammad ibn Sulayman. He studied for eight years, the work is prefaced, and in the preface, he commented on "Al-Aalim wal-Mutaallim" and the introduction of "Al-Fiqhul-Absat" in the remaining places "Al-Fiqhul-Akbar", "Ar-risola" and "Vasya's works, such as those that describe the debates on the subject, will be covered.

KEYWORDS: "Isharatul-Maram", "Al-Fiqhul-Akbar", "Ar-risola", "Al-aalim wal-mutaallim", "Wasiya".

There are Islamic scholars who sacrificed their lives for the protection of their sect and religion. Among such scholars, we can mention Bayaziy Kamoliddin, the author of "Isharatul-Maram" as an example. The scientist was prominent in the science of Aqeedah, and his work entitled "Isharatul-Maram min Ibarotul-Imam Abi Hanifa" is still famous among scholars. In particular, a debate on the topics caused many disagreements. Discussions were held on topics that did not fully cover the work but were more relevant to it.

In a special way, the work began not with the word **الله الحمد** (Alhamdulillah), but with **لمن حمدا** **شيد الدين اصول شيد** (Hamdan liman shayyada usulad-din), that is, praise be to God, who made the foundation of the religion strong. After praising God, Fakir Ahmad ibn Hisamiddin ibn Hasan ibn Shaykh Sinon Bayazi said to his mawla. He praised Abu Hanifa in a beautiful way and called him the light of the nation, the imam of the followers, the pious, and the founder of the science of the word, at the same time, according to his aqeedah, "Al-Fiqhul-Akbar", "Al-Fiqhul-Absat" (or avshot), "Ar-risola", "Al-aalim wal-mutaallim", "Wasiya" works.

The scientist also mentions that he wrote the work "Isharotul-Marom" at the request of many people. In the introduction of the work, the scientist shows that he is also aware of the lion. Because he tried to rhyme the end of the sentences. For example, **عن دقائقها فتوى** **kl khatrwqad, wnzr nqad** (fatovvaytu daqaqaha an kulli khotiri viqod wa nazitri niqad), the end of the word ends with the letter d, such cases are often found in the introductory chapter. From the scientist's introduction, we can see how well he knows Arabic and how advanced his knowledge is [5:1.

The scientist enumerates that the work "Isharatul-Maram" contains several benefits and enumerates the following:

1. Extracting important notes from the sayings of Imam Abu Hanifa.
2. Extracting general important issues from the Imam's exact and firm sayings.
3. Deriving general clear proofs from the imam's allusions.
4. Dispelling the suspicions of the party who disagrees with Ahle Sunnah.



5. Narrating these things (dispelling doubts) from the books of the great imams.
6. He explains that there are many ways of high sanads in narrating the work of Abu Hanifa. That is, the statement that Imam's works have reached us through various imams through high sanads, that there is no doubt in them, and this increases the power of the work.
7. It explains the place of the words of Abu Hanifa, which consists of the narrations of the great imams in these books and famous books. isnad (that is, continuity in narration) is the basis for relying on one piece of information.
8. Summary of the arguments of the imams.
9. Evidence of stable texts and fixed nas.
10. Reprimanding for missed steps.

The reason for the realization of these works by the scientist is two great Ottoman caliphs Muhammad Fatih (born 1429/833. Died 1481/886. The first reign was 1444/848-1446/849, and the second was 1451/855-1481/886) (Bayazi said that Abulfath Muhammad Khan) and Sultan Sa'id Ibrahim Khan (b. 1615/1024-1058/1648) ibn Sultan Ahmad Khan (b. 998/1590-1026/1617) were the cause, and praises them [5:2-3].

In the work, the scientist mentions that Abu Hanifa received knowledge from seven companions and ninety-three subordinates. Hussan, Abu Tufail Amir ibn Wasila Kinani (r.a), Anas ibn Malik Ansari (r.a), Hirmos ibn Ziyad Bohili (r.a), Mahmud ibn Robe' Ansari (r.a), Mahmud ibn Labid Ashhali (r.a), Abdullah ibn Busr Mazini (r.a) and Abdullah bin Abu Awfa met with Aslami, may Allah be pleased with them. Hammad ibn Abu Sulayman studied Ash'ari for a long time and was known for it [2:9].

The scientist Bayazi completed this work by adding an additional commentary and comments to his work entitled "Usulul-Munifa", in which he wrote a brief commentary on the above-mentioned five works of Abu Hanifa. Fakhru'l Islam Pazdavi (d. 482/1090), Hisamiddin Sighnaqi (d. 714/1314) wrote some issues in the works "Al-Fiqhul-Akbar", "Al-aalim wal-mutaallim" and "Ar-risola". , Qavomiddin Atkani (d. 758/1357-58), Jaloliddin Kirlani (d. 767/1366), Qavomiddin Koki (d. 749/1348), Alauddin Bukhari (b. 779/1377, d. 841/1438), Akmaliddin Bobarti (b. 714/1314, d. 786/1384) mentioned some issues in his works, the "Treatise" was written in its entirety by Hamadani in his "Khizanatul-Akmal", Imam Natifi in "Al- "Ajnos", Allama Najmuddin Umar Nasafi's work "Al-Aalim Wal-Mutaallim" in "Manoqibi Abi Hanifa", "Manoqibi Khorazmi" and Kardari and Imam Abu Muhammad Harisi Sabazmunii discussed most of the issues, Burhani's "Muhit" that some issues have been mentioned in the "marriage of books" chapter, Some issues of "Fiqhul-Akbar" were mentioned by Shaikhul-Islam Sheikh Muhammad ibn Ilyas in his "fatawa", Ibni Humam mentioned in his "Musayora", and some issues of "Fiqhul-Absat" were mentioned by Imam Abu Mu'in Nasafi. In "Taqlid" and other chapters of Tabsira, Nuriddin Bukhari in "Tanzih" (Purification of God) and other chapters of "Kifoyah", Hafizuddin Nasafi in "Etimad Sharhi Umda" and "Kashful Manor", Abulabbas Natifi in "Al-ajnos" ", Qazi Abul'ala Su'idi in the book "Al-Etiqad", Abu Shujo' Nasiri in "Burhani Sote' Commentary Aqeed Tahawi", Abulmahosin Mahmud ibn Siraj Qunawis commented, Faiqh Ato ibn Ali Juzhoni also commented on "Fiqhul-Absat", the work "Wasiya" in full form by Imam Sorim Misri in "Nazmi Jamon", Qazi Taqiyuddin Misri in "Tabaqoti Sunniya", Qazi Abulfazl Muhammad ibn Shahina Halabi in the previous "commentary of Hidayah" He mentions that he has mentioned some issues in his Musoyara, Sheikh Akmaluddin Bobarti has commented on "wasiya" [2:11].

"Isharatul-Maram" contains twenty doctrinal matters and high sanads with narrations by Imam Abu Yusuf, Imam Muhammad Hasan Shaibani, Hasan ibn Ziyad, Asad ibn Amr, Yusuf ibn



Khalid Samati, Abdulkarim Jurjani and Abu Ismah Marwazi. hadith) mentions that he added the hadiths related to the creed he arrived at.

He organized the work according to the introduction, three chapters, and conclusion. He started the work with bismillah and praise from Abu Hanifa's book "Al-aalim wal-mutaallim". Why did he start with bismillah [2:12], what are its interpretations, the dictionary and proverbial meanings of praise, and their different definitions, he started by explaining praise [2:13]. Then he started directly commenting on "Al-Fiqhul-Absat". In it, he explains the debate about the importance of knowing the science of jurisprudence to understand the science of usul-deen [2:15-16], and in the third place, dealing with the science of the word from "Al-Fiqhul-Absat", conducting various discussions on this way and on this basis, he explains the debate about the importance of distinguishing truth from falsehood and arming himself with knowledge [2:17-25]. In the fourth place, the word before "Al-Fiqhul-Absat" is continued, and in the fifth place, he explains the text about bad and good qualities [2:25-28].

Sixthly, after studying and interpreting the text of Abu Hanifa's "Ar-Risalah" about what is best to be taught to people and from whom one should learn knowledge, then it is precisely from this that from whom one should learn the knowledge of Aqeedah.

interprets the text about the need to stay away from heretical activities and gives hints about it. Then in the eighth place from "Al-Fiqhul-Absat" Abu Hanifa's teacher Hammad ibn Sulaiman (r.a) from Ibrahim Nakha'i (r.a) and that person from Ibn Mas'ud (may God bless him and grant him peace) created something new in Islam. commented on his narration about Ninthly, he cites the hadith in "Al-Fiqhul-Absat" about the division of the ummah into seventy-three factions. This concludes the section devoted to the introduction. At the end of the introduction, he mentions various differences between the Ash'ari and the Moturidis. He numbers them to fifty [2:28-40].

The first chapter is under the title "It is obligatory to know God by seeking evidence", and it explains the long hadith known as the hadith of Jibreel (peace be upon him) in Al-Fiqhul-Absat concerning the Ijmali (briefly) faith. After explaining the short definition of religion in this work, he starts to interpret the text about the origin of monotheism from "Al-Fiqhul-Akbar" and then moves to "Al-Fiqhul-Absat" brings During the interpretation of this text, the servant is given free will, the obligation to know his Lord through the mind, and the need for the servant to reason even if the prophet is not sent [2:41-67].

In the work, monotheism, verbal and substantive attributes of God, the fact that no one is obligated to do anything, the innocence of the prophets (purity from all major and minor sins), seeing God in heaven, God's justice, God's attributes in Persian (in languages other than Arabic). It is possible to say, the necessity of distance when it means to be close to Allah and distance from Him, and the truth of the message of Miraj.

In conclusion, it can be said that "Isharat al-Maram min ibarati Imam Abi Hanifa" is an important and detailed source in explaining the science of Aqeedah, because it contains Abu Hanifa's famous "Al-Fiqhul-Akbar" almost completely, "Al-Fiqhul- "Absat" is half, several topics of "Al-aalim wal-mutaallim" and important and relevant topics from the works of "Ar-risola" and "Wasiya" are presented, with comments and comments, allusions, various respected scholars. views on the subject, the views of the Ash'ari school of thought. We will not be mistaken if we say that a person who has studied the work will have complete knowledge of the science of Aqeedah.



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LEXICAL TRANSLATIONAL PECULIARITIES OF ENGLISH AND UZBEK PROVERBS, IDIOMS, PHRASES ABOUT GOLD

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ANNOTATION

The paper deals with the lexical translational peculiarities of English and Uzbek proverbs with the usage of word 'gold' that reflects national and cultural identity and the specificity of thinking of the Uzbek and English people. This aim was achieved due to the study of the lexical translational peculiarities of Uzbek and English proverbs. Because of the study, both common and specific meanings of the Uzbek and English proverbs were revealed in the languages under consideration. During the analysis the basic meaning of the proverbs were revealed and systematized in this work.

KEY WORDS: national and cultural identity, peculiarities, to analyze, specific meanings.

INTRODUCTION

Proverbs and sayings reflect cultural values widely accepted in the society and contain widely used and accepted evaluations of human behavior and actions or deeds in various situations and in different circumstances. Proverbs are a simple way of expressing a well-known truth or adage based on common sense or experience. They are usually considered to be imbued with ancestral wisdom, passed down from generation to generation until they become part of a society's oral tradition. The aim of the article is to consider the layer of the lexis that presents cultural peculiarities of every nation, these are proverbs and sayings. Most of the proverbs are not of literary origin, but of folk one. The experience of nations, the observations of life by the ancient people are represented in proverbs and sayings, this layer of lexis is unique. [1]

Proverbs are culture-loaded. They are regarded as one of the most ancient and valuable manifestations of human culture. The functions of proverbs are the same as the functions and sub functions of speech acts. They express intellectual and emotional attitudes: disappointment, sympathy, intention, acceptance as well as moral attitudes: approval, disapproval, appreciation, apology or regret.

Cultures of different nations differ from each other greatly. In order to identify these differences, it is of importance to analyze the essence of concepts that lie within. The cultural cognitive mechanisms belong to the cognitive concepts, reflecting basic beliefs, traditions, etc. G.D. Tomakhin (2007) distinguishes between geographical, socio-political and ethnographic culture-specific concepts. [2]

METHODS

Why is gold precious? Why do we attribute gold to quotes? What makes it different from other metals found on the Earth?



Gold is a valuable metal due to three reasons. One, it is rarely found. Two, there is a lot of hard work that goes into extracting it from the Earth. Three, gold is found to be in its purest forms and gold does not rust.

We have planned to make some investigation by comparing Uzbek, English and foreign proverbs, idioms and phrases with the help of lexical translation. To realize the study, the researchers selected material from the monolingual and polylingual dictionaries and other literary sources in the Uzbek and English languages. Among the methods of data analysis are the following ones: - descriptive method, based on observation, - oppositional analysis of the English and Uzbek proverbs,

- Etymological analysis,
- Method of comparative analyses
- Statistical method,
- Method of generalization.

DISCUSSION. CHARACTERISTICS OF PROVERBS

Proverbs still play a significant role in today's speech, where they continue to be used to moralize, to instruct, to advise, and to reflect on everyday occurrences' (Mieder, 1993:58) [4]. Proverbs are often used in different manners, changed in order to suit modern communication due to their unique characteristics, some of which are listed below:

1. Proverbs are often used in personal interaction
2. Almost all proverbs are context dependent (except some biblical proverbs having didactic function)
3. It is usually centered on norms and acceptable code of conduct
4. It is not logical
5. It is empirical fact based upon and derived from people's experiences, human relationship and interaction with nature
6. It is figurative language marked by concise brevity
7. It is a graphic statement expressing a truth of experience
8. It is usually perceived and accepted as an incontrovertible truth
9. It is an aphorism, wise saying based on people's experiences
10. It is a reflection of social values and sensibility of the people
11. It is a means of fulfilment of a variety of socially desired goals [3]

Translating proverbs, idioms word-by-word is not sufficient way to express the meaning of proverbs in the other languages because of cultureless that exists in its content in a target language. It may cause to misunderstand the basic meaning of a proverb. Therefore, the method of finding equivalents of proverbs in English and Uzbek is used to investigate peculiarities of proverbs about gold in these languages.

Similarities in Case of Using Proverbs: Both the Uzbek and English cultures and ideas have a lots commonality. Therefore, these languages also have some similarities the way the proverbs are spoken and used in both the cultural. However, there are many dissimilarities too. However, all the proverbs are semantically universal in one or another way. The following are the examples of the similar and close meaningful proverbs that are used in both Uzbek and English languages:

**Table 1: Similar/ Close meaningful Uzbek and English Proverbs**

Uzbek Proverbs	English Proverbs	Similar/ Close meaning
Yaltiragan narsa hammasi ham oltin emas	All That Glistens Is Not Gold	Similar
"Oltin o'z o'rnida yaxshi, ammo mehribon, jasur, vatanparvar erkaklar oltindan afzaldir"	"Gold is good in its place; but loving, brave, patriotic men are better than gold."-Abraham Lincoln.	Similar
Oltindek qadrlı inson	To Be Worth One's Weight In Gold	Similar
Bir xum tilloga ega bo'lmoq	Crock Of Gold	Close meaning
Oltin ga teng, topilmas ishchi	Like Gold Dust	Similar
Сўз - кумуш, Жим ўтириш - олтин	Speech Is Silver, Silence Is Gold	Similar
Oshig'i oltin bo'lmoq	To Strike Gold	Close meaning
Ko'chadan pul supurib olmoq	Streets Are Paved With Gold	Close meaning
Oltin davrim	The Golden Years	Similar
Ishxonada qo'shimcha pul taqdim etmoq	A Golden Hello	Close meaning
Puling bo'lsa, jangalda sho'rvo	A Golden Key Can Open Any Door	Close meaning
Qo'lini qayerga cho'zsa, yetadi	To Have A Golden Touch	Close meaning
Ketmoni uchmoq	The Golden Ticket	Close meaning
Oltin me'ros	A Golden Oldie	Similar
Oltin davr	Golden Age	Similar
Oltin qoida	The Golden Rule	Similar
Oltin o'tda bilinar, Odam — mehnatda.	Real gold is not afraid of the melting pot	Similar
Omadi chopmasa ish maydonida. Bir chetda o'tirib erkak yig'laydi	He fishes well who uses a golden hook.	Close meaning
Uzoqdagi bug'doydan , yaqindagi somon yaxshi	Better a friend at court than gold on the finger. (Welsh Proverb)	Close meaning
Tanangda oxirgi joning chiqquncha, harakatda bo'l.	If you are sick, think about your life; if you are better, think about your gold . (Mongolian Proverbs)	Close meaning
Haqiqat egiladi, bukiladi ammo sinmaydi	Bury truth in a golden coffin, it will break it open. (Russian Proverb)	Close meaning
Yigitni uch narsa buzadi: shon-shuhrat, oltin hamda qizlar	There are three things that can destroy a preacher, the glory, the gold , and the girls. (American Proverb)	Close meaning
Non yemoqchi bo'lsang, O'tin tashishdan erinma	If you are sick, think about your life; if you are better, think about your gold	Close meaning
O'tgan vaqt yo'qolgan oltin dan qimmat	The golden age never was the present age.	Similar



Oltin yerda yotmas	Gold is where you find it. ~ (American Proverb)	Close meaning
Bulbul uchgandan so'ng Oltin qafasni o't olsin.	Though a cage may be made of gold , it is still a cage. (Mexican Proverb)	Close meaning
Gavhar ko'p bo'lsa, qadri qolmas. Gavhar qadrini ko'r bilmas.	A good cat does not need a collar of gold . (Japanese Proverb)	Close meaning
Oltin boshli xotindan Chelak boshli er yaxshi.	A man of straw is worth a woman of gold . ~ Traditional Proverb	Similar
Oltin yerda qolsa ham, Bilimli yo'lda qolmas	Gold has its price; learning is beyond price. (Chinese Proverb)	Similar
Qo'ldagi oltinning qadri yo'q	Many who have gold in the house are looking for copper outside. (Russian Proverb)	Similar
Uchib tillo-zarlarga . Xazon aylading bog'im	Love kills with golden arrows. (Spanish Proverb)	Close meaning
So'zing kumush bo'lsa, Ishing — oltin .	Silence is golden when you cannot think of a good answer.	Close meaning
Oltin o'tda bilinar, Odam — mehnatda.	Gold is tested by fire, man by gold." -Chinese Proverb.	Close meaning
Oltin — balchiqda ham oltin .	"If you drop a gold coin in mud, it does not lose its value." - Matshona Dhliwayo.	Similar
Oltin bilan ovlab bo'lmas qolgan ko'ngilni	"Gold will never fill an empty heart." -Dorothy Clarke Wilson.	Similar
Kimxob to'ning bo'lguncha, Oltin beshiging omon bo'lsin.	"Rich men without wisdom and learning are called sheep with golden fleeces." -Solon.	Close meaning
Ko'p oltin -qadrsizdir	"If gold was as plentiful as sand, it would not be as valuable."	Similar
Oltin o'tda bilinar, Do'stlik -kulfatda	"Gold is proved in the fire, friendship in need." Danish proverb	Similar
Onangni otanga beparдоз ko'rsatma	"Do not show your own mother to your father without jewelry ..." (The Uzbek proverb)	Close meaning
Oltin olma, bilim ol, Bilim olsang bilib ol.	Don't take gold, take knowledge; knowledge is gold	Similar

In reading some English literary works, we could also read some slangs related to the word 'gold'. Golden girl - a successful woman that many people like and admire her. In Uzbek language, we translate this slang in this way. -Shodiya-tillo qizda, qo'ldan hamma narsa keladi hamda juda xushmuomilali.

Golden-boy -a young man who has become unusually successful at an early age. A favored youth, held in high esteem by others and for whom there are high hopes. -Farrux-tillo bolada, 30 yoshida shuncha yutuqlarga erishdi-ya! O'z mashinasi, o'z hovlisi, o'z biznesi hamda o'z shaxsiy poligraf-servis kompaniyasiga ega. Qoyil!

Nevertheless, sometimes we do not use word-by- word translation. Instead of the word 'gold', we can choose other equivalents. -"To have a golden opportunity" / "to miss a golden opportunity"



In Uzbek, we omit the word ‘gold’ in translation. -‘Ajoyib’ imkoniyatga ega bo’lmoq, ‘zo’r’ imkoniyatni qo’ldan boy bermoq.’

“Stay gold” is a small but powerful phrase, which means that it is perfect for a good number of different uses in sentences. “Stay gold” is a deeply valuable phrase to use in contexts where the person that you are talking to is incredibly good and pure of heart. In these situations, you should use “stay gold” as a way of telling the person that they should always be good and kind. In translation period from English into Uzbek, we cannot use word-by-word translation like ‘oltinligingcha qolgin’. Without changing the meaning of the sentences, we try to translate in this way. - You have been good to me, so as I depart I will simply tell you ‘to stay gold,’ forever and ever.

- Sen menga juda yaxshi munosabatda bo’lding, ketish oldidan bir so’z demoqchiman, iltimos hech ham o’zgarma, hozirgidek asl holingda bo’lgin.

Below, we compare three languages in translation. In three languages, we cannot paraphrase the phrase ‘golden feeling’. - I’m flying now, that golden feeling, as if I could run right into the air, and I’m invincible, nothing can stop me, nothing can stop me, nothing, nothing, nothing, nothing.

- Men hozir o’sha ‘oltin’ tuyg’uni his qilib, go’yoki to’g’ridan-to’g’ri havoda uchayapman va men yengilmasman, meni esa hech narsa, hech narsa, hech narsa to’xtata olmaydi.

- Сейчас я лечу - это ‘золотое чувство’, как будто я могу забежать по воздуху на небо, и я непобедим, ничто не может остановить меня, ничто не может меня остановить, ничто, ничто, ничто, ничто.

RESULTS

A huge number of proverbs, sayings and idioms are considered as a great wealth of the Uzbek culture. The main sources may be classified as followings: some characters from religious sources and the borrowed translations (mainly from the Arab, Tadjik, Persian and Russian languages). Moreover, some proverbs come from sayings created by the mass media (TV, radio or social nets), expressions of films and songs, and even advertising slogans in all languages including English and Uzbek. However, they need some time to become or to form new proverbs as well.

All the above-mentioned facts, let us make the conclusion that proverbs, sayings, phrases, idioms touch every sphere of human life. As the wisdom of the nation is accumulated in them, judging by these expressions, we make conclusions connected with the preferences of the nations, geographical locations, climate conditions, peculiarities of religion that is to get deeper into the essence of the notion “language picture of the world”.

To conclude, proverbs, idioms, phrases come to be a very numerous parts of the English and Uzbek languages. They differ stylistically, semantically, structurally, and even pragmatically from one another. Proverbs, idioms, phrases cover many drawbacks of the culture of a nation. They serve to describe, define and express the culture of the language in which they exist.

CONCLUSION

The translation process of proverbs, idioms, and phrases from one language into another requires more than componential or structural approach, it is necessary to give exactly main idea of a target proverb, idioms, and phrases in a translation. As the main result of the paper it is proved that the semantic, structural or stylistic similarities are found between English and Uzbek proverbs, phrases and idioms about ‘gold’ as well as they have many differences. However, resemblance between linguacultural peculiarities of these proverbs, phrases and idioms do not occur in these languages.



Some universal elements are commonly found in Uzbek and English proverbs, phrases and idioms. The aim of the research with the cross-cultural analysis found out how proverbs are treated in Uzbek and English language. The study found the similarities and also the dissimilarities the way proverbs, idioms, phrases are treated in both. While analyzing dissimilarities it seems that some Uzbek proverbs are based on their meaning found commonly used as English idioms and English proverbs depending on their meaning are found, used as Uzbek idioms. This study undoubtedly improves cross-cultural awareness among students; thus foreign language teachers are expected to be inspired by the results of this research as it's completely new field for Uzbek and English languages researcher to analyze further depending on the present study's outcomes.

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ISSUES OF IMPLEMENTATION OF THE STANDARD “PRESENTATION OF FINANCIAL STATEMENTS” (IAS 1)

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ABSTRACT

Motivated by the issuance of International Accounting Standard 1 revised, this paper investigates reporting choices on the comprehensive Income of listed companies from Europe and the USA. This research aims at verifying the effects of the requirements issued by the International Accounting Standard 1 revised in improving performance evaluation towards the convergence between European and American Accounting Standards, our research tests the correlation between the choice of income statement format and different variables, such as the size of companies, sign of other comprehensive income, leverage and status of a US listing. This paper also evaluates the effect of comprehensive income on financial performance by calculating the return on equity. The main findings underline that the format of Income Statement and the “location” of the comprehensive income can be interpreted both as factors that can influence the choices of investors and as a tool available to managers to alter the communication of the firm’s performance choices.

KEYWORDS: *Financial Statements, Income Statement, Cash Flow*

The International Accounting Standards Board's (IASB) Framework states that; "The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions". The statements prepared also show the results of the management's stewardship.

The requirements of IAS1 apply to all general purpose financial statements prepared and presented in accordance with international standards. General purpose financial statements and those intended for users who are not in position to demand reports that are tailored for their own particular information needs.

The recent process of accounting harmonization made possible by the adoption in 2005 of IAS/IFRS methods represents the beginning of a practice tending to overcome accounting differences not only at the European level but also more generally on a worldwide scale for the progressive adoption of a common global accounting language (McGregor, 1999; Pozzoli, 2003; Erikson et al., 2009; PWC, 2012). A super partes need emerges for a project of convergence between the European accounting IAS/IFRS standards and the American GAAP, which justifies the progressive harmonization of these two accounting systems (Tarca, 2005; Callagan and Treacy, 2007; Hail et al., 2010; Tarca, 2013). The exigency of reaching a definition of a unified set of accounting principles will not only result in the effective solution of “Tower of Babel accounting” (Erikson et al., 2009) but also improve comparability of data and financial communication on stock markets (Accountancy, 1966).

According to IAS1, the objective of such financial statements is to provide information about the financial position, financial performance and cash flows of an entity that is useful to a wide range of users in making economic decisions. Apart from a slight difference in wording, this definition is of course the same as the one given in the IASB Framework. In order to meet this objective, general



purpose financial statements should provide information about an entity's:

Assets. Liabilities and equity. Income and expense, including gains and losses. Contributions by and distributions to owners in their capacity as owners. The information is given in four primary financial statements. Further information is given in the notes which accompany these statements.

The adoption of the IAS/IFRS principles has brought about a radical change in certain key aspects of the creation of financial statements. For several years now, the (IASB, 2008) has been making significant revisions to basic accounting rules in anticipation of the future convergence between the IFRSs and the US GAAP. One of the themes recently revised is the concept of income formation and therefore the IFRS approach to the definition of business performance. At the European level, income determination based on IFRSs has been characterized by several steps that have caused considerable changes. The common aim is to improve external disclosure of the real performance achieved by companies and to meet the information needs of potential investors (IASCF, Framework for the Preparation and Presentation of Financial Statements, 1989; Conceptual Framework for Financial Reporting 2010 [the IFRS Framework] approved by the IASB, September 2010). Although the historical cost criterion has not been abandoned, the adoption of fair value as a "benchmark" criterion has led, in general terms, to the rejection of the concept of realized or produced income and the introduction of the concept of a "true and fair view" of the income, financial and asset positions, including factors of future realizability. This view is known as a "hybrid" or realizable income structure, i.e. an income structure inclusive of proceeds and revenues that, although accrued, have not yet been realized and are linked to the application of the fair value criterion. This results in an increase in the number of items to be recorded as income components, which must be measured solely on an accrual basis, because accrual is sufficient and actual realization is not required.

A statement of financial position as at the beginning of the earliest comparative period presented, if the entity has applied an accounting policy retrospectively or has made a retrospective restatement of items in its financial statements.

This titles have replaced the more traditional titles used in the previous version of IAS1 (balance sheet, cash flow statement) and are trough by the IASB to reflect more closely the function of each statement. However entities are allowed to use titles for the financial statements other than those used in the standard if they so wish.

The structure and content of most of the statements is specified in IAS1. But the statement of cash flows is dealt with by IAS7 Statement of cash flows. It is important to appreciate that the notes which accompany the four primary statements are in integral part of the financial statements and so fall within the scope of IAS1 and of the other international standards.

In addition to the items listed above, IAS1 recognizes that an entity's annual report might contain other statement such as environmental report or value added statement. These other statements are not part of the financial statements and are therefore outside the scope of international standards.

Financial statements must present fairly the financial position, financial performance and cash flows of the entity concerned. This requires that the effects of transactions and other events should be faithfully represented in accordance with the definitions and recognition criteria for assets, liabilities, income and expenses set out in the IASB Framework. It may be assumed that the application of international standards will result in financial statements that achieve a fair presentation. An entity which produces financial statements that comply with international standards must make an explicit and unreserved statement to that effect in the notes. A fair presentation also requires the entity to.

Select and apply appropriate accounting policies in accordance with the requirements of



international standard IAS. Provide information that is relevant, reliable, comparable and understandable

Provide further disclosures if compliance with international standards is insufficient to enable users to understand the impact of transactions and other events.

On very rare occasions, compliance with requirement in an international standard may produce misleading information and so conflict with the objective of financial statements. In these circumstances, the entity should depart from that requirement and the notes should disclose that the entity has complied with international standards except that it has departed from a particular requirement in order to achieve a fair presentation. The notes should identify the title of the standard concerned, the nature of the departure, the reason for the departure, the accounting treatment that the standard would have required, the accounting treatment actually adopted and the financial impact of the departure.

Financial statements should be prepared on the going concern basis unless the entity intends to cease trading or has no realistic alternative but to do so. If there are significant doubts concerning the entity's ability to continue as a going concern, the uncertainties which give rise to these doubts should be disclosed. If financial statements are not prepared on going concern basis, that fact should be disclosed, together with the basis on which the financial statements are prepared and the reasons for which the entity is not regarded as a going concern.

Financial statements other than the statement of cash flows should also be prepared using the accrual basis of accounting. The statement of cash flows is an obvious exception to this rule since, by definition; it is prepared on a cash basis.

IAS1 defines materiality by stating that emissions or miss statements of items are material if they could individually or collectively influence the economic decisions that users make on the basis of the financial statements. IAS1 further states that materiality should be judged in context and that either the size or nature of an item, or combination of both could determine whether or not the item is material.

In general, financial statements are prepared by analyzing transactions and other events into classes and the aggregating each of these classes to produce line items which appear in the statements. For instance, all sales transactions are aggregated into a single revenue figure shown in the statement of comprehensive income. IAS1 requires that each material class of similar items should be presented separately in the financial statements. If an item is not individually material, it may be aggregated with other line items.

IAS1 explicitly states that there is no need to satisfy the disclosure requirements of an compliance with the standards can be achieved without having to disclose immaterial items, whether in the primary financial statements or in the accompanying notes.

In general assets and liabilities should be reported separately in the statement of financial position and should not be offset against one another. Similarly, income and expenses should be reported separately in the statement of comprehensive income. IAS1 takes the view that offsetting should not be allowed, since this would normally detract from user's ability to understand transactions and other events. However, this general rule does not apply in a specific instance if another international standard permits or requires offsetting in that instance.

Financial statements should normally be presented at least annually. If an entity changes its accounting date and so presents a set of financial statements for a period which is longer or shorter than one year, the entity should disclose:

The reason for using a period that is longer or shorter than one year. The fact that the



comparative amounts given for the previous period are not directly comparable with those given for the current period.

Unless another international standard permits or requires otherwise, IAS1 requires that entities should present comparative information in respect of the previous period for all amounts reported in the financial statements. Comparatives should also be given for narrative information if this would be relevant to an understanding of the current period's financial statements.

In order to maintain comparability the way in which items are presented and classified in the financial statements should generally be consistent from one accounting period to the next. However, this rule does not apply if:

It is apparent that a different presentation or classification would be more appropriate, following either a significant change in the nature of the entity's operations or a review of its financial statements. A different presentation or classification is required by an international standard.

The majority of IAS1 is concerned with the structure and content of an entity's financial statements. The standard requires that certain items should be shown in the statement of financial position, the statement of comprehensive income and the statement of changes in equity. Other items should be shown either in these statements or in the notes. IAS1 does not deal with the statement of cash flows, since this is the subject of IAS7 Statement of cash flows. The main headings in this part of IAS1.

The first point made in this part of IAS1 is that the financial statements should be clearly identified as such and distinguished from any other information which may be given in the same published document. Since international standards apply only to the financial statements, it is important that users can distinguish information that has been prepared in accordance with standards from information that has not.

Furthermore, each component of the financial statements should be clearly identified and the following information should be displayed prominently and repeated where necessary for a proper understanding of the information presented:

An important requirement of IAS1 with regard to the statement of financial position formerly known as the balance sheet is that current and noncurrent assets should be presented separately and that current and non-current liabilities should also be presented separately. For an entity which supplies goods or services within a clearly identifiable operating cycle, this separation provides useful information by:

Distinguishing the net assets that are continuously circulating as working capital from those used in the long term and highlighting the assets that are expected to be realized within the current operating cycle and the liabilities that are due for settlement within the same period.

IAS1 established a set of criteria which should be used to distinguish between current and non-current assets and another set of criteria which should be used to distinguish between current and non-current liabilities.

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MULTIMEDIA TECHNOLOGIES IN AUDIOVISUAL ART

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ABSTRACT

This article discusses multimedia technologies in audiovisual art. The purpose of audiovisual creativity is to create an artistic image, which includes not only the image - the nature of the audiovisual work, but also the sound-visual image of the work, the image of each episode, scene, and everywhere figurativeness (visuality) turns into figurativeness.

KEY WORDS: *multimedia technology, audiovisual art, media language, visual symbols, specifics of media texts*

Vision of the surrounding world as a way of speculative mental reactions, the ability to capture forms, lines, combinations of light-tone transitions and nuances, penetration into the essence of objects through their external outlines comes in the process of constant training in the process of performing exercises that develop visual representations. Vision hides the ability to marvel at the perfection of the world, its contradictions, the harmony of its individual parts, or the incompatibility of phenomena. A figurative or symbolic vision is formed depending on the dominant development of the corresponding ideas. It appears as a result of comprehension of what was discovered, discovered in the past cognitive experience. At the same time, the views that have already become habitual are overcome. The ability to see harmony in surrounding things, the beauty of lines, the play of light and shadow is attributed to the field of artistic vision, deepening into the essence of phenomena, sharpening sensory perception when hidden meanings are discovered, refers to intellectual vision. With the help of visual perception, a deep change in shape, large-scale expressiveness, light-tonal and perspective constructions, main and secondary, characteristic and insignificant are recorded. Vision is associated with visual observation - the ability to notice strokes, nuances, details, characteristic, but little noticeable features of objects and phenomena. Associative imaginative solutions are based not on external effects, but on various kinds of connections with thoughts about visible phenomena. Mastering the language of audiovisual images helps to see the possibilities of their use, to comprehend their internal patterns, which in turn significantly activates the vision. The vision formation system is a set of personal orientations in the sphere of screen images and symbols. The main didactic principle of mastering the media language is the gradual expansion of the range of perceived objects, the zone of their mutual influence from the system of direct object environment to those located in virtual reality. Figurative vision is associated with a feature of visual perception, which increases the sensitivity to generating images in the process of observation, tracking and search. This allows you to carry out cognitive activities based on personal worldview and your own position. The sign-symbolic vision includes both the sign itself and its forms, as well as the conventions of the symbol in various varied meanings. It can significantly increase the intensity of visualization of various meanings. Intellectual-figurative vision consists in giving semantic meaning to



images, in objectifying the proposed decisions, connections, systems. Here, unreal figurative solutions associated with illusions and phantoms can be involved, emotions, moods, thoughts thicken, caused not only by situations and events of everyday life, but also by artificially organized material, subconscious intellectual decisions and imaginative moves receive a new structure, being extracted from it.

Sociocultural concepts of audiovisual creativity Levels of cognitive activity should be understood as a gradation of progress towards creativity and self-fulfillment and a kind of hierarchy of predominant activities:

1) explanatory-illustrative, or informational, level associated with immersion in the problem in the process of perceiving the material and saturating it; deployment of the problem field; 2) reproductive-reproducing level: obtaining knowledge on stereotypes and samples and designated algorithms of actions;

3) the level of practical development of knowledge in the form of deployment of ideas, classifications, forecasting and design;

4) problem-developing level: further development of ideas in the form of one's own interpretations and a holistic vision of the problem;

5) research, heuristic level, providing for finding independent, creative solutions;

6) the level of reflective communication and creative self-development provides for the presence of intellectual increments as incentives for personal neoplasms.

That is why the following seven stages of learning activity can be defined.

1. Explanation and illustration in the process of cognition is the essence of the stage, which consists in inclusion in the problem.

2. Playback and work on known algorithms leads to the need for educationally oriented search activities.

3. Practical assimilation of knowledge indicates a certain degree of assimilation of the material in screen activities.

4. Thanks to the acquired information, the prerequisites for the development of the problem are created, which consist in the possible interpretation and structuring of the audiovisual material.

5. Research and search, leading to independent decisions, are the basis of the fifth, creative level of educational activity.

6. Arising at the level of reflection, the possibility of embodying one's intention is realized in the form of a presentation of the audiovisual information received by the student.

7. The presented and assimilated information is not the end of the process of cognition, which is continuous and continues in further cognitive-developing communication.

The goals of information and educational interaction in the field of screen technologies are differentiated by levels as follows. The first level is the selection of screen media and media texts for collecting information and compiling a knowledge base; obtaining information that satisfies the cognitive interests and abilities of students; illustration of phenomena that are difficult to imagine and require visual analysis. The second level is the use of previously acquired knowledge and skills; explanation of your preferences; determination of ways of cognitive activity and adequate media means; analysis of plot (semantic) lines; analysis of media texts in historical, social and cultural contexts; creation of media text according to the model of the existing one. The third level is the use of ready-made media texts to solve feasible tasks; assessment of the language of media texts; their certain forms, genres and categories;



"reading", identification and discussion of audiovisual tests, including questions related to the language of the media (angle, plan, color, sound); study of the typology of plots found in media texts and comparison of new types of plots with known ones; identification and description of various stereotypes in media texts; analysis of new meanings of verbal and visual symbols; disclosure of the content of the plot, the development of the action and the denouement of the plot; understanding the specifics of media texts; recognition of symbolic codes used by media (frame, perspective, angle); an explanation of how information relates to codes and conventions; analysis of implied and openly expressed ideas; understanding the meaning in the combination of elements (sound, frame, perspective); understanding the interaction of symbolic codes to create meanings; comparison of screen information interpretation methods; the use of various techniques in planning and creating media texts. The fourth level is the use of audiovisual technology for learning and development, the creation of a problem space, the development of ways to master the audiovisual language, the analysis of plot and semantic contexts; posing questions and problems in leisure and educational activities; creation of various options for interpreting media texts; identification of ways to solve problems and tasks; evaluation of the effectiveness of various elements of the media text; creation of different plots based on the same image and vice versa (verbalization / screen adaptation). The fifth level is the creation of your own signs, symbols and visual artifacts; development of plot construction methods; expressing one's own preferences or points of view; participation in the discussion through interactive means; critical reading and evaluation of media texts; typification, classification and comparison of media texts using screen forms of expression; the use of media texts for the study of processes and phenomena; choice of means and forms of media; making decisions about the use of available audiovisual media (substantiation, implementation and presentation of your media project); experimentation with various forms and technologies in order to study the specifics of their use. The reflexive process is also closely related to figurative thinking, which consists in the sequential deployment of figurative and symbolic generalizations based on the correlation of perceptual units-frames, their constituent parts. In the process of reflexive communication of screen fragments, a kind of "energetics" is revealed - an atmosphere of emotional, figurative, associative and semantic connections between perceptual units. Audiovisual technologies in education are variable, they can be integrated into the educational process in whole or in fragments. The methodology for building models of learning and development is based on cycles of cognitive, creative and game tasks.

To substantiate audiovisual educational technologies, the following theories, tested by the world practice of media education:

The theory of media education as a source of "satisfaction" of educational needs, the purpose of which is to help get the maximum benefit from the media in accordance with desires and inclinations.

The "practical" theory of media education, its essence lies in the creation of original video clips for students, in which, thanks to the skillful use of the media language, the contours of self-comprehension of practice-oriented knowledge are indicated.

The semiotic theory of media education is the representation (representation) of screen information in the form of media texts, which opens up the possibility of creative and aesthetic transformation of information in the process of forming one's own educational strategy.

The theory of the formation of "critical thinking" in the process of interaction with the screen text. At the same time, a system of social values is formed, with the help of which one-sidedness of training,



unreliability of data, passionate judgments, ambiguity of argumentation and lack of evidence, manipulation by the screen are overcome.

The cultural-dialogical theory of media education is aimed at the evaluation and interaction of media texts, which results in the insertion of various meanings into screen information and its independent evaluation.

Video technologies in socio-cultural activities With the help of a video camera, the stages of perception of the surrounding reality are recreated on the screen, by following the movement of the human eye and interpreting this movement with the help of editing. Primary and secondary editing creates the conditions for the transition using the effects of "continuation" and "insert", the size of plans, the focus of attention, the shooting location, light and color ratios, direction, phase and speed of movement are selected. Each shooting or viewing technique has a different creative rationale. The movement of the video camera lens goes from a general plan to a close-up, the detailing of a video image can become a stimulus for active artistic thinking if the viewer tries to feel the figurative content of the details, and then synthesize, building the screen space of the picture in his mind on the basis of emotional and semantic correlation. The establishment of associations creates the internal content of the screen narrative. At the same time, a change in constructions and thoughts, emotional and semantic dynamics in the development of plastic images, and corresponding figurative generalizations are fixed. Placement of objects of perception in the context of a video film, their storyboarding, fragmentation and linking forms the energy space of personal associations, feelings, thoughts, spiritual and moral life. Video technologies have an important specific feature to exist in the form of screen speech associated with the skills of audiovisual communication based on the sound-plastic dynamics of information, changing spatial and temporal dimensions. Video technology is carried out in three stages. The first stage is following the logic of the video film perception and creating your own vision algorithm using storyboards, making editing records, working with a soundtrack and building figurative generalizations. The second stage is a video training that simulates a linear, associative or polyphonic screen narration by means of making collages, visually denoting a problem or conflict; building a figurative atmosphere of on-screen narration in a video frame; reflective commentary on screen fragments. The third stage is a holistic coverage of the screen narrative, comprehension of the internal content, understanding the linkages of the plastic composition of frames. Video technology has the creative potential of changing the logic of alternation and image change. When releasing video films, psychological, pedagogical and methodological aspects of the preparation of educational materials should be taken into account. Careful consideration is needed when selecting videos for use by different audiences. Monologues should be of optimal duration, the speech sequence should not dominate the visual, the theme should be strictly sustained. Video technologies are promising for use in the educational process.

It is not difficult to record any material from the TV screen (reproduced video material) on a video cassette, replicate the video recording, fragment it for re-viewing. The video allows you to go back for the purpose of: - training; - a more detailed study of the object of perception; - target viewing. There are the following forms of using video in the educational process: video lessons, video lectures, video tours, demonstration material in video fragments, video performances, video concerts, video magazines. The information richness of the video film lies in the fact that through demonstration in a short period of time it is possible to convey such an amount of information that is unrealistic to present in a verbal



presentation. In this case, the rate of presentation of video information can change, which makes it possible to provide more or less detailed presentation. Managing the process of perceiving information from the screen is determined not only by the pace of its presentation, but also by the logic of presentation, the use of video recording tools to highlight one or another plan, up to their detailed presentation. With the help of video, a clear and thoughtful dosing of information is carried out in order to prevent overloading the film. In this regard, the composition and logic of building a video film should be such as to create a problem situation that requires mutual solutions.

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BICUBIC SPLINES IN COMPUTER SIMULATION

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ABSTRACT

This article discusses bicubic splines in computer simulation. Often displayed objects, especially natural ones, have a rather complex shape that does not allow for a universal analytical description as a whole. Their shape is given by a set of characteristic (reference) points belonging to the surface of the object. Reference points are obtained as a result of measurements on real objects, their scanning using 3D scanners, or assigned by developers.

KEYWORDS: *computer graphics, splines*

In the process of geometric modeling, the original surface must be restored with a given accuracy. It should pass as close as possible to the reference points, and preferably through them. In this case, the character (topology) of the original surface must be preserved. The simplest approach is to connect the control points with plane sections, that is, apply a polygonal model. However, to achieve realistic display of an object, its polygonal model must contain thousands and tens of thousands of polygons, which increases the requirements for memory and graphics system performance. The use of quadrics does not bring success either, since in this case the problem of their smooth joining into a single surface arises. Surfaces of non-analytical forms are represented by piecewise polynomial functions - splines.

The word "spline" (spline) came from shipbuilding. So at one time in England they called a long and thin metal ruler. She was pressed against the ribs (reference points) of the future vessel and, thanks to her elasticity, received the contours of the sides. In geometric modeling, splines are power functions of one or two variables, whose graphical representations are curved lines or curved surfaces. They serve, in particular, to solve the problem of interpolation, that is, to find intermediate points of a curved line or surface defined by reference points. Spline equations usually have a degree no higher than the third, since it is this degree that is the minimum necessary for smooth joining of curved sections.

A spline surface, unlike a curve, must pass through four points that are angular for it. The surface can be thought of as the result of a cubic curve moving parallel to itself. In this case, the end points of this curve slide along two other (lateral) cubic curves in the process of movement. The result is a surface that is described by a bicubic power polynomial. Each term of the polynomial includes two arguments, having various combinations of degrees from 0 to 3. There are many varieties of spline surfaces that have different properties and are formed using different conditions and geometric parameters.

Splines can be described using explicit, implicit and parametric forms. In computer graphics, a parametric description of splines is usually used. The explicit form of the description in the Cartesian coordinate system is rarely used for a number of reasons. First, the type of surface description in an explicit form depends on the chosen position of the coordinate system. Secondly, some parts of the



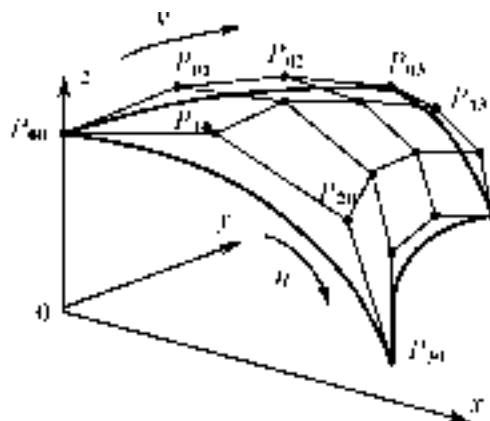
surface may have vertical tangent vectors with derivatives tending to infinity. In this case, it is impossible to set the conditions for docking surface compartments. Thirdly, the parametric representation, in contrast to the explicit form, describes the natural successive traversal of the surface sections in the process of its unfolding in time, which was explained by the example of quadrics. In the general case, the section of a spline surface is described by bicubic expressions of the form

The coefficients of polynomials are found by imposing restrictions on the shape of the surface section. Depending on the choice of constraints, the surface receives one or another form of description. For example, the restrictions for the Koons surface (a special case - the Hermite surface, the Ferguson surface) are the conditions for its passage through the given corner points, as well as the compliance with the given values of partial derivatives (i.e. slopes) at the corner points of the surface and mixed partial derivatives (i.e. torsion) at these points. The use of such restrictions is geometrically clear, but difficult to implement. In computer systems of geometric modeling, the repetition of the shape of a certain polyhedral reference surface (characteristic polyhedron) specified by sixteen reference points is usually used as a constraint by a spline. The surface must pass near the control points or through some of them, and changing their coordinates must lead to a change in the shape of the surface.

The values of the functions $f_i(u)$, $f_j(v)$ act as weight coefficients of the coordinates reference points, so these functions are called weight or mixing.

In computer graphics, a description of a spline in matrix form is usually used. Splines are characterized by a number of useful properties. It has already been mentioned that the shape of the spline compartment follows the shape of the characteristic polyhedron. If all its reference points lie in the same plane, then all current points of the spline also lie in this plane. The characteristic polyhedron is circumscribed around a spline surface, therefore, whether this surface falls into a certain volume (for example, the observer's visibility volume) is easily checked using sixteen points. In addition, splines are invariant under affine transformations. This means that if you need to shear, rotate, scale, and mirror the spline, you do not need to subject all current points of the compartment to these transformations. It is enough to perform transformations only on control points, and then simply apply the spline expansion algorithm on these transformed control points. In geometric modeling, a bicubic Bezier surface is often used. The limitations in constructing this surface are its passage through the corner points of the characteristic polyhedron and the slopes of the tangents given on its boundaries in the u, v directions.

The figure shows a bicubic Bézier surface and its characteristic polyhedron.





The surface is placed in its local Cartesian coordinate system. The main task when using spline primitives in geometric modeling of spatial objects is the placement of reference points. In the case of a Bezier spline, the four corner points of the primitive are easy to find: they belong to the surface of the object. The rest of the points must be chosen in such a way as to ensure smooth joining of the primitive with its neighbors. It is easy to figure out that there will be eight such neighboring primitives: four will be in contact with this primitive by edges and four by corner points.

The dashes show the straight lines on which the extreme control points of neighboring primitives lie.

The mathematical conditions for smooth joining will be the equality of partial derivatives taken in the appropriate directions for the spline functions that describe neighboring primitives. For the diagonal direction, the mixed derivative is taken. When constructing a mathematical model of a complex surface, you need to know what these partial derivatives will be, and the designer has only this surface itself or its characteristic points at its disposal. To simplify the process of describing the surface, they resort to interactive systems of geometric modeling. They have ready-made spline primitives, the shape of which can be changed in real time. This is done by moving ("dragging") the anchor points. Corner points are attached to the surface being modeled, and the position of intermediate points is interactively set in such a way that the primitive receives the desired configuration. One of the well-known geometric modeling systems is 3D MAX.

In addition to Bezier splines, basic splines, or L-splines ("bi-splines"), are widely used in computer graphics. The use of L-splines simplifies the process of modeling complex surfaces. Any 16 characteristic points of the surface, forming a quadrilateral 4*4 points, can be taken as reference points of the L-splice primitive.

The use of multiple control points improves the quality of modeling complex surfaces, although it significantly increases the consumption of computing resources of the graphic system. Rational bicubic splines have wide visual possibilities. In computer graphics, non-uniform Rational B-Splines (NURBS) are usually used.

Computer modeling is essentially the digital successor to the art of frame-by-frame animation of 3D models and frame-by-frame animation of 2D illustration. For 3D modeling, objects (models) are created (modeled) on a computer monitor, and 3D figures are equipped with a virtual skeleton. For 2D animation of figures, individual objects (illustrations) and individual transparent layers, layers with or without a virtual skeleton are used. The form of the above expressions shows that the modeling of surfaces based on rational splines requires large computational costs. NURBS drawing macros are available in modern graphics libraries.

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THE MODERN SYSTEM OF VISUAL ART IN THE CONTEXT OF ART MARKETING

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ABSTRACT

This article discusses the modern system of visual art in the context of art marketing. The development and search for new expressive means in the visual arts is currently associated with the direct influence of screen technologies. Fine art becomes a subcategory of media culture, which offers the viewer a complex and technically high-quality visual product. The desire to virtualize images, creating immersive and interactive art spaces, is becoming increasingly relevant among artists, developing not only in the individual, but more often in the collective work of art groups, including IT engineers and designers.

KEY WORDS: *visual arts, art marketing context, creative industries, fine arts*

The emergence of new needs, especially the aesthetic, symbolic and emotional needs of modern society, has led to the birth and development of industries specialized in the production of goods and services, which are very creative in content and whose use and exchange value is determined by their aesthetic and symbolic value. The cultural and creative sector concerns the historical and artistic heritage of the country, which is the cultural core, which is the result of the creativity of past generations, as well as the artistic production of current generations. Creativity is the contribution that facilitates the production and transmission of content by cultural industries that provide goods and services with a high symbolic content. The creative process is strongly present in the realm of material culture as an expression of a country or region and the communities living there.

The creative industries, although they differ significantly from each other, depend on each other in technical, economic and social respects. First, the human factor plays a key role in the characteristic mode of production. Secondly, they are involved in the creation and transmission of symbolic meaning. Finally, the end result implies some form of intellectual property (Throsby 2001). However, in order to define the visual arts industry, additional points of contact must be found by which the boundaries of the sector can be defined. Thus, it can be stated that the visual arts system consists of all socio-economic agents involved in various areas of the cultural and creative sectors, and which:

- Have a production function in which the human factor plays a key role, and especially creativity (A);
- Based on the existence of some form of intellectual property (B);
- Produce a unique (and therefore non-reproducible) cultural product with a high symbolic content (C);
- Satisfy the need for aesthetic and cultural identity (D).

The visual arts system thus defined is a collection of such size and complexity that it can be seen as a cluster of economic agents of varying value and importance. These agents are closely interrelated and offer for various purposes (commercial or cultural purposes) as well as in their respective structures (galleries, auction houses, fairs, museums, foundations) art objects with a high



symbolic content, designed to satisfy aesthetic and cultural needs that the consumer expresses as an alternative use of his economic power. The sector brings together a number of rather heterogeneous activities and operators: from an institutional point of view (for example, firms in the public or private sector, whether they pursue commercial goals or not); in terms of the motivations encountered (for example, cultural, financial or social); with respect to funding flows (whether or not government subsidies predominate). Currently, more than 400,000 companies (more than 350,000 galleries and consultants, as well as 23,000 auction houses) operate in the global art market, providing about 2 million jobs. The production chain, which falls more or less directly into the cultural heritage sector in developed countries, for example in Italy, includes more than 900,000 companies and about 3.5 million jobs.

In the context of art marketing, the study of the visual art system is based on the definition of demand. The demand for goods and services that enable the art system to function comes from four categories of socio-economic agents: private collectors, companies, government bodies, and cultural institutions. The special demand for goods and services associated with the art system stems from the needs of each of these categories. The benefits of consuming art are usually distinguished according to functional, cultural, symbolic and emotional criteria. Functional benefits are sought when a person feels tension caused by anxiety about a need. Art could satisfy a functional need if it was acquired with decorative intent (to furnish the house in a pleasing way) or speculative intent. Art satisfies cultural needs when it provides educational benefits. For example, a large number of studies have shown that gaining knowledge is one of the main reasons why people visit museums and art galleries. Symbolic benefits, as opposed to strictly functional ones, refer to the meaning that a product acquires on a psychological and social level, but are also associated with semiotic aspects: the consumption of artistic products actually reveals the personality and cultural level of the individual, on the other hand, the desire to achieve a certain social status. Finally, emotional gains are related to the desire for stimulating and fun experiences and come down to the sensations and fantasies that result from consumption.

Then it seems obvious that the consumption of art goods satisfies needs of various kinds, both external (utilitarian) and other internal (emotional). In particular, there are at least four motivations for consumption in the contemporary art market related to the goals and needs of families, companies, associations and cultural institutions. The first of these requirements is related to the need to beautifully decorate the house and satisfy the demand for decorative works of art. The need to convey an image of prestige to well-known stakeholders leads collectors and firms to demand works of art by well-known artists. The need to represent both culture and a credible self-image fuels the demand for avant-garde art. Finally, the need to speculate and diversify one's portfolio through alternative investments fuels the demand for art and art banking. Although this is mainly due to different institutional goals (promotion of culture), the artistic need and the resulting demand for works of art from public institutions (museums, agencies, municipalities, provinces) arises from motives much like those of companies. However, compared to the latter, the marketing activities of cultural institutions are more driven - by the amount of resources involved and the way they develop - by the bureaucratic management that traditionally characterizes them, making them less market-oriented.



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CLLOUD TECHNOLOGIES IN ART EDUCATION

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ABSTRACT

The possibilities of using cloud technologies in ART education, as well as possible difficulties in implementation, are considered. The main examples of modern services built on the basis of cloud computing technologies for ART education.

KEYWORDS: *cloud technologies, cloud services, computer technologies*

Today it is difficult to imagine our life without such electronic devices as a computer, laptop, tablet or cell phone. These devices have changed the lives of millions of people on the planet, greatly simplifying it.

Over the past 20 years, computer technology has made a huge breakthrough in its development. But few of us, ordinary users of personal computers and the Internet, know about the existence of cloud technologies that can already make our life even easier and help us forget about some problems.

At the beginning of the 21st century, the development of a technological concept began to provide users with remote access to data storages, applications and services. This technology is called "cloud computing". Relatively recently, the use of these technologies in education has begun. And this concept is gradually entering the educational sphere.

The new format of education is in demand, firstly, because it allows for a high level of accessibility of education, and secondly, it improves its quality. However, we are not talking about a complete transition to e-learning. It is much more efficient and productive to use blended learning. The use of cloud technologies in education will allow science to overcome all existing barriers: geographical, technological, social.

Cloud computing is a new service that involves the remote use of data processing and storage facilities. With the help of "cloud" services, you can access information resources of any level and any capacity using only an Internet connection and a Web browser.

Today, "cloud" technologies are actively used in all developed countries, providing fundamentally new, cost-effective opportunities for business, management, education and research.

In this regard, the issues of studying cloud technologies are now of particular importance.

Cloud technologies are not the Internet itself, but a set of hardware and software that processes and executes client requests. "Cloud services are a way to access information resources of any level and any capacity using only an Internet connection and a web browser."

The issue of the possibilities of cloud technologies in e-learning is not yet well developed, so this topic should be given attention.

There are currently four deployment models for cloud systems. These include:

- Private cloud. Used by only one organization, but with several divisions. May be the property of both the organization itself and a third party;

- Public cloud. For the general public. May be owned by commercial, scientific and



government organizations;

- Hybrid cloud. A combination of several different cloud infrastructures (private and public) that are unique entities but interconnected;

- Public cloud. Designed for use by a specific community of consumers from organizations with common goals.

Consider the basic models for building a cloud and analyze to identify the possibilities of using them in the educational process:

- Software as a Service (SaaS) - "Software as a Service", a model for providing cloud services, when the provider offers for use its applications that are launched in the cloud infrastructure, available to the client using a web interface or program interface.

- Platform as a Service (PaaS) - "platform as a service". The user is given access to use the software platform: operating systems (OS), DBMS, application software, software development and testing tools.

- Infrastructure as a Service (IaaS) - "infrastructure as a service", a model for providing cloud services, in which the user gets the opportunity to manage processing and storage facilities, as well as other fundamental computing resources.

Based on the analysis of all cloud models and research on the experience of using them in foreign countries, we can say that the most commonly used cloud model in educational institutions is "Software as a Service" (SaaS). The advantages of using this model: its use does not require the educational institution to create its own data center and its maintenance, it makes it possible to reduce financial and organizational costs, and also to install their applications on the provider's platform.

Following e-learning, the development of Internet simulators, cloud technologies began to develop in education. This is one of the most promising innovations in the education system in recent times. Cloud technologies significantly reduce the cost of information infrastructure, and also, in order to improve the quality of education, allow creating and distributing additional services.

The introduction of cloud technologies in the learning process is one of the most promising innovations in the education system today. Due to them, the costs of information infrastructure are significantly reduced, additional services are distributed and used in the educational environment to improve the quality of education. In addition, cloud services in the development of individual learning methods are an extremely effective tool, and this allows you to make the learning process more productive and interesting.

Cloud services are applications that are accessed by the Internet using a browser or other network applications. Unlike the usual method of working with software, the user does not take the resources of his computer or server of his local network, but the power that is provided to him as an Internet service.

At the same time, the user is provided with unlimited access to his data and the ability to work with them from a convenient device and from anywhere, and at the same time, the user does not control the operating system, software base and other processes through which this work takes place. Data and applications are stored in the "cloud", and the user retains the minimum required functionality.

All software updates, virus checks, and other maintenance are performed by the cloud service provider. This means that managing documents, editing them becomes easier than when they are placed on the user's computer.

Cloud technologies provide resources as an online service: there is no need for a flash card, since the information is stored in the cloud storage, no additional software is required to be installed



on your PC. The main function of cloud technologies is to meet the needs of users who need remote data processing. Therefore, in e-learning, the main essence of which is the ability to study at a distance, cloud technologies are presented as a tool to improve the quality of education and greater student mobility.

At the moment, there are several services that allow not only reading, but also editing documents online, including:

- Google Drive (Docs) (<https://drive.google.com/>);
- Zoho (<http://zoho.com/>);
- ThinkFree (<http://www.thinkfree.com/>);
- Feng Office (<http://www.fengoffice.com/>).

Among them, Google Docs was perhaps the most developed and potentially the most widespread resource - it can be used by anyone with a Gmail account. After joining the Google Drive service, it has a unique and fundamental advantage over all its competitors - the ability to cloud store and synchronize data, even those created by third-party applications that were not part of Google Docs.

Table 1 shows that Google Drive surpasses even MS Office in a number of attractive properties.

When choosing a form for presenting material on the topic "Google Docs Office Suite", one of its main features must be taken into account: orientation towards working on the Web. Google Drive does not have a document application that can be installed on a computer and used when there is no internet connection.

Today, any computer usually has at least a text editor installed, as a maximum - a complete office suite, be it Microsoft Office, Open Office or another editor. If we talk about students, they are trained to work with the main office applications - MS Word, MS Excel, MS PowerPoint or, in connection with the transition to open source software, their counterparts from the Open Office suite. By the time you start getting acquainted with the Google Docs course, the student is already usually familiar with one or more office suites and does not need a full course of training in working with applications of this kind, getting to know their interface, purpose, etc.

Thus, the course can be limited to familiarity with the features of the Google Docs package, its capabilities and limitations. Therefore, when developing a course, it is advisable to use the format of electronic learning materials. On the other hand, this makes it possible to focus on presenting new theoretical material and demonstrating the features of the office suite.

On the basis of the functionality offered by the Google Drive service, we determine the range of possibilities that require consideration in the laboratory workshop. All selected materials are divided into five sections, for each of which questions on knowledge of theory and practical tasks are prepared.

Note that cloud technologies expand the capabilities of the teacher:

- No licensed software required;
- An effective tool for the development of individual teaching methods;
- You can work not only directly in the classroom, but also at any point where there is Internet access;
- One document can be edited by several people at the same time (organization of group projects, remote work).

It makes up the cloud version of Microsoft Office (Outlook, Word, Excel, Power Point, OneNote Web Apps) and collaboration tools (Lync Online, SharePoint Online, and Exchange Online).

Using cloud technologies in education, students are not required to be physically present at



the place where they receive their education. Such technologies are a great advantage in the constant deadlines of modern life.

There is no need for expensive gadgets, complex software and special skills to work with them. Teachers from other countries have already joined the innovations and appreciated its unique advantages. In a blog post on GETideas.org, an Indiana State University faculty member wrote: “Now you can study anywhere, indoors or outdoors. The teacher at the blackboard is not required. In order to start learning, you just need to have access to the Internet. South Korea has already launched a program to replace paper textbooks with electronic ones. They will be available thanks to a special cloud infrastructure from any convenient learning device with Internet access.

This technology allows students to use educational materials of any kind, as well as work together with teachers or a group. Thus, cloud technologies provide ample opportunities in e-learning, for example, for learning foreign languages under the guidance of teachers who are native speakers. Also, with the help of this technology, you can get advice from a specialist in any field of knowledge, which is located in another part of the country. The use of an integrated educational cloud environment opens up new perspectives for society.

An example of preparing a group project for distance learning. Students are divided into groups and receive topics for their projects. The teacher prepares the necessary documents for each individual group and, using e-mail, opens access for all group members. You can create any document, be it a text file, spreadsheet, presentation, or booklet. Yandex service developers believe that cloud technologies should provide the following scheme of action: after starting work on their laptop, a person can continue writing it when they leave home, on their phone on the road, and send it from a tablet. Approximately according to the same scheme, students can work on their project at home, at the university, and in some other place. The teacher has the opportunity to comment on the documents to correct them by the students. At the same time, it is also possible to determine what contribution each of the students made to the work.

In addition to working with students, the teacher can actively use cloud technologies for himself. An example is the creation of a schedule of training sessions, consultations, an indication of the deadlines for the delivery of projects, abstracts, informing students about the postponement or cancellation of classes.

Having studied the examples of the use of cloud computing, we can say that most often educational organizations use the cloud model as “software as a service”. In this case, the educational institution avoids the economic and organizational costs of creating its own server and its maintenance, it becomes possible to install its own applications on the platform provided by the service provider.

Let's highlight the positive aspects of using cloud technologies in the educational process:

- Economic. Since the educational process is organized in a virtual space, there is no need to occupy a room, a classroom;
- Technical. To carry out activities, only access to the Internet is required;
- Technological. Most cloud services are easy to use and require little to no training or minimal support;
- Didactic. The provided online tools ensure safe interaction between teachers and students.

It should be noted the inconvenience of using cloud technologies in education, which do not affect didactic opportunities and benefits. This is the absence of domestic providers of cloud services, the legislative framework for the use of cloud technologies. However, there are still Russified services, these are Box.net, Dropbox, Google Drive, Evernote and 4shared. They provide the ability to



upload and share documents, create and organize folders with documents, download files, create notes and thematic notebooks, conduct surveys, create diagrams and diagrams, automatically back up all files on the Internet, manage sharing, and it also provides the opportunity to use multiple resources for teachers, students and administration.

The dynamics of information technology stimulates the development of distance learning systems, which are characterized by a high level of interactivity and allow people to participate in the learning process at any convenient time, located in different countries and having access to the Internet in a human-friendly rhythm of cognitive activity .

Like all actively developing technologies, cloud technologies penetrate into all spheres of human life. In different areas, their implementation occurs at different speeds. Distance learning systems (DLS) do not yet actively use their potential.

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A PREDICTION OF SELECTED ANTHROPOMETRIC PHYSICAL AND PHYSIOLOGICAL VARIABLES WITH PLAYING ABILITY OF DISTRICT WOMEN HANDBALL PLAYERS

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ABSTRACT

The purpose of the study was to find out the prediction of selected anthropometric, physical and physiological variables with playing ability of district women handball players. 150 state level handball players were participated as the samples for the study. Different variables namely (Weight, Standing height, Sitting height, Arm length, Arm span, Palm breadth, Chest girth, Waist girth, Hip girth, Thigh girth, Calf girth, Speed, Agility, Flexibility, Leg explosive strength, Muscular endurance, Harvard step up, Resting heart rate and Peak expiratory flow rate) were measured of the samples. Standard procedure was followed to measure the anthropometric, physical fitness and physiological variables. To measure the playing ability, five game experts were asked to rate the players playing ability for ten marks. After that all five experts' marks were added and averaged to get the marks of playing performance. Karl-Pearson's co-efficient of correlation technique was used to find out the relationship between anthropometric, physical and physiological measurement and playing performance. Very few anthropometric measurements found significant with skill performance. The implications of results are discussed.

KEYWORDS: *Anthropometric, physical, physiological, playing ability and handball players*

INTRODUCTION

Sports are the activity through which the physical ability is maintained and improved by participating in competitive physical activity or games. It provides the enjoyment to participants and entertains the spectators. There are many kinds of sports. Some of them include single participants while some include more than one participant. Sport is recognized through the system of activity which is based on the physical ability of an individual. However, there is certain sport which is recognized through the mental ability of an individual such as chess. Sports contain some rules which ensure fair competition and allow the best person to win. Winning depends on the ability of a person who is capable of defeating the opponent by following the game rules.

These days' sports have become the major source of entertainment. It not only draws large crowd but also generates the revenue. A number of competitions are set to be a tournament where the winning person or the winning team is declared as champions. Some sports are played through leagues, whereas some are played in seasons and it follows by playoffs.

HANDBALL

Handball is an ideal synthesis of the three fundamental athletic disciplines of running, jumping and throwing. Therefore it is not only a purely competitive sport but also a fine sport to be taken up with advantage by many for purposes of training and health. The player must be able to start quickly, he must be persevering runner, he must be able to skillfully deceive his opponent, he must be able to swiftly pick up the ball or catch it in the air, he must pass the ball with precision to his team-mates and he must be able to execute all sorts of throws; in short, his body, his arms and his legs will have to be harmoniously trained. As the name of the game suggests, hands play the most important role; hands being naturally the deftest members of the body, the growing popularity of handball is easily explained. Many kinds of throws to score a goal are possible. The handball player is inspired to use his hands as a means of carrying out his ideas. The game is, of course, also faster than other ball-games.



OBJECTIVE OF THE STUDY

To find relationship between selected anthropometric, physical fitness and physiological variables with playing ability of handball players.

METHODOLOGY

For the purpose of study 150 women handball players from various districts of Tamilnadu served as the sample for the study. All samples age category was between 18 to 23. Standard procedure was followed to measure the anthropometric, physical fitness and physiological variables. To measure the Playing ability, when samples were playing the match five experts of handball were asked to assess the skills of the player in match situation and give their marks for 10 each. After that all five experts' marks were added and averaged to get the marks of skill performance (playing ability). To find out the relationship between anthropometric, physical and physiological measurement and playing ability Karl- Pearson's Co-efficient of correlation statistical technique was used.

Table 1: Independent variable Standard deviation Pearson's co-efficient of correlation

Independent variable	Mean	Standard deviation	Pearson's co-efficient of correlation	Sig
Height	186.31	7.69	-0.131	0.065
Weight	70.60	4.71	-0.219	0.068
Leg length	91.03	2.83	-0.228	0.04*
Arm span	187.99	44.32	0.099	0.161
Waist girth	81.27	9.94	0.038	0.594
Hip girth	97.18	8.51	0.021	0.772
Chest girth (Inspired)	98.92	6.99	-0.087	0.221
Chest girth (expired)	95.52	4.36	-0.257	0.003*
Thigh girth	64.88	6.24	-0.038	0.595
Calf girth	57.08	4.87	0.033	0.639
Palm girth	23.21	1.35	-0.124	0.08
Arm length	75.98	3.78	-0.135	0.056
Speed (50 mtr Dash)	10.32	2.84	-0.118	0.097
Agility (Shuttle Run)	11.47	1.01	-0.076	0.287
Flexibility (Sit and Reach test)	49.29	3.66	-0.052	0.468
Explosive power (Standing broad jump)	237.60	38.86	-0.204	0.004*
Muscular Endurance (Sit up test)	43.19	8.07	0.067	0.345
Cardio vascular endurance (Harvard step up test)	73.91	3.74	-0.024	0.737
Resting heart rate	70.59	4.15	0.052	0.464
Vital capacity	462.17	31.01	-0.090	0.024

RESULTS

In the following table we can observe the mean and standard deviation of anthropometric, physical fitness and physiological variables and "r" value with significance level in relation to playing ability.

From the above table we can observe that in selected anthropometric, physical and physiological variables arm span, waist girth, hip girth, calf girth and muscular endurance are positively correlated with playing ability. Height, weight, leg length, chest girth (inspired), chest girth (expired), thigh girth, palm girth, arm length, speed, agility, flexibility, explosive power, cardio vascular endurance, resting heart rate and vital capacity are negatively correlated with playing ability. Amongst 20 variables only three variables namely Leg length, chest girth (expired) and explosive power were found significantly correlated with playing ability. Other than that remaining variables were not at the significant level.



DISCUSSION

As we found that leg length, chest girth (expired) and explosive power are the three variables which are significantly correlated with playing ability. For the handball player's upper body and lower body use to be strong to execute the skills like shooting, jumping and diving. So that player's upper body and as well as lower body areas like chest girth, leg length which is the indicator of upper and lower body strength and explosive power required for the jumping skills. So that might be influenced on the result. Apart from these three variables no other variables are not correlated at the significant level with playing ability because in this study we are having players playing the same tourney of Tamilnadu with having same potentials. So that might also influence on results.

CONCLUSION

In this study leg length, chest girth (expired) and explosive power were found significantly correlated with playing ability of the district women handball players. Other than these variables other variables relationship with players playing ability was not at the significant level.

RECOMMENDATIONS

With the help of results derived from the present study. The following Recommendation can be made.

- 1) The present study results can be very much useful for physical educators, coaches and trainers for screening and selecting potential handball players at university level.
- 2) Further the result of the study can help experts to frame different methods of training by emphasizing the development of factors which are significantly related to handball performance at different levels.
- 3) It is recommended that the present study is limited to anthropometric, physical and physiological variables, further it can be extended to motor fitness variables and psychological variable.
- 4) It is recommended that the present study may be repeated by selecting subjects belonging to different age groups
- 5) This study is only limited to male handball player, further it can be extending to female handball players also.

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EASE OF USE OF DIGITAL PLATFORMS FOR EDUCATIONAL PURPOSES: PERCEPTION OF SECONDARY SCHOOL STUDENTS, TEACHERS AND ADMINISTRATORS

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ABSTRACT

The aim of this paper was to ascertain the perception of teachers, students and administrators concerning the ease of using certain digital platforms that were adopted during the lockdown period necessitated by the Covid-19 pandemic in Port Harcourt Local Government Area (PHALGA), Rivers State, Nigeria. Descriptive Survey Research design was adopted for this study. The sample size was seven hundred and forty-two (742) stakeholders which comprised four hundred and nine (409) students, two hundred and ninety-seven (297) teachers and thirty-six (36) administrators from thirty-two (32) private secondary schools. Multistage sampling procedure was employed using different sampling techniques. Three questionnaires (Teachers' E-learning Practice Questionnaire (TEPQ), Students' E-learning Practice Questionnaire (SEPQ) and Administrators' E-learning Practice Questionnaire (AEPQ)) were used to collect data. The reliability index calculated using Cronbach alpha for TEPQ, SEPQ and AEPQ was 0.90, 0.78 and 0.91 respectively. The data were analysed using frequency, percentages, mean, standard deviation and chi-square test of independence. The findings revealed that the digital platforms identified in this study are easy to use for teaching, learning and administrative purposes. In addition, gender influenced the perception of teachers and students at a statistically significant level. However, it was not the case for administrators. The researchers therefore recommended that there should be trainings and support available on how the digital platforms should be used to make it easy to use. In addition, at the school level, digital platforms that centralise tasks by featuring tools that help teachers to teach, students to learn and administrators to carry out their administrative duties should be adopted.

KEYWORDS: *Perceived ease of use, Secondary education, Digital platforms*

INTRODUCTION

At some point in history, several countries were plagued with a pandemic known as Covid-19 caused by the Coronavirus in the year 2019. Nigeria was also affected; the first case discovered in Lagos on the 27th of February, 2020. Overtime, the disease spread across the different states of Nigeria. As at the 3rd quarter of 2021 in Nigeria, there were over one hundred and seventy-six thousand, five hundred and seventy-seven (176,577) confirmed cases; one hundred and sixty-five thousand, three hundred and thirty-three (165,333) discharged cases; and two thousand, one hundred and seventy-eight (2,178) deaths (Nigeria Centre for Disease Control (NCDC), 2021). Curbing the spread of the corona virus required both medical and behavioural remedies. The medical remedies included the administration of medical treatment in using the covid-19 vaccine, while the behavioural remedies included washing of hands, sanitizing of hands, wearing of nose mask, avoiding crowded places, social distancing, to mention few.

One of the consequences of the pandemic in Nigeria was the lockdown of schools as a means of limiting crowded gatherings to reduce the rate at which the disease spreads. During the lockdown period, some private secondary schools were able to continue teaching and learning activities. However, given the circumstances of no room for face to face modalities, they were forced to operate using online learning modalities. Online learning requires the use of digital platforms, gadgets and internet connectivity. Digital platforms include



social media platforms, video conferencing apps, digital assessment apps, learning management systems, to mention few. Technology such as digital platforms are enablers in online learning (Aparico et al., 2016).

According to Anderson (2010), there are certain digital literacy skills that are required to effectively function when using online learning modalities. They include using ICT skills to create and share information; searching, sifting, scanning, and sorting information; navigating through screens of information; locating and evaluating information; using ICT to research and solve problems; making multimedia presentations; retrieving, organizing, managing, and creating information; sending and receiving messages. The introduction of new technologies usually involves some form of change for users (Nov & Ye, 2008). Digital platforms usually feature tools that help users exercise these skills. The level of difficulty in using different digital platforms may vary as different platforms have their mode of operations.

LITERATURE REVIEW

The Technology Acceptance Model (TAM) developed by Fred Davis in 1985 stated that one of the key determinants of technology acceptance is Perceived Ease of Use (PEOU) (Alshammari & Rosli, 2020; Huang et al, 2020). In developing the TAM model, Davis adapted the Theory of Reasoned Act (TRA) (Attitude and subjective norm) and the Theory of Planned Behavior (ease or difficulty in using a technology) (Jimenez et al., 2021). Hamid et al. (2016) and Okumuş et al. (2016) stated that perceived ease of use (PEOU) is the degree to which a person believes that using a technology will be free from effort. If a system is relatively easy to use, individuals will be more willing to learn about its features and finally intend to continue using it. The researchers defined perceived ease of use as the degree to which teachers, students and administrators believe that the digital platform(s) can be used effortlessly for their respective tasks. Jimenez et al. (2021) noted that PEOU are affected by external and context-dependent factors. Abdullah et al (2016) noted that the best predictor of Perceived Ease of Use of technology such as an e-portfolio is Experience. Perceived ease of use plays a critical role in predicting and determining a user's decision to use an information system. Users perceive a system easier to use as they gain more knowledge and confidence through direct experience in using the system (Hackbarth, et al, 2003). Studies indicate that PEOU is positively associated with continuance intention in the context of online learning (Brown, 2002; Hackbarth, et al, 2003; Fagan et al, 2008; Hamid et al, 2016).

One of the comprehensive extensions of TAM which considers factors that influence PEOU is TAM 3 developed by Venkatesh and Bala in 2008 as shown in figure 1.

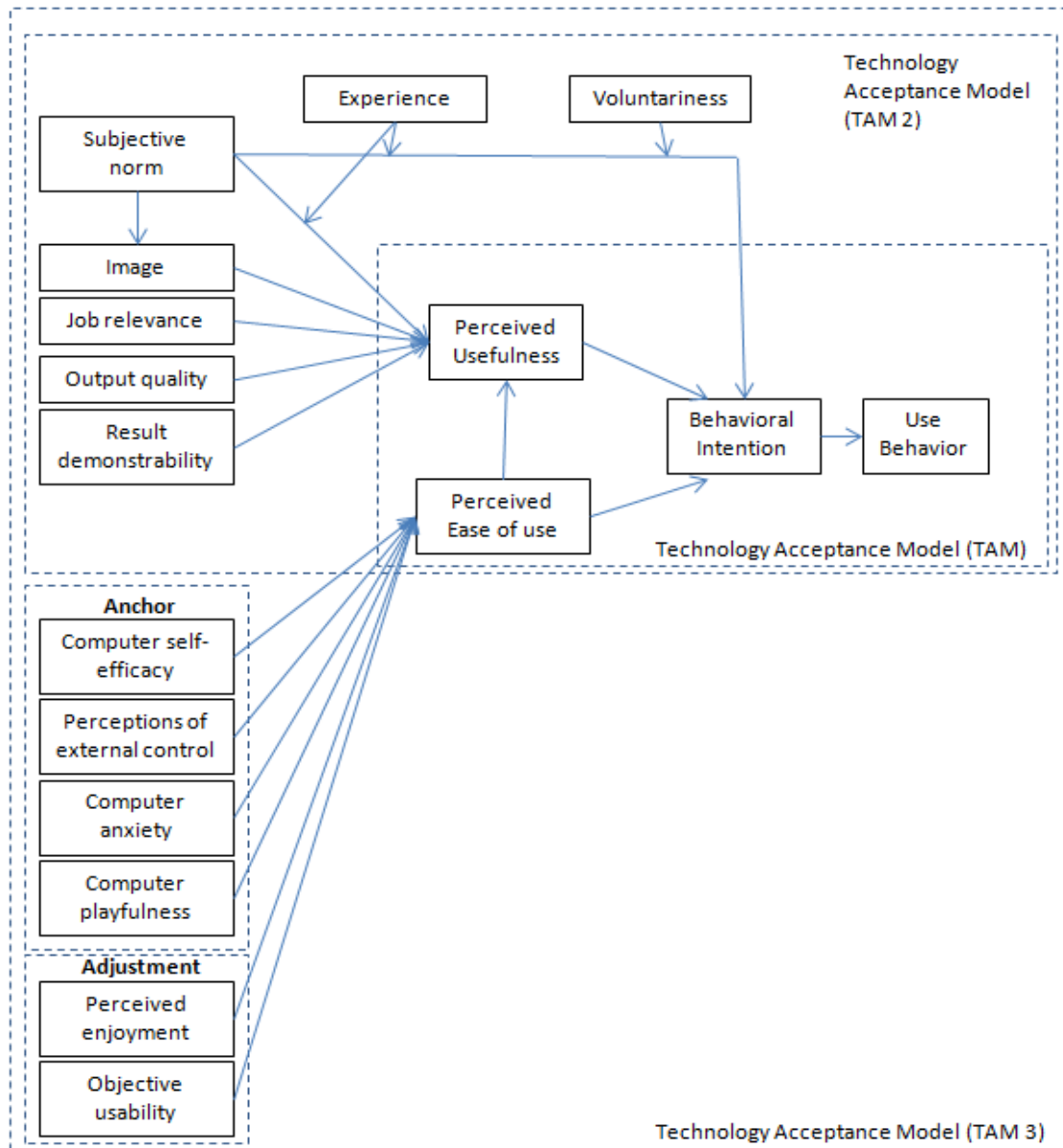


Figure 1: Technology Acceptance Model (TAM 3)

Source: <https://www.bing.com/images/>

Okumuş et al. (2016) stated that perceived usefulness is indirectly influenced by perceived ease of use. In other words, people can perceive a software as not useful if it is not easy to use. Gefen and Straub (2000) noted that PEOU relates to assessment of the intrinsic characteristics of the digital platforms such as the ease of use, ease for learning, flexibility, and clarity of its interface. Şahin, and Dursun (2022) indicated that high self-efficacy can positively influence a person’s ease of use of a technology. They also noted that self-efficacy is closely tied to self-confidence and competence. Huang et al (2020) noted that students’ perception of external control significantly influenced their perceived ease of use of the internet for learning. As different digital platforms can be used to implement online learning, the acceptance of these digital platforms may vary. It is therefore important to consider the factors that influence teachers, students and administrators’ perceived ease of use of digital platforms based on their experiences with such platforms. This



can guide recommendations for trainings and support structures. In this study, PEOU was measured using a 4-point Likert scale of Very easy, Easy, Difficult and Very difficult.

PROBLEM STATEMENT

The predominant mode of secondary schools' operation in Port Harcourt, Rivers State, Nigeria is the traditional face-to-face system. Although some teachers, students and administrators may have been using certain digital platforms for social and personal purposes or even for academic purposes at a somewhat personal level, the integrated use of digital platforms at the school level may be novel to teachers, students and administrators. Finding out the areas where teachers, students and administrators find the digital platforms difficult to use will highlight learning gaps and training needs. It was important to investigate the ease of use of certain digital platforms adopted for teaching, learning and administrative purposes as it will serve as an indication of their continuous use. This can affect the overall state of e-learning implementation in secondary schools and strategies of advocating for technology integration.

AIM AND OBJECTIVES

The aim of the paper was to ascertain teachers, students and administrators' perceived ease of use of digital platforms for their respective tasks. The specific objectives were to:

- 1) Ascertain teachers' perceived ease of use of digital platforms for teaching.
- 2) Find out students' perceived ease of use of digital platforms for learning.
- 3) Determine administrators' perceived ease of use of digital platforms for administrative purposes.

RESEARCH QUESTIONS

- 1) What are teachers' perceived ease of use of digital platforms for teaching?
- 2) What are students' perceived ease of use of digital platforms for learning?
- 3) What are administrators' perceived ease of use of digital platforms for administrative purposes?

HYPOTHESES

- 1) Teachers' perceived ease of use of digital platforms for teaching is not significantly dependent on their gender.
- 2) Students' perceived ease of use of digital platforms for learning is not significantly dependent on their gender.
- 3) Administrators' perceived ease of use of digital platforms for administrative purposes is not significantly dependent on their gender.
- 4) There is no significant difference among the teachers, students and administrators' perceived ease of use of the digital platforms for teaching, learning and administrative purposes respectively.

METHODS

Descriptive Survey research design was adopted for this study. The study focused on the attitude of teachers, students and administrators towards e-learning in the context of e-learning implementation during and beyond the lockdown period necessitated by the Covid-19 pandemic. It was delimited to some private secondary schools that implemented e-learning during the lockdown period. The independent variable of the study was e-learning while the dependent variable was attitude. The moderating variable was gender; male and female. The area of study was Port Harcourt Local Government Area (PHALGA) which is one of the 23 local government areas in Rivers State, Nigeria. PHALGA has twenty (20) electoral wards. It is one of the metropolitan parts of Rivers State with numerous private secondary schools. Multi-stage sampling procedure was adopted for this study. In stage one, stratified sampling technique was used to group the government-approved private secondary schools based on the twenty (20) electoral wards in PHALGA. In the second stage, sampling random sampling was used to select through balloting eight (8) electoral wards. In the third stage, purposive sampling technique was used to select four (4) schools from each ward that implemented e-learning during the lockdown period. A total of thirty-two (32) schools were involved in the study. Within a school, purposive sampling technique was also used to select only the teachers, students and administrators who used digital platforms for teaching, learning and administrative purposes respectively during the lockdown period.

The sample size obtained from the thirty-two (32) schools was seven hundred and forty-two (742) participants which comprised four hundred and nine (409) students, two hundred and ninety-seven (297) teachers and thirty-six (36) administrators. The class of students used were those that were in JSS 3 as at 2020 during the peak of the pandemic when schools were locked down. This was because, most schools that implemented e-learning most likely ensured that the classes that were to sit for external examinations (JSS 3 and



SSS 3) were participants in the e-learning exercise even in cases where all the classes may not have been considered for the e-learning exercise. At the time of the study, the JSS 3 students in 2020 were in SSS 2 as a result of the rush in the academic calendar of secondary schools. And the SSS 3 students had graduated and moved on to higher institutions. Therefore, the students used in this study were only the SSS 2 students in private secondary schools. The teachers used in this study were private secondary school teachers who taught using e-learning modalities during the lockdown period of 2020. The administrators in this study were the administrators of the private secondary schools that implemented e-learning during the lockdown period of 2020.

Three questionnaires titled Teachers' E-learning Practice Questionnaire (TEPQ), Students' E-learning Practice Questionnaire (SEPQ) and Administrators' E-learning Practice Questionnaire (AEPQ) were used to collect data. The questionnaires were designed by the researcher using the logical method. The internal consistency of the questionnaires was calculated using Cronbach alpha and a reliability index of 0.90, 0.78 and 0.91 was obtained for TEPQ, SEPQ and AEPQ respectively. The researchers worked with five (5) research assistants to locate and obtain permission from government-approved secondary schools in the selected eight (8) electoral wards that were used for this study. An introduction video was used to enlighten the schools on the essence of the research. Hard copies of the questionnaires were delivered to the schools. The link to the online version of the questionnaires (<https://forms.gle/TjkkUTQLbLh8rLQJ8>) was also shared alongside the introduction video to the schools. In some cases, the authors went to some schools to distribute the hardcopy of the questionnaires to other stakeholders when only a few teachers or administrators filled the online version of the questionnaire. Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) at 0.05 level of significance. The data were analysed using frequency, percentage, mean, standard deviation and chi-square test of independence. The criterion mean was 2.5.

A preliminary study was conducted to identify the digital platforms that were used by the sampled schools. The results revealed several digital platforms which led to the grouping of the platforms into nine (9) categories based on how they were used by the teachers, students and administrators. The categories are shown on table 1.

Table 1: Categories of Digital Platform

S/n	Category	Digital platform(s)	Description
1.	A	WhatsApp only	Social media platform
2.	B	Zoom only	Meeting app
3.	C	Google Classroom only	Learning Management System
4.	D	Telegram only	Social media platform
5.	E	WhatsApp and Telegram	Social media platforms
6.	F	WhatsApp or Telegram and Zoom	Social media platforms and meeting app
7.	G	Zoom and Google Classroom	Meeting app and Learning Management System
8.	H	WhatsApp or Telegram and Google Classroom	Social media platform and Learning Management System
9.	I	WhatsApp or Telegram, Zoom and Google Classroom	Social media platform, meeting app and Learning Management System

Category G did not apply to administrators as none reported to have used the combination of only Zoom and Google Classroom for administrative purposes. The analysis about the perception of teachers, student and administrators was conducted based on the category of digital platforms used.



RESULTS

Table 2: Teachers’ Perceived Ease of Use of the Digital Platforms for Teaching

Categories of Digital Platforms	Ease of Use		Total
	Difficult	Easy	
WhatsApp only	20	75	95
Zoom only	0	17	17
Google classroom only	0	14	14
Telegram only	0	12	12
WhatsApp and Telegram	0	2	2
WhatsApp (Telegram) and Zoom	6	59	65
Zoom and Google Classroom	2	25	27
WhatsApp and Google Classroom	0	31	31
WhatsApp (Telegram), Zoom and Google Classroom	2	32	34
Total	30	267	297

Table 2 shows the perceived ease of use of each category of digital platform used by teachers for teaching purposes. A higher number of teachers perceived the digital platforms as easy to use for teaching purposes. Though a higher number of teachers (20 of 30) perceived the use of WhatsApp only as difficult for teaching purposes when compared to other categories of digital platforms.

Table 3: Mean Score of Teachers’ Perceived Ease of Use of the Digital Platforms for Teaching

Platform category		Download app	Sign up	Navigate	Understand icons	Log in	Compliance	Upload content	Download content	Communicate	Overall ease of use
A (Whatsapp only)	\bar{x}	3.16	3.07	2.88	3.01	3.05	2.81	2.98	2.89	2.76	2.74
	n	95	95	95	95	95	95	95	95	95	95
	SD	0.78	0.79	0.82	0.78	0.75	0.82	0.79	0.72	0.80	0.80
B (Zoom only)	\bar{x}	3.29	3.06	2.82	3.29	3.18	3.18	3.06	3.29	3.18	3.18
	n	17	17	17	17	17	17	17	17	17	17
	SD	0.69	0.75	0.73	0.69	0.64	0.81	0.90	0.47	0.81	0.64
C (Google classroom only)	\bar{x}	3.14	2.57	2.71	2.71	3.14	3.14	3.00	2.29	2.86	2.86
	n	14	14	14	14	14	14	14	14	14	14
	SD	0.66	0.51	0.73	0.73	0.36	0.66	0.55	0.47	0.66	0.36
D (Telegram only)	\bar{x}	3.83	3.83	3.50	3.50	3.50	3.33	3.67	3.33	3.33	3.17
	n	12	12	12	12	12	12	12	12	12	12
	SD	0.39	0.39	0.80	0.52	0.52	0.49	0.49	0.49	0.49	0.39
E (WhatsApp and Telegram)	\bar{x}	3.00	3.00	2.00	3.00	3.00	3.00	4.00	4.00	4.00	3.00
	n	2	2	2	2	2	2	2	2	2	2
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F (Whatsapp (Telegram) and Zoom)	\bar{x}	3.51	3.28	3.09	3.26	3.38	3.12	3.15	3.15	2.92	3.00
	n	65	65	65	65	65	65	65	65	65	65
	SD	0.56	0.63	0.72	0.73	0.58	0.74	0.75	0.67	0.80	0.71
G	\bar{x}	3.59	3.44	3.15	3.30	3.63	3.07	3.15	3.07	3.00	3.00
	n	27	27	27	27	27	27	27	27	27	27



(Zoom and Google Classroom)	SD	0.50	0.64	0.77	0.61	0.49	0.73	0.86	0.73	0.78	0.88
	\bar{x}	3.61	3.52	3.32	3.03	3.35	3.06	3.00	3.06	3.29	3.13
H (Whatsapp and Google Classroom)	n	31	31	31	31	31	31	31	31	31	31
	SD	0.50	0.51	0.60	0.60	0.66	0.68	0.63	0.57	0.53	0.62
I (Whatsapp (Telegram), Zoom and Google Classroom)	\bar{x}	3.65	3.47	3.18	3.35	3.53	3.18	3.24	3.24	3.29	3.24
	n	34	34	34	34	34	34	34	34	34	34
Total	SD	0.60	0.71	0.80	0.69	0.51	0.72	0.82	0.74	0.84	0.74
	\bar{x}	3.41	3.25	3.04	3.15	3.29	3.03	3.10	3.04	2.99	2.97
	n	297	297	297	297	297	297	297	297	297	297
	SD	0.67	0.72	0.78	0.72	0.65	0.75	0.77	0.70	0.78	0.74

Table 3 shows the mean and standard deviation of teachers' perceived ease of use of the different categories of the digital platforms for teaching. The only aspect of ease of use that was below the criterion mean of 2.5 was the teachers' difficulty to navigate Telegram.

Table 4: Teachers' Perception of the Ease of Use of the Digital Platform based on their Gender

Gender	Ease of Use		Total
	Difficult	Easy	
Male	10 (6.17%)	152 (93.83%)	162
Female	20 (14.81%)	115 (85.19%)	135
Total	30	267	297

Table 4 shows teachers' perceived ease of use of the digital platforms in relation to their gender. The results show that a higher percent of female teachers (14.81%) perceived the use of the digital platforms for teaching to be difficult as opposed to their male counterparts (6.17%).

Null Hypothesis One: Teachers' perceived ease of use of digital platforms for teaching is not significantly dependent on their gender.

Table 5: Chi Square Test of Independence showing the Association between Teachers' Perceived Ease of Use of Digital Platform for Teaching and their Gender

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Sig. (2-sided)	Decision
Pearson Chi-Square	6.056 ^a	1	.014			Significant
Continuity Correction ^b	5.142	1	.023			
Likelihood Ratio	6.084	1	.014			
n	297					

Table 5 shows the Chi square value of 6.056 $p < 0.05$, i.e. $p = .014$ is less than 0.05 and this is statistically significant at the chosen alpha level of 0.05. This led to the rejection of the null hypothesis. This shows that there is an association between gender and the teachers' perceived ease of use of the digital platforms for teaching purposes.

Table 6: Students' Perceived Ease of Use of the Digital Platforms for Learning

Categories of Digital Platforms	Ease of Use		Total
	Difficult	Easy	
WhatsApp only	6	181	187
Zoom only	2	32	34
Google classroom only	4	10	14
Telegram only	2	14	16



WhatsApp and Telegram	1	7	8
WhatsApp (Telegram) and Zoom	3	40	43
Zoom and Google Classroom	0	42	42
WhatsApp and Google Classroom	8	55	63
WhatsApp (Telegram), Zoom and Google Classroom	0	2	2
Total	26	383	409

Table 6 shows the perceived ease of use of each category of digital platform used by students for learning purposes. A higher number of students perceived the digital platforms as easy to use for learning. Though a higher number of students (8) perceived the use of the combination of WhatsApp and Google Classroom as difficult for learning when compared to other categories of digital platforms. This was followed by the use of WhatsApp only (6 students), Google Classroom only (4 students), WhatsApp (Telegram) and Zoom (3 students), Zoom only (2 students), Telegram only (2 students) and WhatsApp and Telegram (1 student).

Table 7: Mean Score of Students' Perceived Ease of Use of the Digital Platforms for Learning

Platform category		Download app	Sign up	Navigate	Understand icons	Log in	Compliance	Upload content	Download content	Communicate	Overall ease of use
A (Whatsapp only)	\bar{x}	3.41	3.28	3.16	3.42	3.61	3.26	3.38	3.36	3.38	3.29
	n	187	187	187	187	187	187	187	187	187	187
	SD	0.79	0.73	0.83	0.69	0.62	0.85	0.76	0.83	0.82	0.80
B (Zoom only)	\bar{x}	3.76	3.68	3.50	3.35	3.62	3.38	3.21	3.47	3.38	3.18
	n	34	34	34	34	34	34	34	34	34	34
	SD	0.55	0.68	0.71	0.69	0.60	0.65	0.88	0.61	0.78	0.72
C (Google classroom only)	\bar{x}	3.43	2.86	3.00	3.29	3.00	3.00	2.71	2.86	3.00	2.86
	n	14	14	14	14	14	14	14	14	14	14
	SD	0.76	1.03	1.11	0.47	0.78	0.78	0.91	0.86	0.55	1.03
D (Telegram only)	\bar{x}	3.25	3.00	3.25	3.50	3.38	3.50	3.38	3.00	3.63	3.50
	n	16	16	16	16	16	16	16	16	16	16
	SD	0.86	1.26	0.68	0.73	0.72	0.73	0.72	0.73	0.50	0.73
E (WhatsApp and Telegram)	\bar{x}	3.63	3.38	3.00	3.50	3.75	3.38	3.38	3.25	3.13	3.38
	n	8	8	8	8	8	8	8	8	8	8
	SD	0.74	0.92	0.76	0.76	0.71	0.74	0.74	0.71	0.64	0.74
F (Whatsapp (Telegram) and Zoom)	\bar{x}	3.47	3.23	3.21	3.44	3.49	3.05	3.37	3.23	3.14	3.09
	n	43	43	43	43	43	43	43	43	43	43
	SD	0.70	0.81	0.67	0.55	0.63	0.84	0.72	0.68	0.86	0.84
G (Zoom and Google Classroom)	\bar{x}	3.67	3.40	3.33	3.50	3.50	3.19	3.02	3.12	3.45	3.50
	n	42	42	42	42	42	42	42	42	42	42
	SD	0.48	0.50	0.69	0.59	0.74	0.71	0.56	0.63	0.59	0.59
H (Whatsapp and Google Classroom)	\bar{x}	3.73	3.16	3.03	3.13	3.35	3.06	3.00	3.43	3.16	3.22
	n	63	63	63	63	63	63	63	63	63	63
	SD	1.61	0.63	0.74	0.75	0.79	0.82	0.97	0.59	0.72	0.61



I (Whatsapp (Telegram), Zoom and Google Classroom)	\bar{x}	4.00	3.00	3.00	4.00	4.00	3.00	4.00	4.00	4.00	2.00
	n	2	2	2	2	2	2	2	2	2	2
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	\bar{x}	3.52	3.28	3.18	3.38	3.52	3.21	3.25	3.31	3.32	3.26
	n	409	409	409	409	409	409	409	409	409	409
	SD	0.93	0.75	0.78	0.68	0.68	0.81	0.81	0.75	0.77	0.76

Table 7 shows the mean and standard deviation of students' perceived ease of use of the different categories of the digital platforms for learning. The only aspect of ease of use that was below the criterion mean of 2.5 was the overall use of the combination of WhatsApp (or Telegram), Zoom and Google Classroom for learning.

Table 8: Students' Perception of the Ease of Use of the Digital Platform based on their Gender

Gender	Ease of Use		Total
	Difficult	Easy	
Male	8 (3.69%)	209 (96.31%)	217
Female	18 (9.38%)	174 (90.62%)	192
Total	26	383	409

Table 8 shows students' perceived ease of use of the digital platforms in relation to their gender. The results show that a higher percent of female students (9.38%) perceived the use of the digital platforms for learning to be difficult as opposed to their male counterparts (3.69%).

Null Hypothesis Two: Students' perceived ease of use of digital platforms for learning is not significantly dependent on their gender.

Table 9: Chi Square Test of Independence showing the Association between Students' Perceived Ease of Use of Digital Platform for Learning and their Gender

	Value	df	Asymptotic Significance (2-sided)	(2- Exact sided)	Sig. (2- Decision)
Pearson Chi-Square	5.537 ^a	1	.019		Significant
Continuity Correction ^b	4.623	1	.032		
Likelihood Ratio	5.621	1	.018		
n	409				

Table 9 shows the Chi square value of 5.537 $p < 0.05$, i.e. $p = .019$ is less than 0.05 and this is statistically significant at the chosen alpha level of 0.05. This led to the rejection of the null hypothesis. This shows that there is an association between gender and the students' perceived ease of use of the digital platforms for learning purposes.

Table 10: Administrators' Perceived Ease of Use of the Digital Platforms for Administrative Purposes

Categories of Digital Platforms	Ease of Use		Total
	Difficult	Easy	
WhatsApp only	0	9	9
Zoom only	0	2	2
Google classroom only	0	5	5
Telegram only	0	1	1
WhatsApp and Telegram	0	1	1
WhatsApp (Telegram) and Zoom	0	8	8
WhatsApp and Google Classroom	0	1	1
WhatsApp (Telegram), Zoom and Google Classroom	1	8	9
Total	1	35	36



Table 10 shows the perceived ease of use of each category of digital platform used by administrators for administrative purposes. A higher number of administrators perceived the digital platforms as easy to use for administrative purposes (35 of 36). One administrator reported the combination of WhatsApp (Telegram), Zoom and Google Classroom as difficult to use for administrative purposes.

Table 11: Mean Score of Administrators' Perceived Ease of Use of the Digital Platforms for Administrative Purposes

Platform category		Download app	Sign up	Navigate	Understand icons	Log in	Compliance	Upload content	Download content	Communicate	Overall ease of use
A (Whatsapp only)	\bar{x}	3.22	3.11	3.00	3.00	3.22	2.78	3.11	3.11	3.22	2.89
	n	9	9	9	9	9	9	9	9	9	9
	SD	0.44	0.33	0.50	0.50	0.44	0.44	0.33	0.33	0.44	0.33
B (Zoom only)	\bar{x}	4.00	4.00	3.50	3.50	4.00	3.50	4.00	3.50	3.00	3.50
	n	2	2	2	2	2	2	2	2	2	2
	SD	0.00	0.00	0.71	0.71	0.00	0.71	0.00	0.71	0.00	0.71
C (Google classroom only)	\bar{x}	2.60	3.40	3.00	2.80	3.60	3.00	2.20	3.00	3.00	1.80
	n	5	5	5	5	5	5	5	5	5	5
	SD	0.55	0.55	1.00	0.84	0.55	1.00	0.45	0.00	0.00	0.84
D (Telegram only)	\bar{x}	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00
	n	1	1	1	1	1	1	1	1	1	1
	SD										
E (WhatsApp and Telegram)	\bar{x}	4.00	3.00	3.00	3.00	3.00	2.00	3.00	3.00	3.00	3.00
	n	1	1	1	1	1	1	1	1	1	1
	SD										
F (Whatsapp (Telegram) and Zoom)	\bar{x}	4.00	4.00	3.50	4.00	4.00	3.50	3.75	3.50	3.50	3.50
	n	8	8	8	8	8	8	8	8	8	8
	SD	0.00	0.00	0.53	0.00	0.00	0.53	0.46	0.53	0.53	0.53
H (Whatsapp and Google Classroom)	\bar{x}	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	2.00	3.00
	n	1	1	1	1	1	1	1	1	1	1
	SD										
I (Whatsapp (Telegram), Zoom and Google Classroom)	\bar{x}	3.67	3.33	3.56	3.33	3.22	3.00	3.00	3.00	3.11	3.00
	n	9	9	9	9	9	9	9	9	9	9
	SD	0.50	0.50	0.53	0.50	0.83	0.50	0.50	0.50	0.93	0.50



Total	\bar{x}	3.53	3.47	3.31	3.33	3.50	3.08	3.17	3.19	3.17	2.97
	n	36	36	36	36	36	36	36	36	36	36
	SD	0.61	0.51	0.62	0.63	0.61	0.65	0.65	0.47	0.61	0.74

Table 11 shows the mean and standard deviation of teachers' perceived ease of use of the different categories of the digital platforms for administrative purposes. The aspects of ease of use that were below the criterion mean of 2.5 were difficulty in content upload and the overall use of Google classroom for administrative purposes; non-compliance of WhatsApp and Telegram compliance with administrative tasks and; difficulty in communicating using a combination of WhatsApp (or Telegram) and Zoom.

Table 12: Administrators' Perception of the Ease of Use of the Digital Platform based on their Gender

Gender	Ease of Use		Total
	Difficult	Easy	
Male	1 (5%)	19 (95%)	20
Female	0 (0%)	16 (100%)	16
Total	1	35	36

Table 12 shows administrators perceived ease of use of the digital platforms in relation to their gender. The results show that a higher percent of male administrators (5%) perceived the use of the digital platforms for administrative purposes to be difficult as opposed to their female counterparts (0%).

Null Hypothesis Three: Administrators' perceived ease of use of digital platforms for administrative purposes is not significantly dependent on their gender.

Table 13: Chi Square Test of Independence showing the Association between Administrators' Perceived Ease of Use of Digital Platform for Administrative Purposes and their Gender

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Decision
Pearson Chi-Square	.823 ^a	1	.364		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	1.198	1	.274		
Fisher's Exact Test				1.000	
n	36				

Table 13 shows the Chi square value of 0.823 $p > 0.05$, i.e. $p = 1.00$ is greater than 0.05 and this is not statistically significant at the chosen alpha level of 0.05. This led to retaining the null hypothesis. This shows that there is no association between gender and the administrators' perceived ease of use of the digital platforms for administrative purposes.

Null Hypothesis Four: There is no significant difference among the perceived ease of use of digital platforms for teaching, learning and administrative purposes by teachers, students and administrators respectively.

Table 14: Chi Square Test of Independence showing the Association among Teachers, Students and Administrators' Perceived Ease of Use of Digital Platform

	Value	df	Asymp. Significance (2-sided)	Exact Sig. (2-sided)	Decision
Pearson Chi-Square	4.684 ^a	2	.096	.092	
Likelihood Ratio	4.906	2	.086	.118	
Fisher's Exact Test	4.184			.114	
n	742				

Table 14 shows the Chi square value of 4.684 $p > 0.05$, i.e. $p = 0.114$ is greater than 0.05 and this is not statistically significant at the chosen alpha level of 0.05. This led to retaining the null hypothesis. This shows that there is no significant difference among the perception of teachers, students and administrators on the ease of use of the digital platforms for their respective duties.



DISCUSSION OF FINDINGS

Teachers' Perceived Ease of Use of Digital Platforms for Teaching

The results revealed that more teachers perceived the different categories of digital platforms as easy to use for teaching. However, concerns over the use of only social media for teaching were raised as twenty out of thirty teachers indicated that using WhatsApp only was difficult for teaching. In addition, teachers pointed out that the navigation for Telegram which is also a social media platform was difficult for them. With respect to gender, more male teachers perceived the digital platforms to be easy to use for teaching than their female counterparts. In addition, the discrepancies in perception based on gender was statistically significant. In other words, the perception of teachers about the ease of use of the digital platforms for teaching is associated with their gender.

Students' Perceived Ease of Use of Digital Platforms for Learning

The results revealed that more students perceived the different categories of digital platforms as easy to use for learning. However, students perceived the combination of WhatsApp and Google Classroom as difficult to use for learning. They also perceived some other categories ranging from single platforms to combinations of platforms as difficult to use for learning. With respect to gender, more male students perceived the digital platforms to be easy to use for learning than their female counterparts. In addition, the discrepancies in perception based on gender was statistically significant. In other words, the perception of the students about the ease of use of the digital platforms for learning is associated with their gender. This finding is consistent with that of Akpunonu and Fomsi (2021) who stated that students perceived Google Classroom as a digital platform that is easy to use for learning.

Administrators' Perceived Ease of Use of Digital Platforms for Administrative Purposes

The results revealed that more administrators perceived the different categories of digital platforms as easy to use for administrative purposes. However, the combination of WhatsApp (Telegram), Zoom and Google Classroom was perceived as difficult to use for administrative purposes. In addition, specific areas of difficulties experienced by administrators were in content upload, digital platform compliance with certain administrative duties and communication. With respect to gender, more female administrators perceived the digital platforms to be easy to use for administrative purposes than their male counterparts. However, the discrepancies in perception based on gender was not statistically significant. In other words, the perception of the administrators about the ease of use of the digital platforms for administrative purposes is not associated with their gender.

Teachers, Students and Administrators' Perceived Ease of Use of Digital Platforms

The results revealed that the teachers, students and administrators on a general note perceived the digital platforms as easy to use for their respective tasks. It also revealed that there is no significant difference among the perception of teachers, students and administrators on the ease of use of the digital platforms for their respective duties. However, some digital platforms that may be suitable for teaching and learning may not have sufficient tools for administrative functions and vice versa. For instance, using only social media platform for teaching may not be advisable as navigation may become difficult especially when the conversation threads become so long. Combining so many digital platforms may also be a challenge to students. Using one that has so many functionalities may be more advisable as students may not be able to keep up with switching from one platform to the other. It is therefore necessary for schools to adopt digital platforms that can be used to satisfy teachers role to teach, students role to learn and administrators' role of administration. This will make centralisation of processes meaningful as each stakeholder will be able to perform his/her role using a specific digital platform.

CONCLUSIONS

- 1) The digital platforms identified in this study are easy to use for teaching, learning and administrative purposes.
- 2) The perception of teachers about the ease of use of the digital platforms for teaching is associated with their gender.
- 3) The perception of the students about the ease of use of the digital platforms for learning is associated with their gender.
- 4) The perception of the administrators about the ease of use of the digital platforms for administrative purposes is not associated with their gender.
- 5) There is no significant difference in the perception of teachers, students and administrators on the ease of use of the digital platforms for their respective duties.

RECOMMENDATIONS

1. Schools should be considerate of the type(s) of digital platform used for e-learning so that it does not become overly difficult for them to be used for teaching, learning and administrative purposes. In other words, at the school level, digital platforms



that centralise tasks by featuring tools that help teachers to teach, students to learn and administrators to carry out their administrative duties should be adopted.

2. There should be trainings and support available on how the digital platforms should be used to make it easy to use.

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INFLUENCE OF EDUCATION OF WOMEN ENTREPRENEURS ON THE PROBLEMS FACED BY THEM IN MICRO ENTERPRISES

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I. INTRODUCTION

Women increasingly run their own enterprises, yet their socioeconomic contributions and entrepreneurial potential remain largely unrecognized and untapped. They are concentrated in informal, micro-size, low productivity and low-return activities. Due to lack of proper education, women entrepreneurs remain in dark about the development of new technology, new methods of production, marketing and other governmental support which will encourage them to flourish.

women in micro enterprises show that a woman, who is highly motivated, initiates action and activity without direction has a high internal focus of control, and propensity towards achievement. Women's decision processes indicate a highly personal, subjective process. Studies reveal that the characteristics of women business owners promote their creativity and generate new ideas and ways of doing things.

1.1 Statement of the Problem

Micro enterprises are increasing enormously nowadays. Contribution of women to micro enterprises is appreciable and they provide employment opportunities to lot of people. Lack of education is a major constraint to women that causes low motivation to the women running business enterprises. Women are not aware of business, technology and market conditions and which in turn is a barrier for them in developing their business. Thus, this paper aims at finding out the influence of education of women on the problems faced by them.

1.2 Objectives of the Study

The objectives of the study are

- To understand the level of education of women entrepreneurs in the study area
- To analyse the influence of education of women entrepreneurs on the problems faced by them in micro enterprises
- To give suggestions for the promotion of women engaged in micro enterprises.

1.3 Methodology

The present study is a descriptive research based on the survey method. Primary data were collected from 378 women entrepreneurs as sample from various areas in Tirunelveli. The collected data is analyzed with the help of percentage analysis, ANOVA and Duncan Multiple Range Test. The relevant secondary data were collected from various books, journals, magazines, websites, etc.

II. REVIEW OF LITERATURE

Ram, D., Singh, M. K., Chaudhary, K. P., & Jayarani, L. (2013) found that women entrepreneurship has contributed significantly towards the empowerment of women. Entrepreneurship has made them economically independent. The variables such as education, family size, and socio-economic status had considerable impact on the entrepreneurial behaviour of women.

Gandhan Siva Ramakrishna, et al., (2007) made a comprehensive study and observed that the future development of society lies in the status of women. One reality is that women of the society not only form a major section of the society but also hold greater responsibilities than men. Hence, it is the women who matters because if one woman is empowered through education, health and



information then the whole family recognize these benefits spread over the world. Thus, the empowerment of women is a part of human resource department and cannot be treated independently.

Dil Bagh Kaur, et.al., (2003) concluded that besides providing technical and financial assistance, it is essential to educate rural women and to extend entrepreneurial management and marketing skills also, to enhance their confidence and competence so that they would become self-reliant.

Sameer Gupta et al., (1999) identified that the reason for lack of entrepreneurship in the State is lack of proper entrepreneurial education and training at graduate level. They observed that there is a close relationship between behavioural rigidity and entrepreneurial bent.

III. ANALYSIS OF DATA

3.1 Educational Status of Women Entrepreneurs

The level of education of the respondents will help to enrich their personalities in all respects. When compared to an uneducated person, an educated person has a better understanding of business. As a result, one of the important variables chosen for the analysis is one's level of education. The classification of respondents according to level of education is furnished in Table 1

Table 1
Educational Status of the respondents

Sl. No	Level of Education	No. of Respondents	Percentage (%)
1.	No Formal Education	45	11.9
2.	Up to HSC	214	56.6
3.	UG & PG	96	25.4
4.	Others	23	6.1
	Total	378	100

Source: Primary data

According to Table 1, 56.6 percent of respondents have completed the HSC level of education, while 25.4% have completed the UG & PG level. 11.9 percent of respondents have no formal education, while 6.1% have other professional credentials such as a diploma or vocational education. As a result, the majority of respondents (56.6%) have their standard of education.

3.2 Level of Education of Women Entrepreneurs and Problems faced in micro enterprises

The following null hypothesis was framed for finding out the significant difference among level of education of women entrepreneurs with respect to the problems faced in micro enterprises.

Null Hypothesis: There is no significant difference among level of education of women entrepreneurs with respect to the problems faced in micro enterprises.

The following table shows the result of 'ANOVA' test for significant difference among level of education of women entrepreneurs with respect to the problems faced in micro enterprises.

**Table 2****ANOVA for significant difference among level of education of women entrepreneurs with respect to Problems faced in micro enterprises**

Sl. No.	Problems	Level of education				F value	P value
		No Formal Education	Up to HSC	UG & PG	Others		
1.	General problems	19.49 (2.45)	19.35 (1.82)	20.11 (2.01)	19.17 (1.49)	1.451	0.228
2.	Financial problems	22.44 (3.19)	22.63 (2.84)	23.06 (1.80)	22.73 (3.58)	0.563	0.640
3.	Marketing problems	19.24 (2.04)	18.79 (2.83)	18.51 (0.50)	19.56 (2.55)	2.280	0.079
4.	Managerial problems	14.98 (1.73)	15.54 (2.22)	15.20 (1.39)	14.86 (2.11)	2.189	0.089
5.	Social problems	19.41 ^b (2.13)	20.94 ^a (2.10)	18.51 ^{ab} (3.62)	17.86 ^{bc} (1.79)	8.530*	0.000
6.	Overall problems	95.57 (7.92)	97.27 (5.72)	95.40 (6.28)	94.21 (11.21)	1.655	0.176

Note : 1. The value within bracket refers to SD

2.* denotes significant at 5% level.

3. Different alphabet among level of education of women entrepreneurs denote significant at 5% level using Duncan Multiple Range Test (DMRT)

Since the significant value 0.05 is less than P value. Hence the null hypothesis is rejected at 5 per cent level of significance with regard to problems faced in micro enterprises namely social problems. Hence there is significance difference among level of education of women entrepreneurs with regard to the problems faced in micro enterprises namely social problems.

According to the Duncan Multiple Range Test (DMRT), women entrepreneurs who are Up to HSC is differed significantly with the women entrepreneurs who are no formal education, UG & PG and others on problems faced in micro enterprises namely social problems.

Since the significant value 0.05 is higher than P value. Hence the null hypothesis is accepted at 5 per cent level of significance with regard to problems faced in micro enterprises namely general problems, financial problems, marketing problems, managerial problems and overall problems. Hence there is no significant difference among level of education of women entrepreneurs with regard to the problems faced in micro enterprises namely general problems, financial problems, marketing problems, managerial problems and overall problems.

IV. FINDINGS

- It is found that majority (56.6 percent) of the women entrepreneurs in micro enterprises possess up to HSC as their qualification
- It is found that there is significance difference among level of education of women entrepreneurs with regard to the problems faced in micro enterprises namely social problems.
- Based on Duncan Multiple Range Test (DMRT), women entrepreneurs who are Up to HSC is significantly differed with the women entrepreneurs who are no formal education, UG & PG and others on problems faced in micro enterprises namely social problems.
- It is found that there is no significant difference among level of education of women entrepreneurs with regard to the problems faced in micro enterprises namely general problems, financial problems, marketing problems, managerial problems and overall problems.

V. SUGGESTIONS

- Women entrepreneurs have to undergo formal education to overcome the problems faced by them.
- Women entrepreneurs have to acquire knowledge on digital tools and platforms that will help them to find plenty of opportunities to expand and scale their business.
- Women entrepreneurs should try to upgrade themselves in the changing times by adapting the latest technology.



VI. CONCLUSION

Women should have basic education and knowledge to establish and manage enterprise. Lack of education should not be an impediment for them in doing their business. Having proper education will give them knowledge regarding accessibility to loans, various funding agencies, procedure regarding certification, awareness on government welfare programmes, motivation, technical skill, support from family, government and other organization.

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