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EDITORIAL NOTE

I have the delight and privilege to write as Editor-in-chief of the *Rima International Journal of Education (RIJE)*, an official research publication of the Faculty of Education, Sokoto State University. This edition (Volume 4: No. 1) of the *RIJE* has Forty-one (41) articles from distinguished scholars and educators, poised to report cut-edge research findings and discourse on contemporary educational issues with implications for pedagogy, national and global development.

The dictum of “publish or perish” is in vogue in any worthwhile research-based institutions, hence strict adherence to publications in any reputable and recognized Journal, as such *RIJE* is recognized as complimentary to contemporary dissemination and propagation of knowledge. Therefore, the Editorial Board of *RIJE* wishes to use this medium to solicit well researched articles for publication from teeming population of academics and researchers globally. The Journal would always be subjected to thorough peer review and proper editorial vetting.

Prof. M. U. Tambawal,
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Students' Perception and Use of Emerging Technology in Tertiary Institutions in Ondo State, Nigeria

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Abstract

This study examines students' perception and use of emerging technology in tertiary institutions in Ondo State, Nigeria. Descriptive survey research design was used in the study. Two research questions and one research hypothesis were generated for this study. The sample population consisted of 300 students randomly selected from the three universities across the three senatorial districts (Ondo north, central and south). 100 participants were randomly selected from each of the selected public universities, making the total of 300 participants. The instrument for this study was researcher' self-developed questionnaire titled Students' Perception and Use of Emerging Technology Questionnaire (SPUETQ). The instrument was validated by two experts. Reliability coefficient of 0.78 was obtained using Kuder-Richardson (KR21) technique. Research questions and research hypotheses were answered and tested using mean scores and Pearson product correlation statistical tools respectively. The findings of the study showed that students' perception of emerging technology in tertiary institutions in Ondo State was positive. It was also revealed that the level of use of emerging technology in tertiary institutions in Ondo State was very high. The results also shown that there was no significant relationship between students' perception and use of emerging technology in tertiary institutions in Ondo State (N = 180; r = -.090; p>0.05). The study therefore recommends that managements of tertiary institutions should encourage the use of emerging technology in teaching and learning process. The study also recommended that management of tertiary institutions school make funds available for the provision of web-based devices for effective teaching and learning.

Keywords: Web-Based Tools, Perception, Tertiary Institution, Ondo State

Introduction

The integration of emerging technologies in teaching and learning process is no longer optional but a necessity for educators considering the level of infusion of technology on education particularly as it relates to the changing learning environment, demand for flexibility in methodology, and the need to enhance creativity and innovations in learning. The application of emerging technologies has become so irresistible in the teaching and process, and it is transforming the way teaching is structured and organized, and the job performance of educators. The adoption and usage of emerging technologies assist educators and students to interact more outside the classroom, and to set up classes at any time and place.

Emerging technologies according to Sosa, Salinas & De Benito (2019) are those technologies that have the potential to change the current state of affairs in education. Cukurova et al. (2018) also stated that emerging technologies include but not limited to virtual reality implementations, augmented reality implementations, mobile learning devices, physical computing tools, internet of things, hardware with sensors and technologies that allow collaborative learning at a great scale.

Emerging technologies offer a lot of benefits to both students and teachers particularly in tertiary institutions. Tella, Tella, Toyobo, Adika & Adeyinka (2007) stated that the use of emerging technologies increases student motivation, facilitates recall of prior learning, provides new instructional stimuli, activates the learner's response, provides systematic and steady feedback, facilitates appropriate practises, provides a viable source of educational information to enhance learning, especially lifelong learning, allows students to gain deeper understanding of complex concepts. Abidoye (2018) also claims that emerging technology gives teachers the flexibility to administer and oversee instruction in a setting that is conducive to learning for all students. Yusuf, Onasanya (2004) aver that the ability to train the current generation of students for the workplace of the future, which is offering tools for tomorrow's practices, is made possible by emerging technology.

Perception is one of the factors that affect the use of technology in teaching and learning process. Perception according to Fitri & Tiarina (2021) is a set of activities that involves becoming aware of and interpreting information about one's surroundings. Wood (2015) also define perception as the active process of meaning creation through the selection, organization, and interpretation of people, objects, events, situations, and other phenomena. From the above definitions, one could refer to perception as how humans attempt to comprehend the world all around us gather information using our five sense organs. Perception is our experience of information content, which we can compare to previous experiences, as well as how we see or understand something using one of our senses. Students' perception in the learning process is very important to be investigated. Perception of students in learning refers to a students' perspective on something that provide or apply when running a learning activity. Teachers can use students' perceptions to correct and evaluate the system, methods, or learning materials we provide or apply to them. Halaweh (2013) emphasised that students may be prompted to accept, embrace and effectively make use of emerging technologies applications. If student's expectation on the use of emerging technologies is met, there is tendency for them to make use of it without any problem. There is no doubt that if emerging technology applications is easy to access and use the students will make maximum use of it for learning.

Research Questions

The following research questions were raised and answered in this study;

1. What is the students' perception of the use of emerging technologies in tertiary institutions in Ondo State?
2. What is the level of use of use of emerging technologies in tertiary institutions in Research Hypotheses

Research Hypotheses

The following null hypotheses were tested during the course of this research study;

3. H_{01} : There is no significant relationship between students' perception and use of emerging technologies in tertiary institutions in Ondo state.

Methodology

The study adopted descriptive survey research design. A total of three hundred (300) students were proportionately random selected from three public universities in Ondo State. One university was randomly selected from each of the three senatorial districts in Ondo State. Ondo state was divided into three senatorial districts (Ondo South, Ondo Central and Ondo North). 130 students were selected from Adekunle Ajasin University Akungba Akoko, 100 students were also selected from Adeyemi Federal University of Education Ondo while 70 students were selected from Olusegun Agagu University of science and Technology Okitipupa, the instrument used in this study was a self-developed questionnaire titled Student Perception of the Use of Emerging Technologies Questionnaire (SPUETQ). This was divided into three sessions A-C. Section A deals with the personal information of the respondents such as institution, Gender and level. Section B consisted of 10 question items on students' perception of emerging technologies, while section C consisted of 10 question items on students' use of emerging technologies in tertiary institutions in Ondo State.

The instrument was validated by two experts in Test and Measurements, Department of Guidance and Counselling, Adeyemi Federal University of Education Ondo. The reliability coefficient of the instrument was also measured using Kuder-Richardson (KR21). The reliability coefficient of 0.78 was obtained. This was considered to be high enough for the instrument to be used. The research questions were answered with the use of mean and Standard Deviation. While the only research hypothesis was tested with the use of Pearson product correlation coefficient at 0.05 level of significance.

Results

Research Question 1: What is the students' perception of emerging technologies in tertiary institutions in OndoState?

Table 1: Students Perceptions about the Use of Emerging Technologies

Item	SA	A	D	SD	Mean	Std. D.
I have a lot of confidence when it comes to the use of emerging technologies in the class	232	264	72	0	3.28	.67
It would make me happy to be recognized as an expert in the use of technology	276	227	65	0	3.37	.68
Generally, I have felt secure about using the emerging technologies for problem solving	244	207	64	53	3.13	.94
Using technology effectively will help me in understanding of lesson very well	178	310	56	24	3.13	.75
I think I can handle more difficult and complex topics with the application of emerging technologies in class	251	253	64	0	3.32	.66
I believe the use of technology make learning enjoyable for students	290	147	95	36	3.21	.94
I believe the emerging technologies has potential as a learning tool	273	204	47	44	3.24	.90
I know I can improve my performance by increasing my emerging technologies usage	366	100	81	21	3.42	.86
Emerging technological tools makes learning easier	289	197	51	31	3.30	.84
I think I could handle more difficult problems using emerging technological tools	289	182	57	40	3.26	.90
Weighted Average					3.27	

Key:SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree
Decision Value:0.00 - 2.49 = Negative, 2.50 - 4.00 = Positive

Table 1 shows the perceptions of students about the use of emerging technologies in tertiary institutions in Ondo state. The table shows the students agreed to all the items as follows: they have a lot of confidence when it comes to the use of emerging technologies in the class ($\bar{x} = 3.28$), it would make them happy to be recognized as an expert in the use of technology ($\bar{x} = 3.37$), generally, they have felt secure about using the emerging technologies for problem solving ($\bar{x} = 3.13$), using technology effectively will help them in understanding of lesson very well ($\bar{x} = 3.13$), they think they can handle more difficult and complex topics with the application of emerging technologies in class ($\bar{x} = 3.32$), believe the use of technology make learning enjoyable for students ($\bar{x} = 3.21$), believe the emerging technologies has potential as a learning tool ($\bar{x} = 3.24$), they know they can improve their performance by increasing their emerging technologies usage ($\bar{x} = 3.42$), emerging technological tools makes learning easier ($\bar{x} = 3.30$) and they think they could handle more difficult problems

using emerging technological tools ($\bar{x} = 3.26$). The perception of students in higher institutions about the usage of emerging technology in Ondo State is favourable, according to the weighted average value (3.27 out of the possible maximum value of 4.00), which is within the decision value for positive.

Research Question 2: What is the level of utilization of emerging technologies by the pre-service teachers in colleges of education?

Table 2: Students' Level of Use of Emerging Technology in Tertiary Institutions

Item	SA	A	D	SD	Mean	Std. D.
I use services provided by messaging apps such as WhatsApp to get relevant academic information.	54	29	17	0	3.16	.82
I participate in my class online group discussions	40	51	9	0	3.18	.90
I research, type, complete and submit my assignments and projects using emerging technological tools	46	37	17	0	2.80	.96
I watch tutorials and videos on difficult concepts with the use of emerging technologies.	41	53	3	3	2.92	1.07
I use emerging technological tools to access information on the internet	47	42	11	0	2.87	.92
Emerging technological tools allow me to use multimedia resources when learning	18	56	13	6	2.96	1.05
I usually compare lecturer's lessons to online information	16	65	19	0	3.14	1.01
I take online courses easily with the aid of technological tools	21	57	19	3	3.40	.68
I watch educational movies and play educational games more than I learn with emerging technologies	41	40	7	6	2.00	.97
I use online cloud accounts to backup my educational documents	40	36	18	6	2.93	1.23
Weighted Average					2.94	

Key: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree

Decision Value: 0.00 - 2.49 = Low, 2.50 - 4.00 = High

Table 2 displays the level of use of emerging technologies by the students in tertiary institutions in Ondo state. The table demonstrates that the students agreed to the following: they use messaging apps like WhatsApp to access services that provide pertinent academic information ($\bar{x} = 3.16$); they participate in online group discussions in class ($\bar{x} = 3.18$); they use emerging technological tools to conduct research for, type out, and submit their assignments and projects ($\bar{x} = 2.80$); they watch tutorials and videos on challenging concepts ($\bar{x} = 2.92$); and they use emerging technological tools to access information on the internet ($\bar{x} = 2.87$), and they use messaging apps like WhatsApp to participate in online group discussions in class ($\bar{x} =$

3.16, 3.18). The table also reveals that the students disagreed that they learned more from emerging technologies than they did from watching instructional movies and playing educational games ($x = 2.00$). The level of student use of emerging technology in Ondo State's tertiary institutions can be judged to be high based on the weighted average's value (2.94 out of the possible maximum value of 4.00), which is within the judgement value for high.

Research Hypothesis

H₀₁: There is no significant relationship between students' perception and use of emerging technologies in tertiary institutions in Ondo State.

Table 3: Summary of Pearson Product Moment Correlation Showing Relationship between students' Perception and Use of Emerging Technologies

Variable	Mean	Std. D	N	r	Sig(p)	Remark
Perception	17.48	1.78	180		.231	Not Significant
Utilization	11.87	2.03		-.090		

Table 3 shows the relationship between pre-service teachers' perception and utilization of emerging technologies in Colleges of Education. The table shows that there is no relationship between student perception and use of emerging technologies in tertiary institutions ($N = 180$; $r = -.090$; $p > 0.05$). Hence, hypothesis 2 is accepted.

Discussion

In research question one, it was revealed that tertiary institution students' perception of emerging technologies in Ondo State was positive. Most of the students presented positive opinion about the use of emerging technologies in their education because technology tools could function as a support for improving the understanding of concepts, attention, or acquisition of knowledge. More so, the students availed that they have a lot of confidence when it comes to the use of emerging technologies in the class, feel happy and motivated when lecturers introduce emerging technologies as a means of enhancing their learning activities and that the information gotten from emerging technology tools is better than using printed materials/textbooks. The study's finding was in line with the finding of Ekmekci (2016), who came to the conclusion that students had positive perception of the use technologies in their learning process.

In research question two, the study also showed that the level of use of emerging technologies in tertiary institution in Ondo state was very high. Higher institutions use emerging technologies at a significant rate. A fascinating trend in today's educational system is the use of emerging technology. It provides educational institutions and

students with low-cost access to a variety of applications and resources. This was as a result of the fact that the adaptable nature of technology frees students from the constraints of distance, provides access to an endless supply of material on the desired subjects, and makes learning more accessible from any location. New technology advancements enable students to access information online, attend tutorials and films on challenging ideas, and use multimedia resources when learning. The results of this study corroborate those of Lahiri and Mosel (2013), who claimed that one of the most recent global trends affecting the use of information technology in educational institutions is the emergence of new technologies. However, this most recent discovery conflicts with research done by Malcolm and Godwill (2018) and Mooij and Smeets (2014) which revealed that the level of technologies implementation in teaching and learning was low.

Also, in research hypothesis one, the study reveals that the perception of the students had no relationship with the use of the emerging technologies in tertiary institutions. This is as a result of the fact that students' perspectives and their point of view about how technologies can contribute to the learning context does not necessarily translate to their use of the emerging technologies in the tertiary institutions. The research of Abdullahi and Seng (2015), who found no connection between students' perception of emerging technologies and their use in tertiary institutions, lends credence to this.

Conclusion

Based on the reviewed relevant literatures and the findings of this study, it was concluded that the University students have positive perception of emerging technologies in Ondo State.. While their level of use of emerging technologies was also very high. Therefore, the teaching and learning process in universities should embrace the use of emerging technologies especially at this technology age.

Recommendations

Based on the findings and implications of this study, the following recommendations were made:

1. Management of tertiary institutions should organize training and development programs to enhance students' skills and knowledge on the use of emerging technologies.
2. Management of tertiary institutions should make fundamental investments with a clear vision and strategy to enhance access and exploitation of emerging technology.

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Digital Library Services: Availability and Usage for Research and Academic Purposes among Undergraduates of Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria

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Abstract

This study investigated into the availability and usage of Digital Library services (DLS) for academic purposes in Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria. The descriptive survey was adopted for this study. The population comprises of all undergraduates in Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria. The respondents were selected using simple random sampling techniques and the sample size consisted of 200 undergraduates selected from the five faculties in the University. About 35 respondents were selected from faculty of Arts, 50 from faculty of Education, 34 from faculty of Social Sciences and Management, from faculty of science 36 respondents were selected and faculty of Vocational and Technical Education 45 respondents were selected using simple random sampling technique. The instrument for data collection was the researcher's self-developed questionnaire titled "Digital Library Services Availability and Usage for Academic Purposes among Undergraduates Questionnaire, "DLSAUAPQ". The instrument was validated by 3 experts. The reliability coefficient was obtained using Cronbach Alpha 0.81 value for availability and 0.85 values for the usage of digital library services. Research questions were answered using mean and standard deviation, while the hypothesis was tested using t-test. The finding of the study showed that there are inadequate digital library services in the university and that very few undergraduates made use of the available DLS for academic purposes. Also, gender does not reveal any appreciable difference. The study therefore recommends that the level of awareness of the availability of DLS should be increased to the library users.

Keywords: Digital Library Services, evolution, traditional libraries, digital libraries awareness

Introduction

The University undergraduates visit libraries in order to retrieve accurate, adequate, relevant and current information in digital resources form for effective and efficient research work and academic purposes. The undergraduates are expected to study more after classroom instructions to collect relevant information for class activities such as assignments, seminars, term papers, dissertations, thesis and research projects. This is because university libraries house the intellectual contents of the institutions. The attempt to digitize the intellectual contents is known as digitization. In digital library, resources are kept and made available in digital form and the services of the library are also made available electronically (Nwabueze & Urhiewhu, 2015).

The main purpose of digital library materials is for preservation and easy access by students, researchers and other users. Digitalization improves access to library resources, by digitalizing library collections; information will be accessible to all instead of a group of students (Fabunmi *et al.*, 2006). Digital projects also enable users to search for collections rapidly and comprehensively from anywhere at any time. It also removed the challenges of distance, as users do not have to travel to libraries that possess the hard copies of libraries materials before they can access and use such materials.

The availability and usage of Digital Information Resources (DIRs) can facilitate, increase and ease processing and access of information to library users (Shariful, 2012). Dhamdhare (2012) observed that digital library services and practices expand the features and facilities in library to develop digital library services with Information and Communication Technology (ICT). The research revealed that students and research scholars wish to publish their research articles and other papers online to download whenever they want. Perdana and Prasajo (2020) examined the search pattern of online journals among the faculty members. The study revealed that the majority of the digital libraries were aware of availability of online journals.

The level of availability and usage of e-resources in any university library may influence the information services provision to students in that library. (Rajasekaran *et al.*, 2023). Ganesamoothy *et al.* (2022) opined that the level of e-resources available to any university library and the degree of usage to which they are put determine the information services delivery and skilful used, influence information services provision by making them more meaningful. Ashraf *et al.* (2019) reported that University libraries play significant role in complementing research by funding, provision of facilities and dissemination of information. Gakibayo *et al.* (2013) explored the merits of electronic resources over printed ones include the following: speedy access, ease of use, ability to search multiple files at a time and ability to access documents from outside the library university. Tenopir (2003) in his study revealed that e-resources have been rapidly adopted in academic areas, though the behaviour varies according to the discipline or subject area. Also, Fatoki (2004) investigated the impact of library resources and the internet among undergraduate students in Ibadan and it was revealed that 65% of the respondents use the internet for research activities. It was indicated in the research that 72% of students preferred to use the university library's internet services, 35% the Cybercafe, and 5% neither. In a study investigated by Ojo and Akande (2005) on 350 respondents examined undergraduates' access, usage and awareness of e-resources at the University College Hospital (UCH) Ibadan, Nigeria. The study revealed that the level of usage of the e-resources by undergraduates is not high. This was as a result of lack of information retrieved skills for exploiting e-resources, thus making the level of usage e-resources by medical students very low.

Plantino (2023) investigated on assessment and utilization of digital library services in the new normal and its implications to students' academic application. It was revealed from the findings that students' utilization of digital library services is on an average of twice a week. Also, Hendal (2020) pointed out that the rise of digital services offered by the library enabled the user to utilize various electronic resources. Agyeiku (2022) found the undergraduate students utilize the resources and service of the library for their assignment, learning, examination purposes, class preparation and self-development.

Gender had been seen as a relevant factor in the use of electronic database, while issues of gender difference among students towards the use of library resources have been elevated by researchers. Also, in the research study carried out by Bamidele and Adekanmbi (2019) on the influence of gender differences on usage of patterns of electronic information sources among undergraduates of selected universities in Southwest Nigeria. It was revealed from the study that there is no basis for gender differentiation in the use of electronic resources usage appeared negligible. Bassi and Camble (2011) reported electronic resources in university libraries of Adamawa State, Nigeria. The findings revealed that a total of 280 (43.5%) and 102 (38.1%) males and females students indicated that they used the e-resources for research. And 227 (35.3%) and 96 (35.8%) of males and females' students respectively responded that they use e-resources for assignments. It was concluded from the study that male students used e-resources more for research purposes while female students used e-resources more for research purposes while female students used the resources for assignments and leisure. Smith (2015) conducted research on gender matter on the use of university library access and career preparedness. The findings revealed that female students felt more prepared by their degrees programmes when they felt library resources were available. Females were also more likely to feel library materials were available if they believed the university's distance learning technology was reliable and that web-based technology provided by the university was adequate.

Bridging the Gender Digital Divide (EDD) in access, use and appropriation of technologies would promote the digital inclusion in spaces traditionally dominated by men (Pelaez-Sanchez *et al.*, 2023)

Statement of the Problem

In the past, libraries have been seen as collection of books, manuscripts, journals and similar items. At that time, libraries have increasingly developed to provide information resources and services to users in times of need. The term digital libraries and virtual library refers to the vast collection of information to which students gain access remotely.

After the advent of Information and Communication Technology (ICT) libraries have adopted a new mode of digital technology and digital libraries have become a need of the current time. The increased availability of ICT had led libraries and librarians to

develop relations with computer centres. ICT has made it possible for the shift from paper to digitized hypermedia which has created a high degree of comfort from the traditional setup to the digital world. Digital library made libraries closer to the users, that information can be shared, can be made available and new forms of information becomes possible. With the importance of DL, there is needed to look into how Nigerian University undergraduates use the DL and how DL is available in their various universities. Therefore, the research study is about the usage and availability of Digital library services among undergraduates in Ondo State, Nigeria.

Objectives of the Study

The study was based on the following objectives:

1. To investigate the availability of digital library services for research and academic purposes among undergraduates.
2. To determine the level of usage of digital library services for research and academic purposes among undergraduates.
3. To find out if there is difference between the levels of usage of digital library services based on gender.

Research Questions

The study sought and provided answers to the following research questions.

1. What is the level of availability of digital library services for research and academic purposes among undergraduates of AFUED?
2. What is the level of usage of digital library services for research and academic purposes among undergraduates of AFUED?

Research Hypothesis

The following research hypothesis was formulated and tested at 0.05 level of significance.

1. There is no significance difference between male and female undergraduates' level of usage of digital library services for research and academic purposes.

Methodology

The study used a quantitative research design based on a survey method through questionnaire. Survey method was employed on this research study, because it is an efficient way for collecting information from a large number of respondents. Simple

random sampling technique was used for this research study and the population consisted all undergraduates at Adeyemi Federal University of Education, (AFUED), Ondo, Ondo State, Nigeria. Five faculties were used for this research study regardless of their departments and gender. In order to give all the respondents equal opportunity for been selected, a random sampling technique was adopted to select thirty-five (35) respondents from Faculty of Arts, Faculty of Education, fifty (50) respondents, Faculty of Social Sciences and Management thirty-four (34) respondents, Faculty of Sciences, thirty-six (36) respondents and Faculty of Vocational and Technical Education forty-five (45) respondents were selected. In all, two hundred (200) were selected and eighty-nine were males while one hundred and one (111) were females regardless of their departments. The main instrument for this study is researcher's designed questionnaire titled "Digital Library Services: Availability and Usage for Academic Purposes among Undergraduates Questionnaire "DLSAUAPUQ". The questionnaire consists of two sections: Section "A" contains Demographic data of respondents and Section "B" contains items on Undergraduates' Usage and Availability of Digital Library Service for Research and Academic purposes. The questionnaire was subjected to both face and content validity to check the appropriateness and adequacy of the content of the instrument. One Lecturer from Department of Computer and two Liberians from Federal University of Technology, Akure, Ondo State validated the instrument. After they deemed it fit to be validated, their advice and suggestions were used to modify the questionnaire to produce final draft.

The questionnaire was tested for reliability on fifty (50) randomly selected undergraduates from Tai Solarin University of Education, Ijebu-Ode, Ogun State, who were not part of this study. The data gathered from the trial test was analysed to check for internal consistency in reliability. The Cronbach Alpha was used and the values obtained were 0.81 for the availability and 0.85 for the usage of digital library services among Undergraduates. This indicated that the research instrument was highly reliable. The researcher with the help of research assistants in the five faculties at AFUED administered copies of e-questionnaire through various social media platforms of the selected respondents.

At the end of the exercise, 200 valid responses of the e-responses were retrieved from the undergraduates upon which analysis of the results were carried out using mean, standard deviation and t-test to answer the research questions raised and tested the research hypothesis formulated for the study.

Results

Research Question 1: What is the level of availability of Digital Library Services for research and Academic Purposes among Undergraduates of AFUED?

Table 1: Availability of Digital Library Services among Undergraduates AFUED

Item	SA	A	D	SD	Mean	Std. D.	Remarks

Digital Library Services: Availability and Usage for Research and Academic Purposes among Undergraduates of Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria

There are no adequate DLS gadgets for research and academic purposes	76	85	26	13	3.12	.87	Accepted
The DLS gadgets in my faculty is restricted and limited to some other specific usage	71	94	13	22	3.07	.93	Accepted
I prefer the usage of traditional library rather than DLS because DLS gadgets are not available	113	27	27	1	3.42	.74	Accepted
Digital library services is not yet established because of the insufficient ICT facilities	60	95	8	37	2.89	1.04	Accepted
Weighted Average					2.73		

Key; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Decision Value for Remark: Not Accepted =0.00-2.44, Accepted = 2.45-4.00

Table 1 shows the level of availability of Digital Library Services (DLS) among Undergraduates of Adeyemi Federal University of Education, Ondo. The table indicates agreement among the undergraduates for all items, “I prefer the usage of traditional library rather than digital library services because DLS gadgets are not available for undergraduates” which received the highest mean score ($x = 3.42$). Based on the result from this table and the mean score acceptance by the decision rule, the investigation on the issue of availability of DLS facilities are: there is no sufficient DLS gadgets for research and academic purposes in my faculty, DLS gadgets in my faculty are restricted and limited to some other specific usage; I prefer the usage of traditional library rather than digital library services because DLS gadgets are not available for undergraduates, DLS is not yet established because of insufficient ICT facilities.

Research Question 2: What is the level of usage of Digital Library Services (DLS) for research and academic purposes among Undergraduates of AFUED?

Table 2: Level of Usage of Digital Library Services among Undergraduates of AFUED

Item	SA	A	D	SD	Mean	Std. D.	Remarks
I do not make use of digital library for any research and academic purposes	21	92	56	31	2.51	.88	Accepted
There are no digital library services in my faculty	63	22	79	36	2.16	1.11	Accepted
Some students cannot make use of digital library services for their research purposes	40	37	53	70	2.23	1.13	Accepted
Only brilliant students make adequate use of digital library services in my faculty	18	36	49	97	1.88	1.01	Accepted
Weighted Average					2.29		

Key; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Decision Value for Remark: Not Accepted =0.00-2.44, Accepted = 2.45-4.00

Table 2 shows the level of usage of digital library services among undergraduates of Adeyemi Federal University of Education, Ondo. The table indicates agreement among the undergraduates for all item with, “I do not make use of digital library services for my research and academic purposes ($x = 2.51$) and “There is no digital library services in my faculty” which received a mean score ($x = 2.56$). Furthermore,

the table shows the undergraduates disagreed that some student cannot use digital library services for their research purposes ($x = 2.23$) and only brilliant students make adequate use of digital library services in my faculty ($x = 1.88$). Meanwhile, based on the value of the weighted average (2.99 out of 400 maximum values obtainable) which falls, within the decision value for low, it can be inferred that the level of usage of digital library services among undergraduates of AFUED, Ondo is low.

Hypotheses Testing

H₀₁: There is no significance difference between male and female undergraduates' level of usage of digital library services for research and academic purposes.

Table 3: Summary of T-test showing difference in male and female Undergraduates' usage of Digital library services

Variable	N	Mean	Std. D	Df	T	Sig.	Remark
Male	89	9.02	1.99	198	-1.055	.293	Not Significant
Female	9.31	1.91					

Table 3 shows the difference in the level of usage of digital library services by male and female undergraduates. The table shows that the mean score for male undergraduates is 9.02 while that of female undergraduates is 9.31. The value of the mean scores do not reveal any appreciable difference. Therefore, there is no significant difference between male and female undergraduates' level of usage of digital library services in Adeyemi Federal University of Education, Ondo ($df = 198$; $t = -1.055$; $p > 0.05$). Hence, hypothesis 1 is retained.

Discussion

The result of this research study showed that the level of availability of Digital Library Services (DLS) among undergraduates for research and academic purposes are: there is no sufficient DLS gadgets, DLS gadgets in my faculty are restricted and limited to some other specific usage, undergraduates prefer the usage of traditional library to digital library services and that DLS is not yet established because of insufficient ICT facilities. Rajasekaran *et al.* (2023) argues that the level of availability and usage of e-resources in any university library may influence that information services provision to students in that library. Also, Ganesamoorthy *et al.* (2022) in a similar study revealed that the level of e-resources available to any university library and the degree of usage to which they are put determine the information services delivery and skilfully used, influence information services provision by making them more meaningful.

Findings of the study revealed the usage of digital library services among undergraduates for research and academic purposes. It was revealed that undergraduates' usage of Digital Library Services (DLS) is low; this may be attributed to insufficient DLS gadgets and awareness of the students on the usage of

DLS for research and academics purposes. The findings of Platino (2023) revealed that students' utilization of digital library services is on an average of twice in a week. Also, the findings of Hendal (2020) and Agyeiku (2022) contradicts the outcome of this study that undergraduates utilized DLS for their assignments, learning, examination purposes, class preparation and self-development. They also pointed out that DLS offered by the library enabled the user to utilize various electronic resources findings on the difference between male and female undergraduates' level of usage of digital library services for research and academics purposes, it was revealed that there is no significance between male and female undergraduates' level of usage of digital library services for research and academic purposes. This finding is in consonance with Bassi and Camble (2011) who asserted that male students used e-resources more for research purposes while female students used the resources for assignments and leisure. In contrary to this finding Smith (2015) conducted research on gender matter on the use of university library access and career preparedness. The findings revealed that female students felt more prepared by their degree programmes compared to the male students.

Conclusion

The availability and usage of digital library services is a Sine-qua-non to information acquisition by undergraduates in the university libraries. The study determined the level of availability of digital library services for research and academic purposes among undergraduates. It was concluded from this study that there are no sufficient digital library services for research and academic purposes.

The respondents agreed on the level of usage of digital library services for research and academic purposes was concluded that the level of usage of digital library services among undergraduates is low.

Also, there was no significance difference between male and female undergraduates' usage of digital library services for research and academic purposes. It was also concluded that there is no significance difference between male and female undergraduates' level of usage of digital library services.

Recommendations

The following recommendations were made based on the findings of the study:

1. The level of awareness of the availability of Digital Library Services should be increased to the library users through organizing workshops, conferences and seminars.
2. Trained personnels should be on ground to assist the undergraduates' usage of the available digital library services in the university library.

3. Both male and female undergraduates must develop positive attitudes towards the usage of digital library services in order to maximize the usefulness of the resources which can enhance their academic career.

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Innovative Pedagogy and Technology for Driving Language Education and Sustainable Development in Nigeria

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Abstract

Innovative pedagogies and technology are critical drivers for enhancing language education and promoting sustainable development. Pedagogy plays an important role in preparing learners to acquire knowledge of the subject-matter presented to them during the teaching and learning process. This paper talks on the importance of the learner-centered approach which enhances language acquisition by promoting learners' participation, critical thinking, creativity, communication and problem-solving skills. Furthermore, this paper discusses the need for the adaption of new pedagogies such as, Project-Based Learning (PBL), Task-Based Learning and Gamification Language Learning Approach which are flexible and engaging for learners across diverse linguistic and socio-economic backgrounds. Complementing this, the paper emphasises on the integration of technologies in the teaching and learning of language. Effective use of technology can bridge the gaps in accessing quality language education. Also, this paper delves into the need for the integration of Artificial Intelligence (AI) into the field of language teaching and learning. This paper concludes by emphasising the need for the government to provide digital infrastructure in schools and see to the needs of learners in this technological driven era. By doing so, our educational system can unlock the transformative potential of language education; fostering social inclusion, and sustainable development. Some recommendations were proffered for effective integration of innovative pedagogies and technology in language classroom. This includes training of teachers on how to integrate new strategies in their language lessons and, on how to use technology to evaluate learners both in and outside the language classrooms. More so, the word 'language' is used in this paper to refer to the teaching and learning of English language in schools.

Keywords: Innovation, Pedagogy, Technology, Language Education, Sustainability

Introduction

The process of teaching and learning a language could be complex and multifaceted approach. Contemporary pedagogical strategies in teaching have recently emphasised on the learner-centered approach; where learners are fully engaged in diverse language activities and authentic use of the language. Khoury (2022) opines that learner-centered approach has a positive impact on learners' motivation, active engagement and improves learning outcomes. Nurassyl *et al.* (2023) further states that the learner-centered approach places the needs and interest of the learners at the center of learning which promotes learners' engagement, collaboration and autonomy. It is essential to upgrade teaching and learning methods in order to meet up with the trends

of change in education. A better understanding of innovative pedagogies is needed in order to address contemporary challenges in language learning and also, improve teachers' professional competence in the language teaching and learning process.

Innovation in education involves going beyond traditional pedagogies. There are different tools, techniques and resources which can help teachers build structured and interactive teaching plans that cater for the needs of different learners in the classroom. Likewise, understanding how and when innovative pedagogies work requires critical reflections on the purpose and the potentials of adaptive teaching. In this digital age, giving learners the opportunity to learn both in class and out of the classroom prepares them for global competitive workforce of the 21st century. The process of language teaching and learning through interaction between teacher and learners, and between learners can potentially help the learners to retain more information and process it at a deeper level. In addition to pedagogical training, it is important that teachers have opportunity to be trained on the use of educational technology as the demand for online courses has grown. Fasae *et al.* (2023) notes the dearth of digital literacy skills among language teachers in order to enhance both the teachers and learners' language teaching and learning as well as the learners' performance. Therefore, the adaption of technology is one of the most needed ways of enhancing learners' understanding when it comes to the implementation of active language learning. Thus, innovation pedagogies that are based on technology is necessary in driving the affairs of learning. Also, it is a valuable educational tool which can immerse learners into engaging real-world scenarios. Furthermore, technology enhances learners' development in problem-solving abilities which in turn guides the learners to understand and to face challenges; thereby breaking ineffectual social constructs and contribute generally towards a sustainable future. For sustainable future, Khirjah *et al.* (2024) emphasises on the need in integrating the Sustainable Development Goals into language teaching. Conversely, it is inherent to note that language materials presented to learners are designed to ensure that learners can comprehend and process language appropriately wherever they find themselves.

The Need for Innovative Pedagogy in Language Education

According to Lukin *et al.* (2016) conventional educational systems involve well-defined syllabi, instructor-based learning and actual classroom. These are the basic constituents of traditional learning environments, which is prevalent over the years. The main goal of the conventional system of education is to ensure that all learners undergo the same learning experience and cover all necessary topics. The standardisation is important in ensuring that there is equity in education with clear expectations. Holmes (2016) and Holmes *et al.* (2019) explain that the conventional methods can also be teacher oriented with fewer activities that allow learners to learn independently, and this may negatively affect the learners' critical thinking and problem-solving skills. Therefore, learning can be effective and efficient if teachers of English language acknowledge the impact of innovative strategies in education.

Hence, teachers of English language are expected to be exposed to the diverse learning needs of learners in this technology-driven world.

Innovative Pedagogies and in-class Language Learning Experience

With the emergence of new pedagogical approaches to learning in general and concerning language learning in particular, applied linguistics is finding a new direction towards the teaching of language. Alemi *et al.* (2010) state that dynamic view towards the nature of language turned scholars from static view to competence towards more interactive and dynamic views. So, a technological language classroom context that promotes self-initiation and many language activities and clear instruction is the key to effective language teaching and learning. Hence, innovative pedagogies can be a powerful tool for improving learners' outcomes in language education. Some research on the role of technology in language teaching and learning in real-time classroom interactions found that learners can practice interpersonal skills by interacting with other speakers of the target language in real-time via video, audio or text.

Furthermore, learners' ability to access online resources from any device, and from anywhere enhances flexible learning which reduces overcrowded classroom and overburden teachers. Learners learn differently; some, for instance, respond better to visual stimuli, while others understand by absorbing information from text source. Online platform can adapt to individual child's learning style. Through the cloud, teachers can create tailored- made language resources for learners from multimedia. Likewise, stimulated language teaching environment can draw learners into the heart of a subject allowing them to feel connected with the topic they are exploring.

It is pertinent to note that a technological language classroom cannot be effective without a technological-based teacher. Muhonen (2023) conducted a study on the relationship between teachers' pedagogical and ICT training and approaches to online teaching and the use of digital tools. The findings revealed that pedagogical training enhanced teachers learning-focused approach to online teaching and diverse use of digital tools. He further stressed that building an online teaching in which digital tools are used to promote interaction in online environment enhances learners' understanding. Teachers, therefore, need to be able to implement versatile pedagogical practices and incorporate digital tools, applications and materials into the language classroom to support learners in achieving the desired teaching outcomes.

The Project-Based Learning Approach and Language Education

The Project-Based Learning (PBL) is an approach that aims to enable learners to solve problems based on real-life scenarios; either individually or in pairs. Learning takes place through completing a project. For instance, the language teacher can create learning activities where learners use online searching or recording tools to document their writing, example a descriptive essay topic assigned to them to write

on. The aim of using such an approach is to enhance active learning in language classroom as well as to foster learners' critical analysis and higher-order thinking skills; especially in composition writing. In a study, Xiaohu et al. (2023) explore the impact of project-based language teaching on developing high school students' competence and the factors influencing the effects of project-based teaching on improving the students' competences in English as a foreign language. The results showed improvement on the students' use of the English language. More so, assignments given to learners using the PBL approach consists of multi-step problems that challenge their level of understanding and, enhance their interpersonal skills; helping them solve real-world problems. Learners' use of critical analysis, logical deductions and interactive techniques inspires teamwork, collaboration and peer learning; thereby transforming the learners' understanding through activity-based instruction in the language learning classroom.

Task-Based Language Teaching Approach

Similarly, Task-Based Language Learning is another pedagogical approach that bridges the gap between what learners learn in the language classroom and the practical usage of the language they learned outside the classroom. It is a pedagogical approach that emphasizes the importance of performance of meaning-oriented tasks in facilitating second language learning (Teng *et al.*, 2024). The approach focuses on the completion of language task that centers on real-life language use where learners are encouraged to engage in real world problem-solving activities. According to Lu (2023), effective task-based learning approach involves designing, progressing and sequencing of tasks to foster language acquisition. Assigning task to learners is usually from a simple task to a more complex task. For instance, a task can focus on vocabulary acquisition, followed by sentence construction then paragraph writing. By using this gradual approach, the learners' linguistic knowledge and understanding is expanded, hence building their confidence in learning the language. Another task could be learners going to interview people of various profession in order to gain experience through question format and active listening. This in turn enhances their language production. More so, assigning a topic to learners to complete outside the school helps learners to develop self-awareness, self-management, social awareness, social skills, self-confidence and decision making. Furthermore, the sequencing of the tasks enables the teacher to provide adequate support to learners at each stage of the learning; thereby helping learners to build their language use, as each task builds on the previous ones leading to a coherent and comprehensive language learning process.

Gamification and Language Education

Game-based teaching is another approach that accelerates the participation and engagement of learners in language teaching classroom where points, rewards and progress tracking are used to motivate the learners. Interactive exercises such as, pronunciation practice, vocabulary matching and sentence building can be used in a

gamified learning environment. For instance, learners can use speech recognition features to practice saying different types of sentences; for example, “I need a glass of water” and the like. Also, in composition writing classroom, topics on different professions can be written on papers and squeezed for learners to pick and speak or act. This makes learning fun while encouraging competition and engagement (Chen *et al.*, 2023). Meanwhile, the language teacher can use storytelling games like “Twine” for creative writing tasks or host a “Kahoot” quiz to review grammar or vocabulary learned in previous lessons. The aim of this approach is to capture the learners’ interest, improve their concentration level and enrich their learning experiences. The approach, further aids the cognitive development of learners while simultaneously fostering learners’ creativity and problem-solving skills.

Apparently, teacher-learner and learner-learner interaction is crucial during the game. The interaction provides opportunities to learners to practice and develop their language skills anywhere and anytime. Lu (2023) states that when role-play is integrated in a lesson and learners are allowed to participate fully, the practice of peer collaboration and interaction is strengthened in language learning classroom; as it encourages the learners to engage in meaningful communication in a relaxed atmosphere. Kallunki, et al. (2023) opine that creating diverse interactive language learning environments that supports language learning requires pedagogical skills. Teachers with formal pedagogical training invest more in aligning the design and implementation of their teaching, and consider the impact of teaching methods on the learners learning. Thus, by working together on various group activities, learners are compelled to navigate through linguistic challenges, often leading to an enhanced understanding of the language structure and usage, and negotiation of meaning. This shared learning experience not only builds a supportive learning community but also elevates the confidence of the learners. Therefore, the reciprocal nature of peer interaction through games plays a consequential role in driving motivation, and ensuring that the process of mastering a new language is not a solitary endeavour but a collective effort.

It is pertinent to note that the three approaches discussed above are learner-centered approach. Assigning new concept and topic from the course to the learners to discover is prominent. Afterwards, classroom discussion ensues where learners share their discoveries, ideas, views and findings within the class; supported by the teacher. These approaches promote self-paced learning, customized learning experience, active and engaging learning experience that is contextually relevant, skill gap analysis and freedom to express creativity.

Harnessing the Power of Artificial Intelligence (AI) in Language Teaching and Learning

The integration of technology in language learning environment has opened up new avenues for enhancing learners’ engagement and more exposure to the language they

are learning (Kettunen et al., 2013). In today's language classroom, the need for innovative pedagogy in the teaching and learning of language is important. The application of Artificial Intelligent (AI) in education is set to change the way teaching and learning is carried out. Kallunki *et al.* (2023) opines that the application of Artificial Intelligent (AI) can improve teaching and learning in schools. Similarly, Goel et al. (2017) state that AI has the potential of changing the face of current learning models; especially in language classroom; thereby making learning efficient and inclusive.

One of the AI approaches suggested by Santos et al. (2019) is the identification of learners' need while learning the language. The development of AI- driven solutions transform the existing language learning approach to an effective approach that meets the needs of the learners during the teaching and learning process. For instance, AI can provide personalized learning experiences that adapt to the individual pace and style of each learner. While traditional education often struggles with a one-size fits approach, AI can tailor educational content, methods and interactive feedback to suit different learners thereby enhancing engagement and adequate learning outcomes. More so, AI empowered educational platforms can enhance language lesson by providing customized exercises on grammar, vocabulary and sounds and, immediate feedback to reinforce the teaching and learning of the language. Dogan et al. (2023) asserts that AI is used in many dimensions of our lives; including education. In addition, Tuomi (2018) states that AI has shown significant promise in providing timely intervention for children with special educational needs, enriching both their learning experiences and daily lives.

Moreover, having a customised AI Language Laboratory could be a supportive tool to help learners develop their language skills through interactive learning methods. A well-equipped AI language laboratory utilises digital tools, software and audio-visual materials to enhance language acquisition. Hwang et al. (2024) study on using advanced AI to enhance the English language learning through video drama revealed that AI enhanced video drama can improve English language teaching; especially learners' writing and speaking skills. Thereby emphasised that AI is effective in language teaching.

Assessment plays a vital role in every language learning. It serves as a bridge between learners' understanding and production of the language which gives the teacher an insight on the level of the learner's understanding and use of the language. Foltz (2014) states that assessment is carried out in order to understand the role of feedback; to drive improvements in language learning as well as to support the learning process. For instance, AI based assessment such as, customised tests and quizzes with clearly defined learning objectives could be so effective in measuring the learners' level of understanding in the English language classroom. Hence, integrating assessment with AI could assist learners to know their performance through immediate feedback, and

the aspects that require improvement in real-time; thus, enhancing learning and teaching.

The adaption and use of innovative pedagogies and technological approach in the teaching and learning of language depends on the support and training programmes given to language teachers. It is necessary that teachers of language at all levels of learning receive quality knowledge on AI applications. Conversely, the workload in the language curriculum can be mapped out and topics generated and taught through AI.

However, the aim of this paper is not to condemn or compete with the conventional approach to teaching language, rather emphasises the need to integrate innovative pedagogies and technology in the teaching and learning of language. The adoption of new approaches into language teaching and learning can augment the conventional approach which is in existence for long.

Language Education and Pedagogy Innovation for Sustainable Development

Education for sustainable development (ESD) integrates critical thinking, collaboration and transformative learning approaches into curricula. Language education as part of ESD can advocate for environmental stewardship through materials and curricula centered on climate change literacy, facilitate long life learning by making educational content accessible to learners of all ages; especially the vulnerable communities and, build resilience communities through communication skills that enables effective disaster preparedness and conflict resolution (Manyas, 2024).

Hence, language education and innovative pedagogy play a pivotal role in promoting sustainable development by fostering intercultural understanding and equitable access to education (Muneer *et al.*, 2022). These elements are interconnected and contribute to the broader goals of the societal transformation, economic progress and environmental sustainability. Language is the key driver for social cohesion, cross-cultural communication and economic participation. It enables individuals to access information and share knowledge. For a sustainable development, language fosters inclusion and equity; ensuring that marginalized groups like the girl child and the physically challenged have access to education. Furthermore, the integration of innovative teaching methods in language education enhances learners' engagement, effectiveness and adaptability to modern world's needs. Technology-enhanced learning use digital platforms and AI language tools and virtual classroom to create language experiences which enhance learners' exploration of the language. Akgun *et al.* (2022) explains that the use of Artificial Intelligence in education could help improve learners' digital skills and language use. This can also help learners to acquire skills for cross-cultural communication which is needed to develop sustainability (Yishu *et al.*, 2022). However, establishing benchmarks to measure the impact of language education on sustainable goals, including increased literacy rates

is necessary. Implementing such a practice ensures that learners are effectively equipped with linguistic proficiency.

Conclusion

In conclusion, the pedagogical approaches discussed in this paper emphasise the need for the adoption of new strategies in the teaching and learning of language in our schools. The digital transformation could mark a significant step towards quality language education; thereby demonstrating the power of technology in overcoming some of the challenges faced in language teaching and language context. Integrating these various teaching approaches can bridge gaps, personalised learning, and help in improving learning outcomes. Effective language learning is not about smarter classrooms, but learner-centered where learners explore the subject-matter and where interaction is prominent. This can enhance the development of learners' spoken and written language. Learners are motivated and encouraged to constantly develop different learning skills and build their engagement capacity; as much as they come in contact with the resources presented to them. This can be achieved through active language teaching and learning practices instead of just providing learners with auxiliary classroom resources.

Additionally, the use of technology in the language classroom; such as language-learning apps, interactive whiteboards, language laboratory and online resources introduce learners to a variety of spoken and written language inputs. The positive effect of pedagogical training on teachers' concepts, teaching practices, reflective skills and confidence can contribute immensely in building and shaping the language skills of learners. This can further reinforce the learners' understanding and retention which helps them to navigate multimodal landscape of real-world language use. More so, this view not only informs pedagogical decisions, but also gives room for continued innovation in language teaching practices, ensuring that learners are equipped to stand the demand, and the challenges they may face in real-world. The adoption of technology facilitates professional development for teachers; equipping them with digital literacy skills necessary for 21st century classrooms. Also, by integrating innovative pedagogical strategies in education, the goals of sustainable development become a transformative tool for empowering individuals and communities. Therefore, all educators concern should fuel innovation in language education; ensuring no learner is left behind.

Recommendations

1. To ensure that learners are comfortable and proficient with technological tools, there is need for comprehensive and technical training programmes.
2. To bridge the gap between pedagogy and sustainability requires teacher training and capacity building. Equipping teachers with skills to integrate

sustainability concepts and interactive methodologies into language teaching could transform the delivery of language teaching and learning.

3. Educational institutions and AI developers can jointly create tailored learning approaches and forms of evaluation.
4. Language teachers should extend their methods of content delivery which geared towards new trends in the teaching and learning of language.
5. Government, school administrators and policy makers should make language teaching and learning more effective for learners by providing the necessary innovative materials that will help schools to keep up-to-date with latest language teaching strategies.
6. There should be collaboration between educators and researchers to improve awareness on quality education in order to achieve the Sustainable Development Goals through language education.

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Principals' Collaborative Leadership, Teachers' Professional Development, And Students' Academic Performance in Senior Secondary Schools, Education District V, Lagos State, Nigeria

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Abstract

In Senior Secondary Schools Educational District V, Lagos, Nigeria, this research looked into Principals' collaborative Leadership practice, Teachers' Development, and Students' Academic Performance. Two null hypotheses were developed to direct the investigation. The survey design used in the research was descriptive. A sample comprised 402 respondents, that is 385 teachers and 17 principals from 72 senior secondary schools from Lagos State's Educational District V. To address the study issues, the obtained data were analysed using Pearson Product Moment Correlation analysis, and the hypotheses were tested at the $P < 0.05$ level of significance. The study showed that principals' collaborative leadership has a major impact on teachers' professional growth. The research also shows that professional development for teachers has a significant impact on students' academic performance. It is recommended however that principals of public secondary schools should adopt and enhance collaborative leadership practices in light of the results.

Keywords: Collaborative leadership, Teachers' development, Students' academic performance, Teacher collaboration

Introduction

In public schools, the collaborative leadership style of school heads is widely regarded as an important mediating factor to support institutionalised innovations, progress, and capacity building in teaching and learning practices, as well as teachers' teaching performance and students' academic outcomes. The collaborative leadership style of school heads is inextricably linked to the daily operations of schools as the strategic catalyst for educational achievement and transformation.

In today's ever-changing world, where everyone has been entrusted with a high level of responsibility and accountability to achieve excellence in all walks of life, the principal who serves as the head of every school board in Nigeria bears ultimate responsibility for everything that happens within the school is no exception Fubara (2017). To improve students' academic performance, many studies have indicated that the primary role of the school principal is to achieve positive outcomes for the school through their contribution to the climate and organisation of the school, which impacts teaching and learning to

reach students (Rodrigues & Ávila de Lima, 2021). According to Halliger *et al.* (2011), as cited by Parlar *et al.* (2021), the critical functions of school principals, among other responsibilities, are to encourage student learning, enhance teachers' professional development activities, and maintain classroom time. According to Ndyali (2013; p8), student academic performance defines as “how well or poorly a student performs in his/her studies”. Mugambi (2015) discovered that high-performing schools' principals' provision of sufficient teaching and learning resources is the reason for their students' strong academic accomplishment (Parlar *et al.*, 2021).

Sahlin (2022) narrated that “researchers, practitioners, and political representatives have emphasized that school leadership and school improvement are essential if schools are to meet future requirements and fulfil their mission to enable all students the possibility to develop and achieve their educational goals” (p;2). According to Leithwood *et al.* (2019) as cited by Parlar *et al.* (2021) found that school leaders contribute to school performance. Bektaş *et al.* (2022) claimed that school leadership positively impacts students' academic outcomes by indirectly fostering teachers' skills and practice, and creating an atmosphere conducive to the learning of every member of the school community. Scott (2018) stated that “school leadership is found to have one of the greatest influences on students' [academic] outcomes” (p;2). Scott further asserted that “principals, through their actions, can be powerful multipliers of effective teaching and leadership practices in schools. And those practices can contribute much to the success of the nation's students” (P.2). He highlighted the following essential roles for competent school leaders and other school leaders in creating a learning environment and enabling a strong working atmosphere for teachers' professional development and their students' academic achievement that:

1. School leaders should exemplify a vision that fosters students' academic success
2. Revised instructional manuals
3. Creates a friendly climate for educational efforts
4. Oversees staff data, and school structures and processes
5. Cultivates school improvements, and
6. Prepares others to assume leadership roles.

Collaborative leadership is leadership that focuses on the school-wide approach that aims to improve school structures and processes that are shared by the school leader, teachers, administrator, and others (Hallinger & Heck, 2011; Schlebusch, 2020). It is a leadership style where everyone can participate in decision-making to improve the school. Hallinger & Heck (2011) defined collaborative leadership as “the use of governance structures and organisational processes [by the principal] that empowered staff and students, encouraged broad participation in decision-making, and fostered shared accountability for students

learning” (p:20). Straubhaar and Wang (2022) enumerated four main features of collaborative leadership as a model that has been proposed by different scholars. Fullan (2012) concluded that all members of the school community should own and participate in decision-making rather than being placed in the hands of school administrators.

The school leader creates an environment where teachers can work together on their professional development and increase the students' achievement. They make these thriving collaborative communities by considering the following six characteristics of collaboration, as stated by (Mora-Ruano et al., 2019): cooperation should be voluntary; People who work together should share their resources; they should also share responsibility for the results; there should be shared responsibility for participation and decision-making; it requires parity among participants; it should be based on common goals.

Saleem *et al.* (2020) found that the behaviours and collaborative leadership styles of school heads have always been scientifically linked to the teaching effectiveness of instructors. Additionally, it was shown that there is a significant correlation between teachers' teaching effectiveness and the collaborative leadership style of school heads. In addition to routinely supervising classes to give feedback on teachers' methods and how they affect students, school heads' collaborative leadership practices also involve facilitating strategic planning that involves all stakeholders, including parents, teachers, and administrative and support staff. As a result, school heads' collaborative leadership abilities act as a mediator between teachers' performance and students' academic results, encouraging them to enhance their performance and demonstrate creativity and innovation in the classroom to enhance students' learning and academic results.

According to Cook (2021), opportunities for increased teacher cooperation result in better professional growth and improved student academic success. Teachers who grow into leaders provide their colleagues with efficient, school-based professional development by directing communities of practise that continuously reflect on and improve teaching methods. Professional development is the activities, workshops and professional maturity that make teachers better teachers and exceptional (Singer, 2011; Krasniqi, 2021) asserted that since “teaching is a collaborative, competitive, and complex profession,” that teaching requires constant “refinements for teachers to master the skills, knowledge, and methods needed for completing their tasks professionally, accountably, and successfully” (P.2). In Knight and Hassel (2015) the professional development of teachers is done on daily bases in the sense that they consult each other when preparing lesson plans, formative and summative assessment, class activities and knowledge about individual performance in the absence of a professional developer. Teachers learn faster from one another than from formal learning settings as learning appears to be spontaneous; as assignments completed in “a cooperative spirit strengthen collegial relations, which lead to greater trust, collaborative climate, and more personal and professional support”.

Many teachers work in isolation; they do not work as professionals because a true professional does not work in isolation but in teams that focus on effectiveness in their practice, take responsibility for continued growth and development, and take an active role in determining the path to professional growth (Greiner, 2015).

Research Hypotheses

The following hypotheses were formulated at 0.05 level of significance was used in this study:

H₀₁: There is no significant relationship between principals' collaborative leadership and teachers' professional development.

H₀₂: There is no significant relationship between collaborative leadership and students' academic performance.

Literature Review

Concept of Collaborative Leadership

Despite being relatively nascent in the field of education, collaborative leadership has been widely accepted. According to recent research in the area of global education reform, student learning, school development, and educational quality are all positively impacted by school leadership. Scholars worldwide have laboured to formulate the hypothesis that a school's academic success is stimulated by the leadership of the principal. They went on to say that as a consequence of a wave of worldwide developments, school leaders' roles and responsibilities are always evolving, which means that they must always overcome challenges in their line of work. Managers may collaborate or operate alone to accomplish their objectives, depending on the circumstances at the school and their own traits. Heroic leadership focuses primarily on the leader acting alone and does not make use of the abilities and traits of other leaders. School leadership has now moved from heroic leadership styles to distributed, shared, or collaborative leadership styles to expand the sources of school leadership. To encourage collaboration and participation among the participants of the organisation in a way that leads to purposeful actions that are more likely to achieve the organisation's goals, collaborative leadership is comprehensive and can incorporate a variety of other leadership concepts, including transactional/management, transformation, and instruction management (Black & Edgecombe, 2022).

Principal Leadership and Teacher Collaboration

According to DuFour *et al.* (2016) in Marshall (2021), the duties and responsibilities of school leaders have changed in the 21st century; recent educational changes have altered the role of the school principal. It is observed that in the new normal of education, the role of the school leader expands to include much more than just the face of the school (Marshall, 2021). According to Marshall (2021), school leaders must encourage teacher

collaboration by providing professional development and support for professional learning communities. This will help teachers develop their abilities and build relationships with their peers. According to Sebastian *et al.* (2017) in Marshall (2021), teachers become increasingly isolated when there are no opportunities for cooperation. Teachers are therefore forced to work in isolation in their classrooms to complete long to-do lists; this type of work environment stifles creativity and hampers personal and professional development (Marshall, 2021). Collaboration creates significant professional growth for administrators and teachers. Principals are educational leaders who need to foster collaborative environments in schools. A school's success is reflected in its culture; The shift from an autonomous to a collaborative culture affects the educational environment (Marshall, 2021).

Principal and Teachers' Professional Development

According to a growing body of research, school leadership is the most important factor in accomplishing an organisation's objectives and has the most influence on teachers in the classroom. Since teacher quality is the most important element related to student accomplishment, administrators' ability to properly support teachers' professional development is another crucial indication of their effectiveness as leaders (Somprach *et al.*, 2017). The principle plays a crucial role in improving teacher performance by providing guidance and inspiration to teachers to accomplish the set educational objectives via competent and acceptable leadership (Agustin *et al.*, 2022). In addition to doing informal ability evaluations of teachers, the principal runs training programmes, seminars, and workshops (Chalikias *et al.*, 2021). The impact on the professional development of teachers and school leaders was the focus of a study by Hilton *et al.* (2015) on school leaders as participants. The study also found that school leaders and teachers interact during workshops and in the classroom, as well as through their reflection and implementation of changes in a variety of areas related to teachers' professional development. Abari *et al.*, (2022) and Chalikias *et al.*, (2021) contend that school administrators need to do the following in order to support teacher professional development:

- i. Establishing connections with parents, students, and educational personnel.
- ii. Forming and communicating shared objectives and visions.
- iii. Encouraging leadership by delegating tasks and sharing authority.
- iv. A feeling of group identity.
- v. Cooperation, comprehension, and professional growth for educators.

Professional development for teachers is linked to the role of the school administrator, who must demonstrate attributes such as accountability, impartiality, and open communication while maintaining a relationship with teachers (Chalikias *et al.*, 2021).

According to Chalikias *et al.* (2021), teacher development is the process by which educators acquire new information, enhance their capacity for learning, and use that information to the best interests of their pupils.

The Principal's Contribution to Collaborative Leadership: Enhancing the Quality of Education

1. The principal as an instructor: As a teacher, the principal must always work to improve the quality of instruction provided to teachers. In this instance, the principal's professionalism will be significantly impacted by experience, particularly when it comes to assisting the education staff in developing a comprehension of how to carry out their responsibilities. The principal's capacity to perform his duties is significantly influenced by his training and upgrades, as well as his experience as a teacher, vice principal, or member of a community organisation. The following is a description of the steps that school administrators may take to enhance their own performance as teachers, particularly in enhancing the performance of teaching staff and student learning outcomes:
 - a. Including instructors in the upgrading process to increase their expertise. Principals must also provide educators the chance to further their education in order to enhance their knowledge and abilities. Giving instructors who haven't earned their bachelor's degree the chance to attend lectures that do not conflict with instructional activities is one example. Through collaboration with the community, business community, or other non-binding partnerships, principals should look for scholarships for teachers who pursue further study.
 - b. Principals need to make an effort to encourage the learner evaluation team to put in more effort, and the findings ought to be made public and posted on the bulletin board. Students may benefit from this by being inspired to work more in class and obtain better results.
 - c. Make good use of class time by motivating instructors to begin and conclude instruction at the appointed times and to use the time effectively and efficiently for learning objectives.
2. The Motivating Principal: In order to inspire education staff to perform their many duties and responsibilities, the principal must have the appropriate plan in place. The physical environment, the work environment, discipline, encouragement, effective incentives, and the provision of a variety of learning materials via the establishment of a learning resource centre (PSB) may all help to increase this drive.

3. The Principal as a Teacher: As an educator, the principal must be able to inculcate, encourage, and enhance a minimum of four types of values, which are as follows:
 - a. Mental, including issues pertaining to character traits and interior attitudes.
 - b. Moral issues, which are characterised as morality, character, and decency, and which deal with the teachings of right and wrong in relation to behaviours, attitudes, and duties.
 - c. Physical, including issues pertaining to one's body, health, and external appearance.
 - d. Artistic, including issues pertaining to how sensitive people are to beauty and art.

Methodology

In this research, a descriptive survey approach was used. This research tries to anticipate the relationship between teacher development, student academic achievement, and collaborative leadership practises used by principals. The study's participants included principals and teachers working in public senior secondary schools in Lagos State's Education District V, which is made up of four zones: Ajeromi Ifelodun, Amuwo Odofin, Badagry, and Ojo, and it did not include any private or federal schools in the State. In Lagos State, Education District V has 72 public senior secondary schools and 1,511 teachers (Lagos State Education District V Office, 2023).

The respondent was chosen from among the principals and teachers employed in every public senior secondary school in District V of Lagos State using a stratified sampling technique. The sample size was chosen using a simple random sampling technique. Since the target population is homogeneous, this approach was chosen. This sample was chosen to be representative of the whole population. The objective of this research is to include a minimum of 385 teachers, representing 24% of the teacher population, and 17 principals, representing 24% of the principal's population. The following procedure was used to calculate the sample size for this investigation. The sample size needed for a population using the margin of error and confidence level:

$$n = \frac{z^2 pq}{e^2}$$

where:

n = sample size needed z = z-score for the desired confidence level (e.g. 1.96 for 95% confidence level) p = proportion of the population estimated to have a certain characteristic or behaviour $q = 1 - p$

e = margin of error as a proportion

To use this formula for a population of 1614 with a desired margin of error of 5% and a confidence level of 95%, we would need to estimate the value of p , which represents the proportion of the population that exhibits a certain characteristic or behaviour of interest. Let us assume that one does not have an estimate for p , so one will use a conservative value of 0.5, which maximizes the sample size needed for a given margin of error.

Substituting the values into the formula, we get:

$$n = \frac{1.96^2 0.5 \times 0.5}{0.05^2}$$

$$n = 384.16$$

Therefore, we would need a sample size of at least 385 individuals from the population of 1511 to achieve a margin of error of 5% with a 95% confidence level, assuming a conservative value of $p = 0.5$. The main instrument adopted for the collection of data was a structured questionnaire captioned “Principals’ collaborative leadership, teachers’ development, and students’ academic performance in Lagos state educational district V.” Part A of the questionnaire provides information on demographic data of the respondents while part B centred on the request for the respondents to complete the questionnaire meant to answer the research questions posed for the study. A Likert type four-point scale was used to obtain the responses of the participants and represented as follows:

SA	Strongly Agree	4 points
A	Agree	3 points
D	Disagree	2 points
SD	Strongly Disagree	1 point

To ascertain the reliability of the instrument, the questionnaire went through a pilot-test similar but smaller sample group from the neighbouring school. On a two weeks interval the two scores were correlated using Pearson product moment correlation coefficient and reliability ($r = 0.95$).

The researcher personally visited all the public senior secondary schools in District V of Lagos State and administered the questionnaire to both principals and teachers. The questionnaire was collected two days after administering.

For clarification and easy understanding of the information collected, the data were analyzed by using Pearson's Product moment correlation analysis and the formula is given below:

$$r_p = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2 (N \sum Y^2 - (\sum Y)^2)}}$$

Results

Table 1: Correlation Showing Relationship between Principals' Collaborative Leadership and Teachers' Professional Development

		Collaborative Leadership	Teachers' Professional Development
Collaborative Leadership	Pearson Correlation	1	0.538**
	Sig. (2-tailed)		0.000
	N	407	407
Teachers' Professional Development	Pearson Correlation	0.538**	1
	Sig. (2-tailed)	0.000	
	N	407	407

From the result presented on Table 1, it could be observed that a significant Person Correlation of 0.538 was obtained at 0.05 level of significance, hence the null hypothesis which states that there is no significant relationship between principals' collaborative leadership and teachers' professional development was rejected. This implies principals' collaborative leadership has an impact on the teachers' professional development.

Table 2: Correlation Showing Relationship between Collaborative Leadership and Students' Academic Performance

		Collaborative Leadership	Students' Academic Performance
Collaborative Leadership	Pearson Correlation	1	0.266*
	Sig. (2-tailed)		0.000
	N	407	407
Students' Academic Performance	Pearson Correlation	0.266*	1
	Sig. (2-tailed)	0.000	
	N	407	407

From the result presented on Table 2, it could be observed that a significant correlation of 0.266 was obtained at 0.05 level of significance, hence the null hypothesis which states that there is no significant relationship between collaborative leadership and students' academic performance was rejected. This implies teachers' collaborative leadership has an influence on the students' academic performance.

Discussion of Findings

Hypothesis One

Findings from empirical studies have shown that principals' collaborative leadership impacts teachers' individual and collective (self-)efficacy on the one hand and their collaborative behaviour on the other (Alik *et al.*, 2012). Collaborative leadership applied by principals plays an important role in helping teachers identify needs for professional development and find and distribute resources to support teaching and learning (Schlebusch, 2020). The results of Hsieh and Liou's research (2018) show that the dimensions of collaborative leadership consisting of activating resource assistance, framing the work environment and synthesizing collaborative processes can affect organisational performance. The same results are also shown by Maalouf's research (2019) that collaborative leadership can encourage organisational performance in order to remain competitive and survive and have an impact on the entire organisation. Likewise, Sulaiman's research (2020) concluded that collaborative leadership contributes positively to organisational cohesiveness.

This implies that collaborative leadership practices facilitate teachers' development by creating a supportive and collaborative environment. When principals involve teachers in decision-making, encourage peer observation and feedback, and provide opportunities for professional learning communities, teachers feel valued and empowered. This, in turn, enhances their teaching skills, pedagogical knowledge, and instructional strategies.

This result is in line with that of Krasiqi (2021), who noted that administrators play a critical role in this process and that teacher collaborative learning is an essential part of ongoing professional development for teachers.

Hypothesis Two

Research related to collaborative leadership in schools has been conducted by Samriangjit *et al.* (2016) and concluded that collaborative leadership is beneficial in improving student learning and achievement, creating a culture of good working relationships, caring for students more strongly, exchanging information, knowledge and insights.

The findings of this study agreed with the results of an investigation carried out by Watson, Partington, Gray and Mack (n.d). In the study, they argued that students' academic achievement in Aboriginal and minority communities in Western Australia depended on focused collaborative leadership of the school principals. A collaborative principal is the one who harnesses school community values and also involves teachers and students effectively. In agreement with Leithwood, Louis, Anderson and Wahlstrom (n.d). Watson *et al.*, (n.d) argued that the greatest contribution of principals to the performance of their teachers and students is their ability to create meaningful and collaborative cultures in their schools. They however emphasized that principals should be able to redesign their school organization through collaborative cultures and structures. Creation of collaborative structures should be done both internally and externally in the institutions. Such structures enhance effective connections with guardians and the surrounding community. Collaborative cultures and structures also

ensure that effectiveness of the school is strengthened and this leads to improvement in the learners' achievement.

The results of Parlar *et al.* (2021) claimed that, in terms of the school staff's shared vision and teamwork for kids' development, the instructional leadership severs are a crucial component that improves the collaborative culture in schools. This means that principals' collaborative leadership practices have been found to have a direct impact on students' academic performance. When principals prioritize collaboration and create a supportive environment for teachers, it improves instructional practices and increases student engagement. Collaborative leadership practices also promote a culture of continuous improvement, where teachers and principals work together to identify and address students' needs. This leads to enhanced teaching and learning experiences, ultimately resulting in improved academic performance.

Conclusion and Recommendations

Based on the findings of this study, the researcher concludes that: There is no significant relationship between principals' collaborative leadership and students' academic performance of public senior school. There is a significant relationship between principals' collaborative leadership and teachers' professional development of public senior secondary school. There is a significant relationship between teachers' professional development and students' academic performance of public senior secondary school.

From the results of the study, the following recommendations are made:

1. **Strengthen Collaborative Leadership Practices:** Principals should foster a collaborative environment that values the input and expertise of all stakeholders, promoting a sense of ownership and shared responsibility for student success.
2. **Foster Professional Development Opportunities:** To enhance teachers' development, it is crucial to provide ongoing professional development opportunities. School leaders should design and implement comprehensive programs that address the specific needs of teachers in public secondary schools.
3. **Encourage Teacher Collaboration and Mentoring:** Promote a culture of collaboration among teachers within public secondary schools. Encourage teachers to work together, share best practices, and engage in peer observation and feedback.

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Assessment of Talent Management Strategies on Administration of Human Resources in Federal Universities in North-West, Nigeria

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Abstract

This study assessed “Talent Management Strategies on Administration of Human Resources in Federal Universities in North-West, Nigeria”. Descriptive survey research design was used for the study. The population of the study was 7,597 respondents. This comprised of 7,118 Teaching Staff and 479 Management Staff from the Federal Universities in North-West, Nigeria. The sample of the study was 365 respondents. Multi-stage sampling technique was used for the study. A self-designed questionnaire was used for data collection. Three (3) experts vet the instrument and the reliability index yielded 0.89 using Cronbach’s Alpha Method. Mean score was used to answer the research questions while independent t-test was used to test the hypotheses formulated at the 0.05 significance level. Findings of the study revealed that Federal Universities in North-West, Nigeria sponsored staff to attend conferences, workshops and in-service training in the areas needed for staff professional development which promote the administration of Human Resource in the Universities. The study recommended that the management of Federal Universities in North-West, Nigeria in collaboration with Tertiary Education Trust Funds (TETFUNDS) should improve on the sponsorship of staff for conferences and workshops to facilitate the acquisition of current knowledge needed for effective discharge of their duties.

Keywords: Talent, Management, Development, Engagement, Human Resources

Introduction

Universities all over the world are collection of the most specialized and accomplished minds due to their distinctive character. They act as knowledge repositories, supporting the development of the nation's labour force and, in turn, gratifying the aspirations of the populace for a just and socially inclusive. The University environment is entrenched in and sustained by long-established principles, values, structures and practices which convey how things are done, as the individual progresses through their career journey before, during and after the doctoral programme. Nowadays, new pressures for universities have arisen as a result of a series of ongoing governmental policy changes and these have impacted on university life and academic work. In tandem with the above, Martin, Lord and Warren-Smith (2020) observed that these changes, together with heightened competition and an increase in new technologies, may mean that staff, processes and structures struggle to evolve quickly enough. This underscores the

importance of talent management in the administration of human resources in educational institution, especially Universities.

Talent management refers to a systematic process of recruiting; developing, engaging, appraising, motivating, retaining and planning for succession of people with the right skills at the right time and place in order to meet the present and future organizational objectives. According to Jothi and Savarimuthu (2022), talent management refers to a purposeful, conscious process used to find, train, and keep employees who have the potential and skills to satisfy the organization's current and future demands. Dabic, Maley, Moeller and Vlaci (2021) defined talent management as those strategic actions which organizations formulate and perform to attract, develop, and retain critical human resources. Collings, Mellahi and Cascio (2019) viewed talent management as all the organizational activities undertaken with the objective of attracting, selecting, developing, and retaining the best employees in the most strategic roles on a global scale.

There are different strategies of managing talents in an educational institution. One of such strategies is through talent development. Talent development focused on the planning, selection, and implementation of development programmes and strategies for the entire pool of staff in order to guarantee that the organization maintains not only the current but also the future supply of talent necessary to meet its strategic objectives. According to Chethana and Noronha (2023), talent development refers to the organisational procedure for preparing people for career growth in a way that is consistent with the institution's objective. In the opinion of Londhe (2016), talent development represents efforts to improve employees' ability to handle a variety of assignments and to cultivate capabilities beyond those required by the current job. This implies that talent development benefits both the organization and the individual employee. Ahmad, Ali, Siddiq, Akbar, Bibi and Rahman (2024) for example shows that talent management has a positive and significant impact on employee performance. Fernandes, Veiga, Lobo and Raposo (2023) found that high potential talents are able to obtain better results and hence produce a better standard of international performance.

One of the cornerstones to institutions' success in producing outstanding academic quality and services for the entire academic community is employee involvement or engagement in the activities of the organization. Talent engagement is the process by which workers are emotionally, physically and intellectually motivated to achieve their personal and organisational objectives within the organisation. According to Londhe (2016), talent engagement is one of the strategies through which the employees can be placed at some important job in an organization for a period of time. This will help employees gain a cross-cultural exposure and an opportunity to exploit his latent potential better. Gallardo-Gallardo, Thunnissen and Scullion (2020) noted that for universities and colleges to retain productivity and effectiveness, engagement must rise. Several scholars agree that motivated workers have the ability to alter organizations in transformative ways. In tandem with this observation, Farooq, Othman, Nordin, and Ibrahim (2016) opined that Universities around the globe present various images of educational philosophies, the

system of higher education, and instructor employment, hence faculty members must be actively involved in education.

The importance of employee engagement in educational institutions vibrates much beyond the confines of the employee. In this regard, Chethana and Noronha (2023) contended that organizations should ideally make such actions an integral component of their leadership and management positions. A strong educational institution with a highly devoted and committed workforce has good effects on society as a whole. Corroborating on the above assertion, Morris (2017) opined that educational institutions are more reliant than other organisations on the dedication and participation of their teaching faculty. Abdullahi, Raman and Solarin (2022) found that Employee Engagement mediates the association between Talent management and Employee Performance whereas Talent Management practices (succession planning practice, promotion practice, and performance appraisal practice) have a substantial impact on Employee Performance.

In the recent years, the researchers have been observing noticeable loopholes in the ways talents are been managed in Federal Universities in North-West, Nigeria. It is worrisome to the researchers, the rate at which academic staff (talents) leaves the Universities for other sectors that seems more lucrative. Federal Universities in North-West, Nigeria in the past tried to manage shortage of academic staff in the institutions through visiting, adjunct, sabbatical and contract lecturers. It is rather unfortunate that with the introduction of Integrated Personnel and Payroll Information System (IPPIS) in these Universities, such arrangement has become difficult as the number of academic talents continues to shrink. The implication of this is that at the institutional level, the workload allocated to the available academic staff has simply increased; which means more responsibilities for the individual staff. This working environment in many Universities in Nigeria, has dampened the morale of many academics and consequently led to low productivity, poor quality of teaching, and poor quality of education (Awolaja, 2023; Ogunode & Okwelogu, 2022). This is negatively impacting the excellence in teaching, research and community services for which the Universities are established for. It might also suggest poor management of talents in these institutions. Hence, the need to look into the ways talents are been managed in universities become imperative. It was against this backdrop that this study assessed talent management strategies applied on administration of human resources in Federal Universities in North-West, Nigeria.

Objectives of the Study

The following objectives were raised to guide the study:

1. determine the Talent Development Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria; and
2. examine the Talent Engagement Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria;

Research Questions

The following questions were raised to guide the study:

1. In what ways does Talent Development Strategy apply on administration of Human Resources in Federal Universities in North-West, Nigeria?
2. How does Talent Engagement Strategy apply on administration of Human Resources in Federal Universities in North-West, Nigeria?

Hypotheses

The following hypotheses were formulated to guide the study:

H₀₁: There is no significant difference in the opinions of Teaching and Management Staff on the Talent Development Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria.

H₀₂: There is no significant difference in the opinions of respondents on the Talent Engagement Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria.

Methodology

Descriptive survey research design was used for the study. This design, according to Charles and Aligba (2017), is concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing. The population of the study was 7,597 respondents. This comprises of 7,118 Teaching Staff (Lecturers) and 479 Management Staff (HODS, Deans and Principal Officers) from the 7 conventional Federal Universities in North-West, Nigeria. 365 respondents were used as sample size for the study based on the recommendation of Researcher Advisors (2006) Table for selection of sample size. Multi-stage sampling technique was used for the study.

A self-designed questionnaire of twenty (20) items tagged “Talent Management Strategies and Administration of Human Resources Questionnaire (TAMASHRQ)” was used to collect data for the study. The instrument was structured on a five (5) points Likert scale options of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD) with the numerical values of 5, 4, 3, 2 and 1 respectively. Three (3) experts from the Department of Educational Foundations and Curriculum, Ahmadu Bello University, Zaria vet the instrument and their observations were incorporated in the final draft of the instrument. The instrument reliability index yielded 0.89 using Cronbach’s Alpha Method.

Descriptive statistics of mean was used to answer the research questions. By this, when the mean score of an item was higher than 3.00 set for the study, the item was regarded as

agreed by majority of the respondents. On the other hand, when the mean score of an item was lower than 3.00, the item was considered disagreed by majority of the respondents. Independent t-test was used to test the two (2) formulated null hypotheses at the 0.05 level of significance. By this, when the probability value was lower than 0.05 level of significance set for the study, the hypothesis was rejected, but when the probability value was equal or higher than the level of significance, the hypothesis was retained.

Results

Table 1: Opinions of Respondents on Talents Development Strategy Applied on Administration of Human Resources in the Federal Universities in North-West, Nigeria

S/N	Item Statements	Categories of Respondents	SA		A		U		D		SD		M
			F	%	F	%	F	%	F	%	F	%	
1	The University sponsors staff to attend conferences for their professional development.	Mgt. Staff	2	3.6	32	58.2	3	5.5	15	27.3	3	5.5	3.27
		Acad. Staff	4	1.4	180	64.1	25	8.9	56	19.9	16	5.7	3.46
2	The University organizes workshops for staff in the areas needed for their personal development.	Mgt. Staff	3	5.5	38	69.1	10	18.2	4	7.3	0	0	3.73
		Acad. Staff	19	6.8	190	67.6	43	15.3	19	6.8	10	3.6	3.67
3	The University develops staff through mentoring programmes.	Mgt. Staff	1	1.8	44	80.0	3	5.5	4	7.3	3	5.5	3.65
		Acad. Staff	1	0.4	223	79.4	21	7.5	18	6.4	10	3.6	3.61
4	The University provides staff with career development opportunities (e.g. certifications and scholarships).	Mgt. Staff	10	18.2	39	70.9	4	7.3	1	1.8	1	1.8	4.00
		Acad. Staff	27	9.6	210	74.7	9	3.2	25	8.9	10	3.6	3.78
5	The University organizes seminars for staff to improve on their job performance.	Mgt. Staff	4	7.3	47	85.5	0	0	3	5.5	1	1.8	3.91
		Acad. Staff	2	0.7	218	77.6	18	6.4	32	11.4	11	3.9	3.60
6	The University sponsors staff for in-service training for their professional development.	Mgt. Staff	2	3.6	49	89.1	1	1.8	0	0	3	5.5	3.85
		Acad. Staff	25	8.9	224	79.7	4	1.4	11	3.9	17	6.0	3.81
7	The University organizes symposium for staff in the areas needed for their personal development.	Mgt. Staff	2	3.6	8	14.5	3	5.5	36	65.5	6	10.9	2.35
		Acad. Staff	10	3.6	59	21.0	7	2.5	186	66.2	19	6.8	2.48
8	The University develops its own online training materials for staff to gain required knowledge.	Mgt. Staff	8	14.5	26	47.3	3	5.5	10	18.2	8	14.5	3.29
		Acad. Staff	18	6.4	146	52.6	22	7.8	65	23.1	30	10.7	3.20
9	The University provides opportunities for staff to grow in their profession.	Mgt. Staff	4	7.3	36	65.5	5	9.1	7	12.7	3	5.5	3.56
		Acad. Staff	16	5.7	153	54.4	11	3.9	81	28.8	20	7.1	3.23
10	The University has policies that promote career	Mgt. Staff	5	9.1	43	78.2	3	5.5	4	7.3	2	0.7	3.89
		Acad. Staff	22	7.8	178	63.3	31	11.0	48	17.1	2	0.7	3.60

advancement for staff.

Grand Mean

3.50

Table 1 shows the opinions of respondents on the Talent Development Strategy applied on administration of Human Resources in Federal Universities in North-West Nigeria. It revealed that all the items except item 7 were all agreed upon as ways talent development strategy applied on administration of Human Resources. This was because they had response mean score higher than the instrument scale mean of 3.00. With the grand mean of 3.50 which is higher than the instrument mean of 3.00, this shows that majority of the respondents agreed that Federal Universities in North-West, Nigeria sponsored staff to attend conferences, workshops and in-service training in the areas needed for staff professional development which promote the administration of Human Resource in the Universities.

Research Question Two: How does Talent Engagement Strategy apply on administration of Human Resources in Federal Universities in North-West, Nigeria?

Table 2: Opinions of Respondents on Talents Engagement Strategy Applied on Administration of Human Resources in the Federal Universities in North-West, Nigeria

S/N	Item Statements	Categories of Respondents	SA		A		U		D		SD		M
			F	%	F	%	F	%	F	%	F	%	
1	The University engaged its staff by providing them with sufficient freedom to perform their jobs.	Mgt. Staff	4	7.3	37	67.3	7	12.7	7	12.7	0	0	3.69
		Acad. Staff	18	6.4	203	72.2	18	6.4	35	12.5	7	2.5	3.68
2	The University engaged its staff by providing them with enough authority to complete their work.	Mgt. Staff	1	1.8	15	27.3	2	3.6	37	67.3	0	0	2.64
		Acad. Staff	2	0.7	117	41.6	6	2.1	152	54.1	4	1.4	2.86
3	The University provides flexibility for work hours to engage its qualified employees.	Mgt. Staff	11	20.0	31	56.4	1	1.8	12	21.8	0	0	3.75
		Acad. Staff	58	20.6	162	57.7	8	2.8	47	16.7	6	2.1	3.78
4	The University provides flexibility for tasks to increase staff's engagement.	Mgt. Staff	17	30.9	28	50.9	0	0	10	18.2	0	0	3.95
		Acad. Staff	67	23.8	163	58.0	14	5.0	36	12.8	1	0.4	3.92
5	The University facilitates internal job rotation to engage talented employees' experiences in different faculties, departments and divisions.	Mgt. Staff	12	21.8	36	65.5	3	5.5	4	7.3	0	0	4.02
		Acad. Staff	51	18.1	171	60.9	28	10.0	24	8.5	7	2.5	3.84
6	The University offered opportunities to staff to bring up their initiative to perform tasks.	Mgt. Staff	11	20.0	36	65.5	5	9.1	3	5.5	0	0	4.00
		Acad. Staff	32	11.4	187	66.5	23	8.2	33	11.7	6	2.1	3.73
7	The University ensures that staff performance at work is tracked against set objectives.	Mgt. Staff	9	16.4	36	65.5	6	10.9	4	7.3	0	0	3.91
		Acad. Staff	68	24.2	142	50.5	26	9.3	43	15.3	2	0.7	3.82

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8	The University provides adequate materials to engage its qualified employees.	Mgt. Staff	0	0	20	36.4	0	0	33	60.0	2	3.6	2.69
		Acad. Staff	2	0.7	112	39.9	6	2.1	158	56.2	3	1.1	2.83
9	The University engaged its staff by delegating duties to them on a regular basis.	Mgt. Staff	3	5.5	43	78.2	5	9.1	4	7.3	0	0	3.82
		Acad. Staff	36	12.8	204	72.6	23	8.2	16	5.7	2	0.7	3.91
10	The University provides healthy competitive ground to engage its staff.	Mgt. Staff	1	1.8	48	87.3	1	1.8	0	0	5	9.1	3.73
		Acad. Staff	7	2.5	240	85.4	11	3.9	8	2.8	15	5.3	3.77
Grand Mean													3.62

Table 2 shows the opinions of respondents on the Talent Engagement Strategy applied on administration of Human Resources in Federal Universities in North-West Nigeria. It revealed that all the items except item 2 and 8 were all agreed upon as ways talent engagement strategy applied on administration of Human Resources. This was because they had response mean score higher than the instrument scale mean of 3.00. With the grand mean of 3.62 which is higher than the instrument mean of 3.00, this shows that majority of the respondents agreed that Federal Universities in North-West, Nigeria facilitates internal job rotation, delegate duties to staff and provide flexibility for tasks to engage their qualified staff which enhanced the administration of Human Resource in the Universities.

Hypotheses

Hypothesis One: There is no significant difference in the opinions of Teaching and Management Staff on the Talent Development Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria.

Table 3: Summary of Independent t-test Analysis on the Talents Development Applied on Administration of Human Resources in the Federal Universities in North-West, Nigeria

Status	N	Mean	SD	DF	t.cal	t-crit.	P	Decision
Management Staff	55	3.72	.400	334	1.60	1.98	0.21	Retained
Teaching Staff	281	3.43	.331					

P<0.05 Alpha Level

Table 3 shows independent t-test analysis for the study. It revealed that the calculated t-value of 0.60 is lower than t-critical value of 1.98 while the calculated P-value of 0.21 is higher than 0.05 Alpha Level. The null hypothesis which states that there is no significant difference in the opinions of Teaching and Management Staff on the Talent Development Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria is hereby retained.

Hypothesis Two: There is no significant difference in the opinions of Teaching and Management Staff on the Talent Engagement Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria.

Table 4: Summary of Independent t–test Analysis on the Talents Engagement Applied on Administration of Human Resources in the Federal Universities in North-West, Nigeria

Status	N	Mean	SD	DF	t.cal	t-crit.	P	Decision
Management Staff	55	3.62	.348	334	0.81	1.98	0.37	Retained
Teaching Staff	281	3.63	.397					

P<0.05 Alpha Level

Table 4 shows independent t-test analysis for the study. It revealed that the calculated t-value of 0.81 is lower than t-critical value of 1.98 while the calculated P-value of 0.37 is higher than 0.05 Alpha Level. The null hypothesis which states that there is no significant difference in the opinions of Teaching and Management Staff on the Talent Engagement Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria is hereby retained.

Discussions

The findings of the research question one (1) revealed that Federal Universities in North-West, Nigeria sponsored staff to attend conferences, workshops and in-service training in the areas needed for staff professional development, which promote the administration of Human Resource in the Universities. This agrees with the result of hypothesis One (1) which was retained, meaning that there is no significant difference in the opinions of Teaching and Management Staff on the Talent Development Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria. The variable tested that p-value is 0.21 which is higher than 0.05 level of significant and the grand mean score of 3.50 is higher than the instrument mean of 3.00. In line with this finding, Harun, Mahmood and Othman (2020) found that talent identification, talent development and talent culture were positively related to teacher leadership development. Atheer, Abdul and Raj (2020) conducted qualitative research to explore practices that are utilized for managing talent development in the higher education environment in six Australian universities and found that talent development had a positive effect on the performance of educational employee in higher education institution. In addition to the above, Nyaribo (2016) and Al Ariss, Cascio and Paauwe (2014) emphasized that training need identifications are essential for talent development and also advise that tertiary institutions of learning should encourage their experienced staff to develop their best traits.

The findings of the research question Two (2) revealed that Federal Universities in North-West, Nigeria facilitates internal job rotation, delegate duties to staff and provide

flexibility for tasks to engage their qualified staff which enhanced the administration of Human Resource in the Universities. This agrees with the result of hypothesis Two (2) which was retained, meaning that there is no significant difference in the opinions of Teaching and Management Staff on the Talent Engagement Strategy applied on administration of Human Resources in Federal Universities in North-West, Nigeria. The variable tested that p-value is 0.37 which is higher than 0.05 level of significant and the grand mean score of 3.62 is higher than the instrument mean of 3.00. In line with this finding, Abdullahi, Raman and Solarin (2022) found that employee engagement mediates the association between talent management and employee performance whereas talent management practices have a substantial impact on Employee Performance. Also, Fernandes et al (2023) revealed that work engagement congruence and staffing management practices both contribute to organisational success and the development of competitive advantage for educational institutions. In addition to the above, Tuty et al, (2021) found that organizational culture factors, transformational leadership, and job sharing have a positive impact on employee talent management, and talent management itself has an impact on job satisfaction, job performance, and commitment sustainability.

Conclusion

Based on the findings of the study, it was concluded that Federal Universities in North-West, Nigeria sponsored staff to attend conferences, workshops and in-service training in the areas needed for staff professional development which promote the administration of Human Resource in the Universities. The study also concluded that Federal Universities in North-West, Nigeria facilitates internal job rotation, delegate duties to staff and provide flexibility of tasks to engage their qualified staff which enhanced the administration of Human Resource in the Universities.

Recommendations

In line with the research findings and conclusions, the study recommended that:

1. The management of Federal Universities in North-West, Nigeria in collaboration with Tertiary Education Trust Funds (TETFUNDS) should improve on the sponsorship of staff for conferences and workshops to facilitate the acquisition of current knowledge needed for effective discharge of their duties.
2. The management of Federal Universities in North-West, Nigeria should improve and facilitates internal job rotation and delegate duties to engage their qualified staff.

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Characterising the Patrons of Traditional Maternal Healthcare Services in Southwestern Nigeria

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Abstract

It is evident that the preference for traditional maternal health care services is a significant component of high maternal mortality in the country. Hence, the need to examine characterizing the patrons of Traditional Maternal Health Care Services (TMHCs) in Southwestern Nigeria. Descriptive research design technique approach was used in the investigation. All pregnant women and nursing mothers who visited TMHCs in the Southwest made up the study's population. The sample size were 1020 pregnant women and nursing mothers. Information from the respondents was gathered using a self-made questionnaire. Data was analyze using frequency distribution, chats, ANOVA was used to test significance of the variable that were measured. The results indicated that low-income earners 378 (43.2%), young adult 718 (82.1%), attained tertiary education 322 (36.8%), traders 344 (39.3%) were the respondents who patronized TMHCs. Also, showed that factors influencing the patronage of traditional maternal healthcare services did not differ across ethnic groups ($F=.373$ sig $=.688$) in the study area. It that factors influencing the patronage of traditional maternal healthcare services differed based on educational status ($F=21.193$ sig $=.000$). The study concluded that patronage of traditional maternal services is a predisposing factor to high maternal mortality in Southwestern Nigeria.

Keywords: Faith-based home, indigenous healthcare, pregnant women, maternal death, conventional healthcare

Introduction

During these transitional periods, many women of childbearing age are at risk, especially with regard to labour and delivery, illness, and even death. Despite being a biological process, delivery carries risks that can be fatal. According to Ibrahim (2016) and the World Health Organization (WHO) (2010), maternal death is described as the death of a woman during pregnancy, childbirth, or within six weeks of the pregnancy's termination, regardless of the place or time of the pregnancy, for any reason connected to or exacerbated by pregnancy or its administration, but not as a result of incidental or accidental causes.

Globally, millions of women pass away annually because of difficulties during pregnancy and delivery, a vast bulk of these losses are avoidable (Hunt & Bueno de Mesquita, 2010). As such, maternal mortality is considered a communal wellbeing delinquent, growth issue, human privileges alarm as well as human catastrophe (WHO, 2020). Maternal death was relatively high in emerging countries, especially in Southern Asia

and Sub-Saharan Africa, accounting for about 86% (295,000) of global maternal death in 2017 (WHO, 2019). Given that 17 of the 22 nations with the highest maternal fatality ratios worldwide are located in Africa, the continent is severely impacted (Vandana et al., 2017). Approximately 56% of maternal deaths worldwide are thought to occur in Sub-Saharan Africa (Ogu & Ephraim-Emmanuel, 2018). In particular, Nigeria had the highest percentage of yearly maternal fatalities in 2010 (14%) of all maternal fatalities worldwide, in 2015, the maternal mortality rate was 19% per 100,000 live births (Gilda *et al.*, 2017). Nigeria accounted for 23% of global maternal fatalities in 2021 (Punch Newspaper, 2022).

The rise in maternal fatalities in Nigeria is due to several factors, including a lack of maternal health infrastructure, significant delays in seeking care, proximity and access to healthcare facilities, obtaining proper care upon arrival, and referral delays (Ogu & Ephraim-Emmanuel, 2018 and Catherine *et al.*, 2019). Unfortunately, the causes listed above not include the actual type of healthcare system being patronised by pregnant women. This is because, like other African countries, people in Nigeria have and seek options between modern (orthodox or conventional) and traditional (indigenous and faith-based) health care systems for various health services including maternal health services (Ozioma & Chinwe, 2019).

Traditional maternal wellbeing upkeep consists of Traditional Birth Attendants (TBAs) who are the main practitioners that render antenatal care and oversee the delivery of pregnant women who patronise them. The majority of TBAs are women. For instance, in Nigeria, especially in rural regions, 60-85% of deliveries are supervised by TBAs and religious homes. According to International Maternal & Child Health Care (2017), they therefore have a significant role in the public health system. According to the current maternal death ratios, Nigeria's maternal health status is still precarious due to a number of maternal health service deficiencies, including a lack of free prenatal care, a shortage of skilled delivery assistants, and a lack of resources (Ogu & Ephraim-Emmanuel, 2018). Women's endorsement of existing sources of child health treatments based on socio-cultural and economic variables is significantly linked to the continent's high maternal death rates (WHO, 2017, WHO, 2018, Olawale *et al.*, 2019 and Joseph *et al.*, 2019).

According to Guardian newspaper (2018) factors that support traditional midwifery, such as low socioeconomic status, illiteracy, a lack of knowledge about modern maternal health (MCH) facilities, strong family influence, and easy access to TBA services, have been strongly linked to the use of traditional and faith-based health care services. According to Ugboaja et al. (2018), rural residency, poor economic position, skilled employment status, age, and large household size were all linked to an increase in the usage of traditional parental services. According to Adewuy *et al.* (2019), 70% of young moms aged 15 to 24 gave birth at home, which was more than the 63% national average for all Nigerian women of reproductive age. Nwankwo *et al.* (2019) and Sowunmi *et al.* (2020) found a strong correlation between TMHCS patronage and the clients' age, educational background, and economic standing.

Despite the implementation of programmes like Mother-care in Nigeria, exposure to doctors and public maternal health workers, new-borns and women healthcare (ACCESS), public maternal and child health policy (MCH), and Abiye project (Safe motherhood), Nigeria continues to have the greatest amount of home deliveries and births participated by traditional birth attendants in West Africa (Nigeria Demographic and Health Survey (NDHS), 2018). It was discovered that two-thirds of pregnant women (64%) never received antenatal care, and 58 percent of women were born at home or in spiritual houses (NDHS, 2018 and WHO, 2018).

Therefore, it is imperative that we focus on finding answers to this troubling subject in order to provide evidence about the prevention and reduce maternal fatality in the country. Hence, this study was therefore carried out to assess characterising patrons of traditional maternal healthcare services in southwestern Nigeria.

Objective of the Study

The following objectives were raised to guide this study

1. Assess the socio-economic characteristics of women patronising traditional maternity health care services in southwestern Nigeria.
2. Determine the factors influencing patronage of traditional maternal healthcare services based on socioeconomic characteristics.

Methodology

The descriptive design technique was adopted for the study. The research included all expecting women and nursing mothers who went to TMHCS in the study area. The study recruited pregnant women and nursing mothers who had given birth at TMHCS in Southwestern Nigeria during the study period.

The sample size of 1020 pregnant and nursing mothers were used for the study. This was derived from the Fishers' standard formula ($n = \frac{z^2 pq}{d^2}$) which was used in calculating the minimum sample size based on proportion of population, confidence level and margin of error. To start with, based on the female population census figures for 2006, the projected female population for 2016 were 2,289,131, 2,305,739 and 3,842,023 for Oyo, Osun and Ondo States, respectively (National Population Commission [NPC], 2013). These figures were projected for 2021 using a population growth rate of 2.5% as published by (World Bank, 2022). Hence, the projected population of females for 2021 in the study area were respectively 2,589,941, 2,608,732 and 4,346,896 for Ondo, Osun and Oyo States. According to Ogbo *et al.* (2020), the prevalence rate, being the proportion of pregnant women utilising TBAs services in Nigeria for 2018 is 20.5%. Based on this prevalence rate, the calculated sample size of 340 was estimated for each state, indicating the minimum measurement or survey needed to have a confidence level of 95% that the true female population is within $\pm 5\%$ of the measured/surveyed value. The total calculated

sample size for the three states is therefore 828. While adjusting for respondents that would breach the study protocols, 25% of the calculated sample size (192) was determined. The sample size was 1020 respondents in the entire sample. The sampling method was multi-stage. Using simple random sampling, the Local Government Areas (LGAs) in each state are chosen in the first step. There are 18 LGAs in Ondo State, 33 in Osun State, and 30 in Oyo State. Twenty-five percent (25%) of the LGAs were selected from each State using simple random sampling technique. In total, twenty-two (22) LGAs were chosen for the research.

The second step entails selecting TMHCS centres from the chosen LGAs using simple random sampling. Ten percent (10%) of all traditional maternal health centres in each of the chosen LGAs were sampled, for a total of fifty-two (52) centres. Using a systematic sampling technique, women are chosen from the traditional maternity health centres that have been chosen for the third stage. Respondents were selected from the centre at the time of the survey at Nth intervals (1st, 2nd, 3rd, etc.). A self-designed questionnaire titled "Patrons of Traditional Maternal Health Care Services-Survey (PTMHCS-S)" with a 15-question item of multiple-choice answer was used for this study. The study used a five-point Likert scale with ratings of 5, 4, 3, 2, and 1, respectively, for strongly agree, agree, disagree, and strongly disagree. The instrument was assessed by experts in Nursing Science and the Department of Obstetrics and Gynaecology for instrument's validity.

The reliability of the instrument was assessed with the test-retest method which was conducted on fifty (50) respondents based on convenient sampling in Ekiti State. It was re-administered to the same group of participants after a 4-week break (only 18 were obtainable). The scores obtained at both time periods were analysed with Pearson Moment Correlational Analysis (PPMC), the reliability test score of $r = 0.78$ was obtained, this ascertain that the instrument was deemed reliable for the study. In the course of data collation, 145 questionnaires were discarded because the data were mutilated, result into 875 questionnaires used in the analysis.

IBM SPSS version 25 was used to analyse the data acquired for the study using frequency distribution, cross-tabulation, and chats, ANOVA was used to test significance of the variable that were measured

Results

What are the socioeconomic characteristics of women patronising traditional maternity health care services in the study area?

Figure 1 shows that most of the respondents are Yorubas in all the selected three states. This implies that respondents who are Yorubas highly proportionally constituted the majority patronising the TBCs. However, the Hausas accounted for the least of respondents in all the three states.

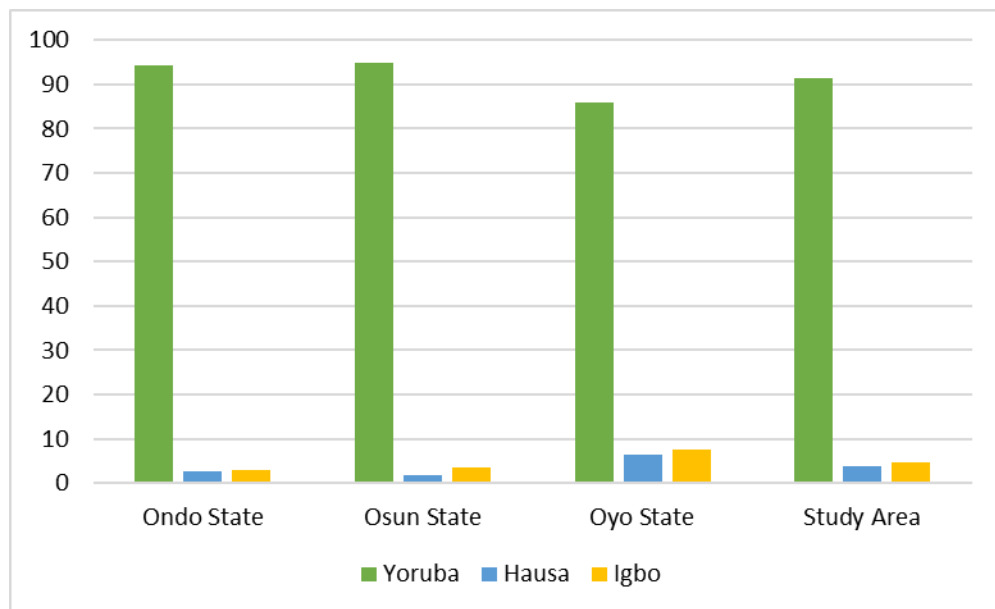


Figure 1: Ethnicity of Respondents

Figure 2 shows that respondents with tertiary education dominated the study. However, those who had primary education accounted for the least of respondents in Oyo State, while the singles accounted for the least in both Osun and Oyo States. Both groups however only accounted for a very few proportions of respondents in the study area.

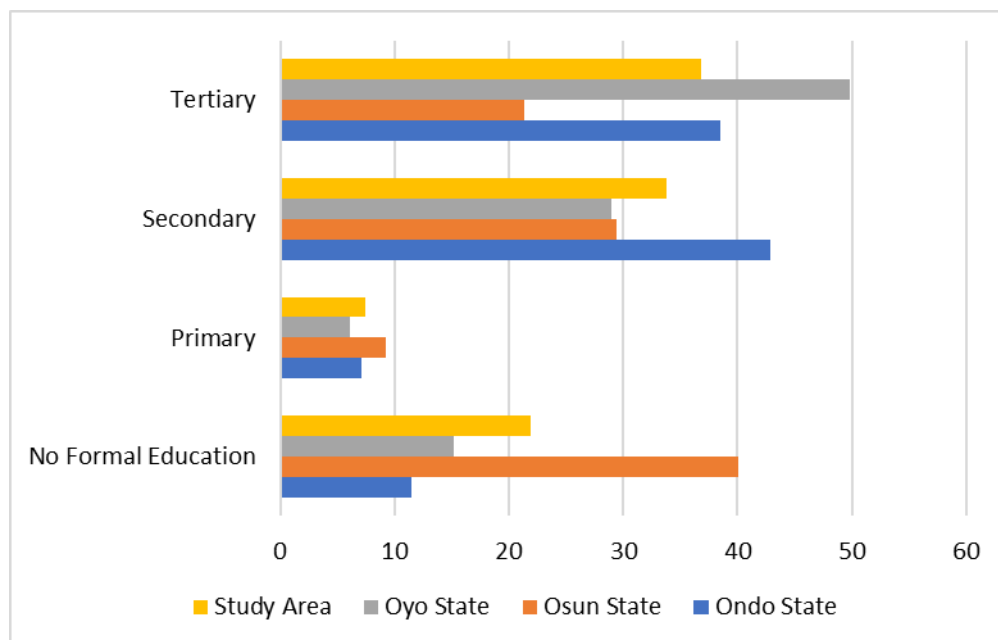


Figure 2: Educational Status of Respondents

Figure 3 indicated that traders make up the bulk of research participants. The majority of Oyo respondents are traders and civil servants, whereas Osun had the greatest percentage of non-active service members. While Oyo respondents who patronized TBCs have the least number of people not in service.

The age classification according to the National Population Commission [NPC] (2013) and ICF International (2014) indicated that youths are between 18 and 24 years, young

adults are between 25 and 54 years, old adults are between 55 and 64 years and 65 years while older are tagged aged.

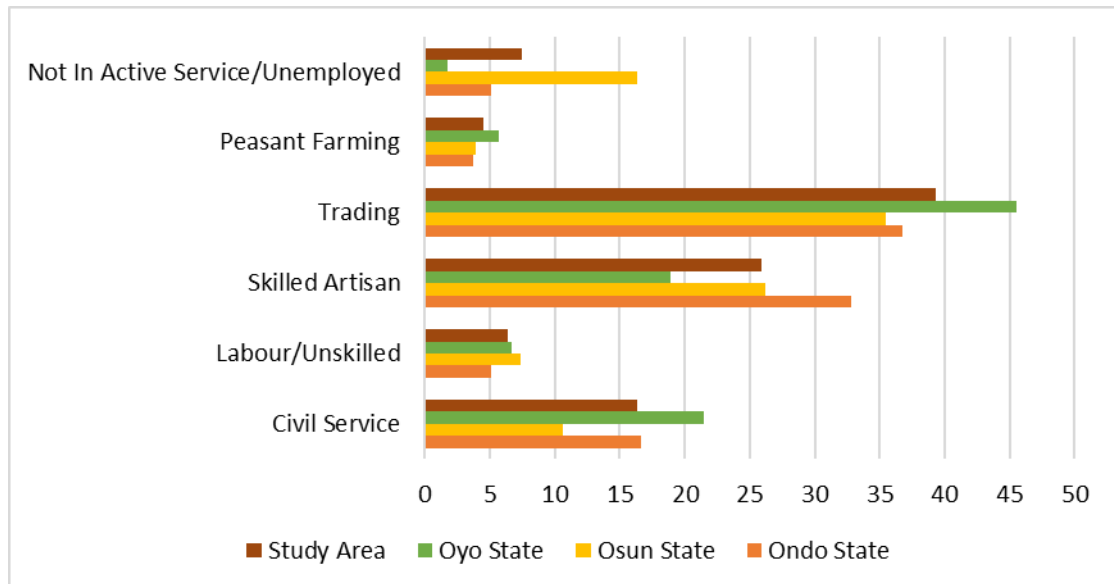


Figure 3: Occupation of Respondents

Figure 4 shows that 14.3% are youths, 82.1% are young adults, 3.4% are old adults while 0.2% is aged. This implies that, a large number of young adults are the major respondents who patronize TMHCs.

Income categories as documented by Odunsi (2020) based on the national minimum wage. People who earn below ₦30, 000 are low-income earners, ₦31, 000 and ₦90, 000 are lower middle-income earners, (₦91, 000 and ₦210, 000 upper middle-income earner and high-income earners ₦210,000.

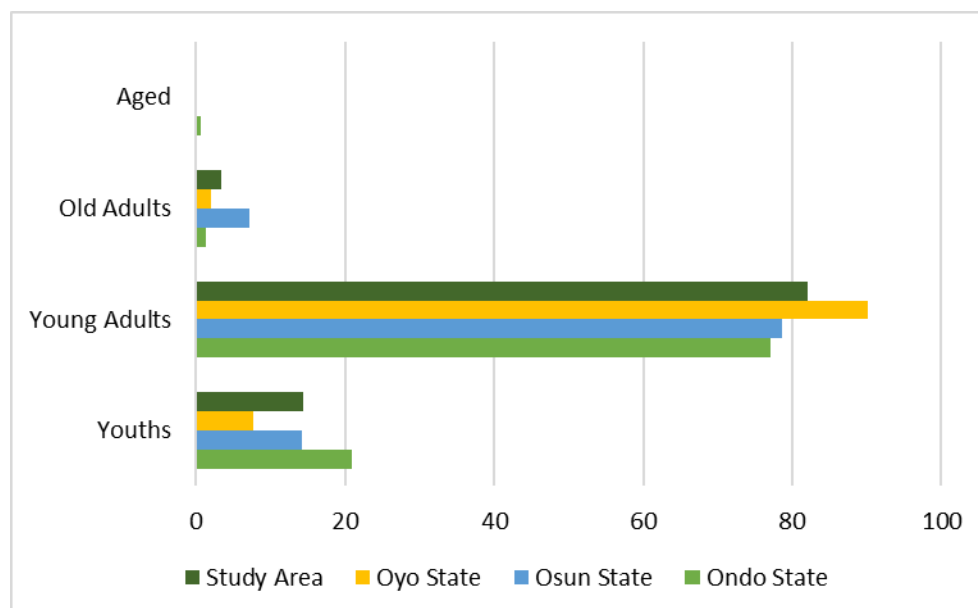


Figure 4: Age Group of Respondents

Figure 5 shows that majority of the study respondents across the three selected states are low-income earners. More so, Osun respondents who patronize TBCs are the lowest income earners.

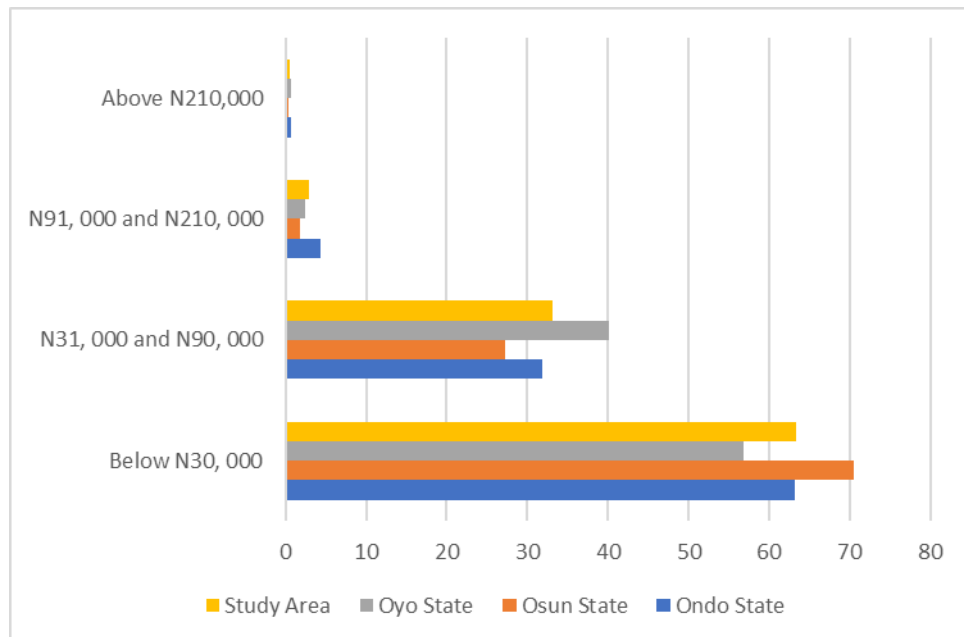


Figure 5: Income Group of Respondents

Table 1: Factors influencing the Patronage of Traditional Maternal Healthcare Services based on Ethnicity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	195.837	2	97.919	.373	.688
Within Groups	228632.992	872	262.194		
Total	228828.830	874			

$p > 0.05$

Result presented in Table 1 showed that p value (ANOVA) of .688 is greater than 0.05. This inferred that factors influencing the patronage of traditional maternal healthcare services did not across differ ethnic groups in Southwest Nigeria.

Table 2: Factors influencing the Patronage of Traditional Maternal Healthcare Services based on Educational Status

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15567.408	3	5189.136	21.193	.000
Within Groups	213261.422	871	244.847		
Total	228828.830	874			

$p < 0.05$

Table 2 revealed that p value (ANOVA) of 0.000 is less than 0.05. This implied that the result is statistically significant. It is therefore concluded that factors influencing the patronage of traditional maternal healthcare services differed based on educational status. The post-hoc analysis is further depicted in Table 3

Table 3: Post-hoc Analysis on Factors influencing the Patronage of Traditional Maternal Healthcare Services based on Educational Status

Multiple Comparisons

Dependent Variable: FACTORS

	(I) educational status	(J) educational status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Scheffe	no education	formal primary	11.90224*	2.24547	.000	5.6128	18.1917
		secondary	6.81700*	1.44997	.000	2.7557	10.8783
		tertiary	10.78351*	1.42676	.000	6.7872	14.7798
	Primary	no education	-11.90224*	2.24547	.000	-18.1917	-5.6128
		secondary	-5.08524	2.14337	.132	-11.0887	.9183
		tertiary	-1.11873	2.12774	.964	-7.0784	4.8410
	Secondary	no education	-6.81700*	1.44997	.000	-10.8783	-2.7557
		primary	5.08524	2.14337	.132	-.9183	11.0887
		tertiary	3.96651*	1.25999	.020	.4373	7.4957
	Tertiary	no education	-10.78351*	1.42676	.000	-14.7798	-6.7872
		primary	1.11873	2.12774	.964	-4.8410	7.0784
		secondary	-3.96651*	1.25999	.020	-7.4957	-.4373

*. The mean difference is significant at the 0.05 level.

Table 3, factors influencing patronage of traditional maternal healthcare services differed between non-formal education and primary, secondary and tertiary education categories. However, while primary education differed from non-formal, its difference between secondary and tertiary education was not significant. Also, the difference between secondary education, non-formal education and that of tertiary education was significant while between secondary and primary education was not significant. Conclusively, while there was no difference between tertiary and primary education, difference existed among tertiary, non-formal and secondary education.

Discussion

The purpose for carrying out this research was to assess the patrons of traditional maternity health care services in study area. The socioeconomic features of women using traditional maternity health care services in the research area were presented by the study's findings. The results demonstrated that the majority of women in the study region who use traditional maternity healthcare facilities are young, married, traders, and low-income earners.

This result agreed with that of Joseph *et al.* (2019), whose findings shows that poverty and other problems have a significant impact on maternal health decisions. Additionally, these results corroborated earlier research published in The Guardian newspaper (2018), which found that factors that support traditional midwifery such as low socioeconomic status, illiteracy, a lack of knowledge about conventional maternal health (MCH) facilities, strong family influence, and easy access to TBA services have a strong correlation with the use of traditional and faith-based health care services. Furthermore,

this study supported the earlier findings of Ugboaja *et al.* (2018) which showed that rural residency, poor economic status, skilled employment status, and big household size were all linked to an increase in the usage of traditional parental facilities.

The study found that traditional maternity health care services were being used in the study area by young married women. The results were consistent with those of Adewuyi *et al.* (2019) who discovered that 70% of Nigerian young mothers aged 15 to 24 gave birth at home as against conventional maternal health centres.

According to the study's findings, there is a correlation between women's income group and how frequently they visit traditional maternal health centres. This is consistent with Nwankwo *et al.* (2019) which found a strong correlation between the economic standing of clients and their use of TMHCS. Their results clearly show that women from lower socioeconomic classes make up the majority of respondents who use TMHCS. Also, age of women and the frequency of patronage of traditional maternal health centres is another characteristic that influence each other. This study supported the findings of Ugboaja *et al.* (2018) and Sowunmi *et al.* (2020) whom revealed that there is a significant relationship between women's age and their patrons of TMHCS.

Conclusion and Implications

The study focused on characterizing the Patrons of TMHCs in Southwestern Nigeria. In summarising the findings, it was revealed that married women, women with tertiary education, traders and civil service workers, young adult, low-income earners were the socioeconomic characteristics of women patronising TMHCs in the study area. The study further revealed that factors influencing the patronage of traditional maternal healthcare services did not across differ ethnic groups and the frequency of patronage of TMHCs. Also, the study confirmed that factors influencing the patronage of traditional maternal healthcare services differed based on educational status and the frequency of patronage of TMHCs. Conclusively, while there was no difference between tertiary and primary education, difference existed among tertiary, non-formal and secondary education.

In light of this findings, it is recommended that the government should support women's and young girls' access to education and economics opportunity. Understanding the significance of region-specific determinants of maternal mortality incidence necessitates initiatives that specifically target their influence in the relevant regions.

Last but not least, the variation seen in this study may have been influenced by the unique cultural and religious customs of southwest Nigeria. Therefore, more research is needed to validate the underlying causes in various geopolitical zones.

Ethical considerations

The necessity of ethical concern in this investigation was noted. The research participants (the chosen childbearing women) provided written consent. Each questionnaire included a consent form that the study participants were asked to sign. As stated in the consent form, confidentiality of the data was also guaranteed. This study received ethical approval (IPH/OAU/12/1903) from Obafemi Awolowo University's Institute of Public Health in Ile-Ife, Osun State.

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Artificial Intelligence Integration in Teaching and Learning: Investigating Retirement-date and Self-efficacy of in-service Teachers in Higher Education Institutions

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Abstract

Artificial intelligence (AI) technology is recalibrating teaching and learning activities. Higher education institution teachers have different perceptions and different “self-efficacy” on the need to integrate AI to enhance their tasks. This could affect their readiness to embrace AI to develop instructional resources. Moreover, the number of years left for them to spend in the teaching-service could affect how they embrace AI or otherwise. This is a problem because it could affect level of learning satisfaction given to the learners in the digital age. Getting empirical data would help to understand the complexity of the problem and specific actions to take towards solutions. Hence, this study focused on artificial intelligence integration in teaching and learning regarding retirement-date and self-efficacy of in-service teachers in higher education institutions. Online questionnaire on Teachers’ AI Self-efficacy (TASQ) with 0.86 reliability co-efficient was used for data collection. Data were analysed with Chi-square. The results revealed that impact of retirement-dates were not significant on the self-efficacy of the academics. Based on the results, recommendations were made, among others, that conscious advocacy should be embarked upon to encourage teachers to embrace integration of AI in their career practices to increase their professional relevance during their career and post-career.

Keywords: Artificial intelligence, Integration, Retirement-date expectation, Self-efficacy, HEI’s

Introduction

Unlocking sustainable development is much dependent on attaining innovative skills and appropriate new technology. Artificial Intelligence (AI) is an area of emerging technology that most technology compliant people are integrating to help make easy their daily tasks, both for official and personal uses. AI is a “Systems that display intelligent behaviour by analysing their environment and taking actions - with some degree of autonomy - to achieve specific goals” (Netherlands Council for Government Policy, 2023). So, AI as a digital technology has the ability to process numerous tasks in a way that would be similar to human intelligence; AI is among the emerging technologies.

Acceptance and integration of technology into teaching and learning is always met with apparent resistance because many stakeholders in education often see it as a potential burden even if the technology is to reduce burden of their task. If the technology is computer driven, the resistance will be more pronounced due to the digital phobia of

many teachers. This was implied by Balić, Grubišić and Granić (2024) as digital readiness gap among different people. Another problem of technology integration in teaching and learning is the level of access that the teachers have to such technology. This will serve either as motivation or discouragement to deploy the benefits that are inherent in the technology to enhance teaching and learning. The resistance to technology in education is found at all levels of education; higher education institutions are also included as teachers in tertiary institutions are not exempted from digital phobia.

Teachers in tertiary institutions who are still active in the teaching service (in-service teachers) are reasonably among multitude of users of AI to facilitate teaching and learning activities; ranging from instructional resource development to instructional content delivery. According to Pozo *et al.* (2021), digital technology has become the mediator of all education. However, teachers should have knowledge on pedagogical contributions of AI-based tools in order to maximise the opportunities of AI in education (Xu, 2020). Teacher's self-efficacy towards AI utilisation is paramount in this matter.

According to Thoring *et al.* (2017) some higher education institutions - HEI's are in the beginning stage of integrating digital Technology into teaching and learning. However, higher education institutions, as post secondary institutions have a number of factors that may affect how technology is integrated whether for teaching or learning. Foremost is the level of access to get the required devices and availability of relevant technical supports to make the resources functional. Another factor is the training being given to make the teachers in higher educational institutions to make them confident on their capability to use the digital devices. Despite that teachers in higher education institutions are highly educated it does not correspondingly translate to being digitally literate. Reasons being that some areas of specialisation are based on technology why many other areas of specialisation are not. Nevertheless, all areas of specialisation could be enhanced with technology integration. As observed by Baimuldina *et al.* (2019), smart technology is essential for teachers' professional development to prepare quality educational resources for instructional delivery.

Yet, there are inhibitions regarding integration of digital technology for teaching and learning in higher education institution, not only because the teachers do not know how to operate the devices but they lack the required skills to purposefully and effectively use the technology to facilitate teaching and learning activities in an efficient way, to achieve instructional goals. Meaning that there are some teachers in higher education institutions who could use some 21st century digital technologies for personal tasks or meeting self-needs but not savvy to use these same technologies to design instructional resources and deliver teaching-learning activities. The challenge is increasing everyday with dynamic advancements in emerging technologies. Meanwhile, Yigezu (2021) submitted that digital technology integration in teaching and learning in higher education institution of learning is important to prepare the citizens for knowledge-based economy.

Furthermore, there are a number of factors that affect the in-service academics regarding their belief in their ability; that is their self-efficacy (Bandura, 1997) to integrate AI in their career practices. Self-efficacy refers to personal belief by an individual in his or her capacity to do what is required to achieve specific level of performance in any task. A person with high level of self-efficacy points to self assurance to handle life challenges better compared to those who have low self-efficacy. Bandura (1997) stated that "people with high assurance in their capability approach difficult task as challenges to be mastered rather than as threats to be avoided". A factor that could impact the self-efficacy of the in-service teachers is the number of years that the teachers will retire from teaching employment (retirement-date). The context of retirement-date is the number of years left for the individual teachers to quit from their active paid employment.

However, in the work environment of the 21st century citizens, there is a lot of AI software with peculiarities on what the AI's could be used to do in education. Apart from using AI's to source for visual resources such as audio resources, audio-visual resources and hypermedia resources to integrate in education, in order to facilitate achieving learning goals, some AI's could be used to generate lesson outlines on any topics, to prepare lesson plans, to generate learning resources and actual learning experiences. As acknowledged by Montebello (2018), as well as Wang & Zhao (2020), profound impact of AI is present in education through AI-based tools such as intelligent tutoring and automated grading systems. Suffice to mention that AI's integration has its attendant challenges such as similarity problem (lack of original thoughts), issue regarding authenticity, deficiency in ethical use, insufficient digital skills and loss of interest in innovative skills development due to over-reliance of human beings on the AI technology. Otherwise, AI's promotes inclusive and productive learning activities with high effectiveness. Substantiated by some empirical studies, AI's provide transformative learning engagements to the students because the technology could adapt to individual learner's needs. Indeed, it is possible to identify the cognitive and emotional needs of learners with the help of AI (Chen *et al.*, 2021); and with AI, learners are provided with personalized support (Mislevy *et al.*, 2020). The support is also offered timely, and thus, learners might be more satisfied with on-time feedback (Zawacki-Richter, *et al.*, 2019).

In this study, the Social cognitive theory of self-efficacy is applicable. This study is rooted in the theory of Social Cognitive Theory of Self-efficacy which has - four "input's" components, one "output" component and Self-efficacy as the "through-put" component. The input components are – Mastery experience/Performance accomplishment (past experience of success on a specific task would make an individual to believe that they will be successful on the task in the future), Vicarious experience (observing others perform could make an individual to make judgments about his/her own capabilities to attempt the same task), Social persuasion (verbal encouragement being provided by the people around you to increase your confidence), as well as Physiological and emotional states; while the only outcome component is "outcome expectancy". According to the proponent of the theory (Bandura, 1997), "Mastery experiences are the most influential source of efficacy information because they provide

the most authentic evidence of whether one can muster whatever it takes to succeed. Success builds a robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established". Besides, Hussain et al. (2022) Social see persuasion as encouragement or discouragement from others to perform a task; While Capa-Aydin, Uzuntiryaki-Kondakci and Ceylandag (2018) expressed that if individuals believe that others do not think highly of them or do not believe in their ability to complete a task, their self-efficacy is likely to be low.

It is necessary to state that the academics who are participants in this study automatically take the position of trainees; and their "outcome expectancy" should be "to attain the set goals for the training", this means acquisition of purposeful skills to integrate specific AI's into teaching and learning to improve learning activities. Nevertheless, the Social Cognitive Theory of Self-efficacy does not attribute it that any person that do better on a task would always be better than other counterparts with less performance on the same. Thus, the focus of this study is to investigate artificial intelligence integration in teaching and learning regarding retirement-date and self-efficacy of in-service teachers in higher education institutions.

Statement of the problem

As a fast-growing technology, Artificial intelligence (AI) has redirected the ways of living and doing things in the society, including the tasks of teaching and learning. In the category of utilization, there are simple as well as complex AI's. Whether easy or difficult to use the AI's, individual differences ranging from factor of "readiness gap" to the factor of "capability level" still exist among the users. Teachers or academics in higher education institutions also have different perceptions and different "self-efficacy" on the need to integrate AI to enhance their tasks. This could affect their readiness to embrace AI to develop instructional resources. Moreover, the number of years left for them to spend in the teaching-service could affect how they see the need to develop their capability level to use AI. This could translate to problem of not meeting learning satisfaction of the learners in the digital age. This raises concern to understand the complexity of the problem and specific actions to take towards solutions. Hence, this study focused on artificial intelligence integration in teaching and learning regarding retirement-date and self-efficacy of in-service teachers in higher education institutions.

Objective of the study

The purpose of the study was to investigate how if number of years that academics or teachers will retire from teaching employment would or would not determine the self-efficacy of the academics towards integrating AI technology into teaching and learning.

Research question

The only research question that guided this study was:

How did number of years that academics will retire from teaching employment impact on their self-efficacy towards integrating AI technology in teaching and learning?

Hypothesis

To answer the research question earlier stated, the following three hypotheses were raised.

1. There is no significant difference in self-efficacy of teachers towards integrating artificial intelligence software for teaching and learning, between academics who have a few years to retire and those who have more years to retire from teaching employment.
2. There is no significant difference in self-efficacy of teachers towards integrating artificial intelligence software for teaching and learning, between academics who have a few years to retire and those who have most years to retire from teaching employment.
3. There is no significant difference in self-efficacy of teachers towards integrating artificial intelligence software for teaching and learning, between academics who have more years to retire and those who have most years to retire from teaching employment.

Significance

This study is significant because it will provide empirical data on the necessity for "needs analysis", to understand the entry attributes of the participants who are to be trained; and to make strategic planning that would effectively achieve the goals of the continued professional development training, particularly for the academics to improve teaching and learning in the 21st century.

Methodology

The target population for this study comprises of all the teachers (academics) in tertiary institutions in Lagos state. Purposive sampling method was used to select the 85 participants in this study, who are academics from two higher institutions - a Polytechnic and a University. Using online learning workshop (cohort) approach, the participants were trained on how to use some selected AI tools to carry out literature review, to produce online learning resources that would meet the needs of learning styles of different students – be it text based, audio resource, visual, video, animation, audio-visual and hyper-media resources. The participants were also exposed to AI software that allows online publishing of learning contents. Data were collected using validated online questionnaire - Teachers' AI Self-efficacy Questionnaire (TASQ); it was designed on 4-Likert scale with 0.86 reliability coefficients. For this aspect of the study which is on the number of years that the academics or teachers will retire from teaching employment -

(retirement-date expectation), the data were analysed with inferential statistics of Chi-square.

Results

The results of the analyses are discussed below, in the order that the three hypotheses were earlier stated, to provide answers to the research question via all the hypotheses raised.

Table 1: Chi-Square Analysis of Self-efficacy of Academics with a Few Retirement-Years Date and More Retirement-Years Date

Retirement-Years Date		Level of Skills Acquired			df	P-Value	Sig.
		Low	Medium	High			
Few Retirement-Years Date	count	1	4	16	2	3.362 ^F	.163 ns
	% within Few Retirement-Years Date	4.8%	19.0%	76.2%			
More Retirement-Years Date	count % within	0	8	10			
	More Retirement-Years Date	0.0%	44.4%	55.6%			
Total	Count	1	12	26			
	% within More Retirement-Years Date only	2.6%	30.8%	66.7%			

ns = Not Significant at $P > .05$

As revealed in the Chi-square analysis in Table 1 above, there is no significant difference between Self-efficacy of Academics with a Few Retirement-Years Date and those with More Retirement-Years Date (.163 > .05); thus, the hypothesis 1 is not rejected.

Table 2: Chi-Square Analysis of Self-efficacy of Academics with a Few Retirement-Years Date and Most Retirement-Years Date

Retirement-Years Date		Level of Skills Acquired			df	P-Value	Sig.
		Low	Medium	High			
Few Retirement-Years Date	count	1	4	16	2	3.369 ^F	.139 ns
	% within Few Retirement-Years Date	0.0%	34.8%	65.2%			
Most Retirement-Years Date	count	0	16	30			
	% within Most Retirement-Years Date	0.0%	34.8%	65.2%			
Total	Count	1	20	46			
	% within Most Retirement-Years Date only	1.5%	29.9%	68.7%			

ns = Not Significant at $P > .05$

From the Chi-square analysis in Table 2 above, there is no significant difference between Self-efficacy of Academics with a Few Retirement-Years Date and those with More Retirement-Years Date (.139 > .05); Therefore, the hypothesis 2 is not rejected.

Table 3: Chi-Square Analysis of Self-efficacy of Academics with More Retirement-Years Date and Most Retirement-Years Date

Retirement-Years Date		Level of Skills Acquired		df	P-Value	Sig.
		Medium	High			
More Retirement-Years Date	count	4	10	1	.515 ^F	.569 ns
	% within	44.4%	55.6%			
	More Retirement-Years Date					
Most Retirement-Years Date	count % within	16	30			
	Most Retirement-Years Date	34.8%	65.2%			
Total	Count	24	40			
	% within	37.5%	62.5%			
Most Retirement-Years Date only						

ns = Not Significant at $P > .05$

As could be seen in the Chi-square analysis in Table 3 above, there is no significant difference between Self-efficacy of Academics with More Retirement-Years Date and those with Most Retirement-Years Date (.569 > .05); Hence, the hypothesis 3 is not rejected.

Discussion and Conclusion

As could be seen in the results of the analyses, the number of years that the academics will retire from teaching employment (number of years left for the individual academics to quit from their active paid employment) did not have any impact on the self-efficacy of the academics. The implications of these are that the academics are always ready to acquire new skills to enhance their career practices in their fields. This aligns with the view of Darling-Hammond et al. (2017) that targeting the content and grade level when providing training is better than training teachers on topics without considering how they will be asked to teach. Further on the implication of the findings in this study, the academics would like to be relevant irrespective of the number of years left for them to retire from the active employment. This specifically means that the academics have professional quality of lifelong learning which is a standard that is capable of propelling an individual to even learn what may seem challenging. This opinion supports the assertion of Luan et al. (2020) that AI-based tools have the potential to foster a learner-centred approach; just as Hwang et al. (2020) as well as Shum et al. (2019) stated that AI-based tools provide personalized learning experiences.

Recommendation

Based on the findings of this study, it is recommended that:

1. Irrespective of their retirement-dates expectation, conscious advocacy should be embarked upon to encourage academics to embrace integration of AI in their career practices to increase their professional relevance during their career and preparing for post-career.
2. Irrespective of their retirement-dates expectation, subject targeted training for teachers or academics should be provided to avail them with AI tools that are peculiar to their field or course for career and post-career relevance.

3. Irrespective of their retirement-dates expectation, the concerned authorities should encourage social persuasion among the academics to encourage one another to use or integrate AI's into their teaching and learning tasks while in career service and preparing for post-career relevance.

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Islamic Perspectives on the Use of Artificial Intelligence Tools for Achieving Sustainability in Education

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Abstract

The uniqueness of the influence of artificial intelligence tools on teaching, learning and research in Nigerian system of education is unprecedented. Artificial intelligence tools had made the field of education productive, enjoyable and scientific. This study adopted historical, analytical and phenomenological approaches to do justice to the work. The historical method was used to discuss the historical development of artificial intelligence. The analytical method was applied to analyse the common artificial intelligence tools used for teaching, learning and research in Islamic Studies. While phenomenological approach was used to discuss the Islamic perspectives in the use of artificial intelligence tools for teaching and learning in Islamic Studies. The findings of the study showed that sustainability in education could be achieved with the aid of artificial intelligence tools. The study indicated that there some artificial intelligence tools that are commonly used among lecturers to facilitate teaching in Islamic Studies in Nigeria. It was concluded in the study that application of artificial intelligence tools for teaching, learning and research is permissible in Islam after fulfilling the fundamental conditions such as: limitedness of technical capabilities of AI tools, ethical consideration and protection of authenticity of sacred injunctions. It was therefore, suggested that Islamic guidelines in the use of artificial intelligence should be adequately followed while using artificial intelligence for teaching, learning and research for better sustainability of Islamic Studies Education in Nigeria.

Keywords: Artificial Intelligence, Islamic Perspective, Sustainable Education, Achievement

Introduction

Education in Islam is the process of training the mind, brain and character of human beings in order to be able to recognize the Oneness and Existence of Allah the Supreme Being and appreciate His wonderful favours on His creatures through the knowledge of primary sources of education which are Quran and Hadith. According to Haneef (2018), education in Islam could be described as the process of training individual's sensibility and characters purposely to achieve the benefits of this world and the bliss of the Hereafter through application of Islamic codes of conduct enlisted in the Glorious Quran and Hadith of Prophet Muhammad (PBUH). It could be understood from this definition that Islamic education distinguishes itself from other forms of education by making

Glorious Quran and Hadith of Prophet Muhammad (PBUH) the sources of knowledge in order to cleanse the heart, brain and attitudes.

The Quran had many years ago proved the existence of innovation in knowledge that is the reason behind the word of Allah in many portions of the Quran that knowledge and wisdom will continue to be reviewed by Allah Himself. Therefore, knowledge and wisdom gain development generation after generation. Allah says:

“Read! And your Lord is the Most Generous.

He taught by the pen.

He taught man what he never knew” (96:3-5)

In another chapter, Quran says:

“And the horses, and the mules,

and the donkeys (are created) for you to ride,

and for luxury. And He creates what you do not know”(16:8)

The above Quranic injunctions are indicating that there are numerous things which are yet to be known and the knowledge about them will soon manifest through the work of man on the earth. There was nothing like computer before and computer came into existence and now the technology has moved forward to the era of artificial intelligence.

The use of artificial intelligence tools for teaching, learning and research had made a remarkable landscape in the field of education which immensely contributed to all aspects of teaching including Arabic and Islamic Studies. According to Mehmood et al. (2024), artificial intelligence tools have created profound opportunities to enhancing teaching and learning in all subjects especially Arabic and Islamic Studies. Al-Zahrani (2021) and Ghaly (2020) further explained that Arabic and Islamic Studies have currently gained tremendous artificial intelligence influences during the last decade to the level that many viable artificial intelligence tools have been incorporated into the teaching and

learning of Islamic Studies globally. Natural Language Processing (NLP) is a viable artificial intelligence tool that is very good in identifying and analyzing classical texts in Islamic literatures. This tool can help locate the Quranic verses and Hadith of Prophet Muhammad (PBUH) that are relevant to every Islamic law and its application (Karimullah, 2023). In addition, Solihu (2024) stated that Natural Language Processing (NLP) is artificial intelligence tool that can interpret Quranic verses and Hadith of Prophet Muhammad (PBUH) in a useful and understandable way that can lead to proper understanding of the text. Therefore, the significance of artificial intelligence tools in the understanding of Islamic sources of law could be seen in the beautiful performance of Natural Language Processing tool.

Historical Development of Artificial Intelligence

Historically, artificial intelligence is a special package developed to simplify the entire work of human beings be it administrative, economic, social, political and education among others (in 1955 by John McCarthy). Although initially Muslim scholars showed reluctance to the adoption of artificial intelligence, at last the tools were found useful. In order to add values to teaching, learning and research in Islamic Studies and to emphasise the dynamism and relevancy of Islamic teachings, it becomes pertinent to integrate Islamic Education and its teaching with new technological development. The application of Artificial intelligence tools in Islamic Studies education underwent series of stages such as: consideration, test running and adoption (Mehmood, et al., 2024). The first stage which is known as consideration stage is the period where the importance of AI integration into Islamic education was discussed and accepted after series of conferences and debates among Muslim scholars and it was between 2010 and 2015 (Mehmood, et al., 2024). According to Mohammed et al (2021); Mehmood, et al., (2024) this stage witnessed creation of digital repository and discovery of Islamic text search functionality.

Test running stage on the other hand, is the period that witnessed usefulness of artificial intelligence in the field of technology integration in Arabic and Islamic Studies. This period according to Mehmood, et al. (2024) enjoyed high percentage of patronage in the application of AI tools in Arabic and Islamic Education and it lasted for 5 years between 2015 and 2019. During this period AI tools gained tremendous advancement because its impact on administration, education and religion to mention a few was boomed globally. The last stage which started from 2020 till date is the adoption stage that witnesses

unprecedented advancement in the field of technology. Great achievements are recorded in Arabic and Islamic Studies education with the aid of artificial intelligence tools in this era. Mehmood, et al. (2024) noted that AI application such as: ChatGPT, Natural Language Processing, Bussu, Arabits and some others that can produce complex textual analysis, design pattern recognition and create adaptive learning were discovered useful for teaching, learning and research in Arabic and Islamic Studies.

From the fore going, it is understood that adoption and implementation of artificial intelligence tools in Arabic and Islamic Studies passed through three different stages and huge achievement was recorded in each stage let alone the present period when artificial intelligence tools had become unavoidable tools for achieving sustainability in all spheres of human endeavours including education. However, the perspectives of Islam in the adoption and implementation of artificial intelligence tools are expected to be considered.

Islamic Perspectives on the Use of Artificial Intelligence Tools

Islamic injunctions are universal, dynamic, relevant, valid and reliable. These attributes make the injunctions appropriate and acceptable at all time and place. Artificial intelligence tools have become easier search engines that can provide deep and efficient capabilities in providing comprehensive knowledge of the trends of Islam and its civilization, different current position of schools of thought on various aspects of lives and newly developed techniques in the application of reasoning (Karimullah, 2024). Artificial intelligence tools like Natural Language Processing (NLP), Arabic Text Processing (ATP), Adaptive Learning Algorism (ALA), Busuu and Arabits platforms are very useful in Arabic and Islamic Studies.

However, the position of Islam does not change regarding the integration and implementation of artificial intelligence tools in Islamic Studies. The conditions powering the use of AI tools in Islamic Studies after appreciating the benefits and challenges associated with AI by the scholars are to put forward special attention to technical capabilities of AI tools, ethical consideration in the use of AI tools and authenticity of religious sacred injunctions and scholarly traditions (Mehmood et al., 2024). In order to have complete and successful integration and implementation of artificial intelligence in Islam, Al-Zahrani (2020) opined that both traditional Islamic educational methodology and contemporary learning theories should be aligned with

Islamic Religious Principles. Similarly, Ghaly (2021) explained that the objectives of Sharia law (*Maqasid ul Shariah*) are the bedrocks on which extraction of laws are built in Islam. Therefore, guidelines regarding permissibility of AI were provided through Islamic Religious Principles. This implies that Islam is not against the use of AI tools in Islamic Studies but the above conditions need to be well fulfilled. It shows that technical capabilities of AI tools are limited compared to the power of Allah (The Originator, The Source and The Owner of everything) and it is clearly stated in the Glorious Quran where Allah says:

“O society of Jinn and humans! If you can pass through the bounds

of the heavens and the earth, go ahead and pass.

But you cannot pass except with authorization” (55:33)

The above verse according to Islamic scholars is pointing to limitedness of human knowledge, reasoning and science. It shows from the verse that artificial intelligence tools though work like human beings, behave as they behave and possess reasoning that is similar to human, nevertheless there must be an expectation of error no matter how small in AI tools’ reactions. Because perfection belongs to Allah alone as it is evident in the Glorious Quran that:

“He who created seven heavens in layers.

You see no discrepancy (error, deficiency)

in the creation of Ar-Rahman

(The Compassionate).

Look again! Can you see any crack? (67:3)

The above verse testifies to the accuracy and perfection in the creation of Allah whereas AI tools are created by human beings therefore, there must be tendency of having error in

whatever AI tools give or produce. This is the first condition that all Muslims need to consider before using AI tools for teaching and learning Islamic Studies.

Secondly, ethical considerations need to be given priority while using AI tools for searching Islamic knowledge. This is because Islam is a religion that values morals and good norms. Therefore, AI tools that can promote what is illegal and discourage what is legal should not be regarded.

Lastly, authenticity of Sacred Book (Quran) and the Hadith of Prophet Muhammad (PBUH) should not be unscrupulously treated because they possess sacred qualities and regard. Thus, AI tools proposed to be applied or adopted need to treat them sacredly without contaminating the original text and meaning of any of them.

Artificial Intelligence Tools Suitable for Teaching Arabic and Islamic Studies

Arabic is the process of studying the language of Arab which is considered among the most widely spoken languages in the world and it is also the language of Quran and Islam. On the other hand, Islamic Studies is an academic discipline that deals with the logical and systematic studying of Islam, its beliefs, practices, history, culture and influence on the society (Andrabi, 2023). In order to make teaching, learning and research in Arabic and Islamic Studies relevant to the needs of the society, the use of artificial intelligence become imperative. Among the notable artificial intelligence tools used in Arabic and Islamic Studies are Natural Language Processing (NLP), Arabic Text Processing (ATP), Adaptive Learning Algorism (ALA), and Busuu and Arabits platforms to mention but few.

Natural Language Processing

Natural Language Processing is a powerful and widely used artificial intelligence branch that possesses ability to enabling computers comprehend, generate and manipulate human language. According to Anas et al. (2024), Natural Language Processing is a field of computer science and artificial intelligence that allows computers understand and communicate with human language. However, Natural Language Processing (NLP) is widely recognized in the field of Islamic Studies to create avenue for e-learning through the use of computerized toys to demonstrate different acts in Islam. Greek for Greeks (2024) further explained that NLP aims to adopt computational linguistics to study

language formation, communication and responses which normally allows machines to process texts and voices.

The benefits Natural Language Processing in the field of Islamic Studies are unlimited and among them are the following:

- i. It can facilitate language translation from one language to another without distorting the meaning
- ii. It can perform transliteration of text from one language to another accurately without mixing up
- iii. It can identify patterns in language formation and trends of events or incidents
- iv. It possesses ability to analyse the meaning of words or phrases
- v. It can generate articles and reports

There are so many other benefits associated with the use of Natural Language Processing (NLP) in the field of Arabic and Islamic Studies education after considering Islamic ethics in the adoption and application of this tool.

Busuu and Arabits Applications

Busuu is an application designed to learn different languages including Arabic Language. According to Anas et al. (2024), Busuu is a language learning platform that utilizes interactive learning approach to introduce users to fluent communication and pronunciation of words in order to be able to detect unconscious flaws commonly used in the language and make proper correction. This platform affords the users opportunity to communicate fluently and discovers the errors in the use of the language. In the same vein, Arabits is an application where images and sounds are used in a unique manner to teach Arabic language (Sofa, 2022). This platform is very useful in teaching Arabic words pronunciation, Arabic texts and modern standard Arabic (Anas et al., 2024). However, the use of these two artificial intelligence tools will widen the scope of language learners because through the use of these tools they will be able to detect their strengths and weaknesses during learning process.

Learning language with the aid of Busuu application is very interesting because the application possesses the ability to provide students variety of topics, generate quiz to learn and as well provide exciting pictures, videos, studies material and assignments

(Samara, 2021). This is done to make learning language more exciting in the classrooms and less the teachers' work. Similarly, Arabits application is an application designed for learning only Arabic language. This application is set to provide the user correct patterns in the pronunciation of Arabic words and construction of Arabic sentences. Application like Al-Kitaab, Rosetta, Duolingo could be found under Arabits and they are very useful for Arabic language studying.

Adaptive Learning System

This is another aspect of artificial intelligence that is very essential in the field of education. Adaptive learning algorithm is a new development technique of learning where educational teaching experiences are tailored towards students' strengths, weaknesses and learning capabilities. According to Ristic et al. (2023) this package is a computer system and artificial intelligence tool that analyse data on students' performance and behaviours in order to provide effective feed backs at when due. Furthermore, Ristic et al.'s study (2023) explained that adaptive learning system is a very useful learning approach that allows students to enjoy higher level of support and guidance that normally lead to better outcomes at the end of instruction.

The contributions of adaptive learning algorithm in learning Islamic Studies are enormous because it possesses ability to address dynamic needs of individual student including learning styles. Above all the system, provide opportunity to every student to learn at his/her own pace without interruption. With this, each student will be able to fully engage and participate in learning based on his/her ability. Similarly, this system allows educators to be able to differentiate among gifted, fast and slow learners and to provide effective way outs if necessary. In the same vein, this package widens the objectives of education by allowing it to accommodate different learning abilities and preferences. However, adaptive learning algorithm is highly relevant in the field of Islamic Studies in the sense that students' learning problems are solved promptly.

Conclusion

It is understood from the discussion that Islam is a religion that accepts all forms of development as well as they do not contradict any fundamental rule in Islam. Application of artificial intelligence tools for making teaching and learning of Arabic and Islamic Studies easier is highly encouraged and supported in Islam. Therefore, using

Natural Language Processing, Busuu, Arabits, and Adaptive Learning Algorism in Arabic and Islamic Studies is concluded acceptable in Islam.

Suggestions

The following are the suggestions raised from the study:

- i. Arabic and Islamic Studies teachers and students should develop a very strong interest in the use of artificial intelligence
- ii. School management should make it compulsory requirement the knowledge of newly invented technology for Arabic and Islamic Studies teachers and students
- iii. Government should sponsor series of trainings and workshops for Arabic and Islamic Studies teachers to update their knowledge about artificial intelligence

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Assessment of Digital Literacy and Technology Utilisation among Secondary School Students in Ilaro Metropolis, Ogun State, Nigeria

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Abstract

This study examined the digital literacy levels and technology utilization among secondary school students in Ilaro metropolis, Ogun State, Nigeria. Three research questions were raised and answered, using a descriptive survey method as the research design. data were collected from 210 students across six schools through a structured questionnaire. The instrument was validated and the reliability index obtained was 0.76. The findings revealed a moderate digital literacy among students, the students are using digital technologies in the school and factors like high device costs, limited access to infrastructure, and inadequate training opportunities within schools were identified as barriers affecting the use of digital technologies. Among the recommendations was to enhance digital literacy, making digital infrastructure available in the schools.

Keywords Digital Literacy, Digital Technologies, Utilisation, Digital Infrastructure

Introduction

Technology integration in every sector is rising, and education is no exception. There has been a significant shift in the teaching-learning process in the past few years with digitalization in education. The transformation of all information types (texts, sounds, visuals, video, and other data) of digital language can be termed digitalization (Machekina, 2017). In comparison, Keane (2012) divided digital learning into four components: digital teaching material, digital tools, digital content delivery, and autonomous learning. Koh (2016) stated that a new level of personalized learning was created to integrate technology into the education process. The use of digital technologies presents numerous opportunities for teacher teaching and student learning. In an article, Johari (2017) stated that digitalization in education has made the teaching-learning process stress-free, broad, and more participatory. Schools are gradually implementing digital learning solutions like Smart Interactive boards, laptops, interactive screens, projectors, and an internet connection to support teaching-learning. Digitalization in education can be felt by increasing accessibility, availability, and usage of digital devices in the early years of the student's life. In other words, the learner needs digital literacy skills to use digitalization in education effectively. Information and Communication Technology (ICT) has led all processes based on information, therefore there is a need for

every individual in the country to be digitally literate and technology competent (Oshin & Badmus, 2018).

Digital learning media such as web, blog, video, and multimedia can be used for all primary, secondary, and higher education subjects. This digital media can be defined as a tool/learning platform or application designed for teaching and learning. Digital learning media can facilitate and stimulate students' cognitive skills with a more meaningful learning experience (Paidí *et al.*, (2021; Sidauruk *et al.*, 2021). Digital media is essential in the learning process because it can package the material to be more contextual, interesting audiovisual, reduce verbalism, and be more interactive (Rusydiyah *et al.*, 2020). Technology-based media uses digital tools that need computers and mobile phones as supporting devices. Using digital learning media also aimed to increase students' writing and computer skills, digital skills, interactive, responsive, and share knowledge to enrich learning experiences and resources (Nelson *et al.*, 2011). Regarding digital learning in the 21st century, digital media is proposed to improve student engagement involvement and enhance knowledge and competencies (Purwadi *et al.*, 2020). The use of digital media in learning is an effort to grow student interest, motivation, attractiveness, digital literacy, and student learning outcomes.

Digital literacy refers to the learners' skills in searching for information on the internet browser and operating various software tools (Buckingham, 2010; Law *et al.*, 2018). Digital literacy is not only just understanding how to use technology but also knowing the benefits of the tools and when to utilize them (Alexander *et al.*, 2016), having the capability to organize information, and critical and creative thinking skills (Law *et al.*, 2018). There are twenty aspects related to digital literacy as follows: information research and retrieval, information evaluation, learning resources, utilization tools, data transmission, information communication, social responsibility, authorization of digital information, choosing appropriate computing devices, systems analysis, system design, tools development, programming, security of data and the information, security of financial and personal identity, administration of the database, data management, networking, computer technology; photography and digital video (Nelson *et al.*, 2017). Aspects of digital literacy competencies include capability in utilizing technology, applying technology to acquire, assess, create, and communicate information (Oh *et al.*, 2021).

Digital literacy skills are a particular set of competencies that allow an individual to fully function and participate in a digital world by understanding, finding, utilizing, and creating information from various internet sources. Over time, the advancement of technology has modified the meaning of digital literacy. In some researcher works digital literacy is the ability to understand and use information when presented via computers. Digital literacy is the ability to navigate various digital platforms and understand, assess, and communicate through them. In an article, Phuapan *et al.*, (2015) argued that digital literacy means using digital technology, communication devices, and networks in digital environments to survive in the digital world successfully. According to them, the

essential elements required to attain digital literacy skills are accessing, managing, integrating, evaluating, creating, communicating, analyzing, and synthesizing through digital devices.

Teachers worldwide are encouraged and expected to implement Information and Communication Technology (ICT) in instruction as it now places high demand on education. However, teachers might find it difficult to know how to use the Internet in the classroom. Researchers assert that most teachers in Nigeria lack pedagogical knowledge of effective utilization of ICT resources for teaching in Nigeria (Adikwu, *et al.*, 2018, Nwana *et al.*, 2017; Onasanya, 2010; Yusuf *et al.*, 2013; Yushau & Nannim, 2018). It was also observed that graduates who are hired to work in companies have difficulties manipulating basic ICT tools (Okolocha & Onaigho 2015). There were indications that ICT facilities and digital literacy were not adequately utilized in schools. Students are also seen enrolling in roadside computer centers to acquire knowledge of ICT skills and to be relevant to this digital age. In 1988, the Federal Government of Nigeria introduced computer education.

Statement of the Problem

Despite the National Policy on Education, NPE (2004) recognizing ICT as a product of technological change and innovation in education which called for the integration of computer studies into the curriculum and made the study a compulsory subject in secondary schools, there is still a huge gap in the literacy and utilization of ICT resources in schools.

The Ogun State Government's efforts towards the digitalization of education in all schools have always been discussed in the system, but some secondary schools in the state, particularly in Ilaro metropolis, have not been able to witness this development. Recently, scholars in the field of educational measurement and evaluation have advocated switching all Paper-Based Tests/Exams to Computer-Based Tests (CBT) to further extend the like of JAMB which is completely using CBT as a means of conducting her examination. Some of the digital devices available in some schools are underutilized because digital literacy is lacking among the teachers and students and some secondary schools do not have these digital technologies for both the teachers and students to use.

Since the digitalization of education has come to stay there should be reasons to justify the schools' readiness, digital literacy and technology utilization in secondary school. What we need to know is, if the students are digitally literate, if available the technologies are utilized and what are the like factors hinder the digital utilisation in the school. Therefore, this study assessed the digital literacy level and utilization of digital technologies among secondary school students in Ilaro metropolis, Ogun State, Nigeria.

Objectives of the Study

The purpose of this study was to assess digital literacy and technology utilization among secondary school students in Ilaro metropolis, Ogun State, Nigeria. Specifically, this study;

1. Assess the level of digital literacy among secondary school students.
2. Investigate the level of digital technology utilization among secondary school students.
3. Identify the factors influencing digital literacy development and utilization among secondary school students.

Research Questions

The following raised research questions were answered

1. To what extent is the level of digital literacy among secondary school students in Ilaro metropolis?
2. To what extent do secondary school students utilize digital technologies in their schools for academic purposes?
3. What key factors hinder digital literacy and technology utilization among secondary school students?

Methodology

This study used a descriptive survey design to collect information from the respondents who participated in the study. The target population comprised all senior secondary school students in Ogun State, particularly in Ilaro metropolis. There are twelve (12) public secondary schools in Ilaro.

This study utilized a simple random sampling technique to select six (6) schools out of twelve (12) public secondary schools available in Ilaro metropolis. Thirty-five (35) senior secondary school students (SS2) participated in the study and were selected using a simple random technique in each of the schools, therefore making two hundred and ten (210) students serve as respondents. In this level of class, i.e. SS2 class, have gained enough experience to understand the facilities available in the school, the styles of teaching among the teachers, instructional materials provided by school management and government to facilitate their learning, and the presence of digital technology or computer laboratory in their various schools. In all 112 (one hundred and twelve) male students and 98 (ninety-eight) female students were involved in the study. Table 1 displayed the names of the schools and numbers of the students.

Table 1: Participated Schools in Ilaro Metropolis

S/N	Schools	Nos
1	Promising Generation Secondary School, Ilaro	35
2	Itolu Community Secondary School, Ilaro	35
3	Yewa (Egbado) College, Ilaro	35
4	Ansar-ud-Deen Model Academy, Ilaro	35
5	Okepata Secondary School, Ilaro	35
6	Orona High School, Oke-	35
	Total	210

The questionnaire used to collect data for this study was a researcher-developed one. The questionnaire has two sections (A and B). Section A contained information on respondents' bio-date while section B has items that were used to collect information from the respondents to answer the stated items. The items were measured using Likert's rating scale from strongly agree (SA), agree (A), disagree (DA) to strongly disagree (SD).

The instrument was subjected to face and content validity. Three experts were used to validate the instrument, one from education technology, one from ICT, and one from educational evaluation. Their suggestions and observations were effectively taken care of before the final production of the instrument was made for distribution. The reliability coefficient was achieved through the use of Cronbach alpha and an index of 0.76 was obtained.

The questionnaire was administered with the help of researcher assistants. In each of the participating schools, a researcher assistant was used and helped to distribute and collect the questionnaire back from the respondents. It took two weeks to complete the administration of the collection of data. The analysis of the data collected was made with the use of simple frequency distribution, percentage, means score, and standard deviation through the aid of the Statistics Package for Social Science.

Results

The results of this study are presented according to the research questions as follows:

Answers to the Research Questions

Research Question 1: To what extent is the level of digital literacy among secondary school students in Ilaro metropolis?

Table 2: Level of Digital Literacy among Secondary School Students in Ilaro Metropolis

S/N	Items	SA		A		D		SD		Mean	Std. Dev.
		No	%	No	%	No	%	No	%		
1.	I am confident in my digital skills, such as using social media (Facebook, Twitter, Instagram, etc.)	72	34.3	81	38.6	37	17.6	20	9.5	2.98	0.951
2.	I am confident in digital skills like using search engines (e.g. Google, etc.)	92	43.8	88	41.9	12	5.7	18	8.6	3.21	0.893
3.	I use the internet for academic purposes daily	83	39.5	75	35.7	29	13.8	23	11.0	3.04	0.987

4.	I am confident in digital skills like creating documents (e.g. Word processing, Power presentation, etc.)	69	32.9	92	43.8	32	15.2	17	8.1	3.01	0.899
5.	I do send and receive emails (Gmail, Yahoo emails, etc.)	85	40.5	63	30.0	41	19.5	21	10	3.01	1.002
6.	I can download educational resources (Research Gates, Academia, etc.)	77	36.7	68	32.4	41	19.5	24	11.4	2.94	1.010
7.	I have received formal training on how to use digital devices for academic purposes	62	29.5	79	37.6	39	18.6	30	14.3	2.82	1.013
8.	My teachers incorporate digital tools in their teaching (e.g., using projectors, digital boards)	64	30.5	69	32.9	48	22.9	29	13.8	2.80	1.025
9.	I can search for online information without assistance	56	26.7	68	21.9	46	21.9	40	19.0	2.67	1.069
10.	I can operate different digital devices like smart phones, computers and others	60	28.4	75	35.7	32	15.2	43	20.5	2.72	1.089
Grand Mean = 2.92											

Table 2 revealed that the obtained grand mean score of 2.92 is above the mid-point of 2.5. The mean scores of all the items measured were above 2.5 and the implication is that secondary school students in Ilaro metropolis are literate in terms of digital knowledge. The level of digital literacy is average not high but moderate.

Research Question 2: To what extent do secondary school students utilize digital technologies in their schools for academic purposes?

Table 3: Level of Secondary School Students Utilization of digital technologies for Academic Purposes

S/N	Items	SA		A		D		SD		Mean	Std. Dev.
		No	%	No	%	No	%	No	%		
1.	I can utilize electronic devices including desktop computers, laptops, mobile phones, and tablets available in the school	68	32.4	76	36.2	19	9.0	47	22.4	2.79	1.127
2.	I often use Google search, educational apps, online classes, E-books, etc. for my academic work	42	20.0	36	17.1	67	31.9	65	31.0	2.26	1.104
3.	I frequently use digital tools for completing school assignments	38	18.1	41	19.5	72	34.3	59	28.1	2.28	1.063
4.	I can locate and assess information online using school computer	46	21.9	39	18.6	81	38.6	44	21.0	2.41	1.051
5.	I participate in internet forums and communities in the school for my academic pursuits	31	14.8	21	10.0	79	37.6	79	37.6	2.02	1.035
6.	I use network with other	41	19.5	28	13.3	92	43.8	49	23.3	2.29	1.033

students in my academics via computer											
7.	I do not use computer system in the school for my class work	46	21.9	30	14.3	80	38.1	54	25.7	2.32	1.085
8.	I do not see any of my teacher using digital devices to teach.	65	31.0	56	26.7	61	29.0	28	13.3	2.75	1.038
9.	No digital boards to collect on internet to get more information in the school	57	27.1	61	29.0	47	22.4	45	21.4	2.62	1.101
10.	I find and evaluate online information in the school	52	24.8	58	27.6	57	27.1	43	20.5	2.57	1.075
Grand Mean = 2.43											

Table 3 showed that the grand mean score obtained was 2.43 which is below the mid-point 2.5. From the Table, it was revealed that except for items 1 (2.79), 8 (2.75), 9 (2.62), and 10 (2.57) their mean scores were above 2.5, all other items are below the mid-point. This implies that students are not using digital technology in schools for their learning.

Research Question 3: What key factors hinder digital literacy and technology utilization among secondary school students?

Table 4: Factors Hinder Digital Literacy and Technology Utilization among Secondary School Students

S/N	Items	SA		A		D		SD		Mean	Std. Dev.	Decision
		No	%	No	%	No	%	No	%			
1.	The cost of devices is high to acquire	81	38.6	69	32.9	32	15.2	28	13.3	2.97	1.037	Agreed
2.	Lack of access to computer labs in the school	72	34.3	68	32.4	43	20.5	27	12.9	2.88	1.026	Agreed
3.	Lack of access to digital technologies like computer systems	63	30.0	56	26.7	42	20.0	49	23.3	2.63	1.142	Agreed
4.	Lack of skills to solve technical problems	78	37.1	63	30.0	34	16.2	35	16.7	2.88	1.091	Agreed
5.	Lack of training sessions from the school	69	32.9	56	26.7	56	26.7	29	13.8	2.79	1.052	Agreed
6.	Unavailability of internet facilities and accessibility	65	31.0	64	30.5	36	17.1	45	21.4	2.71	2.71	Agreed
7.	No programme available from the government to improve my digital skills	71	38.8	69	32.9	42	20.0	28	13.3	2.87	1.030	Agreed

From Table 4, it showed that all the mean scores were above the 2.5. All the items are agreed to the stated items. The high cost of digital devices (2.97), lack of access to computer labs in the school (2.88), lack of access to digital technologies to work with in

the school (2.63), no skill to solve technical problems (2.88), no training in the school for digital knowledge (2.79). the internet facilities (2.71) and lack of government intervention (2.87) to improve digital skill contribute to the challenges.

Summary of the Findings

The following is the summary of the major findings:

1. Digital literacy among students is generally moderate, secondary school students in Ilaro metropolis are literate in terms of digital knowledge.
2. Students are not using digital technology in schools for their learning.
3. Key factors influencing digital literacy include access to devices and internet connectivity, while insufficient infrastructure hinders broader usage in academic settings.

Discussion

The findings of this study align with existing literature, suggesting that digital literacy is becoming an essential skill for academic success in the digital age. The positive correlation between digital literacy and academic performance supports previous research (Adedoyin & Oyelekan, 2021) highlighting digital competence's importance in students' learning outcomes. Digital literacy among students is generally moderate, secondary school students in Ilaro metropolis are literate in terms of digital knowledge. This finding is line with Gupta and Kumar (2024) in their study concluded that a large proportion of sampled students showed an average level of digital literacy and little difference(s) were reported in the percentage of male and female students under the different levels of digital literacy. This might be as a result of students' usage of social media and search engines most often. This indicates a digital skill gap for academic use, likely due to limited formal training and resources in digital literacy.

The study found that students are not using digital technologies in the school for their academic pursuit. This finding might contradict the study of Little (2014) who agreed that using mobile devices may not be disruptive to learning environments under conditions in which the cognitive load is not too heavy.

The key barriers include the high cost of devices, lack of access to computer labs, and inadequate school infrastructure. These factors limit students' availability and use of technology, affecting their ability to develop digital skills for learning. Additionally, lack of teacher support and insufficient training sessions contribute to limited growth in digital literacy.

Conclusion

This study concludes that digital literacy is an essential component of modern education, directly affecting the academic performance of secondary school students. While access to digital tools is improving, there are still substantial gaps in utilization, especially in the use of digital resources for academic purposes. Addressing these gaps is crucial for enhancing the overall educational experience.

Recommendations

Based on the findings of the study the following recommendations emerged;

1. The government and schools in Ilaro should prioritize the development of digital infrastructure, including more computers, projectors, and internet access. This will further encourage the students to use digital devices not only for entertainment but for their study.
2. Government at all levels should make available the digital technologies in the schools for students to use. The era of traditional method of teaching has fade out, however, it is imperative for the students to familiar and use these digital gadgets to complement their conventional learning style.
3. Education can grow when there is adequate equipment, available funds, adequate instructional infrastructure and many others in the schools. Government and stakeholders in education should contribute immensely in terms of provision of physical structure in the schools.

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Nexus between Inflation and Economic Growth in Nigeria (1990-2024): Implications for Economic Stability

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Abstract

The study examined the nexus between inflation and economic growth in Nigeria from 1990 to 2024. Implications for economic stability. An ex post facto research design was employed, and secondary data were sourced from the World Bank (WB, 2024). Multiple linear regression was conducted using the Statistical Package for the Social Sciences (SPSS) to assess the relationship between inflation and economic growth in Nigeria. The results revealed that both inflation and population growth significantly influence Nigeria's economic growth. A one-unit increase in inflation reduces economic growth by 0.049 ($p = 0.025$), while a one-unit rise in population growth boosts it by 17.003 ($p = 0.001$). The study recommends, among other measures, that the government should implement effective monetary policies to maintain inflation at a sustainable level to support economic growth. Additionally, collaboration between the Central Bank of Nigeria and fiscal authorities is essential to balancing inflation control with economic expansion.

Keywords Inflation, Population Growth and Economic Growth

Introduction

Inflation is a global economic issue with different causes and repercussions across economies. Both wealthy and emerging nations endure price increases, either as short-term fluctuations or long-term trends. Maintaining inflation within a single-digit range while encouraging economic growth is a significant policy goal (Bashir, 2022). The impact of inflation on economic growth remains debated due to its importance in economic stability and policy decisions (Bangura & Omojolaibi, 2024). Macroeconomic policy tries to balance growth with reasonable inflation (Vinayagathan, 2013).

Moderate inflation promotes economic growth by incentivizing prompt expenditure and heightened investment, hence enhancing economic activity (Oner, 2024). Preventing deflation is vital, as it discourages spending, reduces corporate investment, slows economic growth, and increases debt loads (Clarke & Rubin, 2024). Inflation measures price rises over time, representing rising prices in total or specialized products and services, such as food or transportation, typically over a year (Oner, 2024).

The Keynesian point of view regards government spending as vital for stabilizing the economy, correcting short-term oscillations, and supporting sustained growth (Omodero, 2019). However, detractors claim that excessive government intervention diminishes efficiency, slows production, and distorts economic incentives through high taxation, ultimately leading to poor economic decisions (Barlas, 2020).

Monetary and fiscal policies are crucial for economic stabilization and growth (Onifade et al., 2020). In emerging economies, monetary policy controls inflation, borrowing costs, and the money supply to ensure balance of payments stability (Okimoto, 2018). Fiscal policy supports economic sustainability through taxation, public borrowing, and government expenditure (Adeyemi & Awogbade, 2022). Price uncertainty discourages savings and investment, boosts financial costs, affects the poor, diminishes export competitiveness, disturbs the balance of payments, and impedes long-term economic progress (Oteng-Abayie, 2010). However, it is against this background, the study aims to investigate the Nexus between Inflation and Economic Growth in Nigeria (1990-2024).

Inflation Dynamics

Inflation is a sustained rise in prices that reduces purchasing power (Chineme et al., 2024). While moderate inflation aids economic growth, rapid inflation disrupts economies due to supply-demand imbalances and external shocks like geopolitical conflicts (Floyd, 2024). It results from an excess money supply over goods and services, categorized as demand-pull, cost-push, or supply-side inflation (Toppr, 2024). Keynes linked inflation to excess demand, public spending, and supply constraints, with additional influences from hoarding, wage demands, and tax policies (Toppr, 2024). In Nigeria, inflation is driven by exchange rate volatility, insecurity, and infrastructure deficits, with naira depreciation raising manufacturing and commodity prices (Ashakah, 2022).

Perspectives on Economic Growth

Economic growth is a key indicator of an economy's performance, reflecting an increase in a country's capacity to produce goods and services over time (Munyeka, 2014). It is typically measured by the percentage change in real gross domestic product (RGDP), which accounts for inflation. Growth can be positive or negative, depending on changes in output levels. The size of an economy is determined by its total production, commonly measured as GDP, which can be assessed in nominal or real terms (Reserve Bank of Australia, 2019).

GDP Measurement

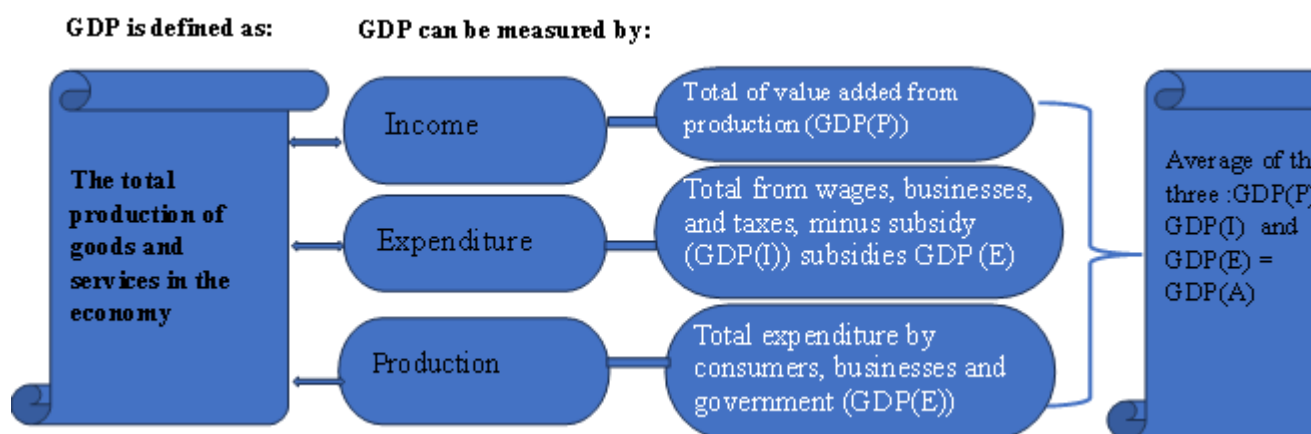


Figure 1: Approaches to GDP Measurement

GDP is measured using three approaches: GDP(P) (total of value added from production), GDP(I) (total income from wages, businesses, and taxes minus subsidies), and GDP(E) (total expenditure by consumers, businesses, and governments). Since data limitations and measurement errors cause variations among these estimates, economists typically use the average of the three, known as GDP(A) (Reserve Bank of Australia, 2019).

Measures for Curbing Inflation

Economic stability fosters equitable growth via fiscal and monetary policies. Fiscal policy governs revenue and expenditure to ensure stability, whereas monetary policy manages inflation (Ozurumba, 2012). Totonchi (2011) emphasizes that diminishing aggregate demand through decreased government expenditure, increased taxation, and interest rate modifications might mitigate inflation. Ashakah (2022) underscores the necessity for robust fiscal and monetary policies, exchange rate stability, infrastructure enhancement, and heightened security in the northern and Middle Belt regions.

Inflation and GDP Growth Trends Over Time.

Nigeria's inflation was low in the 1960s (5%), soared in the 1970s due to oil expansion, and peaked at 54.51% in 1988. The 1990s had volatility, rising 72.84% in 1995 before stabilizing around 10% by 1999. The 2000s experienced minimal inflation, but the 2010s ranged between 8%-18% due to economic shocks. In the 2020s, inflation climbed from 13.25% in 2020 to 28.4% in 2024, driven by subsidy withdrawals, currency depreciation, and supply chain difficulties (Macrotrends, 2024).

Ohuocha (2024) notes Nigeria's GDP peaked at 25.01% in 1970 but fell in the 1980s and 1990s, with -13.13% in 1981 and -10.92% in 1983. Reforms in the 2000s drove growth, peaking 15.33% in 2002. Oil price shocks produced a -1.62% drop in 2016, while the pandemic led to -1.79% in 2020. Growth rebounded to 3.65% in 2021, reaching 3.19% in 2024, underpinned by growing oil output and a robust services sector.

Inflation and Economic Growth

Awogbemi and Taiwo (2012) identified growing costs of products and services as a serious economic concern, highlighting price stability as vital for national economic success. They stress monetary policy, fiscal policy, and balance of payments as significant inflationary determinants, saying that inflation is primarily driven by money supply expansion.

According to Ahamba et al. (2020), the main long-term factors influencing inflation in Nigeria are the country's GDP, money supply, government spending, imports, exchange rate, salaries, interest rate, petrol prices, and unemployment. Their research demonstrates the intricate interaction of macroeconomic variables by confirming that both cost-push and demand-pull forces contribute to inflation.

Anidiobu, Okolie, and Oleka (2018) argue that, from a structuralist perspective, moderate inflation can drive economic growth by encouraging production and investment. However, opposing views imply inflation hampers growth by reducing purchasing power and increasing uncertainty. Oranefo (2022) found that while inflation does not significantly impact GDP, it strongly influences Gross National Expenditure (GNE), influencing overall spending patterns.

Empirical Review

Bawa & Ismaila (2021) conducted a study on threshold inflation level of 13% for Nigeria using quarterly data from 1981 to 2009. Their findings indicate that inflation below this level has a mild effect on economic growth, while inflation above it significantly hampers growth. These results provide insights for monetary policy, guiding policymakers in setting optimal inflation targets.

Similarly, Onwubuariri *et al.*, (2021) study is on the impact of inflation on Nigeria's economic growth from 1980 to 2019 using the ARDL and ECM models. Their study found that inflation and exchange rates negatively affect economic growth, whereas interest rates have a positive influence. Government consumption was found to be insignificant in driving growth. The study recommended stricter inflation control measures by the CBN's Monetary Policy Committee.

Yussuff (2021) examined the relationship between inflation and economic growth from 1990 to 2016 using unit root tests, cointegration, and VECM. The study found that inflation had no significant effect on economic growth during this period. Based on these findings, the study suggested implementing dynamic monetary policies to manage inflation when it becomes detrimental in the long run.

Theoretical Framework

The Monetary Growth Theory was originally developed by Milton Friedman in the 1960s and 1970s, asserted that inflation arises when money supply growth surpasses real output. Excessive money supply leads to rising prices, affecting economic stability and growth. In Nigeria, inflation has been driven by monetary expansion, fiscal deficits, and external shocks like exchange rate volatility and commodity price fluctuations. To manage inflation and stabilize growth, the Central Bank of Nigeria (CBN) has implemented monetary policies, including interest rate adjustments and open market operations.

Objectives of the Study

This study is guided by the following specific objectives:

1. To investigate the relationship between inflation and economic growth in Nigeria.
2. To assess the role of population growth in influencing Nigeria's economic growth.

Research Questions

This study seeks to answer the following research questions:

1. How does inflation affect the economic growth rate in Nigeria?
2. What is the relationship between population growth and economic growth in Nigeria?

Hypotheses

The study tests the following hypotheses:

H₀₁: There is no significant relationship between inflation rate and economic growth in Nigeria.

H₀₂: There is no significant relationship between population growth rate and economic growth in Nigeria.

Methodology

The study employed an expo facto research design. The data used for the study were secondarily sourced from world Bank (WB,2024) and span the period from 1994 to 2024. Multiple linear regression analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software package to examine the relationship between Inflation and Economic growth. The regression model for this study is adapted and modified from the research work of Olurin *et al.*, (2024). The functional relationship used in this study is described below:

$$GDP_t = \beta_0 + \beta_1 INF_t + \beta_2 POP_t + \epsilon_t$$

Where:

GDP_t = Real Gross Domestic Product at time t (dependent variable)

INF_t = Inflation rate at time t (independent variable)

POP_t = Population growth rate at time t (control variable)

B₀ = Constant term (intercept)

B₁ = Coefficient for inflation rate (INF)

B₂ = Coefficient for population growth (POP)

ε_t = Random error term (captures unexplained variation)

The model analyses inflation's impact on Nigeria's economic growth, with population growth as a control variable. B1 represents inflation's effect, while β2 captures population growth's influence, offering insights into economic and demographic dynamics.

Result and Discussion

Table 1: ANOVA Results for the Regression Model on Nexus between Inflation and Economic Growth in Nigeria

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	218.552	2	109.276	12.227	0.000
Residual	285.983	32	8.937		
Total	504.534	34			

Source: World Bank (WB), 2024.

Dependent Variable: Economic Growth.

Predictors: (Constant), Population Growth Rate, Inflation Rate Annually.

The ANOVA results confirm that the regression model is statistically significant (F = 12.227, p = 0.000), indicating that inflation and population growth significantly influence economic growth.

Table 2: Regression Results for the Relationship Between Inflation, Population Growth Rate, and Economic Growth in Nigeria

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	Collinearity Statistics
	B	Std. Error	Beta		Lower Bound	Upper Bound
1	Constant	-39.234	11.603		-3.381	0.002
	Inflation Rate	-0.049	0.021	0.318	-2.355	0.025
	Population Growth Rate	17.003	4.392	0.523	3.871	0.001

Source: World Bank (WB), 2024.

Significance level of 0.05: The threshold below which the result is considered statistically significant. $p\text{-value} < 0.05$: The result is statistically significant, indicating a high likelihood that the observed effect is real.

The regression results indicated that inflation negatively impacts economic growth in Nigeria, as a 1% increase in inflation reduces growth by 0.049 percentage points ($p = 0.025$), highlighting the need for inflation control measures. Conversely, population growth significantly enhances economic growth, with a 1% increase leading to a 17.003 percentage point rise ($p = 0.001$), suggesting that demographic expansion drives economic activity. With a VIF of 1.031, no multicollinearity is detected.

Discussion of Findings

The regression analysis confirms that inflation and population growth significantly influence Nigeria's economic growth. This aligns with Olurin (2024), who found that government expenditure and inflation positively impact economic growth. Similarly, Bawa & Ismaila (2012) identified a negative relationship between inflation and economic growth, regardless of the inflation threshold.

Rukayat (2021) reported that deviations from long-run equilibrium are corrected at an adjustment speed of 6.7%, with a short-run inflation coefficient of 0.0706, suggesting that a 1% increase in inflation leads to a 0.07% rise in economic growth. Nwaonuma & Ebubechima (2023) established a long-run relationship between inflation, unemployment, and economic growth. Lastly, Ojomolade & Oni (2018) found a positive linear relationship between inflation, money supply, and economic growth in both the short and long run, indicating moderate inflation benefits economic growth.

Conclusion

The study reveals that both inflation and growing populations significantly affect Nigeria's economic growth. Inflation negatively affects economic growth, as a one-unit

increase in inflation corresponds to a 0.049 reduction in GDP. Conversely, population expansion positively promotes economic growth, with a one-unit rise contributing to a 17.003 increase in GDP. The regression model is statistically significant ($F = 12.227$, $p = 0.000$), demonstrating the importance of these variables in affecting economic success. The absence of multicollinearity ($VIF = 1.031$) assures the reliability of the results.

Recommendations

1. The government should implement effective monetary policies to keep inflation at a sustainable level to support economic growth.
2. Collaboration between the Central Bank of Nigeria and fiscal authorities is essential to balance inflation control with economic expansion.
3. Encouraging investment in key sectors will help mitigate inflationary pressures and sustain long-term economic growth.

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Perceived Influence of Hibiscus-Tea (Zobo) Intake on Wellbeing of Residents in Ilorin West Local Government Area, Kwara State

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Abstract

Hibiscus tea (Zobo) is a very common drink in Africa especially in Nigeria where adult and young take so as to pass time. However, many do not know the health benefit of this drink, in fact, even the process it passes through is very simple but many do not still know. Majority do not know it has “Hibiscus tea” instead it is best known has “Zobo”. Therefore, the study investigates perceived influence of hibiscus tea intake on wellbeing of residents in Ilorin West Local Government Area, Kwara State. The objective of the study was to examine if (i) moderation of high blood pressure; and (ii) prevention of cancer are perceived influence of hibiscus tea intake on wellbeing among the residents in Ilorin West Local Government Area, Kwara State. Descriptive research of the survey type was adopted for the study. The target population comprised all residents of Ilorin West Local Government Area, Kwara State. A multi-stage sampling procedure was adopted to select two hundred and five (205) respondents for the study. A researcher-structured questionnaire validated by three experts was used as the instrument. The reliability of the instrument was established through test re-test method and a co-efficient of 0.72r was obtained using Pearson Product Moment Correlation (PPMC). Inferential statistics of Chi-square was used to analysed the data collected @ 0.05 level of significance. The finding of the study revealed that: moderation of high blood pressure was significantly perceived as an influence of hibiscus tea intake on wellbeing with calc. χ^2 value of 103.034 > the crit. χ^2 value of 16.92 at df 9 @ 0.05 alpha level and prevention of cancer was a significant perceived influence of hibiscus tea intake on wellbeing in Ilorin West Local Government Area, Kwara State. Based on the findings the study, it was concluded that moderation of high blood pressure and prevention of cancer are perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State. It was therefore recommended that residents in Ilorin West Local Government Area should encourage people with high blood pressure to drink hibiscus tea to moderate their blood pressure, reduce body weight, increased good cholesterol level and prevent the growth of cancerous cells.

Keywords: Perceived, Influence, Hibiscus Tea, Wellbeing and Residents

Introduction

Zobo is a very common drink in Africa especially in Nigeria where adult and young take so as to pass time. However, many do not know the health benefit of this drink, in fact,

even the process it passes through is very simple but many do not still know. Majority do not know it has “Hibiscus tea” instead it is best known has “zobo”. This drink has a lot of benefits on the body if prepared through the right process especially when taken chilled. Hibiscus tea is a herbal tea made as an infusion from crimson or deep magenta-colored calyces (sepals) of the roselle (*Hibiscus sabdariffa*) flower. It is consumed both hot and cold. It has a tart, cranberry-like flavour. Hibiscus is available as an extract or more often, a tea (Lucie, 2015).

Hibiscus tea is herbal tea that is made by steeping parts of the hibiscus plant in boiling water. It has a tart flavour similar to that of cranberries and can be enjoyed either hot or cold. There are several hundred species of hibiscus, varying by the location and climate they grow in, but *Hibiscus sabdariffa* is most commonly used to make hibiscus tea (Cahliková, 2015). Research has uncovered a range of health benefits linked to drinking hibiscus tea, showing that it may lower blood pressure, reduce the growth of bacteria, and even aid weight loss (Ali, 2015). The roselle hibiscus used to make the tea is likely originated in Africa (Blunden, 2015).

It is rich phytonutrient profile may be responsible for such reported health effects. For example, the phenolic acid, protocatechuic acid, organic acids (hydroxycitric acid and hibiscus acid) and anthocyanins (delphinidin-3-sambubioside and cyanidin-3-sambubioside) have been listed as important bioactive components within HSL. A compositional analysis of hibiscus calyces found these to be rich in lutein, chlorogenic acids and delphinidin 3-sambubioside. HSL extracts have additionally been found to have antioxidant and antimicrobial properties, a growing body of evidence suggests that herbal teas, including HSL could benefit aspects of preventative and clinical health. For example, one MA of five RCT comprised 390 participants found that HSL had significant effects lowering both systolic and diastolic blood pressure (Cheng, 2016).

Hibiscus tea is usually derived from the dried calyces of the tropical plant *Hibiscus sabdariffa* L. (HSL) which belongs to the mallow family (Malvaceae). It is thought to be a native of West Africa, but is commonly cultivated across the tropics and sub-tropics including China, Egypt, Mexico, Thailand and the West Indies. HSL is sometimes referred to in English as ‘roselle’ or ‘red sorrel’ and in Arabic as ‘karkade’. This naming is attributed to its colouring with the roselle calyx being a bright red colour and abundant in anthocyanins (Azlan, 2017). It is the calyces (outer parts of the flower) that are most commonly used worldwide, to make hot and cold infusions. HSL is also rich in organic acids and, thus is also referred to as ‘sour tea’ due to these providing a distinctive tart taste. Hibiscus tea is becoming increasingly popular which largely appears to be attributed to its bioactive properties, which could benefit public health. From a historical perspective HSL has been used in folklore and traditional medicines (Andrica, 2015).

Zobo drink has several health benefits resulting from its proximate, mineral, phytochemical and vitamins compositions. its microbiological quality is however questionable. Though microbial density seldom exceeds tolerant limits for ready-to eat

food. The presence of coliforms depicts poor quality. The occurrence of some microbial isolates indicates a potential health concern to consumers of the products. Most of the isolates are spoilage micro-organisms in dairy products but several of them invaded the product through poor handling and processing routes employed (Adrian, 2015). Hence with improved handling, hygiene of processors and marketers and use of sterile water, spices, flavour the microbial diversity could be reduced. In recent times, there has been an upsurge in the consumption of ready-to-eat food. This is probably due to their convenience. Ready-to-eat foods occur in varieties of food including fruits, fruit juices, nutritional drinks, snacks, etc. Generally, they are food items consumed on purchase from vendor, hawkers and consumed immediately without any further preparation (Ursoniu, 2015).

Fruits are potential source of nutrients, micronutrients, vitamins and fiber for humans. Most of these fruits include watermelon, paw-paw, and pineapples. Hibiscus is high in antioxidants and offers many potential benefits. In particular, it may help promote weight loss, reduce the growth of bacteria and cancer cells and support the health of the heart and liver. Some of these fruits are processed into juice/wine such as pineapple juice, watermelon, paw-paw blend, orange, apple and pineapple. Other essential nutritional drinks consumed by a large number of the populace in Nigeria are kunu and Zobo. Zobo is produced from the dried calyces of *Hibiscus sabdariffa* which belongs to Malvaceae family. It is an annual erect bushy branched herb found in tropical and semi-tropical regions of the world mainly in West Africa and the East Indies. *Hibiscus sabdariffa* grows to about 3.5metres in height (Blunden, 2015).

The quality of zobo drink depends mainly on the physio-chemical constituents of the raw materials, water used in their production and the hygienic condition of the processors. Water is a major resource used in the production of this drink from their raw materials. Poor quality with regard to both physio-chemical (colour, pH, turbidity, total suspended solids, total hardness, total alkalinity salinity, electrical conductivity), heavy metals (lead, cadmium, chromium, iron, zinc, copper, nickel, arsenic) and microbial (total heterotrophic bacteria, total fungi, total coliform and fecal coliforms) could also impact on the overall quality of the drink. The environment in which the drinks are processed could also influence the quality especially in the microbial perspectives (Olarubofin, 2017). Zobo drink is a nutritional drink consumed by people in Nigeria. However, the consumption of local beverages could be a potential source of transfer of zoonotic and foodborne pathogens including staphylococcus, Salmonellosis, Brucellosis, Tuberculosis, Shigellosis, Listeriosis, *E. coli*, infections, etc. (Oranusi, 2012).

Statement of the Problem

Hibiscus is generally thought to be safe when consumed in standard amounts. But using an herbal supplement like hibiscus carries a potential risk of side effects. It has been observed that many people around would say, they cannot take bitter things and many would say they prefer to die than to take herbal things, many take hibiscus tea (Zobo) but

still, they do not know the benefit of it to their health. It became a reality when a patient of high blood pressure was diagnosed due to ill-health. This prompted the researchers to make research and then, came across hibiscus tea. It really worked and helped reduce blood pressure to its lowest stage. The dry Hibiscus flowers used for making Zobo drink also includes the slight number of hallucinogenic properties. Such drinks should not be taken regularly, as some professions would absolutely avoid them. For example, drivers and factory workers who have to work with complex techniques do not want to get even slight hallucinations or feel sleepy at work.

People who are taking pills, syrups and any other medicines should avoid Zobo drink because it can interact with medications and cause addiction or health issues. The Zobo drink can help one relax but it can also cause slower reactions in the body (Olarubofin, 2017). This could lead to relaxation and prevent one from working and performing one's everyday tasks. People will get this side effect and lose their ordinary productiveness. Zobo is generally not recommended for pregnant and breastfeeding women. It was due to this effect the present researcher prompted to carry out research on hibiscus tea and educate many on the benefits of hibiscus tea. However, this research therefore sought to find out perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West, Local Government Area, Kwara State.

Research Questions

The following research questions were developed to guide the conduct of this study:

1. Will moderation of high blood pressure be a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State?
2. Will prevention of cancer be a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State?

Research Hypotheses

For the purpose of this study, the following research hypotheses were tested.

H₀₁: Moderation of high blood pressure will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

H₀₂: Prevention of cancer will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

Objectives of the Study

The main purpose of this study was to investigate the perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West, Local Government Area, Kwara State, Specifically, the objective of the study are to examine if:

1. moderation of high blood pressure would be a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.
2. prevention of cancer would be a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

Methodology

Descriptive survey research design was used for the study. According to Orodho (2010), descriptive survey research design is used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification. The design is fitting to a situation where the variables cannot easily be manipulated by the researcher. The design was used by the researchers in gathering information, summarizing, presenting and interpreting information and it involves describing the existing data. The population of this study comprised all 365,235 residents of Ilorin West Local Government Area, Kwara State. (National Population Census, 2006). A multi-stage sampling procedure was employed in this research. In the first stage, random sampling technique was used to select (6) six out of twelve (12) wards which has already been in strata. The six wards were chosen through a balloting method by selecting six rap papers out of twelve (12) rap papers. The selected six (6) wards are, Baboko, Oloje, Ojuekun, Mogaji Ngeri, Wara Oshin/Egbejila and Oko-Erin. In the second stage, a proportionate sampling technique was used to select 0.2% of the wards. Random sampling was used to select 205 respondents for the study.

Table 1: Sample Size of the Selected Wards

Wards	Population	0.2% Sample	Actual Sample
Baboko	11,652	23.3	23
Oloje	12,543	25.0	25
Ojuekun	21,693	43.3	43
Mogaji Ngeri	30,855	61.7	62
Wara Oshin/Egbejila	10,375	20.7	21
Oko-Erin	15,507	31.0	31
Total	102,625	205	205

The main instrument that was used to gather information from the respondents was a researcher's designed questionnaire titled 'Hibiscus tea as correlate of wellbeing among residents in Ilorin west, Local Government Area, Kwara State'. The questionnaire consisted of two sections A and B. Section A elicited information on the demographic characteristics of the respondents, while section B elicited information on the variables under study. The questionnaire was a closed –ended of four-point Likert type of; Strongly

Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). In order to ascertain the validity of the instrument, three (3) drafted copies of questionnaires was given to three (3) experts in Department of Health Promotion and Environmental Health Education, Faculty of Education, University of Ilorin, Nigeria. Their suggestions and comments was used to make the final draft of the instrument. Reliability of the instrument was established by the use of test re-test method. The reliability of the instrument was therefore ascertained by using Pearson Product Moment Correlation (PPMC). A coefficient of 0.72r was obtained which show the instrument is reliable for the study. The researchers carried out the administration of the questionnaire on the respondents with the aid of two research assistants who were trained for the purpose of the research in administrating the instrument. The consent of the respondents was sought before administration of the instrument and those who were not willing to take part in the study were left out. The researchers answered all questions that were not clear to the respondents and translated the questionnaire orally to the respondents who could not read the text. The respondents responded to the item and the researchers collected the questionnaire immediately to avoid loss of instrument. The data collection was sorted coded and subjected to appropriate statistical analysis. Section A which entailed the demographic data of the respondents were described using descriptive statistics of percentage, while the inferential statistics of Chi-square was used to test the postulated null hypotheses at 0.05 alpha level.

Answer to Research Questions

Research Question 1: Will moderation of high blood pressure be a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State?

Table 2: Percentile Analysis on Moderation of High Blood Pressure as a Perceived Influence of Hibiscus Tea Intake on Wellbeing

S/N	ITEMS	SA	A	Positive Response	D	SD	Negative Response
1.	Consumption of hibiscus tea effectively lowers blood pressure.	141 (68.8%)	34 (16.6%)	175 (85.4%)	12 (5.9%)	18 (8.8%)	30 (14.7%)
2.	Good blood pressure control with regular intake of hibiscus tea can prevent heart failure.	100 (48.8%)	87 (42.4%)	187 (91.2%)	18 (8.8%)	0 (0.0%)	18 (8.8%)
3.	Hibiscus helps relax blood vessels and reduce high blood pressure.	102 (49.8%)	79 (38.5%)	181 (88.3%)	24 (11.7%)	0 (0.0%)	24 (11.7%)

4.	Antioxidants in hibiscus tea protect the body against damage from oxidative stress and inflammation which contribute to high blood pressure.	101 (49.3%)	86 (42.0%)	187 (91.3%)	18 (8.8%)	0 (0.0%)	18 (0.0%)
	Mean			182 (88.8%)			23 (11.2%)

Table 2 shows that the means positive responses by the respondents to the items is 182 (88.8%), which is greater than the means of negative responses of 23 (11.2%). This implies that moderation of high blood pressure is a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

Research Question 2: Will prevention of cancer be a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State?

Table 3: Percentile Analysis on Prevention of Cancer as a Perceived Influence of Hibiscus Tea Intake on Wellbeing

S/N	ITEMS	SA	A	Positive Response	D	SD	Negative Response
5.	Hibiscus tea extract limits cell growth and reduces mouth cancer.	78 (38.0%)	103 (50.2%)	181 (88.2%)	18 (8.8%)	6 (2.9%)	24 (11.7%)
6.	Regular intake of hibiscus tea helps reduce breast cancer in women.	52 (25.4%)	112 (54.6%)	164 (80.0%)	29 (14.1%)	12 (5.9%)	41 (20.0%)
7.	Hibiscus tea contains antioxidants which have anti-cancer properties.	100 (48.8%)	34 (16.6%)	134 (65.4%)	65 (31.7%)	6 (2.9%)	71 (34.6%)
8.	Stomach cancer can be reduced with the intake of hibiscus tea.	76 (37.1%)	52 (25.4%)	128 (62.5%)	35 (17.1%)	42 (20.5%)	77 (37.6%)
	Mean			152 (74.2%)			53 (25.9%)

Table 3 shows that the means positive responses by the respondents to the items is 152 (74.2%), which is greater than the means of negative responses of 53 (25.9%). This implies that prevention of cancer is a perceived influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

Test of Hypotheses

H₀₁: Moderation of high blood pressure will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

Table 4: Chi-square analysis on Moderation of High Blood Pressure as a Perceived Influence of Hibiscus Tea Intake on Wellbeing

Variable	N	Df	Cal. value	χ^2	Crit. value	χ^2	P value	Remark
Moderation of high blood pressure as a perceived influence of hibiscus tea intake on wellbeing	205	9	103.034		16.92		0.000	H0 ₁ Rejected

Table 4 shows the calculated Chi-square value of 103.034 which is greater than the critical Chi-square value of 16.92 (Cal. χ^2 val. > Crit. χ^2 val.) with a degree of freedom of 9 at 0.05 alpha level. Since the calculated χ^2 value is greater than the critical value, the null hypothesis which stated that moderation of high blood pressure will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State is rejected. This implies that moderation of high blood pressure is a significantly perceived influence of hibiscus tea intake on wellbeing in Ilorin West Local Government Area, Kwara State.

H0₂: Prevention of cancer will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State.

Table 5: Chi-square Analysis on Prevention of Cancer as a Perceived Influence of Hibiscus Tea Intake on Wellbeing

Variable	N	df	Cal. value	χ^2	Crit. value	χ^2	P value	Remark
Prevention of Cancer as a Perceived Influence of Hibiscus Tea Intake on Wellbeing	205	9	78.171		16.92		0.000	H0 ₄ Rejected

Table 5 shows the calculated Chi-square value of 78.171 which is greater than the critical Chi-square value of 16.92 (Cal. χ^2 val. > Crit. χ^2 val.) with a degree of freedom of 9 at 0.05 alpha level. Since the calculated χ^2 value is greater than the critical value, the null hypothesis which stated that prevention of cancer will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State is rejected. This implies that prevention of cancer is a significantly perceived influence of hibiscus tea intake on wellbeing in Ilorin West Local Government Area, Kwara State.

Discussion

Hypothesis one revealed that the calculated Chi-square value of 103.034 which is greater than the critical Chi-square value of 16.92 (Cal. χ^2 val. > Crit. χ^2 val.) with a degree of freedom of 9 at 0.05 alpha level. Since the calculated χ^2 value is greater than the critical value, the null hypothesis which stated that moderation of high blood pressure will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State was rejected. This implies

that moderation of high blood pressure is a significant perceived influence of hibiscus tea intake on wellbeing in Ilorin West Local Government Area, Kwara State. This finding is in line with the finding of Go, (2016) and World Health Organization, (2015) which stated that hibiscus tea decreased systolic and diastolic blood pressure by an average of 7.58 millimeters of mercury (mm Hg) and 3.53 mmHg, respectively. While hibiscus tea may be a safe and natural way to help lower blood pressure, it is not recommended for those who are taking medications to treat high blood pressure, as it may interact with these drugs it may help to reduce both systolic and diastolic blood pressure. High blood pressure, clinically known as hypertension, affects more than 75 million Americans, an estimated 1 billion individuals worldwide, and is a serious, life-threatening health condition.

Hypothesis two revealed that the calculated Chi-square value of 78.171 which is greater than the critical Chi-square value of 16.92 (Cal. χ^2 val. > Crit. χ^2 val.) with a degree of freedom of 9 at 0.05 alpha level. Since the calculated χ^2 value is greater than the critical value, the null hypothesis which stated that prevention of cancer will not significantly be perceived as an influence of hibiscus tea intake on wellbeing among residents in Ilorin West Local Government Area, Kwara State is rejected. This implies that prevention of cancer is a significant perceived influence of hibiscus tea intake on wellbeing in Ilorin West Local Government Area, Kwara State. This corroborates with report of Spade, (2018) which reported that test-tube studies have found impressive results regarding the potential effects of hibiscus extract on cancer cells. In one test-tube study, hibiscus extract impaired cell growth and reduced the invasiveness of mouth and plasma cell cancers. Another test-tube study reported that hibiscus leaf extract prevented human prostate cancer cells from spreading. Hibiscus extract and its components have also been shown to inhibit the growth of other types of cancer cells in test-tube studies, including breast, stomach, and skin cancer. Hibiscus is high in polyphenols, which are compounds that have been shown to possess powerful anticancer properties (Trusted Source, 2019).

Conclusion

Based on the findings of the study, the following conclusion was drawn:

Taking hibiscus tea contributes to moderation of high blood pressure among residents in Ilorin West Local Government Area, Kwara State. Also, taking hibiscus tea tends to reduces risk of having cancer among residents in Ilorin West Local Government Area, Kwara State.

Recommendations

Based on the results of the findings the following recommendation were drawn:

1. Residents in Ilorin West Local Government Area, should encourage people with high blood pressure to drink hibiscus tea to moderate their blood pressure.

2. Residents in Ilorin West Local Government should take hibiscus tea regularly to prevent the growth of cancerous cell.

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Effect of Game-Based Learning Platforms on Senior Secondary Student Engagement and Knowledge Retention in Biology in Kwara State, Nigeria

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Abstract

The study investigated the Effect of Game-based Learning Platforms on Senior Secondary Student's engagement and Knowledge Retention in Biology in Kwara State, Nigeria. Utilizing a quasi-experimental design, the research involved two groups: an experimental group exposed to classroom based gamified learning strategies and a control group receiving traditional lecture-based instruction. Data were collected using a Biology Achievement Test (BAT) and a Student Engagement Questionnaire (SEQ), with high reliability. The findings indicated that gamification significantly enhances student engagement and knowledge retention, addressing the challenges of low engagement and poor academic outcomes prevalent in the State. The study underscores the importance of adopting innovative teaching strategies in resource-constrained settings, providing empirical evidence that supports the integration of gamification into the biology curriculum. This study contributed to the broader knowledge on educational strategies that foster active learning and intrinsic motivation among students. The study recommended that schools should incorporate gamified learning strategies into the biology curriculum to enhance student engagement and improve academic performance. Teachers should be trained and retrained by school management and government on gamification techniques to effectively implement these strategies in the classroom in order to ensure a more interactive learning environment.

Introduction

Education is the foundation and vehicle for societal progress. Improving the quality of teaching has become critical to meet the evolving needs of 21st-century learners. Among the various innovative teaching strategies being adopted, gamification has emerged as a promising method to enhance learning outcomes. Gamification involves the integration of game activities, such as competition, rewards, and role-playing, into non-game contexts, including education. Deterding, Dixon, Khaled, & Nacke, (2011) In the classroom, gamification transforms traditional teaching methods into engaging and interactive

experiences. This study explores the impact of gamification, specifically classroom game-based learning platforms, on senior secondary school students' engagement and knowledge retention in biology within Kwara State, Nigeria.

Biology, a core science subject, is essential for understanding life processes and tackling global challenges in areas such as health, agriculture, and environmental conservation. However, many students struggle with biology due to its complex and abstract concepts, which are often taught using traditional, lecture-based methods. These methods emphasize rote memorization rather than active engagement and understanding. Olarewaju (2020) noted that these challenges are prevalent in Nigerian secondary schools, particularly in regions like Kwara State, where limited resources aggravate the situation. Consequently, student disinterest and poor academic performance in biology have become pressing concerns that necessitate innovative approaches to teaching.

Classroom-based gamification offers a practical and accessible way to address these challenges. Unlike digital gamification, which relies heavily on technology, classroom-based gamification uses physical and interactive activities that can be easily implemented in resource-limited settings. For instance, games such as quizzes, classroom economy, quest-based learning, badge system, leaderboard challenges, escape room activities, spin the wheel, classroom battles, time trials, role-playing, and scavenger hunts allow students to engage with biology concepts in a hands-on and collaborative manner. Studies have shown that classroom games improve students' understanding of complex topics by making the learning process entertaining and relevant to their age group and day to day life. Miller and Rose (2015) argue that such activities create a playful environment that fosters active participation and deepens conceptual understanding.

One of the key benefits of gamification is its ability to enhance student engagement, which is a critical determinant of academic success. Fasuyi, Oladipo, and Udeani, (2022) defined engagement as the behavioral, emotional, and cognitive involvement of students in learning activities. Unfortunately, traditional teaching methods often fail to engage students effectively, leading to passive learning and low achievement. In contrast, gamification captures students' attention, evokes positive emotions, and encourages active participation in learning. Adesoji and Olusola (2019) found that activities such as biology scavenger hunts and role-playing significantly improved student engagement in Nigerian secondary schools, demonstrating the potential of gamification to transform classroom dynamics.

Another critical challenge in biology education is knowledge retention the ability to recall and apply learned information over time. Most a time, in traditional teaching approaches students struggle to retain concepts for examinations. Classroom-based gamification addresses this issue by promoting learner centered activities through repetitive and scenario-based tasks. These activities align with Vygotsky's (1978) social constructivist theory, which emphasizes the role of interaction and collaboration in knowledge construction. For example, classroom battles and team-based games encourage students to discuss ideas, solve problems, and reinforce their understanding through peer interactions. Huang and Soman (2013) demonstrated that gamified learning significantly improved knowledge retention among biology students, as the interactive nature of these activities made the learning experience more memorable.

In the Nigerian context, the application of gamification is particularly relevant due to the systemic challenges facing the education sector. Issues such as congested classrooms, inadequate teaching materials, and limited access to technology hinder effective teaching and learning. Ogunleye (2018) highlights these challenges, especially in rural and semi-urban areas like Kwara State. Classroom-based gamification offers a cost-effective and scalable solution, as it relies on simple tools and creative strategies that can be implemented with minimal resources.

Despite the global popularity of gamification in education, its application in Nigerian classrooms, particularly in biology, remains underexplored. Adedoyin (2019) conducted a study in Lagos State and found that incorporating gamified activities into science classrooms improved student engagement and knowledge retention. However, the study also emphasized the need for teacher training and curriculum adaptation to maximize the benefits of gamification. While these findings are promising, there is limited research specifically addressing the impact of classroom-based gamification on biology education in Kwara State.

This gap underscores the need for localized research to understand the effectiveness of gamification in improving student engagement and knowledge retention in biology. By focusing on classroom-based gamification, this study aims to provide practical insights that can be applied in resource-constrained settings. It seeks to determine how interactive, game-based learning platforms can transform the teaching and learning of biology for senior secondary school students in Kwara State.

The theoretical framework for this study is grounded in constructivist learning theory and self-determination theory. Constructivist learning theory, as proposed by Piaget (1952) and Vygotsky (1978), emphasizes active participation and collaboration in learning. Gamification aligns with this theory by creating environments where students actively engage with content and construct their knowledge through interaction. Self-determination theory (Deci & Ryan, 1985) further supports the motivational aspects of gamification, as it fulfills students' psychological needs for competence, autonomy, and relatedness, thereby enhancing their engagement and learning outcomes.

The significance of this study lies in its potential to improve biology education in Kwara State and contribute to the broader discourse on gamification in education. By providing empirical evidence on the effectiveness of classroom-based gamification, the study could inform curriculum design, teacher training, and educational policy. Furthermore, it highlights the relevance of gamification in resource-constrained settings, offering a model for other regions facing similar challenges.

Gamification has become an increasingly prominent strategy in education, offering a means to enhance learning experiences by incorporating game elements into teaching methodologies. It has been shown to improve student engagement, motivation and knowledge retention, particularly in subjects like science, where traditional teaching approaches often fail to capture students' interest. Biology, with its complex and abstract concepts, requires innovative instructional strategies to promote active learning and simplify understanding, making gamification a highly effective approach.

One of the primary benefits of gamification is its ability to increase student engagement. Engagement is a critical factor in academic success, yet conventional teaching methods

often leave students disinterested and passive. By introducing elements like competition, rewards, and challenges, gamification can make learning more interactive and stimulating. Yildirim and Şen (2021) found that incorporating gamified elements into science classrooms significantly enhanced students' emotional and cognitive involvement. Similarly, Adesoji and Olusola (2019) demonstrated that gamified activities such as quizzes and role-playing significantly improved the enthusiasm and participation of biology students in Nigerian secondary schools. These findings illustrate how gamification can shift the classroom dynamic, transforming students from passive listeners to active participants.

Another important aspect of gamification is its impact on knowledge retention. Retaining information over time is a common challenge for students, particularly in subjects like biology that involve extensive terminologies and abstract ideas. Gamification addresses this challenge by encouraging deep learning through interactive and repetitive tasks. Huang and Soman, (2013) showed that biology students who participated in gamified lessons exhibited better long-term retention compared to those taught through traditional methods. Collaborative games, such as team-based challenges and problem-solving tasks, were particularly effective, as they fostered peer learning and feedback. Similarly, Oladipo and Adebayo (2020) found that students who engaged in gamified biology lessons performed better on delayed post-tests, indicating that gamification strengthens the durability of knowledge.

The value of gamification is not confined to technologically advanced classrooms. In resource-constrained environments, teachers can be improvised for instructional materials. Adedoyin (2019) emphasized the potential of simple tools like flashcards, charts, and physical activities in introducing gamified learning into biology classrooms. These approaches are particularly significant in settings where access to digital resources is limited, ensuring that students in underprivileged areas can still benefit from engaging and interactive learning experiences. Ogunleye (2021) further highlighted that classroom-based gamification fosters inclusivity, allowing all students to participate regardless of their socioeconomic background.

Despite its advantages, the implementation of gamification in education is not without challenges. One significant obstacle is the lack of teacher readiness and training. Ali and Mohammed (2023) pointed out that many teachers are not equipped with the skills or confidence to effectively integrate gamified activities into their lessons. Addressing this issue requires targeted professional development programs to help educators understand and apply gamification strategies effectively. However, when implemented correctly, gamification has the potential to revolutionize education, making learning more engaging and meaningful for students.

In conclusion, studies have shown immense potential of gamification in improving engagement and knowledge retention in biology education. However, there is a pressing need for localized research to examine its specific impact in area like Offa, Kwara State, where educational challenges are unique. By investigating the effects of classroom-based gamification, this study aims to contribute valuable insights to the global discourse on innovative teaching practices and enhance biology education in resource-constrained settings.

Theoretical Framework

This study is grounded in constructivist learning theory and self-determination theory, which collectively explain the effectiveness of gamification in education. Constructivist learning theory, as proposed by Vygotsky (1978), emphasizes that learners construct knowledge actively through social interaction and engagement. Classroom-based gamification aligns with this theory by fostering collaborative and interactive learning environments that promote deeper understanding. Additionally, self-determination theory (Deci & Ryan, 1985) highlights the importance of intrinsic motivation in learning. Gamification satisfies students' psychological needs for competence, autonomy and relatedness through challenges, rewards, and teamwork, thereby increasing engagement and knowledge retention in biology education.

Statement of the problem

This study is justified by the critical need to address persistent challenges in biology education, particularly in resource-constrained settings like Kwara State, Nigeria. Biology, a core science subject, often suffers from low student engagement and poor knowledge retention due to traditional teaching methods that are teacher centered which emphasize rote memorization over active learning. These challenges hinder students' academic performance and limit their interest in pursuing careers in science-related fields. Gamification, an innovative teaching strategy, has been shown to improve engagement and retention by transforming learning into an interactive and enjoyable experience. However, most studies on gamification in education focus on digital platforms and are conducted in developed countries, leaving a gap in localized research on low-cost, classroom-based gamification in Nigeria. Addressing this gap is crucial, as classroom-based games are more accessible and practical for schools in Kwara State, where digital resources are limited.

By investigating the impact of classroom game-based learning platforms on student engagement and knowledge retention in biology, this study provides evidence-based insights that can inform curriculum development, teacher training and educational policies. Ultimately, it aims to enhance the quality of biology education, improve learning outcomes and contribute to the global discourse on effective teaching strategies in science education.

Objectives of the Study

1. To examine the impact of classroom-based game-based learning platforms on student engagement in biology among senior secondary school students in Kwara State.
2. To assess the effect of classroom-based gamification on knowledge retention in biology among senior secondary school students in Kwara State.

Research Questions

1. How does the use of classroom game-based learning platforms influence student engagement in biology among senior secondary school students in Kwara State?
2. What is the effect of classroom-based gamification on knowledge retention in biology among senior secondary school students in Kwara State?

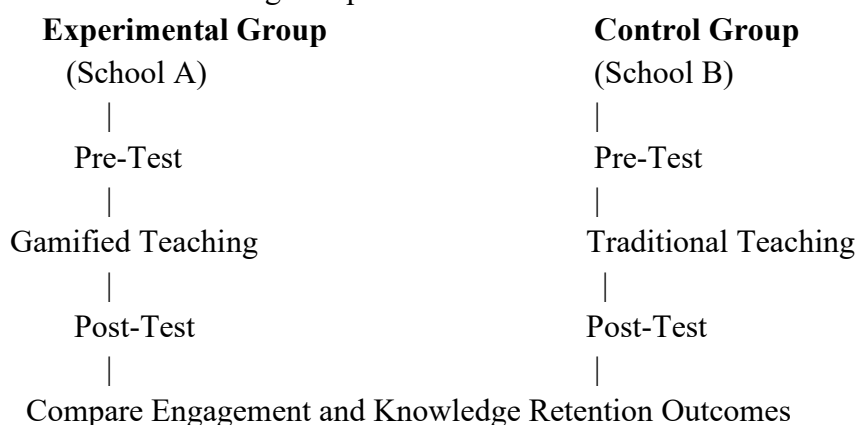
Research Hypothesis

H₀₁: There is no significant difference between classroom game-based learning platforms and student's engagement in biology among senior secondary school students in Kwara State

H₀₂: There is no significant difference effect of Classroom-based gamification on knowledge retention in biology among senior secondary school students in Kwara State.

Methodology

The study employed a quasi-experimental research design to investigate the effect of game-based learning platforms on senior secondary students' engagement and knowledge retention in Biology in kwara State, Nigeria. The design involved two groups, an experimental group, which was exposed to gamified learning strategies, and a control group, which received traditional lecture-based teaching. The study was conducted in two public senior secondary schools in Offa, Kwara State. Senior secondary II (SS II) students of 50 and 53 students respectively in intact classes were involved in the study to ensure the natural classroom setting was preserved.



The population for the study comprised senior secondary school II (SS II) biology students in Offa, Kwara State. Two schools were purposively selected based on their accessibility and willingness to participate in the study. One intact class from each school was randomly assigned to the experimental or control group. Fifty 50 and 53 Senior secondary II (SS II) students respectively were involved in the study to ensure the natural classroom setting was preserved.

The instrument for data collection was a researcher-designed **Biology Achievement Test (BAT)** and a **Student Engagement Questionnaire (SEQ)**. The BAT consisted of 30

multiple-choice questions covering the topics taught during the study, validated by subject experts to ascertain the content and face validity. The SEQ, adapted from Fredricks, Blumenfeld, & Paris (2004), measured behavioral, emotional, and cognitive engagement through a 4-point Likert scale. Both instruments were subjected to pilot testing to determine the reliability. Cronbach's alpha values of 0.85 and 0.78 for the BAT and the SEQ respectively, indicating high reliability.

Data collection lasted for four weeks. In the experimental group, the teacher used gamified strategies such as biology quizzes, classroom economy, quest-based learning, badge system, leaderboard challenges, escape room activities, classroom battles, time trials, and scavenger hunts to teach the assigned topics. The control group received conventional lecture-based instruction on the same topics. Both groups were taught by their regular biology teachers, who were trained beforehand to ensure uniformity in the teaching.

Pre-tests were conducted to both groups to assess their previous knowledge and engagement levels before the intervention. After the treatment of about three weeks post-tests were administered after using the BAT and SEQ to measure changes in knowledge retention and engagement. Observations were made in the experimental group to assess students' responses to gamified activities.

The data analyzed using descriptive and inferential statistics. Mean and standard deviation were used to answer research questions and Analysis of Co-variance (ANCOVA) were used to test the two hypotheses at 0.05 level of significance.

Ethical Considerations

Ethical considerations were strictly adhered to throughout the study. Permission was sought from the Kwara State Ministry of Education and Human Capital Development and the principals of the selected schools. Informed consent was secured from the students and their parents or guardians, to ensure voluntary participation. Anonymity and confidentiality were upheld by coding participants' data and avoiding the use of identifiable information. Students in the control group were assured that they would benefit from the gamification strategies after the study to mitigate any perceived disadvantage.

Results

The findings of this study were presented in the following tables:

Answering Research questions

Research Question 1: How does the use of classroom game-based learning platforms influence student engagement in biology among senior secondary school students in Kwara State?

Effect of Game-Based Learning Platforms on Senior Secondary Student Engagement and Knowledge Retention in Biology in Kwara State, Nigeria

Table 1: Use of Classroom Game-based Learning Platform and Students' Engagement

Group	Number of Respondents	Mean Engagement Score	Standard Deviation	Minimum Score	Maximum Score
Experimental	50	7.8	1.5	5	10
Control	53	5.1	1.2	3	8

Table 1 indicated that the experimental group exhibited a higher mean engagement score (7.8) compared with the control group (5.1), this implied that classroom-based gamification enhances students' engagement.

Research Question 2: What is the effect of classroom-based gamification on knowledge retention in biology among senior secondary school students in Kwara State?

Table 2: Use of Classroom Game-Based Learning Platform and Students' Knowledge Retention

Group	Number of Respondents	Mean Knowledge Score	Standard Deviation	Minimum Score	Maximum Score
Experimental	50	78.2	8.4	60	95
Control	53	58.3	7.6	45	75

Table 2 revealed that the experimental group achieved a higher mean knowledge retention score (78.2) compared with the control group (58.3), indicating that classroom-based gamification positively improves knowledge retention among biology students.

Research Hypotheses

H₀₁: There is no significant difference between classroom game-based learning platforms and student's engagement in biology among senior secondary school students in Kwara State.

Table 3: ANCOVA Showing the Effect of Classroom Game-based Learning Platforms on Student Engagement

Source	Sum of Squares	df	Mean Square	F	p-value
Teaching Method	210.35	1	210.35	98.76	<0.001
Pre-Engagement Score (Covariate)	15.42	1	15.42	7.24	0.008
Error	132.67	99	1.34		
Total	358.44	101			

Table 3 showed a significant effect of the teaching method on student engagement after controlling for pre-engagement scores. The experimental group (gamification) showed higher engagement levels of (F, 98.76) greater than P-value (0.001) when compared to the control group, thus, the null hypothesis was rejected.

This suggests that the use of game-based learning platforms significantly affect student engagement in biology, supporting the rejection of the null hypothesis. The control group,

which did not use gamification strategies, displayed lower engagement scores compared to the experimental group, where gamified learning was adopted.

H₀₂: There is no significant difference effect of Classroom-based gamification on knowledge retention in biology among senior secondary school students in Kwara State.

Table 4: ANCOVA Showing the Effect of Classroom Game-based Learning Platforms on Knowledge Retention

Source	Sum of Squares	df	Mean Square	F	p-value
Teaching Method	18,250.47	1	18,250.47	162.58	0.001
Pre-Knowledge Score (Covariate)	1,200.56	1	1,200.56	10.69	0.001
Error	11,102.34	99	112.15		
Total	30,553.37	101			

Table 4 revealed a significant effect of the teaching method on knowledge retention after controlling for pre-test knowledge scores. Students in the experimental group demonstrated higher knowledge retention with (F, 162.58) greater than P-value of (0.001) compared to those in the control group, thus the null hypothesis was rejected.

Discussion

The findings of this study revealed that classroom game-based learning platform significantly enhances student engagement and knowledge retention in biology among senior secondary school students in Kwara State. The ANOVA results showed statistically significant differences in engagement and retention scores between the experimental group and the control group. This implies that there is different between performance of students exposed to gamification in engagement and knowledge retention than student taught with conventional method of teaching. This underscores the potential of classroom game-based learning platform as a transformative strategy in improving science education, particularly in a resource-limited area like Kwara State.

This study is in agreement with the findings of Obafemi and Adekunle (2021), who reported that gamification strategies create an interactive and enjoyable learning atmosphere, particularly in Nigerian classrooms with limited educational resources. Similarly, Hamari, Koivisto and Sarsa (2014) conducted a meta-analysis and revealed gamification's effectiveness in boosting behavioral, emotional, and cognitive engagement across diverse educational settings.

Knowledge retention was also significantly higher among students exposed to gamification. This finding corroborates the study by Ibrahim and Olawale (2020), who demonstrated that Nigerian secondary school students taught with game-based techniques retained biology concepts more effectively than those taught using traditional methods. Furthermore, Su and Cheng (2015) showed that game-based learning improves long-term

memory by actively involving learners in problem-solving and reinforcing concepts through repetition in a fun and engaging manner.

The results of this study was in line with the study of Akinpelu et al. (2022), who found that gamification fosters collaborative learning and peer interactions, which enhance understanding and retention of complex scientific concepts. In the international context, Kapp (2012) emphasized that gamification leverages intrinsic motivators like challenge and extrinsic rewards to create a meaningful learning experience, leading to better knowledge assimilation. Besides, Charsky (2010) revealed that the immediate feedback inherent in gamification reinforces learning and helps students identify and correct misconceptions early, further improving retention.

The findings of this study also provide local relevance, addressing the challenges of low student engagement and poor academic outcomes in Kwara State. Ajayi and Bamigboye (2019) pointed out that reliance on traditional lecture-based teaching methods in many Nigerian schools often fails to capture students' interest or meet the demands of 21st-century learning. By adopting classroom-based gamification, biology teachers in Kwara State can overcome these limitations and create a more dynamic and effective learning environment. The results of this study confirmed that gamification is a powerful pedagogical tool that promotes engagement and knowledge retention, supported by both local and international research. Its adoption in classrooms has the potential to transform biology education, particularly in underperforming schools, by making learning more interactive, enjoyable, and impactful.

Conclusion

The study confirmed the transformative potential of classroom game-based learning platform in biology education, particularly in areas facing educational challenges. By fostering a more engaging and interactive learning atmosphere, gamification not only enhances knowledge retention but also addresses the pressing need for innovative teaching strategies. The positive outcomes observed in this research advocate for the broader adoption of gamified approaches in educational settings, ultimately contributing to improved student performance and motivation in biology and beyond.

Recommendations

The findings of this study recommended that schools should incorporate classroom game-based learning strategies into the biology curriculum to enhance student engagement and improve academic performance.

School management, ministry of education should provide a platform for training and retrained of teachers on the use of gamification techniques to effectively implement these strategies in the classroom.

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Social Studies Teachers' Accomplishment of the Implementation of Senior Secondary School Civic Education Curriculum in Ilorin Kwara State Nigeria

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Abstract

The readiness of teachers to take additional responsibility in their area of calling is part of what is required of a 21st-century teacher's role. This remains very important to the successful implementation of senior secondary school civic education curriculum as they are saddled with the responsibility to enrich the contents of the subject with relevant information from their immediate environment. This study investigated the teachers' accomplishment in the implementation of the civic education curriculum at the senior secondary schools and whether or not they saw it as an extra burden. A descriptive research design was adopted for this study; the target population for this study was purposively drawn and comprised of 100 sampled civic education teachers. The researcher constructed questionnaire was used to collect data using the Cronbach Alpha to ascertain the reliability at 0.78 value. Percentages, Mean, and t-test statistics were used to analyze the data collected at 0.05 alpha level. The findings of this study revealed that to some extent civic education teachers implemented the value-based concept listed in the questionnaire for the civic education curriculum and they do not perceive the teaching of civic education as a burden, especially in private schools. Based on these findings, it was noted in this study that all schools have the potential to provide the best in the implementation of civic education curriculum and sustainability. It was recommended that Civic education should be considered as a subject which should be handled with a more holistic approach for better achievement of the objectives, teachers' morale should be boosted regardless of school type and school location to sustain the teaching of the essential values embedded in the civic education curriculum.

Keywords Civic education. Extra burden, Public Schools, Private Schools, Social Studies Specialists

Introduction

Civic Education focuses on the cultivation of the right type of values and attitudes in the citizens for the growth of the society. The acquisition of these right types of values and attitudes enables individuals to operate as functional members of society. This definition revealed that education can be taught, and learned through formal and informal dimension, it is formal when it is taught and learned in the school curriculum, while it is informal when it is through the socialization process. Jekayinfa *et al.* (2011) distinguish between social studies and civic education. Social studies encompass the study of humans in their physical, social, political, economic, technological environment, and the rest. Also, Social Studies sensitizes the learners to be conscious of their religious beliefs, and the effect of science and technology on humans. Civic education on the other hand deals

specifically with the study of humans, their social and political relationships in their community, their rights and responsibilities to government and their interest in governance issues. The Jordanian Centre of Civic Education (JCCES) (2010), maintained the position that civic education is a subject that is concerned with disseminating the spirit of responsibilities, and attentive citizenship so that civic qualities may become part of the behavioural ethos of citizens. Ajibade (2011) defined civic education as a school subject which prepares people of a country especially the young to carry out their roles as citizens. Hence it is important not to underestimate what schools can accomplish in the realization of the goals and objectives of civic education. The implementation of the subject commenced in September 2011 to date, with the sole aim of equipping secondary school students to apply the knowledge, skills, values and attitudes acquired to their daily experiences, thereby producing responsible and disciplined Nigerian citizens. The best available evidence also suggests that teaching students about current events, the political process and how to get involved can make them more willing and able to practice good citizenship. For instance, global education conferences organized by UNESCO on citizenship are mainly targeted at giving people the opportunity to discuss why and how to integrate the values inherent in sustainable development into teaching and learning processes, furthermore, it was established that the rights and responsibilities of citizens in a country should be emphasized by citizenship education (Olibie & Akudolu, 2015).

The real value of a functional education rests largely on its effective implementation, this implies that those who translate theory into practice are expected to have undergone certain training with a minimum teaching qualification. The minimum teaching qualification in Nigeria is the Nigerian Certificate in Education (NCE). Other higher teaching qualifications include a university bachelor's degree of Art or Science in Education B. A (Ed) and B.Sc. (Ed). The minimum certificate and professional qualification for teaching at the senior secondary school to date is a Bachelor's degree in Education (B.Ed.). Teachers who possess this qualification in social studies are recognized as qualified teachers for the implementation of civic education at the senior secondary schools in Nigeria (Balogun, 2011). Teaching according to Adetayo (2011) is a continuous human activity by which the teacher connects the learner and the subject matter drawn from the school curriculum. This is to say that teachers are individuals who engage in teaching activities having undergone an appreciable degree of training in classroom pedagogy. In Nigeria, teachers at the senior secondary schools with requisite educational qualification are expected to teach at the senior secondary level consisting of three (3) years duration after the successful basic education. This level of education is the second stage in formal education fondly seen as education for the adolescent years. Also, senior secondary education can be referred to as the education students receive after upper-basic education and before tertiary education (Federal Republic of Nigeria, 2013).

A clear distinction was made between Social Studies and Civic Education thus; While Social Studies encompasses but is not limited to the study of humans in their overall environment, their society, their religious beliefs, and the effect of science and technology on them; Civic Education on the other hand deals specifically with the study

of humans, and their social and political relationships in their community, their rights and responsibilities to government and their interest in governance issues, Civic Education helps people to deal with the world around them more capably and confidently. The subject teaches young people how to get the best out of their world. It teaches them to stand up for their rights and opinions and how to help other people to do so. It also teaches tolerance of opposing viewpoints and that there is no such thing as “the right answer” (Jekayinfa, Mofoluwawo & Oladiran 2011). This is an indication that there is a need to determine what will be taught to ensure that students at the senior get out of this level of education with an understanding of their country’s history to imbibe loyalty to their country and other cherished values for good citizenship. Odejebi and Adeyemi (2009) pointed out that civic instruction tends to be formalistic, stressing the structure rather than the dynamic of governments. Tijani, Musa and Muhammed (2011) stated that teachers are vital elements of teaching and learning, they also lament that insufficient qualified teachers who can handle the contents of civic education constitute a major problem in effective learning of the subject area, they observed that in some schools, History and Geography teachers who do not have in-depth knowledge about the subject are saddled with the responsibility of teaching it.

From the foregoing, it is glaring that the importance of Civic Education in the senior secondary school curriculum cannot be overemphasized. Teachers’ major role in the curriculum process is to transform theory into practice at the classroom level, doing this consciously is expected to develop personal courage and social confidence in students, as best instructional practices that will contribute to the students’ moral development to prepare them for the responsibilities of citizenship are the focus of civic education.

Management and ownership of secondary education are categorized into public and private schools in Nigeria. Literature has established that the first secondary schools in Nigeria were owned by missionaries and are categorized as private institutions. For instance, the establishment of King’s College in 1909 marked the beginning of the division of schools into public and private institutions in Nigeria. However, other secondary schools established after the King’s College constituted a model for private schools and that has been the trend for the establishment of private schools in Nigeria of which the communities, local churches or mosques and private individuals were the owners. Federal government establishment of a few schools follows and is called ‘Government/Public Schools’. At inception, the public schools had the best facilities, they were staffed adequately qualitatively and quantitatively and, in most cases, university graduates were recruited (Fafunwa, 2004). The Reverse is the case now as, Sulyman *et al.* (2024) carried out a study on the quality of physical facilities in private and public schools in Ilorin and discovered that private schools performed better than public schools in terms of the availability and quality of physical facilities. It is not out of place to conclude that with the two types of secondary school ownership operating side by side, public-private secondary school ownership was launched in Nigeria. It was after the independence that various state governments took over the existing private secondary schools. By extension, the state government exercises control over the private schools in

their states for the school owners to abide by the rules and standards guiding the operation of running schools within the State where the school is located. Whichever type of secondary school nomenclature any student attends at this level, secondary education in Nigeria offers two basic goals of preparing learners for useful living within any society; and for the essence of gaining admission into higher education (Fafunwa, 2004). However, there are other derivative cognitive and attitudinal directed objectives from the basic goals, hence, meaningful instructional delivery of Civic Education at this level is capable of equipping students in the realisation of these objectives and goals.

The roles of school location and type in teaching civic education cannot be ignored. It has been said that the geographical location of schools could influence students' academic performance as well as teachers' input in their services at senior secondary schools. The Rural-Urban classification is used to distinguish rural and urban areas, the classification defines areas as rural if they fall outside of settlements with relatively low resident populations while some urban areas as central towns with populations larger resident populations, this is to say that the classification is based on populations and settlement patterns, not on how much a rural landscape is. The classification has been made according to the proportions of the population residing in urban settlements and outside urban settlements (Crown Copyright and Database Rights, 2016)). In Nigeria, literature has established that the students in urban areas usually outstrip those students from the rural areas in academic performance, one of the factors attributed to this gap has to do with low nutritional status and prevalent health problems dominant in rural communities (Alokan & Arijesuyo, 2013). This is to say that there is a likelihood that teachers in urban areas would exceed their counterparts in rural areas in their discharge of their duties owing to certain infrastructural facilities attached to urban schools. Also, teachers need the ability to understand a subject well enough to teach the students effectively regardless of the school location. Among the related foreign studies conducted on school location include that of Sumida and Kawata (2021) on an analysis of the learning performance gap between urban and rural areas in Sub-Saharan Africa. Their study revealed that the urban-rural learning gap was attributed to disparity in school and teacher characteristics, thereby submitting that the availability of classroom resources such as whiteboards, wall charts, classroom libraries, bookshelves and more to the quality of teaching conditions in a school. Shii and Meke (2022) in their study investigated rural-urban students' performance inequality in Malawi, their study revealed that a significant difference existed in the performance of students in the rural and urban schools due to teachers' factor, the study attributed the gap to the deployment of more qualified school heads to rural schools.

Mezeobi (2011) proclaimed that, at present, there are professionally trained academics in social studies education that is imbued with philosophies, orientations objectives and pedagogies for effective social learning. Mezieobi explained further that, the same experts in social studies have written books, made worthwhile publications and organized workshops, attended conferences and seminars that could uplift civic education. Thereby recognized them as qualified to effectively implement the civic education curriculum

over the years and considered the implementation as an additional task for the existing social studies teachers, hence, the need to second/transfer them to teach the senior secondary civic education in Nigerian schools.

Also, Jekayinfa *et al.* (2011) submitted that Teachers irrespective of what subject they teach are a great asset to any nation. Their profession and their selfless commitment and dedication to duty since the beginning of time belong to a special class and should therefore be acknowledged and appreciated. They further stated that since the implementation of any educational curriculum cannot be achieved without qualified teachers, the success of the civic education curriculum poses a challenge to social studies teachers. However, the effective teaching of Civic Education became an additional task for the existing trained social studies teachers. Hence the need to investigate social studies teachers' successful implementation of civic education in senior secondary schools in Ilorin, Kwara State Nigeria.

Jekayinfa *et al.* (2011) established in their article that no Teacher Education programme for civic Education teachers at the commencement of the implementation of the senior secondary school's civic education in September, 2011. The reason for the skepticism about the successful implementation of the curriculum. Literature has shown that some existing Social Studies teachers in some parts of Nigeria have undergone capacity-building programmes for the sustainability of Civic Education in Nigerian secondary Schools, this is why teachers were acknowledged as character moulders and crucial to the successful implementation of the civic education curriculum (Egwu, 2010). This is an indication that students at the secondary schools at their age of critical thinking can be equipped with values embedded in the civic education curriculum and the same should be reflected in civic education classroom practice to a meaningful and powerful civic education in Nigeria. Although, the implementation of civic education in Senior Secondary Schools rests largely on the existing social studies teachers, however, in a study conducted by Balogun (2011) other non-social studies teachers are found teaching civic education and are called unqualified teachers. Balogun however suggested that whichever teachers who handles the instructional delivery of civic education should acquaint themselves with the content and pedagogical skills embedded in the curriculum for the attainment of the objective of the curriculum. Also, Yusuf, (2014) pointed out that, implementation of the curriculum is the most difficult aspect of the curriculum development process, and those who are charged with the responsibilities of implementing a curriculum are already choked-up with excess workload, hence the need to investigate to what extent teachers have implemented the value-based content of the senior secondary school Civic Education curriculum in Ilorin. Also, these social studies teachers are found in Upper Basic Schools and are probably teaching other subjects than social studies, especially in private schools. This study therefore perceived teaching of civic education at the senior secondary level by this set of teachers as an additional task. Thus, there is a need to find out whether or not the teaching of civic education in Senior Secondary Schools is an additional task for Social Studies Teachers in Ilorin, Nigeria.

Objectives of the Study

The general purpose of this study was to determine social studies teachers' accomplishments in the implementation of civic education curriculum in senior secondary schools in Ilorin. Specifically, it was designed to determine;

1. The basic values components implemented in Civic Education at the senior secondary school.
2. The influence of School type on teachers' implementation of civic education in Senior Secondary Schools as an extra burden
3. The influence of School location on teachers' implementation of civic education in senior secondary schools as an extra burden

Based on these purposes, the following research questions were generated.

Research Questions

1. What are the basic values components implemented in teaching civic education at the senior secondary school in Ilorin?
2. Do the public and private Senior Secondary school teachers in Ilorin perceive the implementation of civic education as an extra burden?
3. Is the introduction of civic education seen as an extra burden by rural and urban Senior Secondary school teachers in Ilorin?

Question two and three were translated to hypotheses and tested in the study:

H₀₁: There is no significant difference in the assessment of the implementation of civic education curriculum as an extra burden in Senior Secondary Schools based on school type

H₀₂: There is no significant difference in the assessment of the implementation of civic education curriculum as an extra burden in Senior Secondary Schools based on school location

Methods

Descriptive survey research was adopted in this study. The instrument for data collection involved the use of the researcher's self-developed questionnaire which consisted of 2 sections. Section A contained demographic variables of school type and school location, while section B contained items measuring the basic values component in the senior secondary school civic education implemented by the teachers. These were to answer the research questions and to test the two hypotheses. The item was rated using a 4 Likert-

type scale as each response was assigned a number that was used to compute the score obtained.

The validity of the instrument was determined by using content validity where experts in social studies in the Department of Social Sciences Education, University of Ilorin assessed the items on the questionnaire. The reliability of the instrument was based on a test of the pilot study conducted using 20 teachers in four schools. The response from the pilot test constitutes part of the sampled respondents to have a reasonable number of teachers for the study. The instrument was found reliable using the Cronbach Alpha measure of internal consistency at a co-efficient of 0.78. The questionnaire was personally administered by the researchers and collected by hand from the respondents. When the respondents could not respond immediately the researcher endeavoured to go back until the numbers of administered questionnaires were retrieved and collated. Research questions one and one were answered using Mean and Standard Deviation. The other research questions translated to two corresponding null hypotheses were tested using a t-test statistical technique at 0.05 alpha level.

Results

Demographic information of respondents

Table 1: Distribution of respondents based on School Type

School Type	Frequency	Percentage
Public	69	69.0
Private	31	31.0
Total	100	100.0

Table 1 shows that 103 (71.5%) of the respondents are found teaching civic education in public senior secondary schools in Ilorin while 41 (28.5%) are found in private schools. This implies that more civic education teachers were found in public schools.

Table 2: Distribution of respondents based on Location

Location	Frequency	Percentage
Urban	78	78.0
Rural	22	22.0
Total	100	100.0

Table 2 shows that 128 (88.9%) of the respondents are found teaching civic education in urban senior secondary schools in Ilorin while 16 (11.1%) are found teaching civic education in rural schools. This implies that more civic education teachers were found in urban schools.

Research Question 1: What value-based content are taught by teachers in the implementation of senior secondary-level civic education curriculum?

Table 3: Mean Rating of value-based content implemented by Civic Education Teachers in Ilorin

Social Studies Teachers' Accomplishment of the Implementation of Senior Secondary School Civic Education Curriculum in Ilorin Kwara State Nigeria

S/N	Citizenship Value Component of Civic Education Curriculum	Mean	SD
1	Our Values	3.00	0.82
2	Justice	3.17	0.66
3	Honesty	2.97	0.84
4	Courage	2.98	0.85
5	Selflessness Activities	3.09	0.71
6	Roles of orderliness in society	3.01	0.75
7	Promoting consciousness	2.90	0.78
8	Integrity	2.93	0.72
9	National consciousness	2.90	0.85
10	Dialogue (skills for resolving conflicts)	2.69	0.72
11	Perseverance	3.01	1.14
12	Readiness to be involved in community service	2.97	0.98
	Weighted Mean	2.97	

As shown in Table 3, with the weighted mean at 2.97 or greater, as benchmarked of each citizenship value itemized. This connotes that any item with mean rating of 2.97 and above is a value confirmation of the acceptance and accomplishment of the successfully implementation of the citizenship values of civic education curriculum by the teachers. Also, only three items out of twelve as indicated in the table are below the benchmark, this is a further confirmation that the teachers of civic education did not perceive the implementation of the curriculum as an extra burden, but an accomplishment of the citizenship value component of the curriculum.

Hypotheses Testing

Hypothesis 1: There is no significant difference in the implementation of civic education in Senior Secondary Schools in Ilorin by public and private school teachers

Table 4: The t-test analysis on the implementation of civic education in senior secondary schools based on school type

School Type	N	Mean	SD	Df	Cal. T	Sig(2tailed)	Decision
Public	69	76.37	6.44	98	1.379	0.170	
Private	31	77.95	5.58				Not Significant
Total	100						

The result in Table 6 shows that the sig (2-tailed) value of 0.170 is greater than 0.05 (0.170) $p > 0.05$ alpha level, this implies that no significant difference exists in the accomplishment and the implementation of civic education curriculum as the teachers do not see it as an extra burden based on school ownership. Therefore, the null hypothesis which states that there is no significant difference in the implementation of civic

education curriculum in Senior Secondary Schools in Ilorin by public and private school teachers is sustained

Hypotheses 2: There is no significant difference in the implementation of civic education as an extra burden in Senior Secondary Schools by rural and urban school teachers

Table 7: The t-test analysis on the assessment of introduction to civic education as an extra burden in senior secondary schools based on location

School Location	N	Mean	SD	Df	Cal. t	Sig(2tailed)	Decision
Urban	78	77.11	6.01	98	1.551	0.123	Not Significant
Rural	22	74.56	7.51				
Total	100						

The result in Table 7 shows that the significant (2-tailed) value of 0.123 is greater than 0.05 (0.123) $p > 0.05$ alpha level. This implies that there was no significant difference in urban and rural civic education teachers' implementation of civic education curriculum as they do not see it extra burden based on school location. This further indicates that teachers in rural and urban schools do not see the implementation of the Civic Education curriculum of Senior Secondary Schools as an extra burden. Therefore, the null hypothesis which states that There is no significant difference in the implementation of civic education curriculum as an extra burden in Senior Secondary Schools by rural and urban school teachers is hereby sustained

Discussion

The results of this study revealed that the task of teaching civic education does not rest solely on existing social studies specialists who are qualified to implement civic education at the senior secondary school level, thus teachers who are not social studies specialists are found teaching civic education in senior secondary schools, especially in private schools. The findings agree with the submission of Jekayinfa *et al.* (2011) that teachers irrespective of what subject they teach, are a great asset to any nation. Also, the study revealed that the value content of the civic education curriculum was to some extent implemented in the direction of the realization of the objective of the subject, thus, Civic Education teachers taught the citizenship-based values itemized in Table 3 in teaching civic Education. The finding is in line with Olibie and Akudolu, whose study revealed that it is ideal to incorporate civic values into the citizenship education curriculum which is one of the objectives of civic education.

It was discovered that no significant difference existed between public and private school civic education teachers' implementation of civic education curriculum in senior secondary schools, and both ownerships did not see the implementation as an extra burden. This implies that public and private schools' civic education teachers claimed

equivalence towards the implementation of civic education at the senior secondary level in Ilorin. But the finding of Sulyman *et al.* (2024) on private and public schools focused on quality of physical facilities, of which the private schools was rated higher. This study focused on the teachers; this may likely be the reason for disparity between the two studies

The findings of this study also revealed that there was no significant difference in the implementation of the value-based content of civic education curriculum and teachers, to some extents do not perceive the teaching of the subject as an extra burden based on school location. This proved that both rural and urban civic education teachers taught the citizenship values successfully. this finding is in line with the finding of Alokun and Arijesuyo (2013) who submitted that no significant difference in the academic performance of students in both rural and urban schools and that rural students were not disadvantaged in their academic performance. The study of Alokun and Arijesuyo was carried out several years back and in Ondo State, this study was conducted about 10 years after, and in Kwara State. Teachers' factor may have contributed to the academic performance of the students in rural schools.

However, it was revealed in this study that public schools have more qualified teachers than their counterparts, but this variable was not measured in this study, this is an indication that the civic education curriculum planner for senior secondary schools in Nigeria truly relied on the qualified professionals of social studies as indicated in the senior secondary school civic education curriculum (Federal Ministry of Education, 2009).

Conclusion

Based on the findings and discussions made in this study, it was concluded that: None of the predictor variables of school type and school location have any significant difference on Social Studies teachers' implementation of Civic Education curriculum in senior secondary school in Ilorin, as the teachers also revealed that the implementation was not an extra burden. The findings of this study have shown that private and public-school teachers both found teaching Civic Education in senior secondary schools in Ilorin worthy of successful implementation and thereby did not see the implementation of Civic Education as an extra burden. This implies that the core factors of professional knowledge, interest and motivation to teach by the teachers have played out in the outcome of this study

Recommendations

Based on the findings of the study, there is a need for consistent efforts of the teachers of civic education at the secondary school level regardless of their professional qualification. Also, now that the education programme to produce trained professionals for teaching Civic education in Nigerian schools has take-off, there is a need for synergy at the secondary school level and Faculty of education in Nigerian universities to take

cognizance of the value content of the subject at both levels and adopt the affective instructional delivery of the subject for the realization of the desired goal of which the senior secondary Civic Education curriculum was introduced. Also, teachers' capacity building should be organized to equipped teachers of civic education at the senior secondary schools in Nigeria regardless of the school type and school location, to enhance teachers' competencies and better sustainability of the teaching and learning of civic Education effectively for the realization of the desired goal of the introduction of the subject at the secondary school level in Nigeria.

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Strategies for Improving Funds Acquisition and Management in Secondary Schools for Enhancing Teaching and Learning of Agricultural Education in Kano State, Nigeria

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Abstract

The success or failure of any educational institution depends on the availability of funds and its effective management. This study was conducted to determine the strategies for improving funds acquisition and management in secondary schools for enhancing teaching and learning of agricultural education in Kano State. The study adopted survey research design. The population of the study was made up of 1190 consisting of 595 Bursars and 595 PTA Chairpersons of secondary schools in Kano State, Nigeria. A sample size of 292 consisting of 146 Bursars and 146 PTA Chairpersons were used. A structured questionnaire served as instrument for data collection. The instrument was subjected to validity by three experts. Reliability test was conducted through pilot study using the Cronbach's Alpha method, which revealed 0.79 as the reliability coefficient. The data obtained were analysed using mean, standard deviation and t-test at 0.05 level of significance. The findings of the study among others were; donations of funds from Parent Teacher Association, and Non-Governmental Organizations. Principal should handle the matters of funds in a way that shows responsibility and accountability. Base on the findings, it was recommended that Management of public secondary schools in Kano State should use motivative strategies to generate funds through Non-Governmental Organizations.

Keywords Secondary School, funds, fund acquisition, fund management

Introduction

Education is critical in developing one's potentials and skills in order to become a productive member of the society. The level of success recorded by the educational sector has been closely linked with the availability of resources. Among the resources needed for the effective administration of the educational sector, fund has been identified as an indispensable instrument (Nwafor, Uchendu & Akani, 2015). This is because fund serves as the life-wire for the management and administration of educational sector including secondary education. Secondary education has been established by the government in order to cater for the educational needs of the citizens of the country. Secondary education which is at the centre of primary and tertiary education prepares the youths for a fulfilled life in the future. This type of education, according to the Federal Republic of Nigeria (FRN, 2013) in the National Policy on Education (NPE) is the education which a child receives immediately after primary education. It includes two levels of the three years junior secondary education of basic education and three years senior secondary

education. Secondary education provides students with diverse basic knowledge and skills for entrepreneurship and educational advancement in the Nigerian society. It provides entrepreneurial, technical and vocational job-specific skills for self-reliance, and for agricultural, industrial, commercial and economic development. One of the subjects that helps to achieve this objective is Agricultural Science (Olajide, Odoma, Okechukwu, Iyare & Okhaimoh, 2015). Agricultural Science is a subject that learners acquire entrepreneurial skills, knowledge and attitude in agricultural production. It is one of the subjects offered in Junior and Senior Secondary Education (FRN, 2013).

Introduction of Agricultural Science in Secondary School curriculum in Nigeria is a worthwhile effort towards adequate food security by equipping the greater percentage of the youths with skills, knowledge and attitude in agricultural production. Agriculture helps to meet the basic needs of human and their civilization by providing food, clothing, shelters, medicine and recreation. No educational setting can achieve its set goals and objectives without fund. Fund refers to sum of money or other resources set aside for a specified purpose. Fund can be any of the following forms; physical cash, credit facilities that is trade credits, bank credits, allowances or discount received, differed expenses such as differed taxes, rents, bills, undistributed profit in the form of retained earnings and reserve (Ndidiamaka, 2022). As school fund is the money provided by a government or raised by parents, teachers, individual or organization to finance the running of a school, it is important that stakeholders in education should apply certain fund acquisition strategies that will ensure adequate provision of the funds for the effective management of schools. According to Nkechi and Nwanneka (2019), funds acquisition refers to money earned or acquired and how it is generated, invested and sustained in an establishment. It is the activity concerned with the estimation, raising and administering the funds to be used in various business enterprises including the schools. It typically refers to efforts to gather money for organizations. In most cases, there is poor management of the funds allocated or acquired for secondary schools to run their daily tasks to achieve educational goals.

According to Ndidiamaka (2022), management can be defined as the process of organizing, planning, leading, measuring and controlling as well as undertaking of risks. It is a process designed to ensure the co-operation, participation intervention and involvement of people in the effective achievement of a given objective. It is also a social process concerned with identifying, maintaining, motivating, controlling and unifying formal and informal organized human and material resources within a system. Management of funds deals with the provision, custody and disbursement of the financial resources needed for the running of public or government established institutions (Ndidiamaka, 2022). According to the view developed by Ndidiamaka (2022), fund management plays a very crucial role to the development of education. This is because it provides the financial managers the means for ensuring optimum utilization of resources, determining the capital requirement of an institution and making choices of sources of funds for financing the institutional programs. The effective management of secondary school fund in Nigeria is of utmost importance to the stakeholders including the

government, parents, students, teachers and the general public. Despite the important roles play by the fund management, it is observed that funds management in the education sector is still very poor, weak, and faced with both external and internal challenges (World Bank; 2020 as cited in Kalume & Peter; 2024).

The importance of funds acquisition and management in our educational institution cannot be over-emphasized. Effort has been made by various governments to improve on the budgetary allocation to the educational sector. This is based on the aspirations of the governments that education serves as a tool for individual and national growth. Kano State government has relatively improved the level of fund set aside for the development of the educational sector. Educational sector received 29.9 percent of the State total budget size. This covers for the secondary level of education (Kano-Budget, 2024). This surpasses UNESCO recommendation that 26 percent of the government annual budget should be set aside for the administration and management of the educational sector. Therefore, Kano State budgetary allocation to educational sector clearly shows the State governments' commitment to rejuvenate the sector through injecting more resources towards restoring the entire education system in the State by improving the teaching and learning outcomes.

As Kano State meets the UNESCO benchmark, the growing issue of out-of-school children in the state ought to have been addressed, however, Kano State became among the states with the highest number of out-of-school children in Nigeria, the affected children were engaged in labour activities injurious to their physical and mental development (Ogunyale, 2024) which is significantly correlated with the State's rapidly growing population and poor managements of funds in our schools, therefore addressing the out-of-school children crisis in Kano State requires more than just budget considerations; it should also involve effective management of the funds allocated/generated for the schools. Hence, this study aimed at determining workable strategies for improving funds acquisition and management in secondary schools in Kano State for enhancing teaching and learning of agricultural education in the State.

Research Questions

The following research questions guided the study

1. What are the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State?
2. What are the strategies for improving the management of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State? and
3. What are the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State?

Hypotheses

The following null hypotheses were formulated and tested at an alpha (α) level of 0.05

1. There is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State,
2. There is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the strategies for improving the management of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State and
3. There is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State.

Methodology

The study adopted a survey research design. The population of the study was made up of 1190 consisting of 595 Bursars and 595 PTA Chairpersons of secondary schools in Kano State. A sample size of 292 participants consisting of 146 School Bursars and also 146 PTA Chairpersons out of the population were selected for the study. Stratified simple random sampling techniques was used to select the sample. A structured questionnaire was used as the research instrument for data collection, titled, "Strategies for Improving Funds Acquisition and Management in Secondary Schools Questionnaire" (SIFAMSSQ). The instrument consisted of four sections; A, B, C and D. Section A sought information on demographic data of the respondents, while Section B, C And D sought answers from the respondents on the strategies for improving the acquisition of funds, the strategies for improving the management of funds and the challenges in funds acquisition and management in secondary schools for enhancing teaching and learning of agricultural education in Kano State. The questionnaire was closed structured using four rating scale; strongly agree, agree, disagree, and strongly disagree with corresponding values of 4, 3, 2, and 1 respectively.

The instrument was subjected to face and content validity by presenting the instrument to three experts. Reliability test was conducted through pilot study. Reliability coefficient was determined using Cronbach's Alpha method, which revealed 0.79. The researcher administered the questionnaire with the help of four research assistants. Two hundred and ninety-two copies of the questionnaires were distributed. All the copies of the questionnaire distributed were successfully returned. The data obtained were analysed using mean and standard deviation to answer the research questions while t-test was used to test the null hypotheses at 0.05 level of significance. In answering the research

questions, any item whose mean score was found to be 2.5 or above, was considered to be Agreed while any item whose mean score was found below 2.5, was considered to be Disagreed. The testing hypotheses was based on comparing the computed p-value (Sig.) and 0.05 levels of significance. If the computed p-value (Sig.) is equal to or less than 0.05 levels of significance the null hypothesis was considered rejected, but accepted if the computed p-value (Sig.) is greater than 0.05 level of significance.

Results

Research Question One: What are the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State?

The data analysis that provided answer to this research question is presented in Table 1.

Table 1: Mean Responses on the Strategies for Improving the Acquisition of Funds in Secondary Schools for Enhancing Teaching and Learning of Agricultural Education in Kano State

S/N	Sources for Funds Acquisition	$\bar{X}$	SD	Decision
1.	Parent Teacher Association could donate funds to school.	3.04	0.66	Agreed
2.	School could raise funds from members of the community by organizing school quiz competition.	2.82	0.47	Agreed
3.	School could acquire funds by organizing appeal fund-raising.	3.50	0.91	Agreed
4.	Funds could be acquired from renting of school halls/compounds for wedding and other social events.	2.87	0.88	Agreed
5.	School could collect registration fees from students as source of additional funds to the school.	3.44	0.90	Agreed
6.	School could own a shopping centre as source of generating funds to the school.	2.92	1.23	Agreed
7.	School should own a computer centre to acquires income generated from typing, printing and photocopies.	3.01	0.98	Agreed
8.	Donations from Non-Governmental Organizations could serve as additional Funds to school	3.22	0.65	Agreed
9.	Funds could be acquired from Old Student's Association	3.47	0.56	Agreed
10.	School could acquire funds from private individuals' donations	2.79	1.05	Agreed

Key: $\bar{X}$ = Mean SD = Standard Deviation N = Number of Respondents

Data in Table 1 revealed that all the 10 items had their mean values ranged from 2.79 to 3.50 were above the cut-off point of 2.50. This implies that all the items are strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State. The standard deviation for the items ranging from 0.47 to 1.23 indicated that the respondents were closed to one another in their opinions.

Null Hypothesis one: There is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State.

Table 2: Summary of t-test Analysis of Mean Scores of School Bursars and PTA Chairpersons on The Strategies for Improving the Acquisition of Funds in Secondary Schools for Enhancing Teaching and Learning of Agricultural Education in Kano State

Status	N	Mean	SD	Df	t-value	P-value	Decision
Principals	146	29.31	4.57	290	3.42	.102	Accepted
School bursars	146	30.22	4.92				

The result in Table 2 indicates that the calculated t-test value is 3.42 and a p-value is .102 with degree of freedom (df) 290 at 5% alpha level. Since the p-value (.102) is greater than the alpha level ($P < 0.05$), the null hypothesis is accepted. Hence, there is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State.

Research Question two: What are the strategies for improving the management of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State?

The data analysis that provided answer to this research question is presented in Table 3.

Table 3: Mean Responses on the Strategies for Improving the Management of Funds in Secondary Schools for Enhancing Teaching and Learning of Agricultural Education in Kano State

S/N	Strategies for Management of Funds	$\bar{X}$	SD	Decision
1.	Effective and efficient budget making for secondary school.	3.25	0.86	Agreed
2.	School should involve stakeholders in budget preparation	3.00	0.99	Agreed
3.	Appropriate allocation of funds to the areas/units where they are in need.	2.92	1.23	Agreed
4.	School should adhere on the budget made.	2.87	1.09	Agreed
5.	Proper record keeping of all financial transactions	2.99	0.76	Agreed
6.	Frequent monitoring and evaluation of the secondary school budget by Ministry of Education.	3.34	0.99	Agreed
7.	Frequent and effective checks and balance for the school account book by Principal to ensure accountability	3.08	0.75	Agreed
8.	Principal should handle the matters of funds in a way that shows responsibility and accountability.	3.44	0.64	Agreed

Key: $\bar{X}$ = Mean SD = Standard Deviation N = Number of Respondents

Data in Table 3 indicated that all the eight items had their mean values ranged from 2.87 to 3.44 were above the cut-off point of 2.50. This reveals that all the items are the strategies for improving the management of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State. The standard deviation for the items ranging from 0.64 to 1.27 showed that the respondents were closed to one another in their opinions.

Null Hypothesis two: There is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the strategies for improving the management of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State

Table 4: Summary of t-test Analysis of Mean Scores of School Bursars and PTA Chairpersons on The Strategies for Improving the Management of Funds in Secondary Schools for Enhancing Teaching and Learning of Agricultural Education in Kano State

Status	N	Mean	SD	Df	t-value	P-value	Decision
Principal	146	27.92	3.54	290	3.05	.231	Accepted
School bursar	146	31.01	4.01				

The result in Table 4 shows that the calculated t-test value is 3.05 and p-value is .231 with degree of freedom (df) 290 at 5% alpha level. Since the p-value (.231) is greater than the alpha level ($P < 0.05$), the null hypothesis is accepted. Hence there is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the strategies for improving the management of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State.

Research Question three: What are the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State?

The data analysis that provided answer to this research question is presented in Table 5.

Table 5: Mean Responses on the Challenges in Funds Acquisition and Management in Secondary Schools Affecting Teaching and Learning of Agricultural Education in Kano State

S/N	Challenges	$\bar{X}$	SD	Decision
1.	Late release of funds allocated to education from the State annually budgetary allocations.	3.06	0.99	Agreed
2.	Inadequate modern equipment for record keeping of the school financial transactions for easy retrieval when the need arises for example computer.	2.98	0.88	Agreed
3.	Inadequate knowledgeable and skills for financial planning and budgeting by secondary schools' administrators.	2.59	1.01	Agreed
4.	Corruption and mismanagement of funds by secondary school administrators.	3.57	0.65	Agreed
5.	Inadequate trained bursars/accountants in secondary schools.	2.87	0.67	Agreed
6.	Poor implementation of the duties and responsibilities of bursars in secondary schools.	3.09	1.21	Agreed

Key: $\bar{X}$ = Mean SD = Standard Deviation N = Number of Respondents

Data in Table 5 revealed that all the six items had their mean values ranged from 2.59 to 3.09 were above the cut-off point of 2.50. This implies that all the items are the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State. The standard deviation for the items ranging from 0.65 to 1.21 indicated that the respondents were closed to one another in their opinions.

Null Hypothesis one: There is no significant difference between the mean opinions of School Bursars and PTA Chairpersons on the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State.

Table 6: Summary of t-test Analysis of the Mean Scores of School Bursars and PTA Chairpersons on the Challenges in Funds Acquisition and Management in Secondary Schools Affecting Teaching and Learning of Agricultural Education in Kano State

Status	N	Mean	SD	Df	t-value	P-value	Decision
Principal	146	29.04	5.29	290	4.22	.197	Accepted
School bursar	146	31.11	5.07				

The result in Table 6 indicates that the calculated t-test value is 4.22 and p-value is .197 with degree of freedom (df) 290 at 5% alpha level. Since the p-value (.197) is greater than the alpha level ($P < 0.05$), the null hypothesis is accepted. Hence, there is no significant difference in the mean opinions of School Bursars and PTA Chairpersons on the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State.

Discussion

The findings of the research question one revealed that the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State include donations of funds from Parent Teacher Association, Non-Governmental Organizations, Old Student's Association and private individuals. Organizing school quiz competition, appeal fund-raising, renting of school halls/compounds and collecting registration fees from students. School could also own a shopping centre and a computer centre as sources of additional funds to the school. The findings are in line with the findings of Nwafor, Uchendu and Akani (2015), who discovered the need for adequate funding in the administration of secondary education in Nigeria and found that school fees, government funding, private sector contributions and sales of students' handcraft and art are among the strategies. The findings are also in line with the findings of Raji (2023), who worked on the relationship between financial management and school effectiveness in public senior secondary schools in Sokoto Metropolis and found that school generates funds from school fees, school business, Alumni association and from school PTA levies.

The findings of the research question two revealed that the strategies for improving the acquisition of funds in secondary schools for enhancing teaching and learning of agricultural education in Kano State are; effective and efficient budget making for secondary school, involving stakeholders in budget preparation, allocation of funds to the areas/units where they are in need and the school should adhere on the budget made. Proper record keeping of all financial transactions, frequent and effective checks and balance for the school account book by Principal to ensure accountability, Principal should handle the matters of funds in a way that shows responsibility and accountability and frequent monitoring and evaluation of the secondary school budget by Ministry of Education.

The findings are in line with the findings of Ndidiamaka (2022) who determined principal's fund management strategies: a panacea for effective administration of schools in Rivers State and revealed that timely allocation of funds to area most needed, budgeting, proper record keeping and checks and balance for the school account were among the strategies. The findings are also in agreement with that of Mike and Nwachukwu (2018), who studied principals fund management strategies for effective administration of public secondary schools in Rivers State and reported that budgeting is one of the important strategies that can be used and effectively directing the available funds for proper use is another good strategy for effective administration of schools' funds.

The findings of the research question three revealed that the challenges in funds acquisition and management in secondary schools affecting teaching and learning of agricultural education in Kano State are; late release of funds allocated to education from the State annually budgetary allocations, Inadequate modern equipment for record keeping of the school financial transactions for easy retrieval when the need arises for example computer, inadequate knowledgeable and skills for financial planning and budgeting by secondary schools' administrators, corruption and mismanagement of funds by secondary school administrators, inadequate trained bursars/accountants in secondary schools and poor implementation of the duties and responsibilities of bursars in secondary schools.

The findings are in line with the findings of Ndidiamaka (2022) who determined the principals' fund management strategies: a panacea for effective administration of schools in Rivers State and revealed that late approval of funds, non-availability of modern-day equipment and inadequate knowledgeable of schools' administrators. The findings are also in consonance with findings of Daerefamama (2022) who studied budgeting and accountability as fund management strategies and principals' effective administration of public secondary schools in Rivers State and revealed that Leadership incompetency on fund management, misappropriation, mismanagement and embezzlement of school funds and lack of leadership accountability are challenges affecting funds management in secondary schools.

Conclusion

Fund management is a fundamental practice in school administration to stay away from monetary blunder, where the principals are ineffectual in dealing with the financial resources of the school, school administration will be exceptionally hard to accomplish. Based on the findings of this study it was concluded that, the sources through which money can be acquired to run secondary schools include; Non-Governmental Organizations, community involvement, donations from Old Student's Associations and appeal funds raising. Principal should handle the matters of funds in a way that shows responsibility and accountability and Ministry of Education should ensure frequent monitoring of the available funds in secondary school.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Management of public secondary schools in Kano State should use motivative strategies to generate funds through Non-Governmental Organizations (NGOs) as additional source of funds in their secondary school.
2. Kano State Ministry of Education should strengthen the training of principals, bursars and any other members of the school management team through workshops, seminars and conferences, to equip them with the skills for management of school funds.
3. Kano State Secondary Schools Management Board should ensure effective monitoring system for the available funds generated in secondary schools.

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Emotional Intelligence and Academic Performance of Arabic Students in Secondary Schools in Ilorin South Local Government, Kwara State, Nigeria

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Abstract

The study investigated Emotional Intelligence and students' Academic Performance in Arabic Language among Secondary Schools in Ilorin South Local Government Area, Kwara state. The research employed a quantitative research method. The population consisted all five hundred and fifty Arabic students and the targeted population were the two hundred SS3 Arabic students in Ilorin South Local Government Area, Kwara State. The sample for this study were 200 respondents selected from 20 schools with the use of Stratified Sampling Techniques. Two instruments validated by three experts in the Department of Arts Education are used to elicit information from the respondents with indices of 1.00, 21.43, 0.91 and two distant factors that captures different aspect of emotional intelligence. The reliability of the instrument was established through test-retest method with correlation coefficient of 0.85. The data were analyzed with appropriate statistical techniques which includes Percentages, Mean and ranking order. PPMC to answer the research questions and test the hypotheses, the findings of this study revealed that all questionnaire items were above the mean score of 2.5 and were considered high. This means that the Emotional Intelligence of the students in this local government was regarded as high. The level of academic performance of secondary school students in Arabic Language is considered high with 196 students who scored A, B, C and P. Only 4% of the students scored 39-001. There was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on gender and school type. Based on the findings, it was concluded that emotional intelligence and academic performance of students in the said local government was high and recommended among others that teachers should encourage students to write about their thoughts and feelings to help students understand their emotion better. Government should introduce mindful techniques such as Meditation or deep breathing exercise to increase self-awareness

Keywords Emotional Intelligence; Academic Performance; Arabic Students; Secondary School; Ilorin South

Introduction

The term Emotional Intelligence (E I) offers a new way of looking at the fact that people can reason about their emotions and equally employ the same to assists the reasoning. Emotional Intelligence (E I) is defined as the ability to reason with emotion in four areas: perception, integration in thought, understanding and management (Roy & Mahato, 2024). It is an innate ability, which gives us our emotional sensitivity and our potential for healthy learning and developing managerial skills. (Roy & Mahato, 2024).

Defining Emotional Intelligence has come with a lot of arguments. As the field is growing so rapidly that researchers are constantly advancing their own definitions. Some definitions as given by different authorities are given below: According to Salovey and Mayer (2020), Emotional Intelligence (E I) is “the ability to monitor one’s own and others feelings and emotions, to discriminate among them and to use its beneath information to guide one’s thinking and actions.”

Elias (2020) said Emotional Intelligence is the set of academic skills performances that we like to see as being reported on the other side of the report card. Furthermore, Emotional Intelligence could be described as the ability of an individual to perceive emotions, to access and generate emotions to assist thought, to understand emotions in ways that promote emotional and intellectual growth. It is an inborn ability (although which can be taught) which gives our emotional sensitivity and potential for emotional management skills that helps us maximize our long-term health, happiness and survival.

Emotional Intelligence covers a spectrum of knowledge by which a person knows how to separate healthy from unhealthy feelings and how to turn negative feelings into positive ones. It is the innate potential or ability possessed by an individual to feel, use, communicate, recognize, remember, learn from, manage, understand and explain emotions more adequately. This list is endless since each psychologist has his or her own definition of the Emotional Intelligence as a psychological construct (Goleman, 1995)

Emotional Intelligence has been considered as an important factor in academic performance (Mohzan, Hasan & Halil, 2023) and this residual quality is more germane to the success of any individual student. Therefore, Emotional Intelligence of a student has an influence on many aspects of his/her academic endeavors (Nwadinigwe & Obieke, 2022).

However, it is of great necessity to establish what each term means. Intelligence is a general description term that can be referred to a hierarchy of mental abilities, from simple perception process and information processing to higher and more general forms of problem solving. Until recent time, the term “Intelligence” has been limited largely to certain kinds of problem-solving involving language and logic. However, people have been able to deal with numerous kinds of contents besides words, numbers and logical relations, for example, space, music, the psyches of other human being and students are part of experience of individuals (Mayer & Salovey, 1997). It is amply evident that human mental functions are highly interconnected (Elias, 2020). Yet, the contest between the school of thoughts that are in favor of exclusively cognitive views of what it means to be intelligence and broader view that accommodate positive role of emotion in the intelligence expression are still in course

Although, having good intelligence may be important in life’s success. Emotional Intelligence is a key to aspect of good relationship with others and achieving one’s goal in life (Elias, 2019), Empirical evidence have revealed that having good observation of oneself and feeling comfortable to understand others feeling, good social-control and

social decision making may lead to an increased productivity of anybody, Thus, it can be said that to be successful in life, one requires to have effective awareness, control and management of one own emotions, and awareness and understanding of other people around

Gkintoni, Dimakos & Nikolaou (2024) stated that Emotional Intelligence (E I) is a desirable tool to employ to enhance learning, as it contributes to co-orientation between people by achieving effective social functioning and learning effectiveness.

Emotional Intelligence describes abilities capacities, skills or self-perceived ability to identify assessing and manage the emotions of one's self and that of other people in the society. Emotional Intelligence is considered as one of the most desirable personality qualities today. Some critics of traditional I Q believe that intelligence is more of a result of an individual's opportunities to learn skills and information in a situation. Sternberg and Gardner (2023) had earlier argued that I Q tests measure only a fragmented and restricted aspect of human intellectual ability. Emotions are involved in everything people do, in every action, decision and even in their judgment. However, emotionally intelligent people recognize this and use their thinking to manage their emotions rather than being managed by such emotions or become overwhelmed by them.

Hence, education everywhere in the world is expected to transform individual to become self-educated, independent disciplined among others. It is presumed that education is a catalyst to the development of any nation as such, the standard of education at every stage is a matter of quality inculcated into lives of the receivers who are students. In a layman point of view, Performance can be regarded as the output of personal ability in each task at a given time. It could be the level that an individual could go upon a given task. The performance in different sector has its antecedent label for what is used to measure. (Farah & Irshad, 2018)

Academic Performance however, can be regarded as the observable and measurable behavior of a student in a situation. Take for instance, the academic performance of a student in Arabic Language includes observable and measurable behavior of such student at any point in time during the period of teaching and learning process. An Arabic student performance would consist of his scores at any time obtained from a teacher-made test on that subject. Yusuf (2019) affirmed that academic performance could be as well equated with the observed behavior or expectation of achieving a specific statement of or statement of educational intention in research. He stressed further that academic performance of students consists of scores obtained from their teacher-made test, first term examination, mid semester test and so on depending on their level of education.

In Nigeria, students' academic performance is acknowledged to be discouraging private individual in the field of education some three decades ago (Okesina, 2016). This abysmal situation has become a nightmare and a great concern to many stakeholders in education sector, and it calls for concerted effort to enhance students learning outcomes. Education is also a veritable tool which every nation needs for its survival, the more the

attention a country gives to education the higher its development in all ramification and vice-versa. The roles teachers play in realizing the goals of education cannot be over stressed. It is imperative to enunciate the nature and trend of educational progress in any developing country. Education is a systematic intellectual and moral training, geared towards obtaining knowledge, development of character and mental development that will ensure human survival. This becomes a reality through effective teaching and learning. Teachers are the fulcrum of educational system, and desired productivity expected from them to be actualized, there is need for government to be more committed to providing them different incentives (Samuel, 2015)

Academic performance according to Raheem (2019) is a measure of output in education which is expressed in term of changes in skills and attitudes of the individuals as a result of their experience gained over a period. Mappadang *et al.* (2022) maintained that academic performance is important as a result of educational experiences in schools to represent knowledge, skills and attitudes. Academic performance remains a yardstick to measure educational outcomes and it has been economically, scientifically and technologically paramount to the advancement or development of any nation (Jansen, 2018). Adeoye and Emeka (2016) stated that student academic performance can be regarded as the ability of an individual student to accomplish a set of educational objectives. However, Yusuf (2019), argued that that the term academic performance and academic achievement have been used simultaneously in educational research but with little distinction in their meaning and implication for education.

Academic performance determines the future goals and objectives of students at any level of education. What subject they will specialize in colleges and universities, which educational institutions they will get enrolled into, what career opportunities they would take up and so forth are all subject to their performance. The determinants of academic performance of the students include; class participation, class assignments, home-work assignments, tests, examinations, and participation in competitions or other events, however the pressure of the parents and other individuals upon teachers and school administrators to improve the academic performance has enabled schools to come up with advanced strategies (Kapur, 2019) ascertained.

Raheem (2019) stated further that secondary school education is the engine room of knowledge acquisition through which students meet various subject which in-turns determine the field of study they would likely pursue at tertiary level of education. Secondary school education is of paramount importance to students because it is a linking bridge that connect primary or elementary education and higher education. This stage of education is of no doubt, determines to a large extent, the making of a profession due to its position in educational system. Successive administrations in Nigeria have taken into cognizance the need to reform the secondary school education in order to produce the kind man power that Nigeria economic sector needs and becomes a nation of collective dreams of her founding father. However, whatever reform that could be done in

secondary education, students' academic performance remain only means to determine its effects (Okesina, 2016).

The other ways by which students' academic performance could be established are cumulative evaluation, termly assessment and periodic test which carried out from school-to-school base on purpose and need of students. Erun and Zahoor (2021) opined that students' academic performance has always been area of interest of several researchers. They affirmed further that students' academic performance is affected by different factors such as habit, learning skills and academic interaction. Other factors such as student emotional intelligence play a significant role. From the above submission, the researcher observed that there is paucity of studies in which the area of interest of researcher as none of the studies mentioned above has been conducted on Emotional Intelligence and Academic Performance of Secondary School Arabic Language Students in Ilorin South Local Government Area, Kwara State which present study intended to investigate, hence, the need for this study. As for the problem of this research work, the researcher identified that I. there are challenges that could hamper students' academic performance as well as their achievement while in the school such as negative peer group pressure, overloaded academic activities, teachers-students relationship, low level of teachers' experience, non-interest of the students, nonchalant attitude of government, inadequate of teaching materials and host of others. The ability of student to cope under the pressure of these multifarious challenges could be difficult. Unfortunately, majority of students lack these social skills which is ardently needed to succeed in their academic pursuit.

The system of Nigeria education seemly deep-rooted in Intelligent Quotient (I Q) measure while little search light on other important area of knowledge which involves emotional and social intelligence skills which psychologists held view that they evolve from broader domain of Intelligence (Mohzan, Hasan & Halil, 2013) and the above source affirmed further that the narrower of students' performance in academic activity based only on their level of Intelligence Quotient that has been outdated in many nations around the world, having realized that individual ability is not limited to his/her IQ measure alone (cognitive) but a matter of other measure parameters such as Emotional Intelligence (E I).

However, difficulty arises when teachers and other relevant stakeholders are confronted with measure of Emotional Intelligence of any student. This challenge hangs largely on what should be measured and when and how it should measure constitute a greater challenge in many schools. Little of these constructs are well known by majority of teachers and guidance counselors who are saddled with responsibility of evaluating students in their respective schools.

II The main purpose of this to examine the relationship between Emotional Intelligence (E I) and Academic performance (A P) of Arabic secondary students in Ilorin South LGA, Kwara state. Specifically, the study intends to examine the:

1. Level of Emotional Intelligence (E I) of Senior Secondary School Arabic students in Ilorin South LGA, Kwara state
2. Level of Academic performance (AP) of Senior Secondary School Arabic students in Ilorin South LGA, Kwara State
3. Relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on school type.
4. Relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on gender.

Research Questions

The following research questions are raised to guide the conduct of this study:

1. What are the levels of Emotional Intelligence (E I) of Senior Secondary School Arabic students in Ilorin South LGA, Kwara State?
2. What are the levels of Academic Performance (A P) of Senior Secondary School Arabic students in Ilorin South LGA, Kwara State?
3. What is the relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on gender?
4. What is the relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on school type?

Research Hypotheses

- H₀₁:** There is no significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on gender.
- H₀₂:** There is no significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on school type.

Methodology

The research for this study was descriptive survey of correlational type. A descriptive design type describes the situation of an affair as they exist and the use of a questionnaire method by concerned researcher. This study therefore describes the emotional

intelligence and academic performance of secondary school Arabic students in Ilorin South LGA, Kwara State. The population of this study involves all the senior secondary schools in the local government. There are 55 private and public secondary schools in Ilorin South Local Government. 20 schools offering Arabic Language were selected with the use of purposive sampling techniques in both private and public school. 10 Arabic students were selected in each of the 20 schools through stratified random sampling techniques. This makes a total of 200 respondents. Questionnaire was used to elicit relevant information from the students based on their emotional intelligence. This was subjected to appropriate statistical tool which include frequent count, the percentage and inferential statistical tools.

For the purpose of this Study, a questionnaire entitled "Emotional Intelligence" checklist was adopted by the researcher. The checklist consists of two Sections, Section A and B. Section A asked for demographic data of the respondents which includes: name of the school, gender and school type. Section B on the other hand, consist of items on emotional intelligence of Students. Four-point Likert-Type Rating Scale format was used to score item of the instrument after being answered by the respondent.

Strongly agree attracts 4 points, agree attracts 3 points, disagree attracts 2 points and strongly disagree attracts 1 point. Validity of the instrument was established by two Arabic lecturers in the department of Arts Education, University of Ilorin. The content validity has 1.00 which is excellent, the reliability for internal consistency has 21.43, correlation of Emotional intelligence and Academic Performance was 0.91 which is of strong positive value $p < 0.005$ and two distinct factors were suggested by factor analysis confirming the questionnaire captures different aspect of emotional intelligence. The reliability of the instrument was established through test-retest method of which the instrument was administered twice at an interval of four weeks to same group of twenty (20) respondents who are not part of school within Ilorin South LGA.

The two set of scores obtained at the two occasions were correlated using Pearson Product Moment Correlation - co-efficient (PPMC). The result obtained therefore determined the reliability of the instrument. However, a correlation coefficient of 0.85 was obtained. The other instrument was adopted Arabic questions which was given to the students to answer. The modality for scoring the test ranges from 1-4 (1, 2, 3, 4). The average mean score is 2.50. (that is, 10/4). Hence, the mean score of 2.50 and above was considered as the high level of emotional intelligence while the mean score of less than 2.50. was considered as low level of emotional intelligence among secondary school students in Ilorin South Local Government.

Results

This section presents the results of data obtained on the respondents in frequency counts and percentages.

Table 1: Percentage Distribution of Respondents Based on Gender

Gender	Frequency	Percentage
Male	167	83.5
Female	33	16.5
Total	200	100

Table 1 presents the percentage distribution of respondents based on gender. The table shows the distribution of respondents by gender, the table shows that 167 (83.5%) of 200 the respondents were male while 33 (16.5%) of the respondents were female. This indicates that male respondents participated more than female in the study.

Table 2: Percentage Distribution of Respondents Based on School Type

Family Type	Frequency	Percentage
Public school	176	88
Private school	24	12
Total	200	100

Table 2 presents the percentage distribution of respondents based on type of school, that is public and private schools. The table indicates that 176 (88%) of the respondents were from public schools while respondents from private schools were just 24 representing 12%. The analysis revealed that majority of the respondents were from the government schools.

Table 3: Mean and Rank Order on the Respondents' Perception on level of Emotional Intelligence

Items No.	As a student emotional intelligence give the following	Mean	Rank
1	Gives students ability to monitor one's own	2.88	11 th
2	It improves competencies and skills	3.15	5 th
3	Assist in self-regulation	2.91	10 th
4	It improves self-motivation	3.18	3 rd
5	Ability to listen to others	2.80	12 th
6	It improves social skills	3.59	1 st
7	Gives the students best potential	3.17	4 th
8	Improve channel of problems solving	2.97	9 th
9	Assist in choosing best carrier	3.58	2 nd
10	Improve ability to cope with pressure	2.78	13 th
11	Assist students to influence people to certain task	2.72	15 th
12	Improve students' faculty of thinking	3.07	7 th
13	Ability to regulate someone emotion	2.74	14 th
14	Helps to build strong relationship among peers	3.01	8 th
15	Assists students in nurturing various training program	3.09	6 th

Table 3 presents the mean and rank order of respondents' expression on the level of emotional intelligence of the Arabic students. It is clear from the findings of the study that, emotional intelligence of the students improves social skill of the students and was ranked 1st with mean score of 3.59, followed by assist students in choosing best career which was also ranked 2nd with mean score of 3.58. emotional intelligence improves self-motivation with mean score of 3.18 and was ranked 3rd. It also gives the students best potential had mean score of 3.17 and was ranked 4th. It improves competencies and skills had a mean score of 3.15 which was ranked 5th. On the other hand, questionnaire items 1, 5, 10, 13 and 11 were the list items and were ranked 11th, 12th, 13th, 14th, and 15th with weighed mean score of 2.88, 2.80, 2.78, 2.74 and 2.72 respectively. That is

gives students ability to monitor one's own, ability to listen to others, improve ability to cope with pressure, ability to regulate some's one emotion and assist students to influence people to certain task. This mean that all items were tested positive and one can conclude that emotional intelligence of the students was above the mean score of 2.5 and was considered high, this mean that emotional intelligence of the students in this local government was regarded as high and give the students a lot of advantages.

Table 4: Students Who Participated in Arabic Language Text

S/N	Subjects	Number present & %	Grade A (%)	Grade C (%)	Grade P (%)	Grade F (%)	Grade A, C & P (%)	N-Value
	Arabic language Studies	200 (99%)	30 (15%)	86 (43%)	80(40%)	4 (2%)	196(98%)	1.25

Table 4 revealed the total number of students who participated in the test which are 200 students. With the above results, the level of academic performance of secondary school students in Arabic Language is considered high with 196 students who scored A, B, C, and P. Only 4% of the students scored from 39-001. Analysis above shows that the students performed better in a standardized test conducted for them.

Research questions 3 & 4 have corresponding hypotheses and thereby tested at 0.05 level of significance.

Table 5: Emotional Intelligence and Students' Academic Performance based on Gender

Gender	N	X	SD	Cal r-value	P-Value	Decision
Male	167	51.2000	2.93893	0.5396	0.002	H ₀₁ rejected
Female	33	51.6500	5.07659	0.5475	0.013	

Source: Field work, 2024

Table 5 presents the result of Pearson Bivariate Correlation on relationship between Emotional Intelligence and Students' Academic Performance of Arabic Students based on Gender. In this test, the Pearson Correlation Coefficient of Emotional Intelligence and Academic Performance of male students is 0.5396, while that of the female students is 0.5475, which signifies positive linear correlation. The significance test has the null hypothesis that there is no positive or negative correlation between the two variables in the universe based on gender ($r=0$). The results show a very high statistical significance with p-value of 0.002 and 0.013 respectively, which are less than 0.05 significance level. Thus, we can reject the null hypothesis of no significant relationship based on gender and assume that emotional intelligence and students' academic performance are positively, linear associated based on gender and therefore, emotional intelligence will significantly influence both the male and female students' academic performance. To the lay man view, hypothesis was rejected, meaning that there was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic Students in Ilorin South LGA, Kwara State based on Gender.

Table 6: Environmental Factor and Students Academic Performance in Arabic Language Based on School Type

School Type	N	X	SD	Cal r-value	P-Value	Decision

Public	176	51.0600	4.58663	0.5210	0.005	H ₀₃
Private	24	51.7000	3.12495	0.5582	0.026	Rejected

Source: Field work 2024

Table 6 presents the result of Pearson Bivariate Correlation Coefficient on relationship between emotional intelligence and students' academic performance of Arabic Students based on School type. In this test, the Pearson's Correlation Coefficient of Emotional Intelligence and Academic Performance of public-school students is 0.5210, while that of private students is 0.5582, which signifies positive linear correlation. The significance test has then null hypothesis that there is no positive or negative correlation between the two variables in the universe based on school type ($r=0$). The results show a very high statistical significance with p-value of 0.005 and 0.026 respectively, which are less than 0.05 significance level. Thus, we can reject the null hypothesis of no significant relationship based on school type and assume that emotional intelligence and students' academic performance are positively, linear associated based on school type and therefore, there was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic Students in Ilorin South LGA, Kwara state based on school type.

Summary of the Findings

The study investigated emotional intelligence and students' academic performance in Arabic Language in Ilorin South Local Government, Kwara State. The following findings were highlighted:

- 1) All questionnaire items were above the mean score of 2.5 and was considered high. This means that emotional intelligence of the students in this Local Government was regarded high and gives the students lot of advantages.
- 2) Research question 2 revealed that the level of academic performance of secondary school students in Arabic Language is considered high with 196 students who scored A, B, C and P. Only 4% of the students scored 39-001.
- 3) There was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary school Arabic students in Ilorin South LGA, Kwara state based on school type.
- 4) There was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary Arabic Students in Ilorin South LGA, Kwara state based on school type.

Discussion

The study investigated emotional intelligence and students' academic performance in Arabic Language among secondary schools in Ilorin South Local Government Area, Kwara State. For instance, the level of emotional intelligence of Arabic students was

regarded high. This correlates with the submission of Elias (2021) who said emotional intelligence could be described as the ability of an individual to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions in ways that promote emotional and intellectual growth. It is an ability (although which can be taught) which gives our emotion sensitivity and potentials for emotional management skill that helps us maximize our long-term health, happiness and survival.

The level of academic performance of Arabic Students in Ilorin South Local Government Area, Kwara state was high. This is agreed with Crires (2015), who lamented that academic performance could be poor or good. A child is said to be performing well in his academic when he is scoring above 50 while children who score below 39 are said to be performing poorly. Crires stressed further, that the concept of academic performance refers to the achievement by individuals of objectives related to various types of knowledge and skills. These objectives are socially established based on age, prior learning capacity of individuals with regards to education, socialization and qualification. Studies conducted on academic achievement notably focus on students' progress and individual, institutional and organizational factors of achievement, along with social relationship interactions that determine, facilitate or hinder academic achievement.

There was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary Arabic Students in Ilorin South LGA, Kwara state based on gender. This is also in line with Obieke (2023). In his empirical studies which revealed that emotional intelligence is closely correlated with learners' academic achievement in schools (Nwadinigwe & Obieke, 2023). Their results independently, have shown that Emotional Intelligence could significantly predict the academic performance of students either male or female. Mohzan et al., (2016) studied the effect of Emotional Intelligence (E I) on academic achievement among 278 bachelor degree learners of Education Faculty in Universiti Teknologi Mara (UTM), Malaysia. The result revealed that there was a significant relationship between the overall emotional intelligence and academic achievement of students. Maraichelvi and Rajan (2018) in their study, also found that there was a close relationship between Emotional Intelligence and Academic Performance of students.

There was significant relationship between Emotional Intelligence (E I) and Academic Performance (A P) of senior secondary Arabic Students in Ilorin South LGA, Kwara state based on school type. This agrees Preeti (2019) who established in his result while studied into the role of emotional intelligence on students' academic achievement, that teaching emotional and social skills at school would not only positively influence academic achievement of students during their years of study when these important skills were taught but would also have long term achievement impact in respect of the type of school. It is found by the above authority that academic performance without emotional intelligence in any school does not indicate future success, while its absence (emotional intelligence) indicates the weak personality and inability to build good relationship at

working place as well in schools. In other words, emotional intelligence is highly important for quality education and social growth.

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Peer Influence, Self-Esteem and Parental Occupation as Determinants of Attitude to Teenage Pregnancy Among Secondary Schools Adolescents in Lagos State

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Abstract

Teenage pregnancy remains a significant public health concern, particularly in developing regions such as Nigeria, where it is associated with adverse health, educational, and socioeconomic outcomes. Adolescents' attitudes towards teenage pregnancy play a crucial role in shaping their reproductive behaviors and choices. This study examines peer influence, self-esteem, and parental occupation as key determinants of attitudes towards teenage pregnancy among 250 secondary school adolescents (ages 13-16) in Lagos State, Nigeria. Hinged on the Theory of Planned Behavior (TPB) and the Precaution Adoption Process Model (PAPM). A descriptive cross-sectional survey was conducted using structured questionnaires measuring peer influence, self-esteem, parental occupation, and attitudes towards teenage pregnancy (assessed on a 4-point Likert scale). Data were analyzed using descriptive statistics, ANOVA, and multiple regression analysis. The results showed that adolescents with high peer influence had more permissive attitudes towards teenage pregnancy compared to those with low peer influence ($F = 4.21, p = 0.018$), while those with low self-esteem were more likely to view teenage pregnancy as acceptable, compared to those with high self-esteem ($F = 6.02, p = 0.011$). Furthermore, the findings revealed that Parental occupation significantly influenced attitudes, since adolescents from low-income families were more likely to hold positive attitudes towards teenage pregnancy compared to those from higher-income families ($F = 5.31, p = 0.023$). The findings suggest that social and psychological factors significantly shape adolescents' perceptions of teenage pregnancy. Interventions should focus on reducing peer-driven acceptance of teenage pregnancy, promoting self-esteem development, and addressing socioeconomic disparities to reshape adolescents' attitude to teenage pregnancy. The study contributes to adolescent health research by highlighting the importance of social norms and self-perception in shaping sexual attitudes and behaviors. The study recommends peer-led education programs, self-esteem development interventions, and targeted socioeconomic support programs to mitigate teenage pregnancy risks.

Keywords Teenage Pregnancy, Peer Influence, Self-Esteem, Parental Occupation, Theory of Planned Behavior, Precaution Adoption Process Model

Introduction

Adolescence being the transition between childhood and adulthood from ages 10-19 years old is believed to be a critical period when immense physical, social, psychological, and reproductive changes take place. During this period, adolescents typically experience sexual initiation and begin exploring sexual activities as a natural part of reaching sexual and reproductive maturity. Therefore, there is a risk of possibly having the adverse effects of early and unprotected sexual activity, usually due to inadequate reproductive

health information about sexuality and skills to maintain sexual abstinence which might lead to unwanted pregnancies (Kassa, Arowojolu, Odukogbe & Yalew, 2018). The challenges during the teenage years appear universal and can be traumatic. Adolescents face multiple challenges, including biological, psychological, social, sexual, and physical maturity, as well as societal pressures. Consequently, some teenage girls engage in risky health behaviors, such as early and unprotected sex, which can lead to devastating consequences, including sexually transmitted infections and unwanted teenage pregnancy (Adeniyi, Olufemi-Adeniyi & Raheem, 2018).

According to World Health Organization [(WHO) (2020)] report, teenage pregnancy is defined as pregnancy occurring in girls aged 13 to 19 years old. Teenage pregnancy remains a pressing public health and social issue globally and in Nigeria. Adolescence is a period of significant physical and psychosocial change, during which adolescents may be vulnerable to risky sexual behaviors including early sexual debut. According to Nigeria Demographic and Health Survey, NDHS (2018) about one in five adolescent girls (ages 15–19) in Nigeria, has begun childbearing either already a mother or currently pregnant (NDHS, 2018; WHO, 2020). This high prevalence of adolescent pregnancy is a concern due to its associated adverse outcomes for young mothers, such as health complications, interruption of education, and socioeconomic hardships (Kassa, Arowojolu, Odukogbe & Yalew, 2018). Prior studies indicate that multiple factors contribute to teenage pregnancy, including peer group influence, individual self-esteem, and family socioeconomic background (Adeniyi, Olufemi-Adeniyi & Raheem, 2018; Abiy, Teketel, & Aklilu, 2018; Agba, Agba, & Ndubisi, 2022).

Peer influence is commonly defined as the extent to which peers exert influence on the attitudes, thoughts, and actions of an individual within similar age range (Teketel, & Aklilu, 2018). Peer influence also enhances the developing personality of individuals and also plays a vital role in the thought processing and sharing, for the growth of self-worth, self-esteem and sexual behaviour. Adolescents communicate in a better way with their peers at this stage more than their parents especially where there is little or no communication between them and their parents. Peer influence, and the need to be famous and accepted are contributing factors to why adolescents spend more time with their friends. Peer pressure was a common reason given by most adolescents for engaging in sex, most mentioned that they were influenced by their friends to initiate sex to show they were matured and catching up with what friends were doing (Envuladu, Van de Kwaak, Zwanikken, & Zoakah, 2017; Sharma, & Harsora, 2022). Adolescents as a way to quickly satisfy their needs for social, emotional, and sometimes financial gratification, yet without adequate life-skills or self-control, may bow easily to peer influence, seek out romantic relationships as a way to boost their self-worth, which may lead to early sexual activity, risky sexual behaviour and an increased risk of unintended or unwanted pregnancy. In order to rescue adolescents from social and psychological pressures that may predispose them to wrong decisions, there is need for preventive programmes to reduce the positive attitude to teenage Pregnancy.

According to Ilegbusi and Adenuga (2024), primary causes of teenage pregnancy include a lack of sex education, followed by peer pressure, poverty, and low self-esteem, stating that other associated factors include a lack of self-control, a lack of parenting, and poverty.

Self-esteem, the individuals' opinion of their self-worth or their ability to feel positive about themselves has also been identified as one of the factors that have the potential to influence sexual behaviors. High self-esteem is expected to reflect and predict good adjustment and behaviors valued by the society. An adolescent with high self-esteem is believed to be assertive enough to avoid risky sexual Behaviours, hence have a negative attitude towards teenage pregnancy (Olorunsola,*et al.*, 2021).

Parental occupation is believed to be a factor that may influence the values, attitudes, and life opportunities available for adolescents. Parental occupation may influence the time parents stay at home with their wards, the financial stability they provide, and the attitudes they instill about education, health, and family life. As such, understanding how parental occupation interacts with other factors, such as decision-making and negotiation skills, can offer valuable insights for developing targeted preventive programmes aimed at reducing teenage pregnancy rates (Makinde, Ahimie, & Idowu, 2013; Folahan,2016).

This study focuses on three key determinants: peer influence, self-esteem, and parental occupation (as an indicator of income level), in the context of secondary school adolescents in Lagos State. Understanding how these factors interplay to influence attitude to teenage pregnancy is crucial for designing effective interventions.

Theoretically, the study is grounded in Ajzen's Theory of Planned Behavior (TPB) and the Precaution Adoption Process Model (PAPM). The TPB provides a framework for understanding how an individual's attitudes, subjective norms, and perceived behavioral control shape their intentions and behaviors (Ajzen,1991). In the context of adolescent pregnancy, TPB suggests that a teenager's attitude toward pregnancy (e.g. viewing it as negative for her education), the subjective norms (e.g. perceived peer approval of contraception use or sexual abstinence), and perceived control or self-efficacy (e.g. confidence in refusing unwanted sex or obtaining contraceptives) will together influence her intentions and actual behavior regarding sexual activity and pregnancy prevention. For instance, an adolescent who believes that using contraception is beneficial, feels her friends/family support its use, and is confident in accessing and using contraceptives is more likely to practice safe sex to avoid pregnancy.

Complementing the TPB, the Precaution Adoption Process Model is a stage-based theory that describes how people adopt health-protective behaviors through a sequence of steps from ignorance to action (Weinstein & Sandmand,2002). Progression through these stages can be influenced by factors like perceived susceptibility, perceived benefits of action, and self-efficacy. For example, a girl with high self-esteem and good knowledge might move from merely knowing about the consequences of teenage pregnancy to

deciding to prevent getting pregnant it, whereas strong peer pressure might keep another adolescent “stuck” in a stage of inaction despite awareness.

Statement of the Problem

Despite global and local efforts to reduce adolescent pregnancy, it continues to pose serious challenges in Nigeria. Teenage pregnancy in secondary schools often leads to school dropout, curtailed future opportunities, and health risks for both the young mother and child. Lagos is believed to be one of the states in Nigeria with large adolescent population, those from socioeconomically disadvantaged communities or unstable family backgrounds may still experience higher rates of early pregnancy.

Observations from school counselors and community health workers in Lagos suggest that many teenagers face intense peer pressure regarding relationships and sexual behavior. Adolescents often desire social acceptance, and they may engage in sexual activity due to encouragement from friends or to emulate peers, sometimes under the misconception that “everyone is doing it.” This peer influence can normalize risky behaviors and uphold positive attitude to teenage pregnancy. At the same time, low self-esteem among adolescents potentially stemming from academic struggles, family issues, parental occupation or social media pressures may make them more susceptible to peer influence and less confident in negotiating safe sexual practices. A teenager who lacks self-worth might seek validation through sexual attention or feel unable to insist on condom use, increasing the risk of unintended pregnancy. Furthermore, parental occupation and income level play a role in adolescent reproductive behavior. Teens from low-income families may receive less supervision or sex education at home, either because parents work long hours or because of limited parental awareness about sexual health. Economic hardship can also indirectly drive teenage pregnancy; for instance, some girls from impoverished backgrounds may engage in transactional sex or consider early childbearing a viable life path due to limited educational and career prospects.

The problem this study addresses is the need for a clearer understanding of Peer Influence, Self-esteem, and Parental occupation specifically impact teenage pregnancy among secondary school students in Lagos. While prior studies have identified these as general risk factors, there is a gap in research in Lagos quantifying their effects and examining them under robust theoretical frameworks like TPB and PAPM. Without this understanding, interventions may miss critical targets (for example, focusing solely on abstinence or biological aspects and neglecting peer group dynamics or psychological support). This study seeks to investigate these underlying factors and provide evidence-based insights to help curb adolescent pregnancy and its negative consequences.

Objectives of the Study

The purpose of this study is to examine peer pressure, self-esteem, and parental occupation (income level) as determinants of attitudes towards teenage pregnancy among secondary school adolescents in Lagos State. Specific objectives of the study include to:

1. Investigate the influence of peer pressure on adolescents' attitudes toward teenage pregnancy among secondary school adolescents in Lagos State.
2. Assess the relationship between self-esteem and attitudes toward teenage pregnancy among secondary school adolescents in Lagos State.
3. Examine the impact of parental occupation on adolescents' attitudes toward teenage pregnancy among secondary school adolescents in Lagos State.

Research Hypotheses

1. There is no significant relationship between peer influence and adolescents' attitudes toward teenage pregnancy.
2. There is no significant influence of self-esteem and adolescents' attitudes toward teenage pregnancy.
3. There is no significant relationship between parental occupation and adolescents' attitudes toward teenage pregnancy.

Methodology

Research Design and Approach: The study employed a descriptive survey research design with an ex-post facto approach, as it investigated existing factors (peer influence, self-esteem, parental occupation) in relation to an existing outcome (attitude towards teenage pregnancy) without manipulating any variables. The design is cross-sectional, capturing data from respondents at one point in time. This approach is appropriate for assessing correlations and group differences in naturally occurring variables among adolescents.

Population and Sample: The target population comprised secondary school adolescents in Lagos State, Nigeria, particularly those in the age range of 13 to 16 years. For the survey, a sample of 250 adolescents was selected from several secondary schools across Lagos State. The sample were female students, because the area of interest is attitude towards teenage pregnancy the analysis focused primarily on female respondents' experiences. The age range 13–16 covers early to mid-adolescence, which is a critical period for sexual debut in many adolescents.

A multi-stage sampling technique was used. The first stage entailed selecting three Education Districts out of the six Education Districts in the state. Three secondary schools were randomly selected from the three Education Districts previously selected to ensure geographic and socioeconomic diversity (including both low-income and middle-income neighborhoods). Then, within each selected school, students in the target age range were stratified by class, and simple random sampling was used to recruit participants from each stratum. Parental consent and student assent were obtained prior to data collection, given the sensitive nature of the topic and the minors involved.

Participation was voluntary and responses were kept confidential. Instrumentation: Data were collected using a structured questionnaire consisting of four sections:

Demographic Information was gathered on background data such as age, sex, class in school, and parental occupation/income level. Parental occupation was assessed by asking students to report their father's and mother's occupation and, if known, an approximate monthly income range. Based on this information, each student was categorized into one of three socioeconomic groups: Low Income (e.g., parents in unskilled or informal jobs with low earnings), Middle Income (parents in skilled trades or lower professional jobs with moderate earnings), and High Income (parents in professional or managerial positions with high earnings).

Peer Influence Questionnaire with a set of questions measuring the degree of peer influence on the respondent's attitudes and behaviors regarding sexuality. Items were adapted from Revised peer pressure questionnaires by Sunil and Singh (2022). Example items included: "I will engage in risky sexual behaviour just to keep up with peers" and "I feel pressured by friends to date the opposite sex" Responses were on a Likert scale (e.g., 1 = Strongly Disagree to 4 = Strongly Agree). A higher total score indicated greater perceived peer influence toward sexual activity. For analysis, this continuous score was also dichotomized at the median to classify respondents into High Peer Influence vs. Low Peer Influence groups for comparison.

Rosenberg's Self-Esteem Scale (RSES) was used to assess each participant's self-esteem. This widely validated instrument includes 10 statements, "On the whole, I am satisfied with myself" and "I feel I do not have much to be proud of" reverse-scored rated on a 4-point scale from Strongly Agree to Strongly Disagree. Scores range from 0 to 30, with higher scores indicating higher self-esteem. For certain analyses, participants were grouped into High Self-Esteem vs. Low Self-Esteem based on a median split of the RSES score.

Attitude Towards Teenage Pregnancy Scale This section inquired about the respondent's sexual activity and any history of pregnancy. "I will like to get pregnant before 18 " and " Pregnancy will help to prove of that I am fertile" Responses were on a Likert scale (e.g., 1 = Strongly Disagree to 4 = Strongly Agree). A higher total score indicated greater perceived peer influence toward sexual activity.

The questionnaire was reviewed by experts and pre-tested on a small sample of similar age students in a school not used for the study. Necessary adjustments were made before the full administration.

Data Collection Procedure: Trained research assistants visited each selected school to administer the questionnaires. Before the survey, students attended a brief session explaining the purpose of the study and assuring them of confidentiality. The survey took about 20–30 minutes to complete. Completed questionnaires were collected and analyzed.

Descriptive Statistics (Mean, Standard Deviation, Frequency), ANOVA (To test for significant differences in attitude scores based on peer influence, self-esteem, and parental occupation), and Multiple Regression Analysis (To assess the predictive strength of peer influence, self-esteem, and parental occupation on attitude scores). The following results table focused on mean attitude scores towards teenage pregnancy.

Table 1: Descriptive Analysis of Attitude towards Pregnancy across the Variables

Variable	Mean	Standard Deviation
Peer Influence Score	15.2	3.5
Self-Esteem Score	22.8	4.2
Attitude Toward Teenage Pregnancy	18.6	3.8

Table 2: ANOVA Results for Attitudes Toward Pregnancy Based on the Variables

Source	Sum of Squares	df	Mean Square	F	p-value
Peer Influence	238.5	1	238.5	9.65	0.002
Self-Esteem	196.3	1	196.3	8.40	0.004
Parental Occupation	182.1	1	182.1	7.88	0.006

Peer Influence ($\beta = 0.45$, $p < 0.01$) Adolescents experiencing high peer pressure had significantly more accepting attitudes towards teenage pregnancy. Implication: Peer norms are a strong driver of reproductive attitudes. Interventions should target peer groups to shift norms away from normalizing teenage pregnancy.

Self-Esteem ($\beta = -0.32$, $p < 0.01$) Adolescents with low self-esteem were more accepting of teenage pregnancy, while adolescents with parents in professional occupations were less permissive towards teenage pregnancy. Implication: Confidence-building interventions and life-skills training can help adolescents resist negative peer influence and maintain future-oriented reproductive goals.

Parental Occupation ($\beta = -0.28$, $p < 0.05$) Adolescents from low-income families were more likely to have accepting attitudes towards teenage pregnancy. Implication: Socioeconomic disparities increase vulnerability. Addressing educational and financial barriers can reshape adolescent attitudes towards pregnancy.

Discussion

The study revealed that adolescents with High level of Peer Influence had positive attitudes to teenage pregnancy, which confirms that peer influence significantly impacts and plays a role adolescents' attitudes toward teenage pregnancy, The finding is in agreement with previous researches (Sharma & Harsora, 2022; Tegegne, 2022). The findings equally revealed that higher self-esteem was associated with restrictive attitudes, which may result in showing negative attitude towards teenage pregnancy aligning with previous researches (Udigwe *et al.*, 2014; Kassa *et al.*, 2018; Tegegne, 2022). Furthermore, the findings showed that parental occupation played a vital role in shaping attitudes, supporting the socio-economic hypothesis of adolescent behavior (Makinde, Ahimie & Idowu, 2013; Duru *et al.*, 2010; Ayoade *et al.*, 2015; Tegegne, 2022).

The statistical analysis shows that there is positive correlation ship between parent and peer influence and self – esteem among adolescence.

Recommendations

1. Schools and communities should strengthen peer mentorship and peer-led education programs to counter negative peer norms that encourage unprotected sex.
2. Encouraging positive peer role models and providing adolescent-friendly sexual health information can reshape adolescent attitudes to teenage pregnancy
3. Schools should integrate psychosocial interventions and self-esteem enhancement programs into counseling and extracurricular activities. As this could play a key role in teenage pregnancy prevention.
4. Adolescents should be taught sexual assertiveness and decision-making skills.
5. Government and NGOs should expand financial support, scholarships, and vocational training.
6. Parental guidance programs should be introduced to help low-income families engage in adolescent reproductive education with their wards.

Conclusion

This study provides strong evidence that peer influence, self-esteem, and parental occupation significantly shape adolescents' attitudes towards teenage pregnancy. Adolescents with high peer influence, low self-esteem, and from low-income families were more likely to have permissive attitudes towards teenage pregnancy. These findings reinforce Ajzen's Theory of Planned Behavior (TPB), which emphasizes that peer norms, self-efficacy, and perceived control over behavior influence adolescent sexual behaviour choices. The study also aligns with the Precaution Adoption Process Model (PAPM), showing that adolescents at different stages of risk perception and readiness have varying attitudes towards pregnancy.

Adolescents' attitudes towards teenage pregnancy shape their future reproductive behaviors. Addressing peer norms, self-esteem, and economic barriers is crucial for reshaping these attitudes and reducing teenage pregnancy rates in Lagos State. Interventions must be multi-dimensional, integrating education, psychosocial support, and economic empowerment to create a healthier future for adolescents.

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Perception of Teachers on Influence of Differential Distribution of Resources on Academic Performance of Students Offering Financial Accounting Courses in Secondary Schools in Oyo West Local Government Area of Oyo State

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Abstract

The study was designed to ascertain the influence of differential distribution of resources on academic performance of commercial department students in secondary schools in Oyo WLGA of Oyo State. Descriptive survey design was used for the study. The targeted population for the study comprises all secondary schools in Oyo WLGA. The sample was drawn from public secondary schools out of all the schools in Oyo West out of these schools, 5 schools were sampled with one principal from each of the schools and 20 teachers. The sample consists of 21 respondents from each of the selected schools. The validity of the instrument was censured by giving the questionnaire to an expert in the field and necessary modifications resulting from renew were made in order to improve the face validity of the instrument. The questionnaire and observation schedule were to solicit opinion from respondents about the influence of differential distribution of resources on academic performance of students. The findings revealed that most of the secondary schools in Oyo West are differentially provided with the school resources in terms of clerical staff, school building and instructional materials, some schools with inadequate resources have their students' performance to be at pass level. The study thus concluded that there should be a policy guiding distribution of educational or school resources to schools and that provision of adequate teaching and learning resources should be enforced and thorough supervision of the teachers by the ministry of education.

Keywords Resources, Academic Performance, Financial Accounting

Introduction

Education is viewed as a crucial investment not only to the individual, but also to the society. It is widely accepted that education is a pathway to individual socio economic and political advancement, yardstick to rapid expansion, upgrading and diversification of manpower. This provides reasonable justification for the huge investment made by developed countries over the year, they invested enormous amount of time, money and energy in providing qualitative education to their citizens, due to the premium on education as eradicator of poverty and ignorance from most societies. Secondary education occupies a critical place in Nigerians educational system. Secondary education plays an important role in the education of a child, being the bridge between primary and tertiary education. It is that level of education that determines the academic achievement and professional carries of students. The national Policy of Education (2013) reflects the

provision of the construction concerning secondary education programme of the government. Section 3 of the NPE, FGN (2013) states that secondary education seeks to prepare youths for useful life in the society. The objectives of secondary education were spelt out as follows;

1. To provide holders of basic education certificate and junior Arabic and Islamic studies certificate with opportunity for education of a higher level, irrespective of gender, social status, religious or ethnic background.
2. To offer diversified curriculum to cater for the differences in talents, disposition, opportunities and future roles.
3. To provide trained manpower in the applied sciences, technology and commerce at sub-professional grades.
4. To provide entrepreneurial, technical and vocational job specific skills for self-reliance and for agricultural, commercial and economic development.
5. To develop and promote Nigeria languages, art and culture in the content of world's culture heritage.
6. To inspire students with a desire for self-improvement and achievement of excellence.
7. To foster patriotism, national unity and security education with emphasis on the common ties in spite of our diversity.
8. To raise morally upright and well-adjusted individuals who can think independently and rationally, respect the views and feelings of others and appreciate the dignity of labour.

To achieve these objectives, secondary education is grouped into two stages; each of the stages last for three years duration. That is, junior secondary education (Basic Education) and senior secondary education (Post basic Education) making six years in total.

The quality of education developed by teachers and the academic achievement of students depends on several factors of which educational resources are essential. Educational resources are the sum total of all things used directly or indirectly for the purpose of education and training to support, facilitate or encourage transmission, patency and acquisition of skills and knowledge.

According to Usman (2017), Educational resources are central to the educational process because they play an important role, they achievement of educational goals and objectives since they facilitate teachers work and accelerate learning on the part of the students. Educational resources are the entire plan which school administrators, teachers

and students' harness, allocate and utilize for the smooth and efficient management of any educational institution to achieve an effective and purposeful teaching and learning experience. Financial and human capital plays vital roles in the ability of a school to fulfill its mission of education students without fund all other vital elements in the school such as school building, allowances, purchases as well as runnier expenses cannot be made. Farombi (2013) opined that the wealth of a nation or society could determine the quality of education in that land: emphasizing that a society that is wealthy will establish good schools with quality teachers learning infrastructures that with such, students may learn with ease thus bringing about good academic achievement writing on the roles of resources in teaching, Asiyai (2010) and Fheonusnekwu (2012), have also show that the condition of school resources have a strong effect on academic performance of pupils. Burkett and Bowers (2018) reported that students in newer and adequate school facilities out performed students in older and inadequate school facilities, conducive school physical environment could enhance student's school attendance, involvement in academic activities and academic performance positively.

Findings by World Bank (2015) in a study on the provision of textbook and physical resources in secondary schools in sub-Saharan Africa countries: Botswana, Cameroon, Coted Vore, Ghana, Nigeria, Malawi, Rwanda, Tanzania and Togo revealed that textbooks and libraries were not only inadequate but differentially distributed among rural and urban schools sub-Sahara African. Similarly, Fabunmi (2012) cited by Mucai (2013) on the study of differential allocation of educational resources and secondary academic performance in Edo State, noted that there was a common feature of difference in allocation of facilities to schools. Hoop (2001) noted that education in most sub-Saharan countries faces chronic shortages in physical and human resources. According to him rather than distributing the limited resources available for secondary education uniformly across school, governments allocate a relatively large share of available resources to a selected number of secondary schools. All the above studies indicated that most schools are faced with challenges such as uneven distribution and inadequacies in terms of human and materials resources in the schools. However, education institutions are intimately linked with society as a whole. It as approved that academic achievement of students is related to individual differences between students, and socio-economic features in which they grow up as well as educational resources of their current school. The general conditions of our schools are of paramount to the success or otherwise of nation because it plays an essential role in the development of the personality of the students. Government should ensure regular supervision of instructional and other educational services; provide equal educational opportunities for students. Government should ensure regular supervision of instructional and other educational services provide equal educational opportunities for students by diminishing the effect of socio-economic factors on academic achievement.

For good educational policy or programme to guarantee quality outputs. It must be several optimally with appropriately trained and motivated teaching staff, adequately supplied with necessary facilities and well-equipped school environment that support

students to perform well and moreover, facts are retained better that supplemental with educational resources.

The review above presents a background to the resource's situation in Oyo state, focusing on student's performance availability and utilization of the resources by teachers and students for effective teaching and learning process. The need for the study is to assess the influence of differential distribution of resources on academic performance of commercial students in secondary school in Oyo West LGA of Oyo State.

Statement of the Problem

The challenge of declining quality of education has attracted researcher attention and comments from many social and educational researchers in Nigeria. Secondary schools students' academic performance in public examination in one of the major instrument use in evaluating the quality and production of secondary school in Nigeria. The government has taken a number of measures to improve and promote secondary school education, but the nation is still yet to prove quality and equitable education to her citizens. Most of the educational resources were either not available, inadequate or unevenly distributed amidst schools.

Hence, this study is interested in investigating whether schools that have scanty resources or adequate resources being allocated to them have the best performance in school certificate exams and find out how the available resources are used influencing students' performance.

Objectives of the Study

The purpose of this study is to examine the perception of teachers on influence of differential distribution of resources on academic performance of secondary school students in Oyo West LGA of Oyo State. The study investigates:

1. The adequacy of human resources in the school
2. The availability of physical and material resources allocated to schools.
3. The extent to which students and teachers utilize the available resources to influence students' performance.
4. Teachers' perception on factors influencing allocation of schools' resources.

Research Questions

1. How adequate are the human resources in the school?
2. How available are the physical and material resources allocated?

3. To what extent are the available resources utilized in influencing students' performance?
4. What is the teacher's perception on factors influencing allocation of school resource

Methodology

The study adopted descriptive survey research design. It is considered as a suitable research design. The population for this study was all public secondary schools students offering financial accounting courses, principals of each school and teachers in Oyo West LGA of Oyo State. Random sampling techniques were adopted. The study was carried out in five randomly selected senior secondary schools in Oyo West LGA. The sample consists of twenty-one respondents from each of the selected schools. The basic instrument form for the collection of information from respondents is a constructed questionnaire titled as Educational Resources Questionnaire (ERQ). The instrument was constructed to select responses relevant to the study from both the principal and teachers. The questionnaire was structured on a four (4) points Likert scale. The researcher assigned weight of 4:3:2:1 respectively to the four-point Likert scales. The result summary of each school was examined that is the West Africa Senior Certificate Examination (WAEC) result was compared to ascertain, if the schools with adequate resources performed well than those with limited or scanty resources.

Result

This section presents and discusses the result of the study as follows: Research Question 1: how adequate are the human resources in the school for students' academic performance?

Table 1: respondents on adequacy of human resources in the school

S/N	Items	Highly Adequate	Adequate	Fairly Adequate	Not at all
1.	Graduate teachers	70	45	35	0
2.	Laboratory assistance	33	81	24	12
3.	School librarian	110	24	16	0
4.	Teacher librarian	0	80	51	19
5.	Clerical staff	60	20	53	17
6.	Cleaners	60	20	13	23
7.	Counselors	93	21	13	23

Result in table 1 revealed the opinion of the secondary school principals and teachers that most of the schools had qualified teachers in the subjects. The findings showed that the teachers almost taught the students without instructional materials as revealed in table 3.

Furthermore, most of the schools and teacher's librarian instead of qualified school librarian this affect the utilization of library. The library was used at an average level. Ogunseye (2010) cited in Owoeye and Yara (2012) had earlier noted that total absence of an organized school library would continue to spell dooms for thousands of secondary

school students. This statement clearly implied that many schools operate without qualified personnel in the libraries and most schools without a well equipped library as seen in table 2 and this adversely affect the academic performance of their students. The position of school librarian requires going through an appropriate course of study. Counselors, cleaners and laboratory assistance were not adequate in almost all the schools as showed in table 1.

Research Question 2: How available are the physical facilities and materials allocated?

Table 2: availability of physical facilities and materials/equipment in the school

S/N	Items	UMA	A	LA	NA
1.	Comfortable chairs and lockers in the classroom	32	47	53	18
2.	Examination hall	85	35	20	10
3.	Administrative block/staff room	70	45	25	0
4.	Laboratories	65	55	20	10
5.	Well equipped library	90	35	15	10
6.	Locker stood and tables in the laboratory	60	20	53	17
7.	Textbooks	70	45	25	10
8.	Typing machine, photocopier, computers	0	80	51	19
9.	Workshop	22	48	70	10
10.	Visual media e.g. graphs, charts, specimens	20	65	40	20
11.	Audio materials e.g. radio, tapes	10	95	30	15
12.	Audio-visual media e.g. television video-tape	0	80	51	19
13.	Workshop equipment	10	85	35	20
14.	Laboratory apparatus e.g. cylinder, flannel, burners board	23	93	21	13
15.	Counseling unit	93	21	13	23

Responses from the teachers and principals indicated that most of the schools had physical facilities beyond average but not up to significant level. These confirmed that well-ventilated classrooms, comfortable chairs and lockers, administrative blocks, examination halls and laboratories were in school up to average level and above and this was responsible for the little academic performance as they enhance effective teaching learning activities.

Furthermore, the findings revealed that almost all the schools had no instructional materials/equipment such as laboratory apparatus, workshop equipment, audio materials, audio visual media and textbooks as shown in table 2. Most of the teachers taught without instructional materials or apparatus (table 3). This contributed to students' poor academic performance.

The findings was in agreement with Ogungbenro (2011) assertion that inadequate provision of required facilities and equipment constitutes a setback to effective teaching and learning in our educational institutions including secondary schools, teaching aids when used effectively facilities retention of factual ideas and concepts.

Research Question 3: to what extent are the available resources utilized in influencing student's performance?

Table 3: utilization of school resources

S/N	Items	GE	SE	VL	NA
1.	Qualified graduate teacher in the subject	70	45	25	0
2.	School librarian	110	24	16	0
3.	Teacher librarian	0	80	51	19
4.	Counselors	93	21	13	23
5.	Clerical staff	22	70	48	10
6.	Cleaners	60	22	53	15
7.	Library	95	25	18	12
8.	Administrative block and staff room	80	40	20	10
9.	Textbooks	100	20	18	12
10.	Typing machines, photocopier, computers	0	80	51	19
11.	Visual media e.g. graphs, charts, specimens	0	95	33	22
12.	Classroom	110	24	16	0
13.	Examination hall	85	40	15	10
14.	Audio visual media e.g. television, video tape	0	85	40	25
15.	Laboratory	81	33	24	12

Result in table 3 indicates that qualified teachers in subject, teacher librarian, and clerical staff are the human resources that were being utilized adequately in most of the schools. the physical facilities found to be utilized table 3 above were not a surprise since they were complimentary items along with educational resources that were found to be regularly utilized in the schools. school's librarian, counselors, cleaners, visual media, audio-visual and radio materials showed that utilizations largely depends on availability, thus these items were revealed to be absent in almost all the schools which makes their utilization to be at a very low extent. All other items in table 3 were utilized in accordance with their level of availability. Akinwumiju and Orimoloye (2010) cited by Owoeye and Yara (2012) asserted that, if items like textbooks, teaching aids and educational materials are unavailable, and those available were grossly insufficient, underutilized or poorly manage would result in sharp decline in the quality of professionals and students that graduates from our educational institutions.

Conclusion

The study has proved that school facilities were the most potent determinant of academic achievement. Schools cannot exist without certain level of school resources. Resources in terms of qualified personnel, who are directly involved in the pedagogy, laboratory, school building, chairs and lockers etc are very crucial to any academic attainment. It was ascertained that most of the schools were in short supply of school resources and seldom uses it and that had an adverse effect on students' academic performance.

The research also showed that apart from inequitable allocation of resources to school and in proper utilization of the available one's other factors militated against students' academic performance and which must strictly adhere to. The researcher therefore, advocate that all stakeholder in education, that is the Parent Teachers Association (PTA), philanthropist and other charitable organization should complement the effort of the government to boost the performance of students in senior secondary certificate examination (SSCE) students being a backbone of every nation needs a well-equipped school system.

Recommendation

Based on the findings of this study, the researcher thus makes the following recommendations:

1. School administrators should be equally sensitized on the need and importance of physical facilities and instructional materials in schools. this could be achieved through workshops for school principals.
2. The three level of government, local, government authority, the state government and the federal government should make frantic and sincere effort towards equitable distributions of resources to schools irrespective of the type of school to make room for uniform academic performance.
3. The educational administrators and planner should increase the budgets to ensure that each school is provided with school resources that are adequate in quality and quantity to prevent inequitable distribution.
4. To encourage hard work and dedication to duty, teachers and other school workers, should be remunerated as and when due.
5. Government should have an agenda or policy guiding resources allocation to school, to prevent differentia; distribution among schools.

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Harmonizing Power: Analyzing Asiwaju Tinubu's Campaign Jingle 'Jagaba' by Rarara on Political Mobilization and Voter Engagement in Nigeria's Electoral Landscape

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Abstract

Since music adapts to every situation as desired by the listener, it is a universal sound without any practical significance in and of itself. The limbic system, a system that is responsible for pressing emotions and managing memory, "lights up" when we hear musical compositions. Modes in humans are brought on by the neurotransmitter dopamine. It is what gives one the goosebumps when they listen to a particularly moving piece of music. Politicians can, however, politically interpret music to some degree. This essay will examine the musical jingle "Jagaba Shine Gaba" by the Hausa musician Dauda Kahutu alias Rarara from a structural and contextual perspective. The research also discusses the importance of music in igniting political movements, particularly during the general election in Nigeria in 2023 that resulted in President Tinubu's election. This essay investigates the campaign jingle employed by Ahmed Bola Tinubu, the front-runner for the All Progressive Party (APC), to win the presidency. This study reveals the underlying meanings and inescapable socio-cultural ramifications of the discourse of the sampled political jingle Jagaba Shine Gaba (Jaba is in Front). It is based on linguistic and literary theoretical perspectives and employs critical discourse analysis and musicology of literature, respectively. Utilising the qualitative analytical approach, the researchers assess the aforementioned jingle based on historical facts and observations. According to the study, political jingles are utilised to improve politicians' personalities and voter acceptability by including a variety of factors such as implicatures, names, lexemes, religious references, evidentiality, and code-switching.

Keywords Jingle, Dopamine, Politic, Limbic, Analysis, Structural, Contextual

Introduction

Political jingles are brief or light musical compositions intended to be used by political parties during electioneering. Political jingles and their use are as ancient as politics in Nigeria; electioneering campaign tactics in Nigeria are said to have started in the years preceding Nigeria's 1960 independence from colonial authority. Jingles have long been used as a political spark to motivate party members to take a position and dedicate themselves fully to the cause of advancement. But sometimes the jingle makes people

want to fight, especially when they're facing up against the opponent. This is evident since Violence, ethnic tensions, and thuggery have long characterised political campaigns in Nigeria. But in the third republic, political jingles became a priority, and musicians from various ethnic backgrounds were urged to compose jingles in their dialects to garner support for their cause. As a result, presidential candidates from the Social Democratic Party (SDP) and National Republican Convention (NRC) committed more funds to national campaigns (Opeibi, 2009). While the Fourth Republic incorporated parts of the First Republic's campaigns, it also brought additional ingenuity, especially in the use of the Internet. This is because Nigerian politics have been shaped by sociopolitical imbalances and crises ever since the country gained its independence. Up to that point, jingles were widely utilised as a political tool.

In Nigeria's multiparty system, politicians and their parties have utilised political jingles to appeal to the people. All parties matched their anthems with popular music during the Second Republic (1979–1983), which was vital for electioneering. The National Party of Nigeria used the slogan "One Nation, One Nigeria," while the Unity Party of Nigeria (UPN) utilised the Christian hymn "Hold the Fort, 1" as their campaign song (Omidiora et al.). In an unprecedented political manoeuvre, the ruling All Progressives Congress (APC), one of Nigeria's most powerful political parties, pulled off the impossible in the 2023 election by using the Hausa Jingle during its northern campaign. This one-religious ticket system is uncommon in a nation like Nigeria where religious strengths are split 50/50.

It is impossible to overstate the emotional impact and ability of music to influence group moods, despite its frequent dismissal as unimportant during electioneering. More important than its genres and content is its influence on political movements. Outside of the political sphere for example, in Nigeria, music has the power to strengthen military unity and cohesion, as well as to assist politicians in using celebrity politics to sell policies and win over the people. With music artists like Davido, ZaZoo (Portable), P-Square, and others releasing jingles in favour of their chosen politicians, it is evident that the Nigerian political landscape of 2023 is changing. Musical movements may be mobilised and popular support garnered during wars such as the Vietnam and Iraq Wars. Using the US presidential election and conflicts like the Vietnam and Iraq conflicts as case studies, this article examines the uniqueness and importance of music in igniting political movements.

Similar to spoken signals, music can have several interpretations and is not entirely under the composer's control. The audience shapes the meaning after it enters public discourse. History demonstrates that music motivates supporters of a certain party to persevere in their efforts throughout campaigns of all types in Nigeria, as seen by the 2023 presidential and governorship elections. Electioneering has benefited from the use of music, particularly Jingles, thanks to the advent of new technologies and the appeal of music. Every year, music has been included into a number of initiatives. In politics, music offers the politician optimism of winning elections, and even in conflict, it may

mask troops' location noises and produce a positive fighting impact. He (2023) reports that Nigerian political parties equipped their large campaign vans with audio and communication capabilities so that voters could hear their jingles while they were out canvassing. Political jingles, on the other hand, like the one made by the northern Nigerian company Rarara, were utilised in all of the country's major campaigns, particularly in the North, to dissuade the People's Democratic Party (PDP) and the Labour Party (LP) from important opposition positions. The failure of the opposition in the 2023 election gave President Tinubu an advantage over rival candidates like Peter Obi and Atiku Abubakar. This counterculture, primarily Afro-music, ultimately overcame the political appeal of the political parties and influenced public perception of the election and social injustice.

The full name of the composer of Jagaba Shine Gaba, the jingle stated above, is Dauda Kahutu, also known as Rararra. Born in 1986 in Nigeria's Katsina State, he became well-known during the 2015 elections thanks to songs supporting the All-Progressives Congress (APC). During his childhood in Kahutu village, he shown musical skill at a young age and attended local music schools. Rarara's career began in the 2015 general election, as the party's victory was aided by his popular songs. He is a gifted singer, composer, and performer who is recognised as one of the top APC political singers in Northern Nigeria. In addition, Rarara is the leader of the 13×13 Kannywood youth club, where she develops relationships with young musicians and mentors them. Even in the face of scandals and accusations of financial abuse, Rarara is still a prominent figure in Nigerian music and politics.

Much like the song Jagaban shine gaba by Rarara, which is symbolic and may have many meanings depending on the situation, music plays a big part in defining a politician's image. A spirit of collaboration was fostered and the viewer was transported to certain places by the campaign jingle's emotional impact and appealing African beat. It has been the practice of presidents such as Obasanjo, Goodluck Jonathan, and President Asiwaju Tinubu to convey their political campaigns, get attention from the people, and foster competition by employing unique dancing routines and music. Parallel to this, the nation's biggest Hausa community backed and spoke for Jagaban Hausa Music in its efforts to reinterpret the importance of Muslim tickets relative to those of other religions.

Campaign songs have become a crucial tool for Nigerian politicians to communicate their political demands and attract voters. With the advancement of technology and new media, music has become an expression of celebrity politics, helping politicians build influence, expand visibility, and guide voter choices. This highlights the importance of media in self-expression and public opinion formation, with celebrities in music becoming a significant part of politicians' election campaigns, just as seen in the 2023 Nigerian presidential election, where both movies and comedians pitched their tents to their favourite politicians through songs and skits. This section analyses the value of music, particularly pop music, in expressing political modes and embodying celebrity culture.

Music works in all human endeavours. For example, the haemodynamic theory suggests that individuals with poor emotional health express their ailments physically, which can be transcended in politics as voters' appetites for a particular candidate can be changed because of the jingle. Studies have shown that those with higher levels of repression tend to have a lower overall T-cell count and higher levels of repressive coping. To restore homeostasis, cathartic release can be achieved through music, which can induce and amplify emotions. Research has shown associations between minor modes and sad emotions and major modes and happy emotions (Shafron, 2010). This connection is the basis for music therapy, which uses structured and free musical improvisation, singing, and listening to address a client's issues.

Music has a significant physiological impact on various biological functions, including breathing, pulse rate, blood pressure, and psychogalvanic effects. Active music-making boosts neurotransmitters like dopamine and serotonin, influencing mood, sleep patterns, anxiety, and pain. Singing in groups promotes connection, oxytocin production, and relaxation while reducing cortisol, the stress hormone. Neurotransmitters, such as dopamine, serotonin, and endorphins, have a significant impact on moods in general. Dopamine is essential for reward and pleasure regions of the brain, while serotonin is crucial for mood control and social behaviour. Music exposure can raise serotonin levels, lowering tension and anxiety levels. Endorphins, the brain's "feel-good" chemicals, are released during music exposure, causing bliss and pleasure and reducing stress and anxiety (Sayin, 2019). This means that political parties with catchy jingles raise awareness and discourage the majority of illiterate Nigerian voters—particularly in Northern Nigeria—from relying solely on symbols while casting their ballots. In certain cases, a voter's name that sticks in their memory may even win them a vote. This was demonstrated in the 2023 election when the Liberal Party triumphed at some voting places without the presence of actual agents.

In light of this, it has been determined that jingles are essential to all political systems because of their indispensability. The qualities of the leaders are highlighted and elevated when these jingles are used. The purpose of this study is to examine the song Jingle Jagaba Shine Gaba, composed by Rarara, for the 2023 APC campaign. Additionally, the analysis of the research shows that this is how the candidates' perceptions are shaped in jingles. It was found through the literature review that there were not many studies done on the topic. The majority of the focus of this research was on how music may be used for propaganda and to increase voter appetite. The approach to which the jingle Jagaba Shine Gaba displays possibilities of election fraudulence before the Nigerian presidential election of 2023 was even conducted.

Theoretical Framework

Davou (2023) describes music as sustained speech done in different pitches concerning conscious time. Thus, making music a form of communication that is done using

different tones to communicate information to the listeners. Tanyildiz (2020) in his theory of communication, explains that music is a powerful and unique form of communication that can induce powerful emotions, and change our feelings, thinking, and actions. It helps bring together intellect and feelings, enabling personal expression and emotional development. Music conveys universal emotions and innermost feelings, experienced by all, and helps humans from different cultures or societies connect and understand one another. Although the two human branches of acoustic communication, speech and music, are separated, their innate pleasure and connection make music a universally experienced form of communication. In this form, politicians employ that form of communication that is transmitted into jingles during campaigns to convince the voters to vote for their aspirations. Denizli (2019) Music holds power and can be used for various purposes, including political, entertainment, and marketing. It can be used by those in power to impress listeners and has the potential to influence us, even if not directly. Therefore, music is a potential power.

This brings us to the theories of the studies that is anchored by John Langshaw Austin's Speech Act Theory and the Cooperative Principle by Paul Grice that has now become a model in the modern-day politics. The speech which was later refined by John Searle, is pivotal in understanding the pragmatic speech acts within Philippine political jingles. It provides a foundational framework for exploring these persuasive communication tools' illocutionary and perlocutionary acts. Its significance to this study is multifaceted and is underpinned by a wealth of scholarly insights. This theory offers a deep understanding of the illocutionary acts found in political jingles. Illocutionary acts are the speech acts that reveal what the speaker intends to do with their utterance. In the context of political jingles, the illocutionary acts are embodied in the promises, declarations, and commitments the candidates make. For example, in the song "Jagaba Shine Gaba" the singer Rarara said that the "Kasar mu zata yi normal gaba" means "our land will be normal in the future" if Tinubu becomes the president.

Vanderveken (1990), has highlighted that the Speech Act Theory enables identifying and categorising these acts, helping researchers dissect the linguistic and rhetorical elements embedded within the jingles. This, in turn, allows for an analysis of how these acts align with the political promises and intentions of the candidates, just as demonstrated in the music of Jagaba Shine Gaba. The jingle Jagaba Shine Gaba has become so popular that it has now contributed to the Speech Theory Act, which is now examining the perlocutionary acts concerned with the effects of speech acts on the audience during and after the electioneering of 2023 that saw Tinubu emerge as the President of the Federal Republic of Nigeria. Researchers like Levinson (1983) have extended this theory aspect, emphasising the importance of assessing how listeners interpret and respond to illocutionary acts within discourse. In political jingles, especially the jingle in view, the perlocutionary acts correspond to how these persuasive elements impact voters' decisions and shape their attitudes. This theory aids in comprehending how the use of illocutionary acts in jingles, such as promises of change or declarations of integrity, triggers specific responses among the audience, thus contributing to the research aims. This theoretical

lens helps unveil how candidates strategically employ speech acts, in lyrical and melodic elements, to convey their political messages and elicit specific responses from the electorate. It informs the study's fundamental structure and connects it to a broader academic discourse on political communication, language, and persuasion.

The music Jagaba Shine Gaba is a pure demonstration of how music plays with human emotions, strengthening messages, and acting as a communication tool (Altenmüller et al. 2013). Murakami (2017) said that music can be considered a language of communication and less likely to oppose a message embedded in music. Music is also considered an effective mnemonic device, acting as propaganda and evoking images and associations, similar to how politicians use pop or film stars.

Rhyming verse is a powerful tool in oral cultures for remembering and recording events, as seen in balladeers and corridistas. During election periods, music and songs are used to convey information. Mass media development and party gatherings have led to similarities in party programs and policies, influencing preferences. Leaders can be launched like any product, with features like vision, knowledge, passion, faithfulness, exemplary trust, motivation, and a sense of justice (Peterson, 2018). Good leaders are listeners, communicate openly, and make decisions quickly and effectively.

Davou's views of musical analysis, as summarised in *The Prodigious Musicologist: Celebrating Professor Agatha Ijeoma Onwuekwe (Ugonabo)* (2023), provide the basis of the musical approach to the inquiry. The textual and structural styles of music analysis are the two main modes of analysis that the theory emphasised and explains in this way.

i. A textual analysis of a song provides a deeper understanding of music through philosophical arguments, fundamental principles, and empirical evidence. Effective methods involve understanding the song's historical context, composition context, and the culture that generated the song corpus.

ii. The structural analytical approach to musical analysis focuses on the mathematical structure of a piece, including scale, tonal organization, pitch, vocal techniques, and harmonic principles. It also considers the performance or presentation form, which includes thematic material, intention, and contingencies.

The analysis of Rarara's song Jagaba Shine Gaba took into account the analytical thorium that was emphasised.

Methodology

This study employed a qualitative research approach, primarily utilising the content analysis to analyse the speech act functions and linguistic elements within the musical jingle Jagaba Shine Gaba by Rarara, a 2023 APC campaign jingle. Sources of verbal data are a musical jingle that was adopted by Asiwaju Bola Ahmed, the presidential candidate of the APC and now the elected president of the Federal Republic of Nigeria. The jingle

Jagaba Shine Gaba was crafted for the APC presidential campaign, and "Rarara" was designed for that purpose. These selections were made according to specific criteria: President Tinubu became prominent during the election because of his comic dance step and staggering movement, which many believe he was not fit to become the president. The jingle showcased a remarkable level of creativity, especially the catchy rhythm and the phrase used, "Jagaba Shine Gaba."

In this study phase, the researcher selected did both the structural and textual analysis of the song and lines from the political jingles and conducted a detailed analysis of their speech act functions. Each line was examined and translated regarding its locutionary act (the literal meaning), illocutionary act (the intended effect), and perlocutionary act (the actual effect on the audience). The analysis involved categorising the lines into these speech act functions to understand how the jingles convey their messages and affect the audience.

Presentation, contextual, and structural analysis of Jagaba Shine Gaba

Jagaba Shine Gaba

Rarara

Presto

Lead. Voice (L.V)

Ja ——— sai Ja - ga-ba Ko da Al - lah mu ne_ga-ba

Response (R)

Ja - ga-ba shi - ne_ ga-ba

5

L.V.

R.

9

L.V.

R.

13

L.V.

R.

17

L.V.

R.

21

L.V.

R.

25

L.V.

R.

29

L.V. Mun ce kul_ ku-na a a a a Ku sayi ka ga-ba

R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi-ne_ ga-ba

33

L.V. A-si-wa - ju Ka-sar mu za ta yi nor - mal ga-ba

R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi - ne_ ga-ba

37

L.V. Ti-nun-bu ne ja - go ran_ ga-ba Bu - ha - ri-ya ba - Ja - ga-ba

R. Ja - ga-ba shi-ne_ ga-ba Ja - ga-ba shi - ne_ ga-ba

41

L.V. Shi-ko Ja - ga-ba tse-re ga-ba De-le - ken fa-la lau_ far-ga-ba

R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi - ne_ ga-ba

45

L.V. Dan si - ya - sa shi - ne_ ga-ba A - P - C

R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi - ne_ ga-ba

49
L.V. P - D - P ta wun-sul-lah Ma-su kwan-do ba su_ ku-la
R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi-ne_ ga-ba

53
L.V. Ya ba kin ci-ki ja - rin ji-lla No wal-wal-lah
R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi - ne_ ga-ba

57
L.V. Wu-rin fi - sa - ri yece in_ fa-da_ kyau-ba - tar-ma-ku mai-kon ge-da
R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi-ne_ ga-ba

61
L.V. Da la-tab ba lab ga_ Ja-ga-ba shi-ne a - ye!
R. Ja - ga-ba shi - ne_ ga-ba Ja - ga-ba shi - ne_ ga-ba

Structural Analysis

1. Form

The jingle is in Call and Response pattern. The lead voice is that of a man while the female voice response.

Media

The musical composition is campaign jingle used by the APC campaign team mostly across the Hausa speaking state of Nigeria. The music in its originally is vocal accompanied by some musical instruments programmed in the studio.

Style

The musical piece, which is fully tonal and written in the key of F major, and the music fadeout in bar 66.

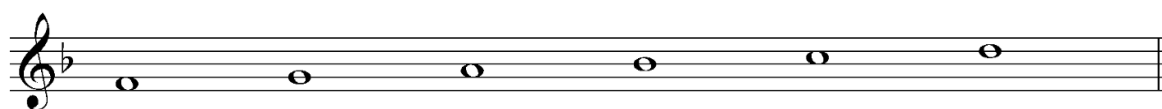
2. Motif.



3. Tempo : The musical tempo is $\text{♩} = 106$

4. Length : The total length of the music is 66 bars.

5. Scale and Mode



The Nigerian national anthem is written on the Hexatonic scale.

6. Mode and Character: The music is in compound time just as common to most African traditional songs in West Africa. The movement of the music is in Presto with a speed of a dotted crotchet 106.
7. Ranger and Tessitura: As stated above, the tonal range of the music begins with the dominant note, which is the middle C4, and ends with the highest note not sung in the Anthem, which is D5. The distance between the lowest and highest-sounding notes is nine steps.
8. Dynamics: The is rendered in a moderate volume no dynamics attached to the music.
9. Intended Audience: The song *jagaba shine gaba* is one of the songs used for campaign by the APC campaign team especially in the Northern part of Nigeria. The song was mainly for exultation and hiping of the APC candidate Ahmed Asuwaju Tinubu. The song, just like other campaign jingles, was meant to intimidate the opponent's camp and sell the candidature of the party's aspirant.

Textual analysis

Political songs, or jingles, are only used by political parties to further their objectives and cast doubt on the fitness of their opponents at rallies. However, the candidate's platform was merely mentioned in passing in the song "Jagaba Shine Gaba," with the promise that

"Our land shall be beautiful in the future" (Kasar mu zata yi kau nan gaba). The song's lyrics are an unwavering declaration of confidence that APC presidential candidate Alhaji Ahmed Bola Tinubu would win the race in whatever way possible. Judging from the jingle, it seems possible to declare the election to be definitive already, given the APC administration has been accused of widespread electoral manipulation ever since taking power in 2015 following their victory against PDP candidate Goodluck Ebele Jonathan. According to Deribe et al. (2021), the electoral fraud reported by the APC administration is defined as an immoral, unlawful, excessive, and prohibited act of meddling with the regular electoral process, particularly by APC officials, members, and supporters. The ruling party carried out this act. According to Kadiri et al. (2023), the failure of the ruling All Progressive Congress (APC) to fulfill its commitments, the rise of a third party, and the Independent National Electoral Commission's guarantees regarding election credibility made the 2023 general election in Nigeria a noteworthy political event. The front-runners were members of the major parties and represented significant tribes. This is demonstrated by the song, which is far from a jingle that tries to persuade voters to vote for the APC candidate into power by telling them that "Jaban ya karbi kasa" (that Jaba has already taken leadership) and also by the expression "Buhari y aba Jagaba" (Buhari has handed over to Jagaba). The aforementioned reported situation shows how the APC let parties take pleasure in irregularities by which the elections conducted under their watch were complete illegalities. As a result, any candidate they present, especially during the presidential election, assumes or automatically becomes the president of the nation. In this case, it is assumed that the APC already knew the result before going to the polls and that knowledge becomes concrete when they have taken steps to ensure that they will win the election in whatever way possible.

Jingle Text

Ashe

Call:	Ya sai Jagaba	Only Jagaba
Response:	Jagaba shine gaba	Jagaba is in front
Call:	Mu gode Allah mune gaba	Thanks to God Jagaba is in front
Call:	Bola Ahmed Tinunbu	Bola Ahmed Tinubu
Call:	Jagaban, Jagaban	Jagaban, Jagaban
Call:	Asiwaju	Asiwaju
Call:	Tinunbu	Tinubu
Call:	Alhaji Ahmen Tinunbu	Alhaji Ahmed Tinubu
Call:	APC	APC

Call:	Allah shine gaba	God take the lead
Call:	A taya mu da murna dare	Let celebrate together
Call:	Jamiya gar bata doyi....	A solid party does not stagger
Call:	Sai Tinunbu a kauye gari	Tinubu is villages and cities
Call:	Jagaba, Jagaba	Jagaba, Jagaba
Call:	Yanzu masu lema basu'a gari	The umbrella people are out of town.
Call:	Masu Kwando za suyi beri	Those with baskets will be lost
Call:	Wuyan na can haka shegen gari	The difficult once are in a bad city.
Call:	Muce kul kuna a a a a	You were caution but you said no
Call:	Ku sai nan gaba	Yours is history
Call:	Isiwaju	Isiwaju
Call:	Kasarmu Zata yi normar gaba future.	Our land shall be normal in the future.
Call:	Tinunbu ne jagoran gaba	Tinubu is the lead
Call:	Buhari ya ba Jagaba	Buhari has handed over to Jagaban
Call:	Da shigo Jagaba tsere gaba starts.	Jagaba is in the lead before the race starts.
Call:	deleken falalau fargaba	(Vernacular)
Call:	Dan siyasa shine gaba	Great politician is in front
Call:	APC	APC
Call:	PDP ta wunsula	PDP is a lost
Call:	Masu Kwondo basu kula	those with basket do not take caution
Call:	Yan bakin ciki jarin jilla	Blackmailing is a troubled market
Call:	No wallala	No troubles
Call:	Gurin fitsari yace in fada	the genital say I should voice out
Call:	Kau batar maku maikon geda	the beauty of nuts is the oil

Call:	Da lab tab ba lab ga	Da lab tab ba lab ga (Vernacular)
Call:	Jagaba shine a ye!	Jagaba is a ye!

Conclusion

This article is based on some musicological and media discourses about the Nigerian political jingle used by the APC during the presidential election, using the APC jingle Jagaba shine gaba by Rarara as an example to explore how helpful jingle could act as an inspiration in electioneering and as a tool of political awareness. Explore the campaign with the example of that the presidential race music helps American presidential candidates to express political strategy and to attract the support of the target population. In addition, the value of music in mobilising political activities is that music can attract audiences to a large extent and create common social consciousness and team spirit through a specific physical environment. Most importantly, the contextual and structural analysis of the music in the quote was done. The major findings in the research reveal the influential role of music in conversing support, just as seen in the 2023 election campaign in Nigeria. Jingles show the great influence of celebrity politics in Nigerian politics and reveal how music helps politicians gain public support and mobilise political activities. However, research shows most target groups are not politicians, suggesting further research should focus on the specific embodiment and influence of music in Nigerian celebrity politics.

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Factors Influencing Students Motivation in a Flipped Classroom in Kebbi State University of Science and Technology, Aliero

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Abstract

Flipped classroom is a student-centered approach that enables students to acquire knowledge before the class and use the classroom time to practice and apply concepts and ideas through interaction with peers and teachers. Many studies explored the impact of the flipped Classroom model over the conventional teaching method. The model enhances students' engagement and learning achievement. However, little is known about the factors affecting student's motivation in the FC model. Therefore, this study employed a qualitative method to explore the factors influencing students' motivation in a flipped classroom and investigate the advantages and challenges of using the FC model. A semi-structured interview was used to collect data. Twenty 200 level undergraduate students were interviewed based on the condition that they must have taken flipped classes. Thematic analysis was used to identify the factors affecting students' motivation. The results showed that the perceived relevance of pre-class materials, learning independence, Clear expectations, responsibility, technological know-how, and access to necessary resources extensively influence students' motivation in the FC model. Furthermore, the results revealed that the FC model benefited students by increasing student engagement, promoting active and personalized learning, encouraging teamwork, and fostering a deeper understanding of class materials and concepts. However, the results also revealed some challenges students faced during the FC, including unstable internet connection, lack of computer access, and poor steady power supply. The study concluded that certain factors need to be considered for the successful conduct of the FC model. More so, institutions should integrate the use of flipped classroom in their instructions as well as instructors should adopt motivating strategies when using flipped classroom

Keywords: Motivation, Students, FC model, Advantages, Challenges

Introduction

Recently, the implementation of flipped classrooms (FC) in colleges and schools has increased to a high level in response to the demand for technology-enhanced and student-centered learning environments (Steen-Utheim & Foldnes, 2018; Samaila & Al-Samarraie, 2023). Flipped classroom is a blended teaching method that combines online learning and face-to-face classroom activities (Thai *et al.*, 2017). It is an innovative teaching method in which the lecture materials are given to the students before the physical class time while the classroom time is used for discussion, problem-solving, assessment, individual learning, and presentation (O Flaherty & Phillips, 2015). In the flipped classroom model, the role of the teacher includes preparing recorded lecture

materials, guiding, facilitating, supporting, giving feedback, evaluating the learning process (Lizhu *et al.*, 2018), and providing a conducive environment for individualized learning (Lai, 2015). The student's role in flipped class is to watch the recorded video content, complete learning activities, and participate actively in the online discussion before the class hour.

Motivation is central to a student's educational experience from kindergarten onward. When motivated, students are more likely to participate in the learning process and exert more significant effort, which can positively influence their academic performance. Students motivated in FC will be more positive and energetic in the classroom and toward learning. They will likely take initiative in their learning and persist through complex material, mistakes, or tasks.

Lack of motivation in FC affects student's ability to gain knowledge and skills even if they have the most outstanding abilities. Motivation is the first condition for completing a learning task and the driving force behind the educational mobile process (Lazowski & Hulleman, 2016). Lack of motivation is a primary cause of academic failure, negatively impacting students' performance (Garay & Orjuela-Segura, 2022). When students are not motivated in FC, improving their academic performance is difficult and nearly impossible. Unmotivated students can disengage and discourage others from using the FC model, affecting the entire learning process. For an effective use of the FC model, there is a need for solid learning motivation among the students. Therefore, assessing students' motivation in a flipped classroom is imperative (O'Flaherty & Phillips, 2015).

Understanding the factors influencing students' motivation in the FC model is essential for educators to effectively design and implement FC activities that engage and motivate students to participate actively in their learning. Lecturers have adopted the flipped classroom model in Nigeria to improve their teaching styles and students' performance, engagement, participation, and retention. However, some lecturers need help keeping students sufficiently motivated using the FC model. Therefore, this study investigates the factors influencing student's motivation in the FC model for better educational outcomes.

Student Motivation in a Flipped Classroom

Motivation is the force that keeps students going even when they are faced with challenges and barriers. It charges them with the energy they need to fulfill their potential and see value in what they are learning and will be determined to achieve their goals. Motivation in the FC model will enable students to be committed, persistent, consistent, and innovative (Hannah, 2021; Samaila et al., 2024). Kettles (2013), in his study, established that students with higher motivation had higher levels of achievement, especially when using the FC model. Several factors motivate students in the FC model; a few amongst many are the content and length of the videos, captivating slide transitions, short activities to be completed, which could be a part of students' assessments, tonality, pitch, intonation, and visual effects can help to keep students more engaged in the content they are watching.

The FC model indisputably promoted student-centered learning and collaboration, where students had the opportunity to participate in group discussions and engage in interactive learning, problem-solving, and decision-making activities. Accordingly, enhanced learning is a result of the use of good active learning techniques rather than merely flipping the classroom. Students who are motivated in the FC model have control over their learning and have the option of learning at their own pace. Active engagement is an essential factor influencing student's motivation in the FC model because it provides students with a sense of purpose and relevance to their learning (Strayer, 2012).

Other factors influencing students' motivation in the FC model include relevant pre-class materials, learning independence and self-direction, clear expectations and responsibility, and technological know-how and access. For instance, relevant pre-class materials are a key factor influencing students' motivation in flipped classrooms. When pre-class materials are connected and relevant to learning objectives, the students are more likely to engage with the materials and actively participate in subsequent in-class activities (Michelle, 2021). For learning independence and self-directiveness, the FC model provides students with greater independence over their learning process, which positively influences their motivation as they feel a sense of ownership and control over their learning.

Clear expectations and responsibility: Setting clear expectations and establishing responsibility helps students maintain motivation in FC. Clear expectation is a classroom management strategy that allows teachers to clearly define to students what is expected of them (Tim, 2020). Students must fully understand the rules, procedures, and academic expectations. Teachers can use various strategies, such as quizzes or reflective assignments, to hold students accountable for their engagement and participation. When students understand what is expected of them and how their efforts will be evaluated, they are more likely to be motivated to engage with materials given to them to study.

Technological know-how and access: As the FC model dramatically relies on technology to deliver pre-class materials, students' technological know-how and access to necessary resources can extensively influence their motivation. Technology plays an essential role in the flipped classroom approach by allowing students to explore concepts, solve problems, and receive timely feedback (Jingming, 2023). The use of technology such as multimedia resources, online discussions, and interactive activities in FC can foster motivation by making learning experiences more dynamic, engaging, and personalized for students. Lack of access to technology or limited technological skills may hinder students' motivation, especially during pre-class materials, leading to a decrease in their motivational level.

Advantages of Flipped Classroom Model

Previous research shows that the FC model promotes active learning, as students are required to engage with instructional materials before attending class (Masood et al., 2022). This model encourages students to take responsibility for their learning and fosters

a sense of ownership and motivation. Samaila et al (2024) in their research, reported that the FC model allows students to participate actively in discussions, problem-solving activities, and collaborative projects during class time. This can deepen their understanding of the subject matter, thereby developing problem-solving and critical-thinking skills (Bishop & Verleger, 2013).

Moreover, the FC model allows students to severally review and re-watch instructional materials multiple times, personalized learning or rewind videos, and seek clarification before attending class. This personalized learning experience enables students to grasp concepts more effectively, leading to improved academic performance (Strayer, 2012). Likewise, the FC model allows teachers to have more opportunities to interact with students individually or in small groups. With the lecture component moved outside of class time, teachers can dedicate more attention to addressing students' questions, providing immediate feedback, and offering personalized guidance. This increased interaction fosters a supportive learning environment, which positively impacts students' academic performance, engagement, and motivation (Bergmann & Sams, 2012).

Challenges of Flipped Classroom

The successful implementation of the FC model relies greatly on access to technology, self-discipline, effective time management skills, and reliable internet connectivity. Students from poor backgrounds or areas with limited resources may need help accessing the necessary technology, which hinder their ability to engage with pre-class materials (Samaila et al., 2021). Students who need help with technological barriers, self-discipline, or competing commitments may find it difficult to keep up with the FC model (Strayer, 2012). Samaila et al (2021) stated that one biggest challenges to FC is students' resistance to a new teaching mode. Students have become familiar with traditional lecture methods and struggle to adjust to an innovative teaching style with new routines, responsibilities and expectations. Another challenge is lack of motivation for pre-class work: Flipped classrooms face challenges in directing students to participate in pre-class learning activities, potentially reducing their effectiveness due to inadequate preparation, as teaching techniques heavily rely on pre-class tasks (Ng & Lo, 2022). Other challenges affecting the effectiveness of the FC model include poor power supply, technological know-how, limited digital literacy skills, and access to computers and internet connectivity (Samaila et al., 2021)

Objectives

The following objectives were formulated as follows:

1. To explore the factors influencing students' motivation in a flipped classroom
2. To investigate the advantages of using a flipped classroom model
3. To investigate the challenges students face in a flipped classroom model

Methodology

Given that qualitative research methodology helps researchers to explain experiences in a more detailed way (Silva, 2007; Lee, 2002), this study employed qualitative methods to assess students' responses. The qualitative study aimed to find out the factors influencing student's motivation in flipped classrooms using a semi-structured questionnaire and interview. The interviews helped to get in-depth information about the advantages and challenges of using the FC model.

The population of the study consists of 35 students who had earlier participated in the flipped classroom. The selected students were from Kebbi state university of Science and Technology, Aliero. A purposive sampling technique was used to select 20 students who were employed in achieving the objectives of this study.

Before the data analysis, experts in instructional technology validated the interview questions, and it was unanimously approved with minor corrections. However, to achieve reliability, the interview questions were carefully revised to ensure consistency. A thematic analysis method was used to analyze and interpret the data.

The study's findings were deliberated on three aspects; firstly, the factors affecting students' motivation in the FC model were discussed, secondly, the benefits of using the FC model were elaborated and thirdly, the challenges students face in a flipped learning environment were also discussed.

Factors influencing students' motivation in the FC model

The majority of the respondents acknowledged that they have participated in FC learning. Based on the interview results, students enjoy using short and precise pre-class materials. Students always feel motivated if the pre-class activities are accessible and understandable. However, only a few students were reported to have issues with the FC model because they needed more motivation and enough time to go through the pre-class materials due to their schedules at home. For instance, participant 3 stated that:

P3: *"I always postponed watching the videos given to me before class time due to their length. I always enjoy and engage watching pre-class materials that are short and precise"*.

Results showed that engaging students in student-centered learning and self-directive learning encourages students during pre-class learning activities, thereby motivating students to have fruitful discussions during the in-class learning activities. Participant 1 stated that:

P1: *"I'm highly motivated with the FC model because i was given a chance to decide and learn at my own schedule. I have more control over my learning activities."*

The findings of this study show that most students affirmed that the FC model positively influenced their overall learning performance by allowing them to take responsibility for their learning. This shows that engaging students in a learning process can motivate them to participate fully in the learning process. Participant 10 stated that:

P10: *"I feel motivated whenever a teacher assigns some tasks to me, especially during in-class activities"*.

Similarly, most of the respondents affirmed that they had access to the necessary technologies required to have successful FC activities. The students acknowledge that technological know-how is among the primary factors influencing students' motivation in the FC model. Participant 7 stated that:

P7: *"I believe my technology skills assist me to get access to the learning materials from the student school portal. Having fewer challenges in ICT skills always motivate and give me more confidence to engage in technology-related approaches such as FC model, blended learning, and online learning."*

Advantages of using FC model

This study investigates the advantages of using the FC model. More than half of the students indicated that the new model supersedes the traditional methods of teaching because they have ample time to interact with their teachers and peers. The model allows them to interact with the materials given to them before class time, which keeps them motivated throughout the course work. Participant 6 stated that:

P6: *"I'm impressed with the FC model because I have enough time to interact with my teachers and learning materials even before the class hour."*

The majority of the students acknowledge that the FC model helps them develop their independent learning skills. These skills are certainly among the most valuable skills for any student to acquire, especially at high institutions where students are expected to study under less supervision. With the FC model, students access the initial information independently before the class hour. By doing that, students can get used to the process of self-study, and it allows them to learn at their own pace. Participant 13 stated that:

P13: *"I'm able to improve my independent learning skills. I can now study with little or no supervision"*.

Another significant advantage of the FC model is that it assists the students in building a deeper understanding of the topic through re-watching of the video contents and active learning. This is different from the traditional method, which has more passive experience because students are actively involved in the learning process. Participant 12 stated that:

P12: *"I like FC model because it gives opportunity to watch and re-watch the video lectures and have the opportunity to involve in the knowledge construction"*.

This study revealed that students are more comfortable with the FC model compared to the traditional method. This is because the FC model engages students with digital content at home, making them read and prepare before coming to class. This method of teaching opens ways for the students to be actively involved in classroom discussions.

P12: *"The idea of using the FC model is not only engaging the students, but making students to read and prepare while at home. This gives me opportunity to be actively involved in the classroom discussion"*.

Challenges of Using the FC model

The main challenge reported by the students was that they needed more motivation to stay till the end of the online class. Some of the respondents affirmed that they faced unstable internet connection during FC, which did not give them the chance to participate fully in the online class. Participant 18 stated that:

P18: *"I feel tired watching video lectures, especially if the videos are lengthy. I need few and short lecture videos cause there is network problem"*.

Students reported that sometimes they prefer the traditional method over the FC model because of the high demand for technology skills. Before using the FC model, students have adequate digital skills. This implies that if the students do not manipulate technology and navigate electronic devices, it will be difficult for them to participate and enjoy the FC model fully.

P16: *"I found it difficult to accommodate FC model because it requires high level of technology skills. This has always de-motivated me from using the FC model"*.

Other challenges narrated by the participants include availability and access to computers and the internet, steady power supply, and lack of professional technical assistance. The availability and accessibility of computers and internet technology are critical for students to access online materials, as well as for teachers to deliver and manage them. The study revealed that students found it challenging to stay disciplined and manage their time in order to complete the online materials before class, as well as cope with increased cognitive demands in class. Participant 19 stated that:

P16: *"It was actually difficult for me to get access to computers and internet while at home. In addition, I have network and power issues which seriously block me from having online materials at home"*.

Discussion

This study explores the factors influencing students' motivation in a flipped classroom and investigates the advantages and challenges of using the FC model. The findings of this study show that the perceived relevance of pre-class materials, learning independence, clear expectations, responsibility, technological know-how, and access to necessary resources extensively influences students' motivation in the flipped classroom. This concurs with previous studies that show that technological know-how is among the major factors affecting students' motivation in the FC model (Samaila et al., 2021). This study further contributes to the existing knowledge on flipped classrooms and provides necessary information to educators and curriculum designers on how to create a more engaging, personalized, and effective learning environment that can support a successful implementation of the FC model for better academic performance.

Results showed that the FC model is not only giving the students the opportunity to access the learning materials before the class hours but also encouraging them to participate in the learning process, thereby improving their engagement, participation, and learning outcomes. Likewise, literature disclosed that the FC model has numerous advantages over traditional methods. For example, Masood et al (2022) reported that with the emergence of the flipped classroom model, teachers continued to experience a significant improvement in learning achievement, engagement, and participation, mainly when the FC model was carefully implemented. A similar study reported that the advantages of the FC model include but are not limited to the improvement in students' learning outcomes, enhancing motivation if wisely implemented, creating independent learning skills, and building engaging lessons (Bishop & Verleger, 2013). This implies that both teachers and students should also be made to understand in detail the advantages of this learning model and how it can improve learning performance compared to the traditional lecture-based methods.

On the other hand, this study reported the challenges the students face while using the FC model. The challenges include lengthy lecture videos, internet connection, and limited digital literacy skills. This is the same as what Samaila et al (2021) found in his research, which found that lack of motivation and limited ICT skills are the main challenges affecting students' commitment to the FC model. Poor power supply, lack of professional technical assistance, and access to computers and the internet are some of the challenges students face in the flipped learning environment. Previous studies also mentioned similar challenges, which include poor knowledge of the FC model, lack of students' engagement during pre-class learning activities, students' poor digital literacy skills, and lack of students' interest in the FC model. This entails that for the FC model to be successful, these challenges need to be minimized or overcome. We can minimize these challenges by building up a supportive learning environment where teachers ought to respect and be patient with students, encourage, praise, and avoid being harsh on them (Jia & Xiuying, 2017). Teachers can achieve this by fostering a sense of belonging, encouraging collaboration, and promoting open communication to arouse students' interest in the FC.

Conclusion

This study explores the factors influencing student's motivation in the flipped classroom setting at the Kebbi State University of Science and Technology, Aliero, Nigeria. The results showed that the perceived relevance of pre-class materials, learning independence, clear expectations, responsibility, technological know-how, and access to necessary resources were the major factors affecting students' motivation in the flipped classroom setting. Despite the advantages of the FC model, there were many challenges students faced during the FC model. Multiple and dimensional actions need to be considered to overcome the challenges. For example, instant feedback, especially during pre-class learning activities, is a critical way to motivate students in the flipped classroom setting. This study was limited to a single Kebbi State University in Nigeria. It was suggested that further studies should be conducted in different Universities to include a larger population and sample size. The study used the qualitative method only. Further research should employ a mixed-method approach to access in-depth data.

Limitation and Recommendation

Due to the limited research sample, this study only covered students from Kebbi State University of Science and Technology, Aliero, and did not cover other populations as students from other institutions might have different opinions on factors that influence their motivation in a flipped classroom. Therefore, future research needs to be conducted to overcome the limitations.

Future research should include larger sample size to extend the scope to generalize the findings to other sets of students with similar characteristics. More so, institutions should integrate the use of flipped classroom in their instructions as well as instructors should adopt motivating strategies when using flipped classroom.

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Nexus Between Teachers Job Performance and Public Secondary Schools Effectiveness in North-Central, Nigeria

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Abstract

This study investigated the nexus between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria. The study adopted the descriptive research design of correlational type. The population for this study comprised 1, 836 principals and 29,210 teachers in all public secondary schools in North-central, Nigeria. Multi-stage sampling technique was used to select 859 respondents, out of which 99 were principals and 760 were teachers. A validated research instrument tagged "Teachers' Job Performance and School Effectiveness Questionnaire (TJPSEQ) adapted from the works of Nelms (2005) and Sulyman (2021) were used for data collection in this study. Reliability coefficients of 0.68 and 0.75 were realised for the teachers' job performance and school effectiveness questionnaire respectively, using Cronbach Alpha. Descriptive statistics of Mean, Standard Deviation, Minimum, Maximum, and Range were used to answer the research question, while Pearson Product-Moment Correlation statistics was used to test the research hypotheses formulated at 0.05 level of significance. The findings revealed that the level of teachers' job performance (55.22) and public secondary schools' effectiveness (46.74) in North-central Nigeria were moderate respectively, more so, there was a significant relationship between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria ($r = .911$; $df = 826$; $P < 0.05$). The study concluded that there was a nexus between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria. The study recommended among others, that the government should not relent in its efforts in providing enabling environments that would enhance job performance and school effectiveness.

Keywords: Nexus; Teachers' Job Performance; Public Secondary Schools, and Effectiveness

Introduction

Teachers are important stakeholders in the educational system and as such, their job performance has to be very effective. This is very necessary because, if teachers' job performance is not effective, the realisation of the school's effectiveness could be hindered. Ismail, Suleiman, Abdullahi, Omeiza, Ndakwesu & Halilu (2020) opined that job performance is regarded as the extent to which an individual employee or a group of employees contribute to achieving the goals of the organisation which could be measured based on the goals set for those individuals or groups and the extent to which the goals of the organisation have been achieved. According to Sulyman (2021), teachers' job

performance in public secondary schools in many states in Nigeria, especially in the areas of classroom management, classroom organization, use of instructional materials, and other practices, has not been encouraging. This could make teachers worrisome and consequently lead to school ineffectiveness.

The low level of school effectiveness which is evident in some public secondary schools in Nigeria could be as a result of ineffective teachers' job performance. This confirms how important teachers' job performance is to the realisation of school effectiveness. In with Olaniyan (2017) affirms that the essence of teachers' job performance cannot be underscored, because it involves all efforts put in place by teachers towards the effective execution of their official assignments in school or outside the school and to actualise the stated goals. Furthermore, Sadam (2016) posited that the ultimate goal of any educational institution is to see that its students have excellent academic performance in their examinations. However, one of the ways of ensuring this in public secondary schools in Nigeria is by making teachers' job performance such as: classroom management, instruction delivery, and use of instructional materials more striking, as poor job performance of teachers could consistently dampen their readiness to make the schools effective.

In contrast, Obadare (2018) lamented that one of the factors responsible for the ineffectiveness of public secondary schools in Nigeria is the apathetic nature of teachers' job performance, as teachers' job performance plays a significant role in enhancing school effectiveness. To support this, Nathaniel (2015) asserted that poor job performance is prevalent among some teachers in public secondary schools in Nigeria, as instructional materials utilization is not prioritized, while imparting knowledge to students, classrooms are haphazardly managed and lesson presentation is not rich enough to adequately convey the knowledge needed by students.

Kolawole (2015) maintained that there is no gainsaying that the effectiveness of school is anchored on many factors but the role played by teachers' job performance cannot be over-emphasized. This is because the inputs of teachers determine the success of the inputs from all other stakeholders in education. Alalade (2018) opined that the problem of ineffectiveness, in terms of poor students' academic performance which has been very prevalent in some public secondary schools in Nigeria could be addressed through effective teachers' job performance. James (2016) submitted that teachers' job performance which covers instructional delivery, lesson preparation, classroom management, utilization of instructional resources, students' assessment, and others plays an important role in determining school effectiveness. For example, teachers who do not use suitable instructional resources to support their teaching to facilitate effective learning would have a negative impact on students' learning outcomes.

School effectiveness however means the extent to which the school has been able to achieve the stated goals. This is why Adedeji (2018) maintained that the effectiveness of school could be measured through discipline, neatness of the environment, the mutual

relationship among school members or between school members and members of the host community, and judicious utilization of the available resources which should facilitate or determine the effectiveness of school. However, students' academic performance takes precedence over others, because it is through it that concrete measures can be derived. Effectiveness of the public secondary schools needs to be given adequate attention (Dada, 2017). For this to be well achieved, among others, teachers need to perform their jobs in a way that would facilitate the actualization of school effectiveness. To support this position, teachers as the custodians and facilitators of learning need to be well-groomed in-service delivery to enhance their effectiveness. Hence, it is against this backdrop that this study examined the nexus between teachers' job performance, and public secondary schools' effectiveness in North-central Nigeria.

Problem Statement

The effectiveness of public secondary schools in North-central Nigeria in the areas of learning, discipline, school-community relations and supervision has not been encouraging. Learning, which is an important reason students enroll in schools, is not properly taking place, based on the fact that some students cannot correctly compose simple sentences or answer questions properly, a scenario which might be causing failure in examinations. The rate of indiscipline in these schools is high as some students engage in bad habits while learning is ongoing, decide not to go to school, leave classrooms or schools without permission, and the likes. Some teachers do not take adequate supervision of students a priority and this gives them the opportunity to be involved in activities that could hinder effective learning. Also, the synergy among parents, members of the school community, teachers, and school management is not encouraging. This scenario has been a concern for stakeholders in education, most especially parents and members of the public. According to Ololube (2016), this could be due to ineffectiveness of teachers' job performance in the areas of poor classroom management, inadequate instructional delivery, poor student assessment, and ineffective use of instructional materials.

Many researchers have conducted studies related to this present study, for instance, Ajayi and Ekundayo (2011) examined factors determining the effectiveness of secondary schools in Nigeria. that leadership, facilities, and discipline determined the effectiveness of secondary schools in Nigeria. Sulyman *et al.* (2019) examined teachers' compensation as a correlate of job performance in Ilorin West Local Government Basic Schools, Kwara State. The findings revealed that there was a significant relationship between teachers' compensation and job performance in Ilorin West Local Government Basic Schools, Kwara State.

More so, Peter, Okpa and Okoi (2020) investigated the influence of educational support services on teachers' job performance in secondary schools in Akwa Ibom State, Nigeria. The outcome of the study showed that educational support services had a significant influence on teachers' job performance in secondary schools in Akwa-Ibom State,

Nigeria. However, to the best of the researcher's knowledge, none of the previous studies focused on the nexus between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria, and this is the gap that this study filled.

Objectives of the Study

The study:

1. examined the level of teachers' job performance in public secondary schools in North-central Nigeria;
2. determined the level of public secondary schools' effectiveness in North-central Nigeria;
3. ascertained the relationship between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria;

Research Questions

The following research questions were raised to guide the conduct of the study:

1. What is the level of teachers' job performance in public secondary schools in North-central Nigeria?
2. What is the level of public secondary schools' effectiveness in North-central Nigeria?

Research Hypothesis

The sole hypothesis was formulated to guide the conduct of the study:

H₀₁: There is no significant relationship between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria.

Review of Related Literature

Teachers' job performance is very important in the realisation of the school's goals. Nayyar (2015) defined teachers' job performance as the extent to which a teacher performs a particular role responsibility based on the specified standards. Additionally, Dibia (2015) elucidated that teachers' job performance is measured mainly in terms of their students' ability to pass or fail examinations (internal and external). Students' academic performance is fundamental for measuring the appreciable performance of teachers in terms of the way knowledge, skills, ideas, values, and the likes are imported into the learners at any level. Furthermore, Owan (2018) explained that teachers' job performance means the extent to which teachers carry out their pedagogical and instructional duties in order to enable students to acquire knowledge and for the actualisation of school objectives. In line with these researchers, Arop, Owan and Ibor

(2019) believed that the extent to which an educational institution realises intended objectives depends on the level of job performance displayed by the teachers.

In any given school, teachers' job performance is significant because it determines the goal achievement of the school. This was buttressed by Igukor (2018) who affirmed that teachers' job performance is a fundamental measurement of service delivery for the actualization of set goal. Also, it is attributed to the extent to which a teacher utilises desirable skills, responds to his discharge of the official duties, and the level of students' actualisation in the examination. Ismail *et al.* (2020) viewed that teachers' job performance is required to be taken with utmost seriousness because it facilitates the extent to which an individual teacher contributes to achieving effectiveness in school which could be measured based on the goals set for those teachers and the extent to which the goals of the secondary schools are achieved.

Effectiveness is a significant factor in any school system because it is used to measure the extent to which the stated goals have been achieved. A School is an educational institution designed to provide optimum learning spaces for the intellectual, emotional, and social development of students under the direction of teachers. Ayandoja, Aina and Idowu (2017) opined that an effective school is regarded as one that is overwhelmed with the improvement of students in all facets of life and also serves as a way of improving the society. Gabriel (2019) explained that school effectiveness is a dynamic, complex, and goal-oriented concept that focuses on the contemporary stand-point of schools. Schools require an optimum usage of available sources, features such as school type, availability of students, personnel sources, socio-economic status of students, physical opportunities and equipment of schools, and socio-cultural environment for its effectiveness. Resourceful teachers and responsible school managers have a profound influence on school effectiveness.

Several studies have been conducted on teachers' job performance and the effectiveness of schools. For instance, George (2018) conducted a study on the relationship between teachers' job performance and school effectiveness in secondary schools in Rivers and revealed that there was a significant relationship between teachers' job performance, teachers' compensation, and school effectiveness in secondary schools in Rivers State. Additionally, Ajayi *et al.* (2011) examined factors determining the effectiveness of secondary schools in Nigeria and found that secondary schools were effective in terms of affective and psychomotor domains but not effective in the cognitive domain, therefore there is a need for improvement in the cognitive domain. The study further showed that poor learning environments, poor monitoring of students' progress, poor school facilities, and poor teachers' compensation affect secondary school effectiveness.

Also, Yook, Woo and Kim (2020) carried out a study to assess public secondary schools' effectiveness in South Korean. The researcher utilised performance indicators such as student academic accomplishment, teacher qualifications, infrastructure quality, and administrative efficiency, and found that the overall

effectiveness level of public secondary schools was moderate. Additionally, Ansong et al. (2017) evaluated educational outcomes: Experience from public secondary schools in schools in Accra-Ghana. Data were analysed using multilevel modelling with covariates at the school levels. It was revealed that the majority of these schools in Accra-Ghana were found to be largely ineffective as many scored below average on key effectiveness indicators such as student exam pass rates, teacher-student ratios, and school facilities. The study further showed that systemic issues such as inadequate funding, poor infrastructure, and lack of teacher motivation significantly hindered the schools' effectiveness.

Wamimbi and Bisaso (2021) examined the effect of performance appraisal practices on teachers' job performance. A cross-sectional survey design with a mixed-method approach was adopted using a target population composed of 211 respondents spread across four private universal secondary schools; and a sample size of 189 respondents with 185 teachers and four head teachers selected using a simple random sampling approach coupled with a fish-bowl technique, while census inquiry was adopted to select head teachers. A self-designed closed-ended questionnaire was administered to collect data from the respondents. Data was analyzed using frequencies, percentages, and simple regression. Findings indicated that performance appraisal practices in terms of comprehensiveness, clarity, and timeliness significantly enhanced teachers' job performance in private schools.

Onyango and Welbery (2019) carried out a case study investigation involving in-depth interviews and observations of 50 teachers in public secondary schools in Tanzania in order to ascertain their overall performance. The study revealed that while teachers were dedicated to professional duties in schools in Tanzania; their overall performance was found to be moderate due to challenges such as insufficient training, limited access to teaching resources, and support from school administrations. Also, in the study conducted by Joseph, Matual and Okoth (2021), it was found that teachers in public secondary schools in Homa-Bay County, Kenya scored an average of 42% in job performance evaluations. This low score was attributed to factors such as inadequate professional development opportunities and limited access to teaching resources.

Akpelu, Meenyinikor and Ebete (2014) investigated the job enhancement strategies for teachers' job performance in public senior secondary schools in Rivers State. The study adopted a descriptive survey design with 247 principals of public senior secondary schools in the State as the population. The sample comprised 123 principals representing 50% of the population. The statistical tools for data analysis were weighted mean and standard deviation statistics for research questions and, z-test for testing the null hypotheses of the study at 0.05 level of significance. The findings revealed that teachers who are trained on the job are improved on the job. Teachers who attend seminars perform well and develop new skills. It was recommended that Rivers State government should ensure that conferences, seminars, and workshops are regularly organized for teachers of secondary schools in Rivers State.

Methodology

The study focused on the nexus between teachers' job performance and public secondary schools' effectiveness in North-central, Nigeria. Descriptive design of correlational type was used to conduct the study. The population of this study comprised all the principals and teachers in public secondary schools in the North-central Nigeria. There were 1,836 and 29,210 principals and teachers respectively in public secondary schools in the North-central Nigeria which comprised Benue, Kogi, Kwara, Nasarawa, Niger, Plateau States, and Federal Capital Territory (FCT).

The sample size for the study was 859 respondents which comprised 99 and 760 principals and teachers respectively. Multi-stage sampling technique was used in the study, with the use of random sampling technique at the first stage to select three states out of the six states and FCT in the North-central Nigeria (Kogi, Kwara, and Niger States). Stratified random sampling technique was used at the second stage to select 37 public secondary schools in Kwara State, 29 public secondary schools in Kogi State, and 33 public secondary schools in Niger State, to make a total of 99 public secondary schools. Proportionate sampling technique was used at the last stage to select 234, 278, and 248 public secondary school teachers in Kogi, Kwara, and Niger States respectively, making a total of 760 teachers. Therefore, a total of 859 respondents were used for the study, which comprised 99 principals and 760 teachers. In determining the sample size of this study, the tabulation sample size by Research Advisors (2006) at 95% confidence and 5.0% margin of error was employed to select 859 participants out of 2346 respondents.

Research instruments tagged "Teachers" Job Performance and School Effectiveness Questionnaire (TJPSEQ) adapted from the works of Nelms (2005) and Sulyman (2021) were used for data collection in this study. The benchmark used for adjudging the level of teachers' job performance and school effectiveness were patterned on a 4 points Likert Scale format range values of 4 = High (H), 3 = Moderate (M), 2 = Average (A), and 1 = Low (L) respectively. Respondents were asked to make their choice by putting a tick (✓) on the column that best describes their view.

To establish the reliability of the TJPSEQ, it was subjected to a pilot test by administering 30 copies to 10 principals and 20 teachers outside the sample of the study (Zamfara State). Thereafter, the data gathered were analysed using Person Product Moment Correlation Statistics (PPMCS), and the reliability coefficient index of 0.68 and 0.75 were obtained respectively.

Data gathered for the study were collated and analysed using Statistical Packages for Social Sciences (SPSS) version 20.0, in which descriptive statistics of Mean ($\bar{x}$) score, Standard Deviation, Minimum, Maximum, and Range were used to answer the research questions raised, while Pearson Product-Moment Correlation statistics was used to test the sole hypothesis formulated at 0.05 level of significance.

Results

Table 1: Result of Descriptive Statistics of Level of Teachers' Job Performance

Variable	N	Mean	Std Deviation	Minimum Value	Maximum Value	Range
Level of Teachers' Job Performance	828	55.22	16.71	20	80	60

Source: Field Study, 2024

Table 1 shows the results of descriptive statistics of the level of teachers' job performance in public secondary schools in North-central, Nigeria. Minimum, maximum, and range values were used to categorise teachers' responses as 20-35 (Low), 36-50 (Average), 51-65 (Moderate), and 66-80 (High). A mean score of 55.22 falls within the range of Moderate (51-65). This shows that the job performance of teachers in public secondary schools in North-central, Nigeria is sometimes effective.

Table 2: Result of Descriptive Statistics of Level of School Effectiveness

Variable	N	Mean	Std Deviation	Minimum Value	Maximum Value	Range
Level of School Effectiveness	828	46.79	16.74	20	80	60

Source: Field Study, 2024

Table 2 reveals the results of descriptive statistics of level of school effectiveness in public secondary schools in North-central, Nigeria. Minimum, maximum, and range values were used to categorise teachers' responses as 20-35 (Low), 36-50 (Average), 51-65 (Moderate), and 66-80 (High) respectively. A mean score of 46.74 falls within the range of Moderately effective (43-60). The implication shows that school effectiveness in public secondary schools in North-central, Nigeria is in need of improvement.

Table 3: Summary of Correlation between Teachers Job performance and School Effectiveness

Variable	N	$\bar{X}$	SD	Cal. value	r-	Df	p-value	Decision
Teachers' Job Performance	828	13.46	4.90					
School Effectiveness	828	46.79	16.74	.911		827	.000	Ho Rejected

Source: Field Study, 2024

As shown in Table 7, the calculated r-value is .911 with the p-value of 0.000 which is less than the set p-value of 0.05 at 826 degrees of freedom. Hence, the null hypothesis which stated that there is no significant relationship between teachers' job performance and school effectiveness in public secondary schools in North-Central, Nigeria is rejected.

Discussion

The findings revealed that the level of teachers' job performance in North-central Nigeria was moderate. The implication shows that the job performance of teachers in public secondary schools in North-central, Nigeria is sometimes effective. The finding is concomitant with the finding of Onyango and Welbery (2019) who carried out a case study investigation involving in-depth interviews and observations of 50 teachers in public secondary schools in Tanzania in order to ascertain their overall performance and revealed that while teachers were dedicated professional duties in schools; their overall performance was found to be moderate due to challenges such as insufficient training, limited access to teaching resources, and support from school administrations. The finding negates the finding of Joseph *et al.* (2021) who found that teachers in public secondary schools in Homa-Bay County, Kenya scored an average of 42% in job performance evaluations. This low score was attributed to factors such as inadequate professional development opportunities and limited access to teaching resources.

The findings revealed that the level of public secondary schools' effectiveness in North-central Nigeria was moderate. The implication shows that school effectiveness in public secondary schools in North-central, Nigeria is in need of improvement. The finding is consistent with the finding of Yook *et al.* (2020) who carried out a study to assess public secondary schools' effectiveness in South Korea and utilised performance indicators such as student academic accomplishment, teacher qualifications, infrastructure quality, and administrative efficiency, and discovered that the overall effectiveness level public secondary schools were moderate, with a score of 62 out of 100, and Key areas improvement identified were teachers' training and resource availability. The finding contradicts the finding of Ansong and Takysa (2017) evaluated educational outcomes: Experience from public secondary schools in schools in Accra-Ghana and revealed that the majority of these schools in Accra-Ghana were found to be largely ineffective as many scored below average on key effectiveness indicators such as student exam pass rates, teacher-student ratios, and school facilities.; as well further showed that systemic issues such as inadequate funding, poor infrastructure, and lack of teacher motivation significantly hindered the schools' effectiveness.

The result of the research hypothesis showed that there was a significant relationship between teachers' job performance and public secondary schools' effectiveness in North-central Nigeria. The finding agrees with the finding of the study conducted by George (2018) who revealed that there was a significant relationship among teachers' job performance, teachers' compensation, and school effectiveness in secondary schools in Rivers State. Furthermore, this finding is also in line with the finding of Ajayi *et al.* (2011) whose study revealed that secondary schools were effective in the affective and psychomotor domains but not effective in the cognitive domain, therefore there is need for improvement in the cognitive domain. The study further revealed that poor learning environments, poor monitoring of students' progress, poor school facilities, and poor teachers' compensation affect secondary school effectiveness.

Conclusion

The study concluded that teachers in public secondary schools in North-central, Nigeria, were sometimes effective in their teaching performance; school effectiveness in public secondary schools in North-central, Nigeria is in need of improvement; hence, teachers' job performance had a positive nexus and significantly contributed to public secondary schools' effectiveness in North-central, Nigeria.

Recommendations

The following recommendations were proffered:

1. Governments should provide an enabling environment that would enhance teachers' job performance in public secondary schools in North-Central, Nigeria.
2. Governments should always ensure adequate discipline which would enable the teachers to be highly committed in the discharge of their duties to facilitate public secondary schools' effectiveness in North-Central, Nigeria.
3. State governments should intensify their efforts by paying more attention to teachers' job performance by providing training opportunities to enhance public secondary schools' effectiveness in North-Central, Nigeria.

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Teachers' Perception of Impact of Digital Technology on Arabic Language Proficiency in Kwara Central Senatorial District

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Abstract

This study examined the perception of Arabic Teachers on impact of digital technology on Arabic Language proficiency in Kwara Central Senatorial District. Four research questions were raised to guide the study. A descriptive survey research design was adopted for the study and stratified and purposive samplings were adopted to sample one hundred and sixty (160) Arabic teachers. Check list and questionnaire were used as an instrument for data collection for the study. The reliability of instruments was done using test-retest technique and a co-efficient 0.82 was obtained. The data collected were analyzed using frequency count and percentages. One of the findings revealed that the challenges faced by the Arabic teachers in utilizing digital technology for Arabic language instruction includes: lack of access to reliable digital tools, inadequate training on how to use digital technology is a major barrier and lack of exposure to digital technology for teaching Arabic language in classroom. It is therefore, recommended that the management of Arabic and Islamic schools should encourage blended learning approaches that combine traditional teaching with digital tools.

Keywords: Perception, Arabic Teachers, Impact, Digital Technology and Arabic Language proficiency

Introduction

The advent of digital technology has revolutionized various aspects of education, including language teaching and learning. As educators worldwide integrate digital tools into the classroom, there has been growing interest in understanding how these technologies impact language proficiency. In the context of Arabic language education, the use of digital technology has been particularly significant, as it provides new opportunities for engagement, interaction, and practice, which are crucial for language acquisition (Abdelrahman, 2021). However, the influence of these technological advancements on Arabic language proficiency, particularly in non-native contexts, remains a topic of debate.

In Nigeria, the Kwara Central Senatorial District, a region known for its strong Islamic and Arabic education heritage, has seen an increasing incorporation of digital tools in

Arabic language instruction. Arabic teachers in this region, tasked with preserving and transmitting the language, play a critical role in shaping learners' proficiency. Their perceptions of how digital technology affects language acquisition are vital, as these perceptions can influence teaching methodologies and students' overall language outcomes (Aliyu and Yakubu, 2023).

Scholars have pointed to the benefits of digital technology in enhancing language learning by providing learners with access to a wide range of resources, enabling individualized learning, and facilitating communication in real-time (Alharbi, 2022). Conversely, concerns have been raised about the potential drawbacks of digital tools, including the possibility of diminishing focus on traditional grammar and writing skills, which are fundamental to mastering Arabic (Abu-Rabia, 2020). These divergent views underscore the need for empirical studies examining teachers' perspectives on the integration of technology and its real impact on students' proficiency levels.

Teachers' perceptions of technology integration in classrooms have been investigated, revealing that factors such as training, comfort level, and usage significantly influence adoption (Almekhlafi & Almeqdadi, 2010). Studies also emphasize the importance of providing teachers with guidance and technical skills to succeed in a connected future (Aminu & Samah, 2019). Omran and Suleiman (2021) opined that majority of Nigerian university students and instructors believe that technology has positively influenced their Arabic language skills, particularly in areas of vocabulary acquisition and listening comprehension. This aligns with global trends in language education, where digital tools have been found to enhance engagement and provide more diverse learning opportunities (Aldosari, 2020).

The rapid advancement of digital technology has significantly transformed the educational landscape, including language instruction. While digital tools are increasingly integrated into classrooms to enhance learning outcomes, there is a growing concern regarding their potential impact on language proficiency, particularly in traditional languages like Arabic. In the context of Kwara Central Senatorial District, Arabic language teachers face the challenge of balancing the benefits of digital technology with the preservation of linguistic and cultural heritage associated with Arabic. Despite the widespread use of digital tools for teaching and learning, little is known about the perceptions of Arabic teachers regarding the influence of these technologies on students' proficiency in the Arabic language.

This lack of understanding creates a gap in determining whether digital technology enhances or diminishes Arabic language proficiency. Teachers' perceptions are crucial, as they are directly involved in the learning process and can provide insight into the effectiveness and challenges of integrating digital tools into language instruction. Furthermore, the unique socio-cultural and linguistic context of Kwara Central, where Arabic holds religious and cultural significance, adds another layer of complexity to the issue. Thus, this study seeks to address the problem by investigating the perceptions of

Arabic teachers in Kwara Central Senatorial District regarding the impact of digital technology on Arabic language proficiency. This will provide valuable insights into how technology influences language acquisition and inform strategies for effective language teaching in the digital age.

Objectives of the study

The main objective of the study is to investigate the perception of Arabic teachers regarding the impact of digital technology on Arabic language proficiency in Kwara Central Senatorial District. Specifically, the objectives of the study are to:

1. Identify types of digital technology available for teaching and learning of Arabic language in Kwara Central Senatorial District
2. Determine the extent do Arabic teacher perceive the integration of digital technology instruction for Arabic language proficiency in Kwara Central Senatorial District.
3. Determine the perceived impact of teachers on digital technology for teaching Arabic language proficiency in Kwara Central Senatorial District?
4. Find out the challenges faced by teachers in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District.

Research questions

The following research questions have been formulated for the study.

1. What are the types of digital technology available for teaching and learning of Arabic language in Kwara Central Senatorial District?
2. To what extent do Arabic teacher perceive the integration of digital technology instruction for Arabic language proficiency in Kwara Central Senatorial District?
3. What is the perceived impact of teachers on digital technology for teaching Arabic language proficiency in Kwara Central Senatorial District?
4. What are the challenges faced by teachers in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District?

Methodology

This study adopted descriptive survey. The study is to investigate the perception of Arabic teachers regarding the impact of digital technology on Arabic language proficiency in Kwara Central Senatorial District. The population for the study comprised of all Arabic teachers in 147 Government approved Arabic and Islamic schools in Kwara Central Senatorial District according to the data obtained from the Kwara Ministry of

Education. Therefore, multi-stage sampling procedure was adopted. At the first stage, stratified sampling technique was used to select four (4) Arabic schools from each of the LGA made up of Kwara Central Senatorial District namely: Asa, Ilorin-East, Ilorin-South and Ilorin West. Also, at the second stage, purposive sampling was adopted to sample all 160 Arabic teachers in the selected schools.

Two research instruments were used for data collection for the study. These include self-developed questionnaire and check list. The questionnaire was tagged “Perception Teachers Learners Impact Digital Technology Arabic Language Proficiency Questionnaire (PTLIDTALPQ)”. The questionnaire consisted of two sections. Section A contained demographic information of the respondents, that is, gender, age, years of working experience and educational qualifications. Section B contained items on research questions raised for the study. Appropriate options were provided from which respondents were to choose. The options to these items were taken on four (4) point Likert scale type rating of Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD).

The items in the instruments were validated by experts in Arabic and Islamic studies as well as test and measurement through a cross-examination by peer review in relation to the research questions raised for the study. The reliability co-efficient of the instrument was carried out using test re-test technique and 0.87 was obtained which revealed that the instrument was reliable for the study.

The administration of the instruments was done by the researchers and five field research assistants who live in the states sampled for the study. The researchers made sure that the selected assistants were familiar with the interpretation of the content of the instruments in the language of the immediate environment of the respondents. This was necessary in case if respondent did not understand English. All the questionnaires were successfully filled and returned. The data collected were analyzed using frequency counts and percentages.

Results

This section presents the results and interpretation from the data collected as illustrated below:

Research Question 1: What are the types of digital tools available for teaching and learning of Arabic language in Kwara Central Senatorial District?

Table 1: Analysis of types of digital technology available for learning of Arabic language in Kwara Central Senatorial District

S/N	Statements/Items	Available		Not Available	
		F	%		%
1.	Learning Management Systems	0	(0%)	160	(100%)
2.	Interactive white board	0	(0%)	160	(100%)
3.	Language Proficiency Testing Platform	0	(0%)	160	(100%)

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4.	Language video tutorials	0	(0%)	160	(100%)
5.	Immersive Virtual Reality	0	(0%)	160	(100%)
6.	Google's speech recognition software	0	(0%)	160	(100%)
7.	Duolingo language Learning App	0	(0%)	160	(100%)
8.	Video Conferencing Tools: Platforms like Zoom	0	(0%)	160	(100%)
9.	Online Translators	146	(91.25%)	14	(8.75%)
10.	Mobile phone	160	(100%)	0	(0%)

Table 1 above show the result of the respondents on the types of digital technology available for teaching and learning of Arabic language in Kwara Central Senatorial District using frequency counts and percentages from the data collected. The result indicated that items 1, 2, 3, 4, 5, 6, 7 and 8 were not available as they have negative higher percentages. While, items 9 and 10 were only common types of digital technology available for teaching Arabic language with positive percentages. This indicated that Duolingo language Learning App, Google's speech recognition software, Immersive Virtual Reality, Learning Management Systems, Interactive white board and Language Proficiency Testing Platform have not been used.

Research Question 2: To what extent do Arabic teacher perceived the integration of digital technology instruction for Arabic language proficiency in Kwara Central Senatorial District?

Table 2: Analysis of extent do Arabic teacher perceive the integration of digital technology in Arabic language instruction in Kwara Central Senatorial District.

S/N	Statements/Items	Frequency, Percentage (%)			
		SA	A	D	SD
1.	The integration of digital technology can improved students' Arabic language proficiency: reading, writing, speaking, and listening skills.	116 (72.5%)	44 (27.5%)	0 (0%)	0 (0%)
2.	Digital technology enhances my ability to tailor Arabic language instruction to meet the diverse learning needs of my students.	101 (63.13%)	59 (36.87%)	0 (0%)	0 (0%)
3.	Using digital tools increases student motivation and engagement in learning Arabic language skills.	92 (57.5%)	68 (42.5%)	0 (0%)	0 (0%)
4.	Digital technology enables more effective assessment and feedback on students' Arabic language proficiency.	114 (71.25%)	46 (28.75%)	0 (0%)	0 (0%)
5.	The use of digital technology has enhanced my students' ability to practice Arabic language skills independently outside the classroom.	118 (73.25%)	42 (26.25%)	0 (0%)	0 (0%)

Table 2 above show the result of the respondents on the indicated that teachers perceived digital technology had positive impact for teaching Arabic language proficiency in Kwara Central Senatorial District as evidently shown in the table 2.

Research Question 3: What is the perceived impact of teachers on digital technology for teaching Arabic language proficiency in Kwara Central Senatorial District?

Table 3: Analysis of the perceived impact of teachers on digital technology for teaching Arabic language proficiency in Kwara Central Senatorial District

S/N	Statements/Items	Frequency, Percentage (%)			
		SA	A	D	SD
1.	I used digital technology to enhance my ability to effectively teach Arabic language skills.	0 (0%)	21 (13.12%)	60 (37.5%)	79 (49.38%)
2.	Digital technology helps me engage my students better during Arabic language lessons.	0 (0%)	19 (11.87%)	57 (35.63%)	84 (52.5%)
3.	I feel confident using digital tools and platforms in my Arabic language teaching.	0 (0%)	8 (5%)	68 (42.5%)	84 (52.5%)
4.	There are sufficient resources and support available for integrating digital technology into Arabic language instruction in my school.	0 (0%)	6 (3.75%)	11 (6.87%)	143 (89.38%)
5.	I am satisfied with the professional development opportunities provided for learning to integrate digital technology in Arabic instruction.	13 (8.12%)	18 (11.25%)	46 (28.75%)	83 (51.88%)

Table 3 above show the result of the respondents on extent do Arabic teacher perceived the integration of digital technology instruction for Arabic language proficiency in Kwara Central Senatorial District using frequency counts and percentages from the data collected. The result indicated that items 1, 2, 3, 4 and 5 were low.

Research Question 4: What are the challenges faced by the teacher in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District?

Table 4: Analysis of the challenges faced by the teacher in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District.

S/N	Statements/Items	Frequency, Percentage (%)			
		SA	A	D	SD
1.	Lack of access to reliable digital tools and devices hinders my ability to use technology effectively in Arabic language instruction.	79 (49.38%)	81 (50.62%)	0 (0%)	0 (0%)
2.	Lukewarm attitude towards digital technology affects its usage for effective teaching Arabic language.	62 (38.75%)	73 (45.62%)	14 (8.75%)	11 (6.88%)
3.	Lack of exposure to digital technology for teaching Arabic language in classroom.	58 (36.25%)	89 (55.63%)	13 (8.12%)	0 (0%)
4.	Technical difficulties with digital tools often disrupt my Arabic language instruction.	94 (58.75%)	51 (31.88%)	0 (0%)	15 (9.37%)
5.	Lack of adequate support and resources from the school to integrate digital technology into Arabic teaching.	84 (52.5%)	61 (38.13%)	15 (9.37%)	0 (0%)

Table 4 above show the result of the respondents on the challenges faced by the teacher in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District using frequency counts and percentages from the data collected. Lack of access to reliable digital tools, inadequate training on how to use digital technology is a major barrier and Lack of exposure to digital technology for teaching Arabic language in classroom were the challenges faced as the result indicated in items 1, 2, 3, 4 and 5.

Summary of Findings

From the analysis of data in the preceding tables, the following findings were deduced:

1. Online Translators and Mobile phone are the common types of digital technology available for teaching and learning of Arabic language in Kwara Central Senatorial District.
2. Extent to which Arabic teacher perceived the integration of digital technology instruction for Arabic language proficiency in Kwara Central Senatorial District was low with the negative percentages as showed in table 2.
3. Teachers perceived that digital technology had positive impact for teaching Arabic language proficiency in Kwara Central Senatorial District as evidently shown in the table 3
4. The challenges faced by the teacher in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District was high as evidently shown in table 4: Lack of access to reliable digital tools, inadequate training on how to use digital technology is a major barrier and Lack of exposure to digital technology for teaching Arabic language in classroom.

Discussion

One of the findings of this study revealed that online Translators and Mobile phone are the common types of digital technology available for teaching and learning of Arabic language in Kwara Central Senatorial District. This finding agrees with the work of Adebisi (2013) who found that the uses of ICTs in schools means that there must be availability of gadget of ICTs and what makes its usage possible. It is one thing for it to be available; it is another thing for it to be in use. He affirmed that, the use of ICTs in teaching and learning has become imperative at all levels of education. Availability of ICTs without being put into use has no positive contribute factor to effective teaching and learning. If the ICTs are available in schools, what are they? If the ICTs are in use for teaching learning process, to what extent are they put into use?

Another finding from the study revealed that the extent to which Arabic teachers perceive the integration of digital technology instruction for Arabic language proficiency in Kwara Central Senatorial District. This finding corroborated with the work of Adebayo and Ibrahim (2022) found that a majority of Arabic teachers in the district (approximately 68%) believed that digital technology could significantly improve students' listening and speaking skills. Teachers reported that audio-visual materials and interactive language apps helped expose students to native Arabic speakers and diverse dialects, enhancing their pronunciation and comprehension. However, the same study noted that teachers' enthusiasm was often tempered by the practical challenges of implementing technology in their classrooms, such as limited access to devices and unreliable internet connectivity.

Another finding from the study revealed that studies have highlighted several challenges faced by teachers in utilizing digital technology for Arabic language instruction in Kwara Central Senatorial District of Nigeria. Oladosu et al. (2022) found that one of the primary

obstacles was the lack of adequate infrastructure and resources. Many schools in the district suffer from unreliable electricity supply and limited access to computers or internet-enabled devices, making it difficult for teachers to integrate digital technologies into their Arabic language lessons consistently. This infrastructural deficit not only hinders the implementation of technology-enhanced learning but also limits teachers' ability to explore and familiarize themselves with new digital tools and resources for Arabic language instruction.

Another significant challenge identified by Abdulkareem and Ibrahim (2023) is the insufficient digital literacy among Arabic language teachers in the district. Their study revealed that many teachers lack the necessary skills and confidence to effectively use digital technologies in their teaching practices. This deficiency is often attributed to limited professional development opportunities focused on technology integration in Arabic language instruction. As a result, even when digital resources are available, teachers may struggle to incorporate them effectively into their lesson plans or may be hesitant to use them at all, potentially missing out on the benefits that digital technology can offer in language teaching.

The last finding of this study is that Arabic language teachers generally perceive digital technology as having a positive impact on their teaching practices and students' language proficiency outcomes. Al-Jarf (2021) found that teachers reported increased student engagement and motivation when using interactive digital tools and multimedia content in their Arabic language classrooms. This engagement was particularly notable in activities involving authentic audio-visual materials, which teachers believed helped students develop a more nuanced understanding of Arabic language use in real-world contexts. Al-Shehri (2020) found that teachers perceived social media and online discussion forums as valuable tools for encouraging students to use Arabic in authentic communication contexts, enhancing their overall language proficiency and cultural competence.

Similarly, Alsowat (2022) reported that teachers observed significant improvements in students' pronunciation and listening comprehension skills when utilizing digital audio and video resources, allowing learners to hear and mimic native speakers more frequently. Moreover, this present finding supports the work of Abdulbaqi and Arikewuyo (2010) conducted in Ilorin Kwara State capital, found out that ICT contributes to the students' spiritual, moral, social and cultural development. This is achieved through active participation in a technologically enriched and increasingly interconnected world; encouraging team work; defining the boundaries and norms of using ICT for developing, planning, sharing and communicating ideas.

Conclusion

In conclusion, the perception of Arabic teachers in Kwara Central Senatorial District highlights both positive and negative impacts of digital technology on Arabic language proficiency. Teachers recognize the potential of digital tools to enhance learning, provide

access to diverse resources, and promote interactive learning experiences. However, challenges such as the lack of adequate digital infrastructure, limited teacher training, and students' over-reliance on technology for answers can hinder effective language acquisition. Overall, while digital technology offers opportunities to improve Arabic proficiency, its success depends on proper integration, sufficient teacher support, and fostering a balanced approach that encourages active learning and critical thinking.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The management of Arabic and Islamic schools should encourage blended learning approaches that combine traditional teaching with digital tools.
2. There is need to create awareness among Arabic teachers on the level of utilization of digital technology.
3. Establish Language Laboratory, equipped with necessary hardware and software for Arabic language learning.
4. Training and re-training programme should be periodically organized for the teachers to complement their existing knowledge on the uses of digital technology tools to improve their competency in teaching Arabic language.

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Leveraging Subsidies to Improve Access to Tertiary Education and Skills Training

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Abstract

This study examines the role of government subsidies in improving access to tertiary education and skills training in Nigeria, with a focus on urban-rural disparities. Using the Human Capital Theory as a guiding framework, the study tests two hypotheses, the first hypothesis explores the relationship between government subsidies and access to tertiary education, and the second hypothesis investigates the difference in the distribution of educational resources between urban and rural areas. Data were collected from 20 respondents across the regions in Nigeria. Descriptive statistics were used to summarize respondents' insights, while Pearson Correlation Analysis was conducted to examine the first hypothesis and an Independent Samples t-Test was used to compare mean distributions, addressing the second hypothesis. Findings reveal that urban areas benefit from superior educational infrastructure, resources, and opportunities compared to rural regions, creating significant barriers for rural students and perpetuating socio-economic inequalities. Financial barriers such as high tuition fees, limited scholarships, and additional costs like transportation and accommodation remain major challenges to higher education access. Evaluations of financial assistance programs indicate some success in alleviating these burdens, but the need for more extensive and targeted support is evident. Government funding is critical in mitigating these disparities, yet challenges remain in the effective allocation and transparency of these funds. To address these challenges, several recommendations are proposed: implement policies to ensure equitable distribution of educational resources between urban and rural areas; enhance financial support mechanisms to reduce cost barriers faced by students; and strengthen monitoring and evaluation frameworks to improve transparency and accountability in the allocation of government funding. Collaborative efforts involving government agencies, educational institutions, civil society organizations, and international partners are essential to achieving these goals. Such partnerships aim to build a more inclusive and resilient educational system that empowers all students and fosters national development. The study concluded that urban centers generally benefit from better educational infrastructure, resources, and opportunities compared to rural communities, which exacerbates inequalities in access and quality of education. These disparities between urban and rural areas persist as significant issues affecting educational outcomes and socio-economic development in Nigeria.

Keywords: leverage, subsidies, higher education, skills training, educational planners, financial aid, economic development, equity, workforce development

Introduction

Access to tertiary education and skills training is a critical factor in driving economic development and social mobility. In many developing countries, including Nigeria, the high cost of education presents a significant barrier for many individuals, particularly those from low-income families. Despite the increasing recognition of education as a fundamental human right, the financial burden associated with tertiary education and skills training remain a substantial obstacle. As a result, leveraging subsidies to improve access to these educational opportunities is essential for promoting equitable economic growth and addressing the skills gap in the labor market (World Bank, 2023). This financial barrier prevents many capable and talented students from pursuing higher education, thereby limiting their potential and perpetuating cycles of poverty and inequality (United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2023). Subsidies can play a pivotal role in alleviating these financial constraints, enabling more students to access and complete higher education.

Moreover, access to skills training programs is equally crucial in preparing individuals for the demands of the modern labor market. By providing financial support through subsidies, more individuals can participate in skills training, thereby improving their employment prospects and contributing to economic development (International Labour Organization (ILO), 2023). The inequitable distribution of educational resources exacerbates the problem of access to tertiary education and skills training. Urban areas and wealthier communities often have better access to quality educational institutions and training programs, while rural and low-income communities are underserved. This disparity not only limits the opportunities available to individuals in these regions but also hinders overall national development by failing to fully utilize the potential of the entire population. Addressing this issue requires targeted policies that ensure equitable distribution of resources and opportunities (organization for Economic Cooperation and Development (OECD), 2023). Government funding and support for education are critical in addressing these disparities and improving access to tertiary education and skills training. Increasing government funding and developing sustainable financing models are essential for supporting subsidies and other financial assistance programs that can make education more accessible (African Development Bank, 2023). Subsidies for tertiary education and skills training can take various forms, including direct financial aid to students, grants to educational institutions, and tax incentives for businesses that support educational programs. Each of these approaches has its own advantages and challenges, and a comprehensive strategy may involve a combination of these measures. For instance, direct financial aid can help cover tuition fees and other expenses for students, while grants to institutions can support infrastructure development and program expansion. Tax incentives can encourage businesses to invest in skills training and education, creating a more collaborative approach to addressing educational needs (World Economic Forum, 2023).

Monitoring and evaluation mechanisms should be in place to assess the impact of subsidies and make necessary adjustments to enhance their effectiveness (United Nations Development Program (UNDP), 2023). International experiences offer valuable lessons for Nigeria in leveraging subsidies to improve access to tertiary education and skills training. Countries like Germany, Sweden, and South Korea have successfully implemented subsidy programs that have significantly increased access to education and improved employment outcomes. These countries have demonstrated that with the right policies and investment, it is possible to create an inclusive educational system that benefits all segments of the population. Nigeria can learn from these experiences and adapt best practices to its own context (World Bank, 2023).

In addition to government efforts, the private sector and civil society organizations play a crucial role in supporting educational initiatives. Public-private partnerships can enhance the reach and impact of subsidy programs by leveraging additional resources and expertise. These collaborative efforts can create a more robust and inclusive educational ecosystem (International Finance Corporation (IFC), 2023).

The potential benefits of improving access to tertiary education and skills training through subsidies extend beyond individual empowerment. A well-educated and skilled workforce is essential for economic growth and competitiveness. These broader benefits highlight the importance of prioritizing education in national development agendas (OECD, 2023). Effective communication and outreach strategies are essential to ensure that the intended beneficiaries are aware of and can benefit from these programs (Transparency International, 2023). Evaluating the impact of subsidy programs is essential for continuous improvement and ensuring that the objectives of improving access to education are met. Regular assessments can provide insights into the effectiveness of different subsidy models and identify areas for enhancement. These evaluations should consider both quantitative outcomes, such as enrollment and graduation rates, and qualitative impacts, such as student satisfaction and employment outcomes. Data-driven approaches can help refine subsidy programs and maximize their impact on educational access and equity (UNESCO, 2023).

With targeted and well-implemented subsidies, Nigeria can create a more inclusive and effective educational system that drives national development and social mobility (African Development Bank, 2023). This study aims to explore the relationship between government subsidies and access to tertiary education in Nigeria, particularly among low-income students. Building on the hypothesis, the study seeks to evaluate the extent to which financial support mechanisms, such as subsidies, scholarships, and grants, influence educational access and participation.

Additionally, the study investigates the distribution of educational resources across urban and rural areas in Nigeria. By examining the hypothesis, it also aims to identify and quantify potential inequalities in educational funding, infrastructure, and availability of learning opportunities. The study highlights the role of government funding in addressing

these disparities and propose actionable policy recommendations to foster equitable resource allocation.

By aligning these concepts with the hypotheses, the study aspires to contribute to a more inclusive and effective educational ecosystem in Nigeria, ensuring that resources and opportunities are accessible to all, regardless of income or geographical location.

Tertiary Education Access in Nigeria

Tertiary education in Nigeria has undergone significant transformations over the past few decades, expanding in both scope and accessibility. As of recent statistics, Nigeria hosts over 170 universities, including federal, state, and private institutions. This expansion aims to accommodate the growing demand for higher education among the Nigerian youth population, which is one of the largest in the world. Despite these efforts, challenges persist in terms of ensuring equitable access to tertiary education across different socio-economic groups. This disparity is influenced by various factors including economic constraints, geographic disparities, and systemic issues within the educational framework. Economic factors play a crucial role in limiting access to tertiary education in Nigeria. Many students from low-income families find it difficult to afford tuition fees and other associated costs of higher education. Although there are scholarship programs and government-funded initiatives aimed at supporting underprivileged students, these are often insufficient to meet the needs of all eligible candidates. Additionally, inadequate funding, leading to strikes and prolonged academic sessions often compromises the quality of education at public universities, which are more affordable. This situation forces many students to seek education abroad or opt for private institutions, which are typically more expensive.

Geographic disparities further exacerbate the issue of access to tertiary education in Nigeria. While urban areas boast a higher concentration of universities and educational resources, rural areas remain underserved. This urban-rural divide means that students from remote regions face significant barriers in terms of accessing higher education institutions. The lack of adequate transportation infrastructure and accommodation facilities in these areas further deters students from pursuing tertiary education. Consequently, there is a noticeable imbalance in educational attainment between urban and rural populations, which perpetuates the cycle of poverty and underdevelopment in rural regions. Systemic issues within the Nigerian education system also hinder access to tertiary education. The admission process, governed by the Joint Admissions and Matriculation Board (JAMB), is highly competitive, with many students failing to secure admission even after multiple attempts. The quota system, intended to ensure fair representation of different states, often leads to controversies and allegations of favoritism. Furthermore, the quality of secondary education, which serves as a feeder to tertiary institutions, is inconsistent, with many secondary schools lacking basic infrastructure and qualified teachers. This inadequacy at the foundational level results in

poorly prepared students who struggle to meet the rigorous academic demands of higher education.

While progress has been made, sustained efforts and collaborative approaches are essential to ensure that all Nigerian students, regardless of their socio-economic background, have the opportunity to pursue higher education and contribute to the nation's development.

Skills Training Development

Skills training and development are pivotal for fostering economic growth and addressing unemployment in Nigeria. With a youthful population and an evolving job market, there is an urgent need to equip individuals with relevant skills that meet contemporary labor demands. The Nigerian government, along with private sector stakeholders, has recognized the importance of vocational training and technical education in bridging the skills gap. Initiatives such as the National Directorate of Employment (NDE) and various vocational centers aim to provide training in diverse fields ranging from information technology to agriculture and craftsmanship. These efforts are crucial for creating a skilled workforce capable of driving innovation and economic progress (National Directorate of Employment, NDE, 2023). Economic diversification in Nigeria is heavily reliant on the development of skills across various sectors. The country's traditional dependence on oil has necessitated a shift towards other industries, including agriculture, manufacturing, and services. To support this transition, skills training programs are being designed to cater to the specific needs of these sectors. For instance, agricultural training programs focus on modern farming techniques and agribusiness, while manufacturing training emphasizes industrial skills and automation. By aligning training programs with industry needs, Nigeria aims to enhance productivity and competitiveness in the global market (Adeoti & Oladele, 2022).

The role of technology in skills training and development cannot be overstated. With the advent of digital platforms and online learning resources, access to training has become more widespread. E-learning platforms offer courses in various disciplines, providing flexibility and convenience for learners. Organizations like Andela and Coursera have partnered with local institutions to deliver tech-focused training, particularly in software development and digital marketing. These platforms not only broaden access to education but also help bridge the digital divide, ensuring that individuals from different backgrounds can acquire valuable skills. The integration of technology in skills training is essential for preparing the Nigerian workforce for the Fourth Industrial Revolution (Nwosu, 2023). Challenges in skills training and development persist, particularly regarding funding, infrastructure, and quality assurance. Many training centers lack the necessary resources and equipment to provide hands-on experience, which is vital for effective learning. Additionally, there is a need for a standardized curriculum that aligns with industry standards and global best practices. Addressing these challenges requires concerted efforts from the government, private sector, and international partners.

Investment in training infrastructure, teacher training, and curriculum development is critical for enhancing the quality of vocational education in Nigeria (UNESCO, 2022).

Collaboration between the government and private sector is essential for the success of skills training programs. Public-private partnerships can provide the necessary funding, expertise, and industry linkages required to develop robust training initiatives. For example, the collaboration between the Nigerian government and the International Labour Organization (ILO) has led to the development of several skill acquisition programs aimed at empowering youths and reducing unemployment. Such collaborations ensure that training programs are relevant and aligned with market needs, thereby increasing the employability of graduates and contributing to sustainable economic growth (International Labour Organization, 2023).

Subsidy Leverages

Subsidy leverage is a critical economic tool in Nigeria, utilized by the government to control prices and ensure affordability of essential commodities such as fuel and agricultural inputs. By subsidizing these commodities, the government aims to cushion the populace from the volatility of global markets and economic shocks. The fuel subsidy, in particular, has been a longstanding policy, ensuring that petrol remains affordable for the average Nigerian. This subsidy has a significant impact on transportation costs and the overall cost of living, affecting both urban and rural dwellers. However, this approach has also been subject to intense debate regarding its sustainability and efficiency (International Monetary Fund, 2023). The economic rationale behind subsidies is to support vulnerable populations and stimulate economic activities. In the agricultural sector, subsidies on fertilizers and other inputs are designed to boost productivity and ensure food security. By making these inputs affordable, the government encourages smallholder farmers to adopt improved farming techniques, thereby increasing agricultural output. This strategy not only aims to reduce poverty but also to diversify the economy away from its over-reliance on oil. Recent studies indicate that agricultural subsidies have significantly contributed to increased crop yields and farmer incomes in Nigeria (World Bank, 2022).

Despite their intended benefits, subsidies in Nigeria have been plagued by several challenges. One of the major issues is the financial burden on the government. Subsidies, particularly in the fuel sector, consume a substantial portion of the national budget, which could otherwise be invested in infrastructure, education, and healthcare. Additionally, the subsidy regime has been marred by corruption and inefficiencies, with reports of diversion and smuggling of subsidized fuel. This has led to calls for subsidy reforms and the implementation of more targeted support systems that directly benefit the intended recipients (Transparency International, 2023). Reforming the subsidy system in Nigeria is a complex but necessary process. Economists suggest that gradual removal of subsidies, coupled with robust social safety nets, could mitigate the adverse effects on the poor. For instance, the savings from subsidy removal could be redirected towards cash transfer

programs, healthcare, and education, which have a more direct impact on improving the quality of life for the poor. Furthermore, enhancing transparency and accountability in subsidy management can help curb corruption and ensure that subsidies reach those who need them the most (African Development Bank, 2023). To maximize the benefits of subsidies while minimizing their drawbacks, Nigeria could explore alternative approaches such as subsidy targeting and digital distribution systems. By leveraging technology, the government can ensure that subsidies are delivered directly to the beneficiaries through digital platforms, reducing the risks of diversion and corruption. Additionally, public-private partnerships can play a crucial role in improving the efficiency of subsidy programs. For example, collaborating with financial institutions to manage and distribute subsidies could enhance transparency and effectiveness. These reforms could help Nigeria achieve a more sustainable and equitable subsidy system (International Finance Corporation, 2023).

Cost Barriers Faced by Students

Cost barriers remain a significant challenge for students pursuing education at all levels globally, with particular severity in developing countries like Nigeria. These barriers encompass various expenses beyond tuition fees, including textbooks, accommodation, transportation, and other living expenses. For many students and their families, these costs can be prohibitive, leading to financial strain and, in some cases, preventing enrollment altogether (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). In Nigeria, the cost barriers faced by students are exacerbated by economic challenges, inflation rates, and limited financial aid opportunities. According to a report by UNESCO (2020), the average cost of higher education in Nigeria has risen significantly over the past decade, outpacing inflation and placing higher education increasingly out of reach for many families. This situation disproportionately affects students from low-income backgrounds, who often struggle to meet basic living expenses while attending school.

The cost of textbooks and study materials also presents a substantial barrier. Many students in Nigeria cannot afford the required textbooks, which are often expensive and sometimes unavailable in local markets. This lack of access to essential learning materials hinders academic performance and diminishes the quality of education students receive. Efforts to alleviate these barriers include textbook subsidy programs and initiatives promoting open educational resources (OER), which provide free or low-cost alternatives to traditional textbooks (Federal Ministry of Education, Nigeria, 2021).

Accommodation costs further strain students' finances, especially for those attending institutions away from home. In urban areas with high rental prices, finding affordable accommodation can be challenging. This situation forces students into overcrowded or substandard living conditions, impacting their health, safety, and ability to focus on their studies. Government and institutional efforts to provide affordable housing or housing subsidies are crucial in addressing this aspect of cost barriers (World Bank, 2019).

Transportation costs also contribute significantly to cost barriers, particularly in rural areas where educational institutions may be located far from students' homes. The lack of reliable and affordable transportation options can deter students from attending school regularly or at all. Initiatives to improve transport infrastructure and provide subsidies for student transportation costs can help mitigate this barrier and improve access to education for marginalized populations (International Labour Organization, 2021).

Addressing cost barriers faced by students requires comprehensive strategies that encompass tuition fees, textbooks, accommodation, and transportation. Government policies, institutional support, and international partnerships play vital roles in ensuring equitable access to education and reducing the financial burdens on students and their families. By addressing these barriers, countries like Nigeria can enhance educational outcomes, promote social mobility, and foster inclusive economic growth.

Impact of Subsidies on Improving Access to Tertiary Education and Skills Training in Nigeria

Subsidies play a crucial role in enhancing access to tertiary education and skills training in Nigeria, addressing barriers such as affordability and promoting human capital development. The Nigerian government, recognizing the importance of education and skills in driving economic growth and social development, has implemented various subsidy programs aimed at expanding access to higher education and vocational training. One notable initiative is the Tertiary Education Trust Fund (TETFund), established in 2011. TETFund provides financial support to public tertiary institutions for infrastructure development, academic staff training, and research. By subsidizing educational infrastructure and resources, TETFund aims to improve the quality of education and expand enrollment capacity across universities, polytechnics, and colleges of education in Nigeria (TETFundertiary Education Trust Fund, 2023).

Moreover, scholarships and grants are integral components of Nigeria's subsidy efforts. The Federal Government Scholarship Scheme (FGSS) and various state government scholarships aim to alleviate the financial burden on students, particularly those from disadvantaged backgrounds. These scholarships cover tuition fees, accommodation, and sometimes stipends, enabling more students to pursue higher education and skills training without financial constraints (Federal Ministry of Education, 2023). In addition to subsidies for higher education, vocational training programs are also supported through initiatives like the National Industrial Skills Development Program (NISDP). Launched by the Industrial Training Fund (ITF), NISDP subsidizes training costs in technical and vocational skills, equipping participants with market-relevant competencies. This initiative targets unemployed youths and enhances their employability in sectors such as manufacturing, construction, and information technology (Industrial Training Fund, 2023).

Despite these efforts, challenges remain. Funding constraints and administrative inefficiencies sometimes limit the effectiveness of subsidy programs in Nigeria. The

allocation of subsidies is not always transparent, leading to disparities in resource distribution among institutions and regions. Moreover, the quality of education and training outcomes varies, highlighting the need for continuous monitoring, evaluation, and improvement of subsidy mechanisms to ensure they achieve their intended impact (World Bank, 2022).

Looking forward, addressing these challenges and enhancing the transparency and accountability of subsidy programs will be crucial. Continued investment in human capital through targeted subsidies for tertiary education and skills training can contribute significantly to Nigeria's socio-economic development goals. By improving access to quality education and equipping individuals with relevant skills, Nigeria can foster innovation, entrepreneurship, and inclusive growth across its diverse sectors.

Disparities in Access to Tertiary Education between Urban and Rural Areas

Disparities in access to tertiary education between urban and rural areas persist as a significant issue globally, with profound implications for educational equity and socio-economic development. Urban areas typically benefit from better-developed educational infrastructure, including a higher concentration of universities, colleges, and vocational training centers (UNESCO, 2020). These institutions often offer a wider array of programs, specialized fields of study, and access to modern facilities and technology, which enhance the overall educational experience for urban students (World Bank, 2022). In contrast, rural areas face numerous challenges that limit access to tertiary education. One of the primary barriers is the geographical distance between rural communities and educational institutions. Many rural students must travel long distances to attend university, which can be costly and time-consuming (Federal Ministry of Education, Nigeria, 2021). This geographic barrier contributes to lower enrollment rates among rural students, as it imposes logistical and financial burdens that deter prospective students from pursuing higher education.

Moreover, disparities in educational quality and resources between urban and rural areas further exacerbate access inequalities. Urban institutions often receive more funding and resources, enabling them to offer better-equipped classrooms, laboratories, libraries, and faculty expertise (UNESCO, 2020). In contrast, rural institutions may struggle with inadequate funding, outdated infrastructure, and limited access to educational materials and technology. These disparities in resources can impact the quality of education and academic outcomes for rural students. Financial constraints also pose significant challenges for rural students aspiring to access tertiary education. Tuition fees, accommodation costs, transportation expenses, and other associated costs can be prohibitively high, particularly for families with limited income (UNDP, 2021). Additionally, the availability of scholarships, grants, and financial aid programs tends to be limited in rural areas, further restricting opportunities for students to pursue higher education without facing financial hardship. Social and cultural factors also play a role in shaping disparities in access to tertiary education between urban and rural areas. In rural

communities, traditional beliefs, societal norms, and economic priorities may prioritize immediate economic needs over investing in education (ILO, 2020). This can lead to lower aspirations for higher education among rural youth and a lack of supportive environments that encourage educational attainment.

Efforts to address these disparities require comprehensive strategies that address both infrastructural challenges and socio-economic barriers. Governments and educational institutions can promote equitable access to tertiary education by investing in rural education infrastructure, expanding scholarship opportunities, improving transportation networks, and implementing outreach programs to raise awareness about the benefits of higher education (World Bank, 2022). By enhancing access to quality tertiary education in rural areas, countries can foster inclusive development, reduce inequalities, and empower individuals to contribute effectively to national and global economies.

Distribution of Educational Resources and the Role of Government Funding in Supporting Higher Education and Skills Training Programs in Nigeria

The distribution of educational resources and government funding plays a critical role in shaping higher education and skills training programs in Nigeria, influencing access, quality, and equity across different regions and populations. Nigeria, like many developing countries, faces challenges related to the uneven distribution of educational resources between urban and rural areas, as well as disparities in funding allocation that impact the effectiveness of higher education and skills training initiatives. In Nigeria, the distribution of educational resources is often skewed towards urban centers, where there is a higher concentration of universities, colleges, and vocational training institutions compared to rural areas. This urban-rural disparity limits access for students in remote and underserved communities, who may face challenges such as inadequate infrastructure, limited access to technology, and a shortage of qualified teachers (World Bank, 2022). Government funding plays a pivotal role in addressing these disparities and supporting higher education and skills training programs across Nigeria. The federal and state governments allocate resources to universities, polytechnics, colleges of education, and vocational training centers to enhance infrastructure development, faculty recruitment, curriculum development, and student support services (Federal Ministry of Education, Nigeria, 2021). Financial support from the government also extends to scholarships and grants aimed at improving access to higher education for disadvantaged students. Initiatives like the Federal Government Scholarship Scheme and state-sponsored scholarships provide financial assistance to cover tuition fees, accommodation, and other educational expenses, thereby reducing financial barriers and promoting inclusivity (Federal Ministry of Education, Nigeria, 2021). However, challenges remain in ensuring equitable distribution and effective utilization of government funding for educational programs in Nigeria. The allocation of resources may sometimes be insufficient or unevenly distributed, leading to disparities in educational quality and access. Rural areas, in particular, often receive less funding compared to urban centers, perpetuating inequalities in educational outcomes (UNESCO, 2020).

To address these challenges, there is a growing emphasis on improving transparency, accountability, and efficiency in the management of educational funds. Government agencies responsible for education must implement robust monitoring and evaluation mechanisms to track the utilization of funds and assess the impact of investments on educational outcomes (United Nations International Children Emergency Fund (UNICEF), 2021). Transparent budgetary processes and public reporting on educational spending are essential for promoting accountability and ensuring that resources reach their intended beneficiaries. Moreover, strategic investments in teacher training and professional development are crucial for enhancing the quality of education and skills training programs in Nigeria. Qualified and motivated teachers are essential for delivering effective instruction, fostering student engagement, and promoting critical thinking skills among learners (World Bank, 2021). Government-funded initiatives to improve teacher qualifications, classroom pedagogy, and curriculum development can contribute significantly to improving educational outcomes and preparing students for the workforce. The distribution of educational resources and government funding in Nigeria plays a pivotal role in shaping higher education and skills training programs, influencing access, quality, and equity. While efforts have been made to improve access and quality through funding initiatives, ongoing challenges such as urban-rural disparities and resource allocation inequities necessitate continuous efforts to enhance transparency, accountability, and efficiency in educational resource management. By addressing these challenges, Nigeria can foster a more inclusive and equitable educational system that empowers individuals and contributes to sustainable socio-economic development.

Theoretical Framework

The Human Capital Theory (HCT), proposed by Gary Becker in 1964 and further developed by Jacob Mincer in 1974, posits that investments in education and training contribute significantly to increased productivity and economic growth. This theory forms the basis for understanding how subsidies aimed at tertiary education and skills training can enhance access, thereby fostering a more skilled workforce and stimulating economic development. The theory suggests that by investing in human capital through subsidies, individuals can acquire the knowledge and skills necessary to contribute effectively to the economy. Support for HCT's premise can be seen in various case studies, such as Indonesia's Higher Education Subsidy Program in 2006, South Africa's National Student Financial Aid Scheme established in 1999, and Chile's Higher Education Subsidy Program also initiated in 2006. These programs aimed to increase access to education and training, aligning with HCT's belief that such investments lead to positive economic outcomes by improving labor market productivity and reducing unemployment rates through enhanced skill levels.

However, critics of HCT raise significant concerns. Pierre Bourdieu (1986) argues that HCT overly emphasizes individual economic benefits while neglecting broader social and public benefits derived from education and training. Critics like Bowles and Gintis (1975) contend that HCT fails to address structural barriers and inequality, which can

perpetuate disparities in access to educational opportunities despite subsidies. Additionally, Simon Marginson (2013) criticizes HCT for its narrow focus on economic growth, suggesting that it overlooks the broader social and political contexts in which education operates, including issues of social justice and equity.

In practical terms, HCT has influenced policy decisions globally, guiding governments in allocating resources towards education and training subsidies as mechanisms for economic development. The theory underscores the importance of investing in human capital as a means to enhance productivity and competitiveness in the global economy. By subsidizing tertiary education and skills training, policymakers aim to equip individuals with the capabilities needed to meet evolving labor market demands and foster sustainable economic growth.

While Human Capital Theory provides a compelling framework for understanding the economic benefits of education and training subsidies, its application must be critically evaluated in light of social, political, and structural factors. Addressing criticisms by considering broader societal impacts and ensuring equitable access to educational opportunities remains crucial in realizing the full potential of subsidies in fostering human capital development and inclusive economic growth.

Research Hypotheses

1. There is no significant relationship between government subsidies and access to tertiary education among low-income students in Nigeria.
2. There is no significant disparity in the distribution of educational resources between urban and rural areas.

Methodology

This study employed a quantitative research design with a cross-sectional survey approach to examine the relationship between government subsidies and access to tertiary education among low-income students in Nigeria, as well as disparities in the distribution of educational resources between urban and rural areas. The study utilized a purposive sampling method to select 20 participants from across Nigeria's geopolitical regions, ensuring representation of diverse perspectives and regional variations. The sample comprised tertiary education stakeholders, including students, educators, and policymakers, with sufficient experience and knowledge of the issues under investigation.

Data were collected using a researcher-made structured questionnaire named Subsidies, Access to Tertiary Education and Skills Training Questionnaire (SATESTQ). It was designed and sent via internet to the various regions designed to access the financial assistance programs, and the availability of educational resources. The items were included in the questionnaire, carefully selected includes items to address related to the study's hypotheses. A pilot test was conducted for which 0.87 and 0.79 were obtained as

reliability and validity coefficients by experts in the field of measurement and evaluation. Respondents were required to rate their experiences and perceptions on a 4-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1). The data were analyzed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics were used to summarize the respondents' insights into the study. Pearson Correlation Analysis was conducted to examine the relationship between government subsidies and access to tertiary education, addressing the first hypothesis. Additionally, an Independent Samples t-Test was performed to compare the mean distribution of educational resources between urban and rural areas, testing the second hypothesis.

Results

Descriptive Statistics of the Findings

Table 1: Relationship between government subsidies and access to tertiary education among low-income students in Nigeria.

S/N	ITEMS	X	SD
1	Government subsidies have made tertiary education more affordable for low-income students in my region.	2.70	1.08
2	The availability of financial assistance programs, such as scholarships or grants, has significantly increased my access to tertiary education.	2.40	1.27
3	I would not have been able to enrol in tertiary education without government subsidies or financial aid.	2.75	1.16
4	The cost of tuition and other fees remains a significant barrier to accessing tertiary education, despite available subsidies.	3.10	1.12
Disparity in the distribution of educational resources between urban and rural areas.			
5	Educational resources, such as libraries, laboratories, and qualified lecturers, are equally available in both urban and rural tertiary institutions.	2.62	1.29
6	Students in rural areas have the same access to learning materials and infrastructure as those in urban areas.	3.00	1.12
7	Government funding is evenly distributed between urban and rural tertiary education institutions in Nigeria.	2.95	1.32
8	The quality of education provided in rural tertiary institutions is comparable to that in urban areas.	3.10	1.10

The table 1 presents descriptive statistics on two key themes: the relationship between government subsidies and access to tertiary education among low-income students in Nigeria, and the disparity in the distribution of educational resources between urban and rural areas. Regarding government subsidies, respondents moderately agree ($M = 2.70$, $SD = 1.08$) that these subsidies have made tertiary education more affordable for low-income students, suggesting a positive impact. However, a lower level of agreement ($M = 2.40$, $SD = 1.27$) indicates that financial assistance programs have not significantly increased access for all students, pointing to challenges in the equitable distribution of these resources. The statement that students would not have been able to enroll in tertiary education without government subsidies garners a moderate level of agreement ($M = 2.75$, $SD = 1.16$), further underscoring the critical role of these programs in facilitating access to higher education.

In terms of disparity in the distribution of educational resources, the data indicate a mixed scenario. For Item 5, there is a moderate agreement ($M = 2.62$, $SD = 1.29$) that educational resources such as libraries and qualified lecturers are equally available in both urban and rural tertiary institutions, yet respondents exhibit a lower level of agreement ($M = 3.00$, $SD = 1.12$) that students in rural areas have the same access to learning materials and infrastructure as their urban counterparts. This highlights a gap in resource availability between rural and urban areas. Furthermore, respondents moderately disagree ($M = 2.95$, $SD = 1.32$) with the notion that government funding is evenly distributed between urban and rural tertiary institutions, indicating an imbalance in resource allocation. The perception that the quality of education in rural tertiary institutions is inferior to that in urban areas ($M = 3.10$, $SD = 1.10$) reflects a higher level of agreement, reinforcing the existing disparities in the quality of educational provision across regions.

Testing of Hypotheses

Table 2: Relationship between government subsidies and access to tertiary education among low-income students in Nigeria

Variables	Mean	Standard Deviation	N	R	P value
Government subsidies	2.70	1.01	20	0.229	.004
Access to tertiary education among low-income students in Nigeria.	11.7	2.81			

In testing the research hypothesis, the Table 1.2 provides the correlation statistics for the relationship between government subsidies and access to tertiary education among low-income students in Nigeria. The mean score for government subsidies is 2.70 with a standard deviation of 1.01, indicating a moderate level of agreement among respondents regarding the positive impact of subsidies on making tertiary education more affordable. However, a p-value of 0.229 suggests that the relationship between government subsidies and access to tertiary education is not statistically significant at the 0.05 level. This indicates that while there may be a trend suggesting government subsidies help improve access to tertiary education, the evidence is not strong enough to establish a clear causal link between the two variables.

On the other hand, the mean score for access to tertiary education among low-income students is 11.7 with a standard deviation of 2.81. This reflects a relatively high level of access perceived by the respondents. The p-value of 0.004 indicates a statistically significant relationship between access to tertiary education and government subsidies, suggesting that government subsidies have a meaningful impact on improving access for low-income students. Although the relationship is significant, the effect size may be

moderate, suggesting other factors could also play a role in enhancing access to tertiary education.

Table 3: T-Test table on disparity in the distribution of educational resources between urban and rural areas.

Variable	N	Std. Mean	Error	df	Mean Score	Std. Deviation	t.	Sig.
Disparity in the distribution of educational resources between urban and rural areas.	20	0.47		19	12.90	2.10	27.47	0.00

Table 1.3 presents the results of a t-test conducted to examine the disparity in the distribution of educational resources between urban and rural areas. The table shows the standard error mean of 0.47 and a sample size of 20, indicating that the standard error is relatively low, suggesting reliable estimates. The mean score for disparity in resource distribution is 12.90 with a standard deviation of 2.10, reflecting a relatively high level of agreement among respondents that disparities exist in the distribution of educational resources between urban and rural areas.

The t-value of 27.47 indicates a strong and statistically significant difference in the distribution of resources between these two regions ($p < 0.05$). The p-value of 0.00 supports this finding, suggesting that the differences in educational resource distribution are unlikely due to random chance. This significant result implies that rural areas face greater challenges in accessing quality educational resources compared to urban areas, highlighting a persistent disparity that affects the overall quality of education in these regions.

Discussion

This analysis investigates the relationship between government subsidies and access to tertiary education among low-income students, as well as the disparity in the distribution of educational resources between urban and rural areas in Nigeria.

Descriptive statistics indicate a moderate level of agreement ($M = 2.70$, $SD = 1.01$) among respondents that government subsidies have facilitated more affordable access to tertiary education for low-income students. However, the non-significant p-value (0.229) suggests that these subsidies alone are not sufficient to drive substantial changes in access (Okunola & Afolabi, 2018). This finding aligns with previous studies that highlight the

complex interplay of socio-economic factors and policy effectiveness in enhancing educational access (Oluwaseun et al., 2016).

The t-test results show a significant difference ($t = 27.47$, $p = 0.00$) in the distribution of educational resources between urban and rural areas. With a mean score of 12.90 ($SD = 2.10$), respondents perceive a higher level of disparity in access to quality educational resources in rural areas compared to urban ones (Eze & Nduka, 2019). Such disparities are well-documented in the literature, which links them to challenges such as underfunding and inadequate infrastructure in rural regions (Ajayi et al., 2017).

The findings indicate that while government subsidies may alleviate financial barriers to tertiary education, they do not address the broader resource disparities between urban and rural areas (Okon, 2015). This uneven distribution affects the quality of education in rural institutions, as evidenced by the lower educational experiences reported by respondents (Amarachi, 2016). Similar research has shown that disparities in resource allocation contribute to the unequal educational outcomes observed between these regions (Oladejo & Omoniyi, 2019).

These findings underscore the need for targeted policies that not only support government subsidies but also address the unequal distribution of educational resources across regions. Investments should focus on enhancing infrastructure and support services in rural areas to bridge the resource gap (Akanbi, 2020). Policymakers should consider a multi-faceted approach that includes infrastructure development, targeted funding, and community engagement to improve educational equity (Adeyemi, 2014).

Conclusion

In conclusion, the study highlights several critical challenges and opportunities in Nigeria's educational landscape, particularly concerning access to tertiary education, financial barriers faced by students, and the role of government funding and support. The disparities between urban and rural areas persist as a significant issue, affecting educational outcomes and socio-economic development. Urban centers typically benefit from better educational infrastructure, resources, and opportunities compared to rural communities, exacerbating inequalities in access and quality of education. Financial barriers pose another formidable challenge, limiting opportunities for many aspiring students to pursue higher education. High tuition fees, limited availability of scholarships, and additional costs such as textbooks and accommodation contribute to these barriers, particularly for students from low-income backgrounds. Evaluating existing financial assistance programs reveals both successes and areas for improvement, emphasizing the need for expanded and targeted support to ensure equitable access and success for all students.

Government funding plays a crucial role in addressing these challenges, yet effective allocation, transparency, and accountability are essential. By increasing funding for education, prioritizing equitable distribution of resources, and enhancing monitoring

mechanisms, Nigeria can strengthen its educational system and bridge the gap between urban and rural areas. Moreover, investments in teacher training, curriculum development, and public-private partnerships can enhance educational quality and relevance, preparing students to meet the demands of a competitive global economy. Moving forward, collaborative efforts involving government entities, educational institutions, civil society organizations, and international partners are crucial for implementing these recommendations effectively. By addressing these complex challenges comprehensively, Nigeria can build a more inclusive and resilient educational system that empowers individuals, promotes social mobility, and contributes to sustainable development goals.

Recommendation

Based on the insights gathered regarding disparities in access to tertiary education, cost barriers faced by students, evaluating financial assistance programs, and the role of government funding in supporting educational initiatives in Nigeria, several recommendations can be proposed to address these challenges effectively: Implement policies to ensure equitable distribution of educational resources between urban and rural areas. This includes prioritizing infrastructure development, technology access, and qualified teaching staff in underserved regions. Governments should allocate funding based on need and ensure that rural communities have adequate educational facilities comparable to those in urban areas. Increase government funding for education, with a focus on improving transparency and accountability in resource allocation. Establish clear budgetary frameworks and monitoring mechanisms to track the utilization of funds, ensuring they reach intended beneficiaries and contribute effectively to educational quality and access. Expand scholarships, grants, and loans to mitigate cost barriers for students, particularly those from low-income families and rural areas.

Ensure these programs cover tuition fees, accommodation, transportation, and other living expenses to make higher education more accessible and affordable for all aspiring students. Invest in teacher training and professional development to enhance teaching quality and curriculum relevance. Provide educators with the necessary skills and resources to deliver high-quality education promote student engagement, and prepare graduates for the demands of the modern workforce. Foster partnerships between the public sector, private companies, and non-governmental organizations to supplement government funding and support educational initiatives. Strengthen existing monitoring and evaluation systems to assess the impact of educational interventions and identify areas for improvement. Regular evaluations should measure educational outcomes, student retention rates, and the socio-economic impact of educational investments to guide policy decisions and resource allocation. Launch awareness campaigns to promote the value of education and increase participation in educational programs, especially in marginalized communities. Collaborate with local communities, civil society organizations, and educational institutions to foster a culture that values education and encourages lifelong learning.

Implementing these recommendations requires coordinated efforts from government entities, educational institutions, civil society organizations, and international partners. By prioritizing equitable access, sustainable funding, educational quality, and transparency, Nigeria can build a more inclusive educational system that empowers individuals, fosters socio-economic development, and contributes to national prosperity.

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Primary Education as a Foundation for Sustainable Development: A Nigerian North Central Perspective

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Abstract

The paper explores the intersection of primary education and sustainable development in North Central, Nigeria and highlighting the collective impact on shaping the region's future. North Central Nigeria is a region characterized by diverse ethnic groups and a complex political landscape. The region faces unique challenges that often influence policy direction and economic development as well as socio-economic and educational disparities are prevalent, thus, the need to provide access to quality primary education becomes paramount for fostering equitable development. The paper highlights the interplay between education and poverty alleviation, gender equality, health improvements, and community empowerment. It also identifies barriers such as inadequate funding, cultural and religious factors, insecurity and conflict, lack of awareness and limited access to resources that hinder the effective delivery of primary education in North Central Nigeria. This paper also examines the impact of some educational reform, religious schools and community-based school on primary education. The paper argues that prioritizing primary education in North Central Nigeria is not just an investment in individual futures but also in the sustainable progress of the entire region and offers recommendations for policy makers and stakeholder committed in transforming primary education as a corner stone for sustainable development in North Central Nigeria.

Keywords: Educational Development, Primary Education, Sustainable Development

Introduction

The relationship between education and sustainable development is paramount in current world debate. While the former is an imperative of human progress, the latter is a critical imperative for ensuring that there will be an adequately equitable and environmentally responsible future. In the case of North Central Nigeria, the connection between primary education and sustainable development is particularly salient. It is a socio-culturally diverse region burdened with a host of challenges and thus provides an ideal prism through which to discuss the interaction of these two critical domains.

According to United Nation Educational, Scientific and Cultural Organisation (2020). Primary education lays the foundation in individual and societal development. It gives an individual the knowledge, competencies, and values necessary for him or her to become a useful member of society and thus to begin contributing toward the larger development equation. Primary education is even more important in North Central Nigeria, given the historical and contemporary challenges characteristic of poverty, insecurity, religious

belief, gender disparity, Almajiri syndrome and with wide educational imbalance compared to other regions. To this end, investment in primary education will lay a solid foundation on which the policymakers and development practitioners can build a realm of sustainable development in the region.

World Bank (2019) pointed out that sustainable development is a system approach toward development in attempts to meet present needs without compromising the ability of future generations to meet their needs. Sustainable Development is measured in three dimensions the economic, social, and environmental these are interconnected. Because of this fact, sustainable development in North Central Nigeria is very necessary for dealing with burning issues such as educational imbalance in the region, resource depletion, adaptive to change and social inequality. This is where the region can strive for both a better quality of life for its citizens and preserve the natural environment for future generations and promoting sustainable practices and policies.

On one hand, primary education may support sustainable development by equipping people with knowledge and skills that would prepare them for the adoption of sustainable practices and participation in decision-making. Examples could involve how primary education can enhance social awareness, promote adaptability, efficiency, economic and political development. On the other hand, sustainable development could have a very conducive environment where quality education infrastructures are available to all, where child labor and early marriage are avoided, and gender equity prevails. International Institute for Sustainable Development (2021), pointed out that primary education plays a crucial role in driving sustainable development in terms of economic growth, improved health and nutrition, environmental sustainability, social equity and gender equity and also strengthen democratic institution. Thus, it is worthy to note that education serves as a powerful catalyst for sustainable development in the North Central especially in equipping individuals with knowledge and skills necessary to participate effectively in the workforce. A well-educated population contributes to economic and growth and development.

Lotz-Sisitks *et al.* (2015) in his theory-based framework attempts to capture Education for Sustainable Development in terms of the underlying pedagogy and the change process identified during policy making and its implementation at all levels of education of a nation. Slijper *et al.* (2022) opined that the ability of change relates to the ability to adapt to a new form of knowledge and the capacity to learn which translate understanding into learning outcome. Thus, primary education is the foundation for future learning and plays a pivotal role in shaping the lives of individuals and communities. Several theoretical frameworks have been proposed to explain these intricate relationships within economic growth, social progress, and sustainable development amongst which is the Human Capital Theory propounded by Theodore Schultz (1961) his core idea is the fact that Education is seen as an investment in human capital, similar to investing in physical capital. Educated individuals possess greater skills, knowledge, and productivity, leading to higher wages and economic growth.

Another, theory is the Social Capital Theory propounded by James Coleman (1988) whose core ideal is Education can foster social capital, which refers to the networks of relationships, trust, and cooperation within a community. Strong social capital can enhance economic opportunities, promote social cohesion, and contribute to sustainable development. United Nation (2015) pointed out that education empowers individuals to participate in decision-making, promote sustainable practices, and contribute to a just and equitable society. According to United Nations Children Educational Funds (2017) pointed out that primary education in North Central Nigeria has gone through rather tortuous times. At the colonial era, this level of education was largely confined to the aristocracy and missionaries. After independence, however, several efforts were made toward expanding education into many forms of primary schools. Despite these advances, most of such schools still suffer from infrastructural setbacks, teacher shortages, and socio-cultural barriers that strongly impede access to a quality education system. Prospects for basic education in North Central Nigeria are mixed; on one hand, it can be observed that over the last couple of years, there are enhancing enrolments and an introduction of free primary education. On the other hand, certain setbacks still persist, such as the out-of-school children, challenges of teacher quality, and lack of resources.

Challenges of Primary Education in North Central, Nigeria

The North Central region in Nigeria comprises of state like Plateau, Benue, Niger, Nasarawa, Kogi, Kwara and the Federal Capital Abuja. The region is characterized by a rich tapestry of ethnicities, language and religious affiliations where its diversity is seen as a mixture of variety, balance and disparity. Adeyemi and Adediran (2016) pointed out that Primary education in the North Central Nigeria faces significant challenges which includes the following:

Poverty and Economic Disparity: Many families struggle to afford school fees, uniforms, and other educational expenses, child labor is mostly attributed to poverty which compel children to engage in child labor, preventing them from attending school. In addition, in this region, a lot of children are yet to be enrolled in school, partly because of abject poverty, cultural reasons, or conflict. In such situations, targeted specific interventions become necessary.

Insecurity and Conflict: Conflicts and insecurity often lead to displacement, disrupting education. The north central Nigeria witnessed series of attacks on school by bandit kidnapping school children leading to the closure and damages to school, in some part they have converted a school as their camp while preparing other attacks. The region has been plagued by security issues, which have disrupted education and displaced communities. Insecurity has made it difficult for schools to operate and has forced many children to abandon their studies. This has led to long periods of out-of-school time and difficulties in accessing educational services in new locations.

Cultural and Religious Barriers: Cultural and religious practices in some parts of North Central Nigeria often require girls to marry at a young age, preventing them from

completing primary education. This is especially prevalent in rural areas where early marriage is seen as a traditional norm. In some vain, some religious extreme often advocate the age of marriage for a girls child should not exceed 12 years, thus, in some areas of the North central Nigeria this extremism hinders access to education particularly for girl. While in some other parts of North central Nigeria rampant very early pregnancies of children which is often not frown at by the cultural practice increase the rate of drop out. (UNICEF, 2017).

Gender Inequality: Discrimination against the girl child prevent girls from accessing primary education. This can be due to cultural norms that prioritize the education of boys or the lack of a dequate sanitation facilities for girls. According to UNESCO Institute for Statistics (2021) viewed this stereotype about the roles of girls and women limit their educational aspirations. These stereotypes may discourage girls from pursuing education or limit their career choices.

Lack of Awareness of the Importance of Education: Some communities may not fully understand the importance of education for their children's future, thereby believing on the child laboring as a better option to education. This is especially prevalent in rural areas where children are involved in agricultural activities or other forms of labor to supplement family income.

Teacher quality: The most significant impact on primary education effectiveness will be brought about by enhancing the quality of the teachers. This will be achieved by providing them with improved quality training, professional development, and adequate remuneration. There may also be a shortage of qualified teachers particularly in rural areas coupled with the low morale of teachers as a result of low salaries, poor working conditions, and lack of professional development opportunities.

Poor Infrastructure: Many schools in North Central Nigeria lack basic amenities such as classrooms, textbooks, and sanitary facilities. This creates a hostile learning environment and hinders students' ability to concentrate and learn effectively. Infrastructure in many schools, infrastructure such as classrooms, textbooks, and facilities is still inadequate. There is, therefore, a need to invest in infrastructure development to ensure that l0earning environments become conducive.

Underfunding: Despite the positive intentions behind many educational reforms, inadequate funding has hindered their implementation. Insufficient resources have led to challenges in building new schools, providing adequate infrastructure, and paying teacher salaries.

These challenges are interconnected and mutually reinforcing. For example, cultural and religious barriers that promote early marriage can exacerbate gender inequality by limiting girls' educational opportunities. Similarly, gender inequality can reinforce cultural and religious practices that discriminate against girls. Cultural and religious

barriers, and gender inequality pose significant challenges to primary education in North Central Nigeria. Addressing these challenges requires a multi-faceted approach that involves promoting gender equality, challenging harmful cultural and religious practices, and investing in education infrastructure and human resources. By addressing these challenges, it is possible to create a more equitable and inclusive educational environment for all children in the region.

The Impact of Primary Education on Economic Growth and Poverty Reduction in North Central Nigeria

Primary education plays a crucial role in driving economic growth and reducing poverty in North Central Nigeria. By equipping individuals with the necessary skills and knowledge, primary education can enhance their productivity, increase their earning potential, and contribute to the overall development of the region. Institute for Statistics (2021) pointed out that Primary education provides individuals with the basic literacy and numeracy skills needed to participate effectively in the workforce. This increased productivity can lead to higher wages and greater economic output.

World Bank (2018) viewed that education can foster entrepreneurship and innovation by equipping individuals with the problem-solving and critical thinking skills necessary to start and run businesses. This can contribute to economic growth and job creation. Thus, a good primary education lays the foundations for the acquiring of these skills. Economic growth and poverty reduction are interconnected. As the economy grows, more jobs are created, and income levels rise. This can lead to poverty reduction and improved living standards. Conversely, poverty reduction can stimulate economic growth by increasing the purchasing power of individuals and households.

In another dimension of gender equality, Education can empower women by providing them with the knowledge and skills they need to participate fully in society. Educated women are more likely to have greater economic opportunities and to be able to make informed decisions about their lives than the uneducated ones. It also reduces gender-based violence by challenging harmful gender stereotypes and promoting gender equality. Educated women are more likely to be aware of their rights and to be able to seek protection from violence.

The intersection of primary education to sustainable development economic development, environmental sustainability, improved health & nutrition, good governance and social equity. Primary education also plays a vital role in driving economic growth and reducing poverty in North Central Nigeria. By investing in primary education, governments and communities can equip individuals with the skills and knowledge they need to participate in the workforce, contribute to economic development, and improve their living standards, promote good governance, democracy, social equity, and gender equality, reduce inequality and to some extent reduce gender-based violence. In summary, primary education is a fundamental building block for sustainable development. By investing in primary education, countries can promote

economic growth, reduce poverty, improve health, protect the environment, enhance social equity, and strengthen democratic institutions.

Educational Policy Reforms in Nigeria: Impact on Primary Education

Nigeria has witnessed numerous educational reforms over the years, aiming to improve the quality and accessibility of education, particularly at the primary level. However, the impact of these reforms has been mixed, with some leading to positive outcomes while others have faced challenges. However, positive impact of some educational reforms includes;

Universal Basic Education (UBE) Act: Enacted in 1999, the UBE Act mandated free and compulsory education for all children aged 6-15. This initiative has led to a significant increase in enrollment rates at the primary level, especially in rural areas and most part of the North Central Nigeria. According to the Federal Republic of Nigeria (1999) the UBE Act transferred the sole responsibility of the basic education on the State and Local Government. More so, the federal government intervenes by providing the consolidated revenue funds which is the main source of funds for the UBE programme. Halilu (2022) posit that the UBE act was a reform educational policy targeted to better the standards of basic education.

National Policy on Education (2004): The National Policy on Education revised 2004 provides a framework for educational development in Nigeria. It outlines the goals, objectives, and strategies for improving education, at the primary level. With goals of providing free and compulsory primary education for all children aged 6-11, to lay a solid foundation for future learning and development, to contribute to the development of human capital and national economic growth and to promote social and moral development among children.

In addition, it also outlines the objectives of primary education as to ensure that all primary school leavers can read, write, and count, to equip children with the knowledge and skills necessary for further learning and life. It also designed to inculcate positive attitudes towards learning, work, and society and lastly to promote physical and health development among children.

Curriculum Review: Periodic reviews of the primary school curriculum have aimed to make it more relevant to the needs of students and the country. These reviews have focused on incorporating practical skills, critical thinking, and problem-solving abilities into the curriculum. National Commission for Colleges of Education (2012). Aimed the revised National Policy on Education (NPE) was to ascertain the relevance of the learning contents and its conformity to societal requirement.

The National Policy on Education Revised (2004) provides a clear roadmap for improving primary education in Nigeria. By implementing these goals and objectives, the government aims to ensure that all children have access to quality education and are

equipped with the skills and knowledge they need to succeed in life. On the other hand, the negative impact of some of the reform policies are witnessed in the underfunding nature of primary education which has the ripple effect in availabilities of facilities and lack of teaching and learning resources, quality issues and teachers shortage e,t,c

In the same vain, an examination of some of the reform policies it show a great impact exerted my religious and community on primary education in the North Central Nigeria in the areas of increased access to primary schools by establishing school where they are limited or even non -existence, cultural relevance where school incorporate cultural and religious values into their curriculum, making education more relevant and engaging for students and some even provide alternative educational approaches where school may even offer alternative educational approaches that can complement the government-run system, providing students with a wider range of options. Thus, religious and community schools play a significant role in the primary education landscape of North Central Nigeria. These schools often complement the government-run education system, providing alternative options for educating children, especially in rural areas. This shows the impact of these schools on primary education in the region, considering the context of educational reforms and policies.

Summarily, while educational reforms in Nigeria have had some positive effects on primary education, several challenges remain. Addressing these challenges requires sustained government commitment, increased funding, and effective implementation of policies. By addressing these issues, Nigeria can ensure that all children have access to quality primary education and are equipped to contribute to the country's development. To this regard this paper show cased that primary education is synonymous to sustainable development, if educational reform policies are comprehensively implemented. The paper also pointed out the deep understanding of the complex relationship between primary education and sustainable development in North Central Nigeria.

Suggestions/ Way forward

The paper provides insights, strategies for improving primary education in such a manner that it can promote sustainable development in the region. The paper offers the following suggestions:

Expansion to increase access to primary education through the establishment of new schools, especially in underserved areas, with establishment of new schools it will cater for the increased enrolment rate since the enactment of the educational reform act of UBE.

Teacher Development that will improve the quality of primary education teachers through training, professional development, and adequate remuneration. Government, religious and community should join in proving scholarship for teachers to go for further training. Offer ongoing professional development opportunities to keep teachers updated on the latest developments in sustainable development education

To reviewed Curriculum and update the primary education curriculum to make it more relevant and effective so that appropriate skills that will enhance economic development are inculcated in the children. Incorporate sustainable development themes, such as environmental conservation, climate change, and renewable energy, into the primary education curriculum.

Funds should be made available and ensured that they are used for infrastructure development to provide adequate infrastructure, such as classrooms, textbooks, and laboratories, in primary schools. Ensure that primary schools are built using sustainable materials and incorporate energy-efficient technologies. Provide access to clean water and sanitation facilities in all primary schools to promote health and hygiene.

Community should be involved in the planning, implementation, monitoring and supervision of primary education programs. Comparatively, this is what is obtainable in Ghana in their quest to improve the quality of education of the country. Collaborate with local communities to identify and address their specific sustainable development needs. Integrate community-based learning activities into the primary education curriculum, such as environmental clean-ups, tree planting, and community service projects e.t.c

To promote gender equality in primary education by ensuring equal access and opportunities for girls and boys, in region with high rate of disparity, girls should be encouraged by providing a scholarship programs similar to the Girl Education Program (GEP) championed by UNICEF. To provide appropriate education for children with special needs.

To incorporate vocational skills, such as agriculture, renewable energy, and entrepreneurship, into the primary education curriculum, and also collaborate with vocational training institutions to provide students with opportunities for hands-on learning and skills development.

Conclusions

Based on the discourse of this paper it clearly pointed out that primary education is not merely a means to acquire knowledge and skills but also a powerful tool for promoting sustainable development and the intersection of primary education and sustainable development is particularly significant. As such the paper propose a policy intervention to strengthen primary education to support sustainable development goals in North Central Nigeria by increasing funding of education, encourage religious and community participation, enhance the curriculum to accommodate vocational training in to the primary education curriculum and government need to increase funding for education, improved teacher training, curriculum reform, and community engagement

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Politics, Power, and Education in Nigeria: The Multifaceted Dimensions for Inclusive Sustainable Development in Nigeria

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Abstract

In Nigeria, the complex interplay of politics, power, and education significantly influences sustainable development. Politics, wielding power, shapes educational policies, resource allocation, and institutional governance, while education acts as a tool and outcome of political power, molding civic consciousness and leadership capabilities. However, challenges like corruption, which is not limited to the wrong appointment of persons to key ministries in education and the direct interference of politics in education system, mismanagement and diversion of funds made for educational development, policy instability also hampers consistent implementation of long-term plans. Inadequate funding, resource inequities, and teacher-related issues compound the complexity, impacting education quality and sustainable development. The study advocates for solutions such as fostering a nationalistic spirit, patriotic leadership, anti-corruption measures, policy consistency, increased funding, and targeted teacher training. Streamlining bureaucratic processes, reducing political interference, and involving stakeholders, including local communities, are proposed strategies. The research underscores the critical need for a harmonious relationship between politics, power, and education to drive sustainable development in Nigeria. Strategic solutions, driven by political will, can unlock the transformative potential of education for a more prosperous and equitable future.

Keywords: politics, power, education, and inclusive sustainable development

Introduction

Politics, power, and education stand as essential pillars in the pursuit of inclusive sustainable development, playing instrumental roles in shaping societies and fostering long-term resilience. The respective functions of these variables and their interconnected realms collectively contribute to the formulation and implementation of policies that address social inequities and societal development. The symbiotic relationship between politics, power dynamics, and education, highlighting their significance as tools for fostering inclusive sustainable development is the focus of this study. Each of the concepts are explained below briefly to provide proper understanding of the paper.

Conceptual Clarification

The variables that constitute the hallmark of this study are explained here. First, politics, is a social process, involving conflict resolution and the negotiation of interests and progress, where individuals and groups engage in activities to influence collective decisions (Easton, 1965). Politics refers to the process of gaining and using power in public life through the exercise of authority, decision-making, and governance within a society (Heywood, 2013). In the institutional perspective, politics encompasses the structures and organizations through which power and resources is distributed, including government bodies, agencies, institutions, political parties, and electoral systems productive for those participating in it.

Here, politics is conceptualized in the functionality of it, which serves as the mechanism through which societies make collective decisions and allocate resources for their growth and development. In the context of sustainable development, political processes are vital for creating policies that address societal concerns, including social inequalities, and economic disparities. This is the reason, politics is referred to as the authoritative allocation of value (Ake, 2003). Through democratic governance, diverse voices are integrated into decision-making, ensuring a more inclusive approach to development.

Power is explained here in three dimensions of authority and influence, relational aspect, and dynamic nature. Power as in authority and influence, is the ability to influence or control the behaviour of others and the course of events. According to Dahl, (1957), it often involves authority, coercion, persuasion, or the possession of resources. The relational aspect sees power in term of social relationship where one party's actions can influence or limit the actions of others (Foucault, 1982). Lastly, power is dynamic and context-dependent, evolving based on societal structures, cultural norms, and changes in political landscapes. Therefore, the exercise of power should be one that is positive in influence, communal in social relations and progressive in its dynamic nature.

Power influence resource allocation and policy implementation, making it essential to distribute resources equitably for inclusive development - enhances even marginalized communities' participation in development processes, fostering social and economic sustainability. Explicitly, sustainable development requires a balanced distribution of power to prevent marginalization and ensure that decision-making reflects the needs of all stakeholders. The essence is power should continue to be a tool for smooth societal transformation and not antagonistic or underdevelopment.

Education on the other hand involves formal learning. That is the formal process of acquiring knowledge, skills, values, and attitudes through instruction, often provided by schools, colleges, and universities, a position shared by Dewey (1916). It is planned systema through which the individual and the society reproduce itself. As a lifelong process, education is not confined to any formal institutions but extends to continuous, lifelong learning that occurs through experiences, self-directed study, and informal interactions. This also explained education in term of its socialization and development

function; it is a socializing force that contributes to the development of individuals and societies by transmitting cultural values, fostering critical thinking, and preparing individuals for civic engagement (Parsons, 1961).

In addition, education is the deliberate pattern through which a society transmits to its young people, the physical, intellectual, and moral content of its culture, for continuity and, for more advancement of its society by improving on the level so far attained (Pandey, 2022). This involves the philosophies and institutions (political, social, economic, science, technology, religion) that the society has. Here, education plays a transformative role in equipping individuals with the knowledge and skills needed for a changing world. Inclusive education, which considers diverse learning needs (development issues in a society) and backgrounds, contributes to social cohesion and equal opportunities. It is a key instrument for preparing societies to navigate and address emerging challenges (World Bank, 2018), which ensure sustainable development.

Furthermore, sustainable development is viewed here in three perspectives. Firstly, sustainable development is an economic prosperity platform. Take Nigeria for instance, sustainable development involves achieving economic growth that meets the present needs without compromising the ability of future generations of Nigerians to meet their own needs; this position was earlier shared by the World Commission on Environment and Development (1987). Secondly, it involves social inclusivity. That is, sustainable development (in Nigeria) should also emphasize social inclusivity, aiming to reduce inequality, eradicate poverty, empower citizenry with knowledge, skills, and ensure the well-being of all citizens, and the United Nations Organisation in 2015 emphasized this position. Lastly, sustainable development is a responsibility, involving patriotic attitudes in terms of leaderships and followership, environmental stewardship, dialogue and peacebuilding, promoting best practices that safeguard the people and environment and address social transformation in all institutions of the society that maintain ecological balance.

Thus, the synergy between politics, power, and education lays the foundation for inclusive sustainable development. By understanding and harnessing the potential of these interconnected elements, societies can create comprehensive strategies that address environmental, social, and economic dimensions, fostering resilience and equity for total transformation of the society.

Purpose and Nexus of Politics, Power, and Education for Sustainable Development

The fundamental purpose of politics, power, and education is societal advancement. When misapplied, these elements become impediments to sustainable development. For instance, blocks are meant for building(s), roads are meant for easier movement of people, goods, and services; hospitals are meant for healthcare service delivery, ensuring a healthy population (manpower); government is meant to unite and lead the people,

resolve challenges before they become emergencies, and create platforms for development to flourish. If these functions deviate from their intended purposes as instruments for stability and development, threats to the smooth progression of society emerge. Similarly, when education fails to function as a tool for enlightenment and capacity-building, societal stagnation ensues. In well-governed societies, politics and power facilitate policy implementation, while education nurtures informed citizens who actively contribute to sustainable development. As highlighted by UNESCO's Futures of Education initiative, reimagining education is crucial for addressing contemporary challenges and ensuring sustainable societal progress (UNESCO, 2021).

Therefore, the inability of these variables to function adequately or deviating from utilizing politics, power, and education as tools for the transformation of man and society are threats to inclusive sustainable development in Nigeria. When things or products do not serve the purpose in which they are initiated for they equally become threats to their own existence, and by extension the entire society.

Most importantly, all over the world, the concepts of politics, power, and education are integral parts of the foundation and tools for smooth continuity of societies. There is no society that exists without a political foundation and system - where the aspirations, goals and objectives of the society is initiated, promoted and or executed. Same with education that is use for socialization, integration, birthing and training critical minds, inculcations of cultures, values, and skills for advancement and sustainability of the society. For societies that are adequately utilizing these variables in their full force, they are equally transforming and attaining inclusive sustainable development in all ramifications. There is little or no threats to such society's existence or future generation's needs. Almost everything is in place for the day to day, smooth running of the society. And such should be the hallmark of politics, power, and education for inclusive sustainable development in Nigeria.

The questions thus emerged, what role does politics and power play on educational development, and what role too does education have on politics and power for inclusive sustainable development. Attempt is made in answering the questions with the sub-topics below:

Roles of Politics and Power in Educational Development

Policy formulation and implementation: politics and power play a vital role in shaping education policies and ensuring their effective implementation (Ajayi, 2016). Government decisions and resource allocations impact the educational system, influencing curriculum development and implementation. For instance, the adoption and publication of the National Policy on education in 1977, establishment of the defunct Universal Primary Education and now Universal Basic Education programmes, gifted and special education, women education, quota-system in admission to schools, are all testaments of policies executed by politics and power play. These are policies aim at

educational development, and the milestones being achieved with these policies are those of politics and power.

Resource allocation: The distribution of resources, such as funding and infrastructure as seen in TETFund, is inherently political and impacts the quality of education (Okebukola, 2015). The United Nation advocated that member nations should allocate about 26% of their national budgets to education. Such emphasis by the UN is a political decision needed for the development of societies; however, Nigeria allocate only between 6% to 8% annually. Adequate resource allocation, driven by political decisions by those in power, is essential for creating a conducive learning environment, and goes a long way in development of the entire sector.

Equality and equalization of education: the accessibility and equity of education are achieved with political decisions and power influence. Policies crafted by those in power shape whether marginalized groups have equal opportunities and infrastructure for education (Ezeani, 2018). The opening up of the education environment to train people with special needs such as the blinds, crippled, handicapped, dumb and deaf, nomadic, disadvantage regions or communities are developmental on education and the society. Ensuring inclusivity in education requires patriotic political will and power commitment.

Curriculum development, change and innovation: the curriculum reflects societal values and priorities, often influenced by political considerations (Oni, 2019). Politics and power dynamics play a crucial role in determining what knowledge is deemed essential for citizens, shaping the education system for development. A patriotic leadership in power will ensure national interest is topmost priority in all curriculum planning, development, change, and innovation particularly as time and issues of the society undergo changes.

Teacher development policies: the formulation of policies related to teacher training and minimum standard, recruitment, training, and remuneration is a political process (Ogundipe, 2017). It is the government in power that usually initiate teacher development processes, right from introduction of formal education when the practice benchmarked the requirement with Teacher Grade I, II, III, and then NCE and B.ed standards, including the operation of 'Teachers Registration Council' (TRC). The head of education agencies such as the TRC is appointed by the Government in power to execute policies on teachers. Teachers' quality as supervise by Government directly impacts on the quality of education, making political decisions in this realm critical for educational sustainability.

Infrastructure development: the provision of educational infrastructure, including establishment of schools, erecting building, provision of books, seats and tables, laboratories and libraries, instructional materials, staff, among other technology is a political and power decision that significantly influences the quality of education (Oyekanmi, 2016). Political leaders in their exercise of power determine the priority and location given to educational infrastructure in national development agendas.

Legislation and regulation: political power is instrumental in enacting laws and regulations that govern the education sector (Ajiboye, 2017). For instance, the promulgation of the Universal Basic Education by President Olusegun Obasanjo in September 1999 and subsequent enactment of the UBE Act in 2004, and the establishment of TETFund Act of 2011, are by act of legislature through the National Assembly. Other Establishments/legislative Acts are those of the National University Commission, Nigerian Educational Research and Development Council (NERDC), National Board for Technical Education (NBTE), National Teachers Institute (NTI), National Mathematics Centre (NMC), National Commission for Colleges of Education (NCCE), National Commission for Mass Literacy, Adult and Non-Formal Education, National Examination Council (NECO), National Business and Technical Examination Board (NBTEB). Even though some of these establishments were promulgated by military decrees but have been rectified by legislative enactment. These enactments contained all the functions and modus-operandi of the educational institutions/agencies. These are legal frameworks that determine educational standards, accreditation processes, and the overall governance of educational institutions that also standardized them to compete and enter partnership globally.

Innovation and Research: politics influences the support for research and innovation in education. Governments with a commitment to education invest in research to improve teaching methods, learning materials, and educational technologies (Okoro, 2019), which are all geared towards attainment of the country's national objectives and goals.

Public perception of education: political discourse shapes public opinion about education, influencing societal attitudes and expectations (Ibrahim, 2016). Political leaders can use their influence to promote the value of education, encouraging societal support for educational initiatives towards sustainable development of the society. Too often, politicians make strong public statements during campaigns and even in office on education issues – emphasizing that it will be their priority in power, and such actions defined the role of politics and power on education development and by extension inclusive sustainable development.

International Collaboration: political engagement on the international stage affects educational partnerships and collaborations (Akinsola, 2014). Engaging in global educational initiatives requires diplomatic efforts and political will to foster international cooperation in education. All the United Nations Organization education initiatives or undertaken by its agencies such as UNESCO for global improvement of education in nations are entered (signed) by political power holders and not classroom teachers or the school managers.

In summary, it is viewed that in the display of politics and exercise of the three dimensions of power - morality, goodness, or rightness, and progressive desired (thoughts) dominate the minds/interest of those involved. This is so stated because of the essential (education) knowledge, values and skills possessed by the players, and should

be displayed at the centre of politics and power. The progressive values of education in leaders should serve as a catalyst of guidance in everyday life. education prepares leaders, leaders make policies that promote education. This becomes the interplay between education, politics, and power.

Roles of Education in Productive Sustenance of Politics and Power

Politics and power do not sustain themselves, but it is the function of education in the society that sustains political culture and ideology being practice. Below are few and productive roles of education to politics and power for inclusive sustainable development:

Inculcation of political awareness and consciousness: education plays a crucial role in fostering political awareness and consciousness among the citizens of Nigeria (Ajayi, 2016). The National Policy on education (NPE) stated this very function as fundamental aspect of all forms of education at all levels in the country. A well-educated populace is more likely to critically analyze political and economy issues, engage in informed discussions, and make sound decisions that transform the society rather than destroy it. This function also ensures the instilling of nationalistic spirit and patriotic mind-sets in the citizenry for productive engagement in politics and leadership.

Inculcation of competencies for civic participation: education enhances civic participation by equipping individuals with the knowledge and skills necessary to actively engage in the political process (Okebukola, 2015). One of the national objectives of Nigeria is become a united, strong, and democratic nation - this objective can only be achieved with education as the platform to instill in citizens democratic values, norms, and culture. In fact, an educated citizenry in Nigeria is more likely to participate in elections, contribute to policy discussions, and hold leaders accountable in the demand for good governance.

More so, education also ensures development of leadership skills and capacity. Education is an instrument in nurturing future political leaders and functional citizenry. By operating solid education curriculum, individuals are better prepared to assume leadership roles and contribute positively to the political landscape, and economy development.

Charting policy formulation and implementation strategies: educated citizens are better positioned to contribute to the formulation and implementation of effective policies (Oni, 2019). In fact, this is where the inbuilt patriotic knowledge, attitudes, and skills of the citizens in whatever capacity one is serving is utilize for the good of the society. This is vital for sustaining political stability and promoting sustainable development in Nigeria.

Inculcation of conflict resolution knowledge and skills: education fosters critical thinking and problem-solving skills, which are essential for resolving political conflicts (Ogundipe, 2017). In fact, one of the basic functions of education is to solve individual

and societal problems. Thus, this is a crucial function that education set out to attain especially in making adulthood responsible and productive in the society. An educated population is more likely to seek peaceful resolutions and avoid violence in times of political disagreement.

Economic development: education is strongly linked to economic development, and a thriving economy contributes to political stability (Akinsola, 2014); and political stability is an ingredient in inclusive sustainable development. More so, no society develops above the level of its education. Educated individuals are more likely to contribute meaningfully to the economy, reducing factors that can lead to political unrest or divert development resources for individuals use. Education makes one a patriotic citizen and displayed of such patriotic attributes in followership and leadership, and public engagements is a big advantage for economic transformation of any nation in planet earth. More so, to achieve Nigeria's national interest like a just and egalitarian society, a great and dynamic economy, a land of full bright opportunity for all, are parts of economic development functions delegated to education as captured in the NPE.

Social cohesion: education promotes social cohesion by fostering a sense of national identity and unity in the learners - would be leaders/followers of tomorrow. This is crucial for the stability of Nigeria, which is characterized by diverse ethnic and religious groups. Here, to achieve a strong and self-reliance nation is being instrumented on the function of education.

Ensuring media literacy: education enhances media literacy, enabling citizens to critically evaluate information from various sources. This skill is essential in the era of misinformation and hate speeches, and helps citizens make informed political decisions and or refrain from engaging in peddling such threats.

Development of human rights awareness and advocacy: education is an empowerment tools for individuals to understand and advocate for their rights, contributing to the protection of human rights in the political sphere (Okoro, 2019) including economy and other sectorial spaces in the society. A population knowledgeable about their rights is more likely to behave accountably in all activities that sanitize the polity, built confident and develop the economy.

Preparation for global interaction and competitiveness: the world has become a single system, and no one function in isolation. A well-educated population enhances Nigeria's global engagement and competitiveness by producing skilled and knowledgeable individuals. This not only benefits the nation economically but also strengthens its diplomatic and political standing on the international stage and increases foreign direct investments.

It can be seen the intersections in politics and power, and education from the above discussions is interdependent, interrelated, and complicated, with profound implications

for inclusive sustainable development. The proper exercise and functioning of each required patriotic commitment and proactiveness in attaining the desired objectives.

Challenges of the Nigerian State in attaining Inclusive Sustainable Development

Presently it would not be said that politics, power, and education have fulfilled their various functions in ensuring inclusive sustainable development. After 63 years of independent and in charting a purposive future, Nigeria in term of inclusive sustainable development is still a journey in the wilderness. Politics, power, and education like production factories to make for narration have operated below the supposed capacity. Nigeria faces significant challenges in achieving inclusive sustainable development, evident abound in various sectors of the economy. One key area is education, where inadequate infrastructure and a high out-of-school rate hinder the country's progress (National Institutes of Health, 2019, and World Bank, 2021). According to recent data, about 20 million children in Nigeria are out of school, aggravating literacy, and skill gaps (UNESCO, 2022).

Additionally, the healthcare system struggles with insufficient resources and accessibility issues, contributing to a high maternal mortality rate (World Health Organization, 2020). Despite efforts, the healthcare infrastructure remains underdeveloped, impeding the realization of inclusive and sustainable health services. On the other hand, economic disparities persist, with a large informal sector and limited job opportunities. Unemployment rates, particularly among the youth, are alarming (National Bureau of Statistics, 2020). This statistic has not improved positively but continue to expand even after three years of report. This economic imbalance perpetuates poverty and hinders the achievement of inclusive sustainable development goals.

Moreover, environmental sustainability faces challenges, as evidenced by inadequate waste management and deforestation issues (Federal Ministry of Environment, 2021). Poor waste disposal practices contribute to environmental degradation, impacting communities and hindering progress towards sustainable development. Corruption further impairs these challenges, diverting resources away from critical development projects (Transparency International, 2023). A lack of transparency and accountability impedes the effectiveness of policies aimed at achieving inclusive development.

The entire situation is systemically threatening to all persons including those that feel they are safe. Take for example, the COVID-19 pandemic experience that came with it intimidating effects on the communal lifestyle of Nigerians; and various sectors of the economy that was struggling to survive went crippled, and many religious-people thought rapture has come. Schools were shutdown, markets were closed, all forms of entertainment (sport, clubbing, music, and cultural festivals) were stopped; air, land, and sea transportation were halted, religious rituals closed, Government office engagements

shutdown, and people movement were enforced to stay indoors. It was catastrophically an experience never to envision again. But a better education system and an organised society would have averted this suffering.

The challenges among others exposed in greater proportion the defencelessness of the Nigerian society in term of threat absorbers and shows the lower-bench level the country is in building an inclusive sustainable development platform. There were no functional ambulances, ventilators in hospitals, inadequate emergency health personnel, lack of drug production capacity; inadequate personnel and financing; absence of online education facilities and trained experts to sustain teaching and learning of school goers. It was national embarrassment and is sad to note. The country came out of the pandemic as a miracle and not necessary because it was ready to fight the threat from the COVID-19. Many of these challenges in Nigeria are rooted in the following:

1. Lack of proper use of political power and the patriotic willingness of leaders at many levels of policy implementation.
2. Miss management and repetency for wealth: this is the basis for corruption. One of the fundamental challenges in the nexus of politics and educational development in Nigeria is the pervasive issue of corruption and mismanagement of resources (Okebukola, 2015). Misappropriation of funds intended for education hampers infrastructure development, teacher training, and the overall quality of education which threaten inclusive sustainable development at the end.
3. Policy instability and reversals: Nigeria has faced challenges with policy instability, where changes in political leadership often lead to the reversal of educational and development policies and reforms (Ajayi, 2016). This inconsistency disrupts long-term development plans and implementation.
4. Inadequate and Misplaced Funding: despite the importance of education and healthcare services for instance, inadequate funding remains a significant challenge to their existence. Budgetary constraints limit investments in infrastructure, teacher training, and educational materials, hindering the quality of education provided. Whereas projects that has no significant impact to inclusive development are prioritize by those saddled with the responsibility of resource allocation or funding. Take for example, the allocation of 5 billion to buy a yacht for Nigeria's President and 1.5 billion to buy vehicles for the first lady in the 2023 supplementary budget are wasteful surplus allocation when compared to the mere 5 billion allocated for students' loan; this defined explicitly misplaced funding as a challenge to inclusive sustainable development. Over the years in Nigeria, States and Federal Governments have annually allocated only 6% to 8% of their budgets to education (Daron and James, 2013). Such unserious allocation cannot bring about the desired impact on the system or in society.

5. Inequitable Access to economic resources and political institutions: power dynamics often contribute to inequitable access to education, health, and other economic variables, with certain regions or socio-economic groups receiving disproportionate attention (Oni, 2019). This challenge worsens disparities in the main tools for development and perpetuates social inequalities.
6. Personnel Quality and lack of Motivation: challenges related to the recruitment, training, and motivation of skilled or productive personnel persist (Ogundipe, 2017). Low teacher morale, insufficient training, and inadequate remuneration hinder the delivery of quality education, healthcare services, security, among other fundamental variables in the chain of inclusive sustainable development.
7. Bureaucratic Hurdles: the bureaucratic nature of governance generally in Nigeria poses challenges to swift decision-making and effective implementation of policies. Red tape and administrative hurdles can impede the efficient utilization of resources.
8. Infrastructure Deficiency: inadequate developmental infrastructure, including classrooms, libraries, and technology; laboratories buildings and medical equipment, power supply, are all pressing issue. The insufficient infrastructure hampers overall attainment of objectives - inclusive development.
9. Political Interference: the entire economy sectors often experience political interference, with appointments and decisions influenced more by negative political considerations than merit, such as for education, health, finance, security agencies/institutions. This undermine the effectiveness and efficiency of the institutions in term of productivity which is an essential ingredient in inclusive sustainable development.
10. Security Challenges: ongoing security challenges in many regions of Nigeria impact on development variables such as disrupting school activities and leading to the closure of schools (Okoro, 2019). Same disruption is witnessed with services in healthcare, farming, transportation, small and medium scale businesses. The resulting instability impedes efforts to provide consistent and quality service delivery.
11. Lack of Stakeholder Engagement: inadequate involvement of key stakeholders in policy formulation and implementation such as: teachers, medical and security experts, parents, and local communities, hampers inclusive sustainable development. Collaboration and communication gaps hinder the successful implementation of policies and initiatives.

Suggested Solutions to the Challenges

The challenges are humanly created and can equally be solve by the people especially those at leadership positions. Therefore, the following suggested solutions are presented:

1. Developing of nationalist spirit and display of patriotic leadership by those in position of authorities: this is the first recommended step to be taken. Focus must be defined and entrenched by those in power; they should understand that leadership is a responsibility and the progress of our society lies on their shoulders especially for the policies initiated and actions taken. Greediness, sentiments, favoritism should totally be jettison, and replace with focus on collectivism, merit, and society benefit. Nationalism and patriotism have the capacity to fix most of the challenges threatening inclusive sustainable development in Nigeria. When people are nationalistic, they have a wider perspective on development issues, they think about the wellbeing of the larger society; and patriotism helps them to stay away from all forms of corruption and ensure the polity is in a stable state. Nationalistic and patriotic citizens (leaders) think topmost of transforming their society, working hard to solve challenges, push forward productivity, impartation, and do not engage in self-accumulation of wealth.
2. Need for attitudinal change and reawakening: there is urgent need to begin campaign, sensitization among training of Nigerians at all levels for change of attitude and reawakening of mindset on things that promote unity and peace, development, and sustainable attitudes. This is necessary because of the current centrifugal culture/behaviour that is threatening the well-being of the society.
3. Politics and power should be play or use with focus on the productive wellbeing of the society. Thye should not be seen as instruments to torment opponents. They are instruments or platforms of resolving challenges, ensuring stability, and influencing development.
4. Anti-Corruption Measures: implementing robust anti-corruption measures is essential to address mismanagement of all development resources (Okebukola, 2015). Transparent financial systems, audits, and strict consequences for corruption practices can help ensure that allocated funds reach their intended developmental purposes.
5. Policy Consistency and Long-Term Planning: we must be encouraging political leaders to commit to long-term development plans and ensuring policy consistency across various development platforms is crucially maintained. This approach provides stability and allows for sustained progress in transformation of the society.

6. **Increased Funding and Budgetary Commitment:** there is a need for increased government commitment to allocating a substantial portion of the budget to education because it remained the first instrument for achieving the nation's national goals and objective. Adequate funding is essential for improving infrastructure, teacher training, motivation, and overall educational quality. When standard is improved and become solid the nation will automatically lead to inclusive sustainable development.
7. Again, efforts should be made to ensure equitable distribution of educational resources to helps in addressing regional and socio-economic disparities in access to education across the nation. This requires targeted interventions to uplift underserved communities.
8. **Streamlined Bureaucratic Processes:** streamlining bureaucratic processes within the political and economic institutions and system can enhance efficiency and effectiveness. Simplifying administrative procedures and reducing red tape can facilitate timely decision-making and resource utilization.
9. **Investment in Infrastructure:** addressing the deficiency in infrastructure requires a significant investment in building and maintaining various structure, facilities, and technology. Infrastructure development is essential for creating a conducive environment and, for inclusive sustainable development.
10. **Reducing Political Interference:** establishing mechanisms to reduce unnecessary political interference in the governance of development institutions (as education) is crucial in attaining inclusive sustainable development. Merit-based appointments and decision-making processes can help ensure that these institutions operate free from undue political influence and achieve their objectives.
11. **Stakeholder Engagement and Community Involvement:** fostering active engagement with key stakeholders across the various economy strata, including teachers, parents, and local communities, is fundamental. Inclusive decision-making processes enhance the implementation of policies and initiatives that are beneficiary to society development.
12. Attitudinal change and reawakening in our planning, actions, and behaviors both in private and public life.

Through implementing these recommended solutions, Nigeria can pave the way for a transformative (educational) landscape that not only equips its citizens with the skills and knowledge needed for the future but also contributes significantly to the overall sustainable development of the nation. It is through such concerted efforts that Nigeria can harness the potential of its economy system as a catalyst for positive change, laying the foundation for a prosperous and equitable future.

Conclusion

This study highlights the interconnected and interdependent relationship between politics, power, and education in fostering inclusive sustainable development in Nigeria. The findings reveal that while politics and power significantly shape educational policies, funding, and institutional frameworks, education in turn plays a critical role in cultivating informed citizens, nurturing leadership, and sustaining democratic values. The paper emphasizes that when politics and power are exercised positively - with a focus on equity, accountability, and long-term national interests with educational institutions are better equipped to produce skilled individuals who contribute meaningfully to societal progress. Conversely, corruption, mismanagement, and political instability hinder these developmental strides.

To achieve inclusive sustainable development, the study emphasizes the need for patriotic leadership, policy consistency, improved funding, and a deliberate commitment to reducing inequalities in education. Investing in teacher development, strengthening resource allocation to underserved regions, and promoting civic awareness through education are essential strategies for fostering social cohesion and economic growth. Ultimately, Nigeria's ability to navigate contemporary challenges and secure a prosperous future rest on achieving a harmonious balance between politics, power, and education.

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Effect of Cognitive Behavioural Therapy and Acceptance and Commitment Therapy on Emotional Exhaustion Management among Secondary School Teachers in Lagos, Nigeria

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Abstract

Emotional exhaustion, a core component of burnout is prevalent among secondary school teachers due to high job demands and limited resources. This study examines the effectiveness of Cognitive Behavioural therapy (CBT) and Acceptance and Commitment therapy (ACT) in managing emotional exhaustion among secondary school teachers in Lagos, Nigeria. The study employs a quasi-experimental design with pre-test and post-test measures. A multi-stage sampling technique was used to select 60 participants (25 male and 35 female) in three secondary schools from three of the six educational districts of Lagos state. The modified Maslach Burnout Inventory –Educators Survey (MMBI-ES), with reliability indices of 0.91 was used to collect data for the study. Data collected was analysed using descriptive and inferential statistics. Findings indicate that both CBT and ACT significantly reduce emotional exhaustion among teachers with CBT showing slightly higher effectiveness. This study underscored the potential of cognitive behavioural therapy and acceptance and commitment therapy as effective interventions for reducing emotional exhaustion among teachers. Recommendations based on the findings of the study includes incorporating CBT and ACT based interventions into teacher well-being programs designed and executed by educational institutions and policy makers.

Keywords: Acceptance and Commitment Therapy, Cognitive Behavioural Therapy, Emotional Exhaustion, Secondary School, Teachers

Introduction

Teaching is a profession that demands significant emotional and psychological investment, often leading to high levels of stress and burnout. Secondary school teachers, in particular, face unique challenges such as managing adolescent behaviours, meeting curriculum standards, and handling administrative responsibilities. These stressors can culminate in emotional exhaustion, a core component of burnout characterized by feelings of being emotionally overextended, drained and depleted. (Hui, Yao, Li, & You, 2022). Central to the educational landscape is the teacher's mental health therefore, emotional exhaustion not only affects teachers' well-being but also impairs their teaching effectiveness, potentially leading to higher turnover rates and adversely impacting student outcomes. (Mérida-López, & Extremera, 2017; Zhang, & Yuan, 2020).

Research indicates that secondary school teachers are among the occupational groups most susceptible to burnout. A systematic review highlighted that these demographic experiences significant levels of emotional exhaustion, depersonalization, and reduced personal accomplishment (García-Carmona, Marín, & Aguayo, 2019). Factors contributing to this phenomenon include excessive workload, lack of a suitable working environment and a lack of social support within the school environment. (Räsänen, Pietarinen, Soini, Väisänen, & Pyhältö, 2022). Work ability, work experience, age, and gender, are also known to influence the level of emotional exhaustion among teachers (Räsänen, Pietarinen, Pyhältö, Soini, & Väisänen, 2020; Roloff, Kirstges, Grund, & Klusmann, 2022).

Various studies have established links between high levels of emotional exhaustion and adverse outcomes among teachers. For instance, emotional exhaustion correlates with decreased job satisfaction and triggers a decline in teachers' commitment to their profession (Skaalvik & Skaalvik, 2017; Wang, Yang, Chen & Zheng, 2024). The consequences of prolonged emotional exhaustion are profound, encompassing diminished job satisfaction, increased absenteeism, and a decline in the quality of education provided to students (Mérida-López & Extremera, 2017). Emotional exhaustion is also a significant predictor of turnover intentions among teachers (Haerens, Matos, Koc, Benita, & Abos, 2022). Teachers experiencing high levels of emotional exhaustion might consider leaving the profession due to overwhelming emotional demands and reduced job satisfaction (Grayson & Alvarez, 2008; Wang, Yang, Chen & Zheng, 2024). In addition, emotional exhaustion has also been associated with detrimental mental health outcomes, including symptoms of anxiety and depression (Skaalvik & Skaalvik, 2017).

To mitigate these effects, various interventions have been explored, with Cognitive Behavioural Therapy (CBT) and Acceptance and Commitment Therapy (ACT) emerging as prominent approaches. CBT aims to identify and modify negative thought patterns and behaviours, thereby equipping individuals with coping strategies to manage stress more effectively. A meta-analysis evaluating interventions to reduce teacher burnout found that CBT-based programs significantly decreased emotional exhaustion among educators (Iancu, Rusu, Măroiu, Pacurar & Maricutoiu, 2018). ACT, on the other hand, focuses on enhancing psychological flexibility by encouraging individuals to accept their thoughts and feelings without judgment and commit to actions aligned with their values. An evaluation of an ACT-based intervention for educators demonstrated reductions in self-reported burnout and improvements in psychological flexibility (Paliliunas, Burke, Taylor, Frizell, Durbin, & Hutchings, 2022). These findings suggest that ACT can be an effective tool in addressing emotional exhaustion by promoting adaptive coping mechanisms and resilience.

Despite the demonstrated effectiveness of these interventions, there remains a need for further research to directly compare the impacts of CBT and ACT on emotional exhaustion among secondary school teachers. Understanding the relative efficacy of

these approaches can inform the development of targeted support programs, ultimately enhancing teacher well-being and educational quality.

Cognitive Behavioural therapy

CBT which is a form of Cognitive Behavioural Intervention (CBI) is not one specific method or set of steps, it mainly combines cognitive training and strategic behavioural practices to provide teachers with the knowledge and skills needed to manage work-related stress (Li, Xue, & He, 2023). In a study conducted by Ghasemi, Herman, and Reinke (2023), the effects of a cognitive-behavioural group therapy program in reducing burnout symptoms among teachers was examined. The study was a randomized controlled trial conducted in the United States, involving 46 elementary and middle school teachers who reported high levels of burnout. Participants were randomly assigned to either the intervention group or a wait-list control group. The intervention group received an 8-week cognitive-behavioural group therapy program that focused on developing coping skills, stress management strategies, and cognitive restructuring techniques. The wait-list control group did not receive any intervention during the study period but were offered the therapy program after the study was completed. The results of the study showed that the cognitive-behavioural group therapy program was effective in reducing burnout symptoms among teachers.

Acceptance and Commitment Therapy

Acceptance and commitment therapy (ACT) is a Mindfulness based intervention, it is a form of psychotherapy that aims to increase psychological flexibility by helping individuals to develop acceptance of their thoughts and feelings, and to commit to values-based actions (Hayes, Luoma, Bond, Masuda, & Lillis 2006; Paliliunas et al., 2022). Awareness and acceptance without judgment are key components of ACT. Recent studies show that, mindfulness-based interventions such as ACT produces a positive effect on teachers' burnout. In a study by Cheng, Zhang, Cao, and Ma, (2022) a hybrid approach was designed to assess the feasibility and effectiveness of a mindfulness-based adaptive program for kindergarten teachers. The results showed that, compared to the control group, the mindfulness training group showed significant improvements in emotional intelligence and mindfulness in teaching. Biglan, Layton, Jones, Hankins, & Rusby, (2013) in a randomized wait-list control design, assessed the effect of ACT workshops delivered to educators' early education and exceptional education staff to be precise and concluded that the interventions reduced experiential avoidance and increased mindful awareness, and sense of efficacy among participants.

Objective of the study

The objective of this study was to examine the effect of cognitive-behavioural and acceptance-commitment therapies in the management of emotional exhaustion among secondary school teachers in Lagos, Nigeria.

Research Question

This research question was answered in the course of this study;

To what extent would there be any significant difference in the post test mean scores of emotional exhaustions on the participants exposed to experimental conditions and control group?

Research Hypothesis

This research hypothesis was tested in the course of this study;

H₀₁: Post-test mean scores on emotional exhaustion will not significantly differ among teachers exposed to experimental conditions and control group.

Methodology

The study design

The research design for this study was the quasi-experimental, pre- test, post- test, control group design. There were three experimental groups for the study. Two treatment groups and one control group. One treatment group was exposed to Cognitive Behavioural Therapy (CBT) while the second treatment group was exposed to Acceptance and Commitment Therapy (ACT). The control group was not exposed to any treatment. Pre-test and post-test were administered to the three groups.

Independent Variables: cognitive behavioural therapy and acceptance and commitment therapy

Dependent variable: emotional exhaustion

Sample and sampling

Multi-stage sampling process was used to select Secondary School teachers for the study. In the first stage of the process, three Education Districts were selected from the six Education Districts in Lagos State using the hat and draw method. The second stage involved the selection of one school from each district using a simple random sampling technique. The third stage involved administration of the modified Maslach Burnout Inventory educators survey to all willing and available teachers. A total number of sixty (60) teachers who met the inclusion criteria were included in the sample. They were assigned into the three treatment groups; cognitive behaviour therapy (19), acceptance and commitment therapy (21), and control group (20).

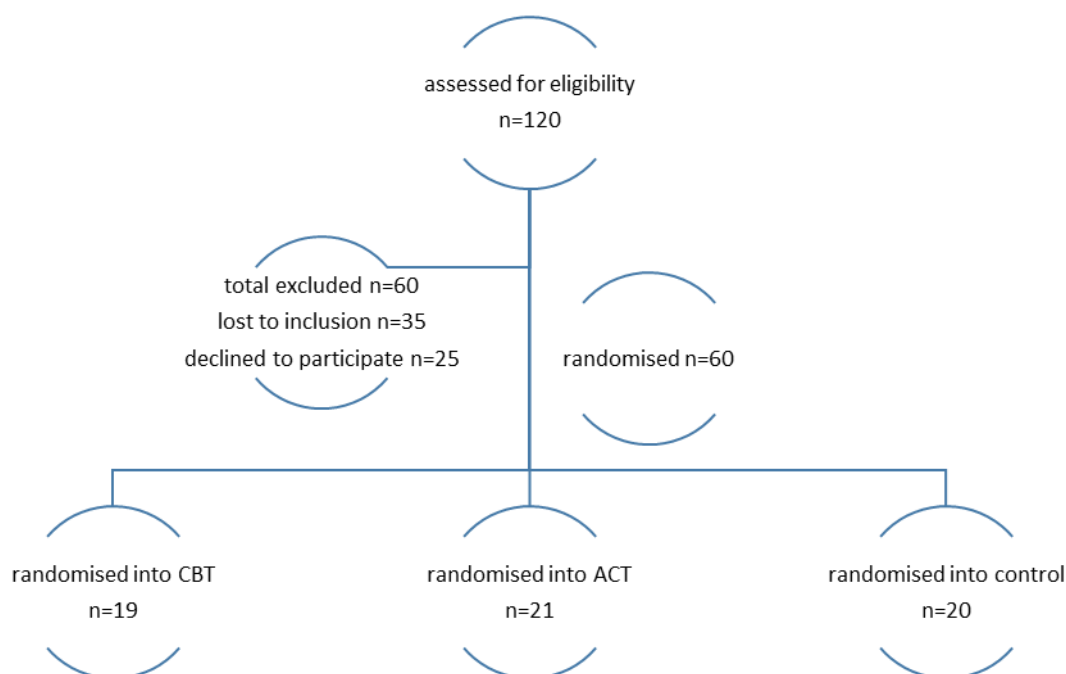


Figure 1: The study's progress

Inclusion Criteria

Only participants who met the following criteria were enlisted for participation:

- They were teachers of a public secondary school in Lagos State.
- Teachers score between moderate i.e 11–15, and high i.e ≥ 15 on the emotional exhaustion scale of the modified MBI-ES
- They were willing to participate in the treatment and control programme.

Research Instrument

The instrument used to collect data for this study was a modified version of The Maslach Burnout Inventory Educators Survey (MBI-ES). The Maslach Burnout Inventory Educators Survey (MBI-ES), was developed by Maslach, Jackson and Schwab in 1996 it consists of 22 burnout items divided into three subscales: 9 items that assess emotional exhaustion (EE) in relation to work; 5 items that assess depersonalization (DP) or negative work attitudes; and 8 items that assess personal achievement (PA) or feelings of achievement or competence in one's own work. The MBI-ES is originally a seven-point likert scale ranging with response ranging from never to Every day. The current study reduced the response to six eliminating the never response.

Validity

The validity of the questionnaire was established through expert review where experts in educational psychology and measurement and evaluation examined the instrument for

content validity, ensuring that it adequately captured the variables that were relevant to the context of the study.

Reliability

Reliability was determined using Pearson Product Moment Coefficient, which yielded a coefficient of 0.91. This high-reliability score confirms the internal consistency of the instrument and its appropriateness for assessing burnout among the selected samples.

Intervention

A cognitive-behavioural and acceptance and commitment programme was developed to manage burnout among teachers. Six sessions were provided for each treatment program at the rate of one session per week, and each session lasts between 60 and 120 minutes depending on the nature of each session. The intervention sessions were conducted face to face from 4 pm to 6 pm Nigerian Time.

Statistical analysis

After the administration of the pre-test, and post test data collected was analysed using inferential statistics including Analysis of Covariance (ANCOVA) where significance effect of treatment is noticeable. Each of the hypotheses was analysed at 0.05 level of significance using Statistical Product for Service and Solution (SPSS) version 24.

Results

Sociodemographic data

Table 1: sociodemographic table

	Categories	Frequency	Percentage
Gender	Male	25	41.7%
	Female	35	58.3%
Years of experience	1-5 years	11	18.3%
	6-10 years	12	20.0%
	11-15 years	17	28.3%
	16 – 25 years	10	16.7%
	25 and above	10	16.7%
Class size	Below 50 students	17	28.3%
	50-100 students	24	40.0%
	Above 100 students	19	31.7 %

Table 1 shows that the participants for the study who are female (n=35,58.3%) and male (n=25,41.7%), have spent 1-5 years (n=11, 18.3%), 6-10 years (n=12, 20.0%), 11-15 years (n=17, 28.3%), 16-25 (n=10, 16.7%) and 25 –above years (n=10, 16.7%) teaching and taught in a class size of below 50 students (n=17, 28.3%), 50-100 students (n=24,40.0%), and above 100 students (n=19,31.7%).

Hypothesis Testing

H0: Post-test mean scores on emotional exhaustion will not significantly differ among teachers exposed to experimental conditions and control group.

Table 2: Descriptive analysis of emotional exhaustion scores before and after the intervention

Experimental Groups	N	Pre-test Score		Post-test Score		Mean Difference
		Mean	SD	Mean	SD	
Cognitive behavioural therapy	19	32.32	4.74	18.74	4.09	-13.58
Acceptance and commitment therapy	21	32.24	4.15	20.71	3.23	-11.52
Control group	20	32.30	3.64	31.60	3.14	-0.70
Total	60	32.28	4.12	23.72	6.64	-8.57

The results presented in Table 2 indicate that participants receiving cognitive behavioural therapy experienced the greatest reduction in emotional exhaustion, with a decrease of -13.58, followed by those in acceptance and commitment therapy, who showed a reduction of -11.52. The control group exhibited only a slight reduction of -0.7. To assess the significance of these mean differences, ANCOVA was conducted. The findings of this analysis are displayed in Table 3.

Table 3: ANCOVA results for emotional exhaustion based on experimental conditions

Source	Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1988.906	3	662.969	60.735	0.000
Intercept	191.625	1	191.625	17.555	0.000
Covariate	85.492	1	85.492	7.832	0.007
Group	1902.005	2	951.002	87.123	0.000
Error	611.278	56	10.916		
Corrected Total	2600.183	59			

The F-value of 87.123 ($p < 0.05$) was deemed significant as it exceeds the critical value of 3.15, based on 2 and 56 degrees of freedom at the 0.05 level of significance. This finding suggests that the post-test scores on emotional exhaustion significantly differed among teachers exposed to cognitive behavioural therapy, acceptance and commitment therapy, and the control group. Based on these results, the null hypothesis was rejected. To identify the specific groups with significant differences, a post-hoc analysis was conducted, and the results are presented in Table 4.

Table 4: Pairwise comparisons of the effect of experimental conditions on emotional exhaustion

(I) Experimental Groups	(J) Experimental Groups	Mean Difference (I-J)	Sig. ^a
Cognitive behavioural therapy	Acceptance and commitment therapy	-2.00	0.061
	Control group	-12.87*	0.000
Acceptance and commitment therapy	Cognitive behavioural therapy	2.00	0.061
	Control group	-10.87*	0.000
Control group	Cognitive behavioural therapy	12.87*	0.000
	Acceptance and commitment therapy	10.87*	0.000

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

*. The mean difference is significant at the .05 level.

As shown in Table 4, when cognitive behaviour therapy ($t = -12.87$; $p < 0.05$) and acceptance and commitment therapy ($t = -10.87$; $p < 0.05$) were each paired with the

control group, differences were observed. The results indicate that both CBT and ACT significantly reduced emotional exhaustion compared to the control group. However, when comparing CBT and ACT directly, the mean difference was -2.00 ($p=0.061$), which was not statistically significant. This indicates that while CBT had a slightly greater effect in reducing emotional exhaustion compared to ACT, the difference between the two interventions was not large enough to be considered significant.

Discussion

The outcome of the hypothesis indicates that post-test mean scores on emotional exhaustion were significantly different among teachers exposed to cognitive behavioural therapy, acceptance and commitment therapy, and the control group. These results suggest that both cognitive behavioural therapy and acceptance and commitment therapy were effective in reducing emotional exhaustion compared to the control group. One plausible reason for this outcome is that cognitive behavioural therapy and acceptance and commitment therapy provide teachers with effective coping strategies and tools to manage stress and burnout. Cognitive behavioural therapy helps individuals identify and challenge negative thought patterns that contribute to emotional exhaustion, while acceptance and commitment therapy focuses on accepting difficult experiences and aligning actions with personal values (Maricuțoiu, Sava, & Butta, 2016). By equipping teachers with these skills, the interventions may have helped reduce their emotional exhaustion levels. This is in alignment with the findings of Li *et al.* (2023) where a meta-analysis was conducted on burnout intervention types and their result showed that cognitive based intervention had the best intervention effect on teacher burnout followed by mindfulness-based intervention, they also discovered that emotional exhaustion is highly susceptible to intervention.

Conclusion

This study examined the effects of cognitive behavioural therapy and acceptance and commitment therapy on the management of emotional exhaustion among secondary school teachers in Lagos State. The findings revealed significant statistical differences in emotional exhaustion levels among participants after intervention. Based on the findings of this study, cognitive behavioural therapy and acceptance and commitment therapy are effective counselling interventions in managing emotional exhaustion among secondary school teachers.

Recommendations

Educational institutions and policy makers should consider incorporating CBT and ACT based interventions into teacher well- being programs. These interventions may help teachers develop coping strategies for managing emotional exhaustion and they can be delivered through workshops, structured counselling programs or professional development sessions. In addition, school counselling services should be strengthened by training counsellors in both CBT and ACT techniques. Providing teachers with

accessible, evidence-based support within the school can help manage emotional exhaustion and promote job satisfaction. consider the use of cognitive behavioural therapy and acceptance and commitment therapy strategies in teacher's emotional exhaustion management.

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Relationship among Guidance and Counselling Intervention, Artificial Intelligent and Academic Performance of Senior Secondary School Students in Sokoto Metropolis

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Abstract

This research investigated the relationships among guidance and counselling intervention, Artificial Intelligent and academic performance of senior secondary school students in Sokoto metropolis. Correlational Survey Design employed for this study. The total population for this study was 11,830. Six secondary schools were purposively selected and participated in this study. 381 students served as the sample for this research. 3 null hypotheses were generated and tested. The instruments used in this study were three sets of questionnaires. Students' artificial intelligent, Guidance and counselling rating scale and self-designed academic achievement tests in Chemistry and English. Pearson Product Moment Correlation Coefficient statistical analysis tool was used to test the three null hypotheses. The three null hypotheses were tested and rejected at an alpha level of 0.05. The major findings of this study are there are significant relationship between Guidance and Counselling intervention and Artificial intelligent and students' academic performance. It was concluded that Guidance and counselling intervention have positive relationship with the variables studied. Recommendations were forwarded amongst which is that since Guidance and counselling intervention have significant relationship with student's artificial intelligent and students' academic performance, the Sokoto state government should employ a qualified counsellors and post one or two of such to each secondary schools in the state.

Keywords: Guidance and counselling intervention, Artificial intelligent, Academic performance

Introduction

In recent years, the global education system has increasingly adopted artificial intelligence (AI) tools to improve the effectiveness of teaching and learning. For example, AI is embedded in curriculum development, adaptive learning platforms and virtual laboratories, providing educators with the opportunity to attract students in a more interactive and immersive way (Kukulska-Hulme, 2020). Guidance and counselling interventions play a vital role in fostering students' academic success, personal growth, and career development. However, the impact of AI on guidance and counselling services and academic performance is a relatively unexplored area of research. This implies that teaching could be done through series of interconnected activities such as; Guidance and Counselling, digitalization and assessing to mention a few.

Specifically, the study seeks to examine how AI-based guidance and counselling interventions influence students' academic achievement and explore the potential benefits and challenges of integrating AI in guidance and counselling services (Kukulska-Hulme, 2020).

AI is generally believed that artificial intelligence could revolutionize the way we learn and teach, there are still some lapses in teachers and students showing ineffective and negative attitudes towards the usefulness and application of artificial intelligence to make it more personalized, engaging and efficient (Hutchins, 2021; Kautz, Etzioni, & Akgun, & Greenhow, 2022).

The findings of this study will contribute to the existing body of knowledge on the intersection of technology, guidance and counselling, and academic performance. The study's outcomes will also provide valuable insights for educators, policymakers, and stakeholders in education, informing the development of effective AI-based guidance and counselling interventions that promote academic excellence and support the holistic development of senior secondary school students (Aguolu, 2019).

The rapid advancement of technology has transformed the education sector, with AI emerging as a key driver of innovation. AI-powered tools and platforms offer immense potential for enhancing teaching, learning, and guidance and counselling services.

Despite the growing interest in AI-based education, there is a dearth of research on the impact of AI on guidance and counselling services and academic performance, particularly in the context of senior secondary school students in Nigeria.

Some philosophical perspectives.

1. Humanistic Perspective:

Student-centered approach: Guidance and counselling intervention should prioritize students' unique needs, interests, and values.

Holistic development: Academic performance is just one aspect of a student's overall development. Guidance and counselling intervention should address the whole person - cognitive, emotional, social, and physical.

Empowerment through AI: Artificial intelligence can enhance student autonomy and agency by providing personalized support and feedback.

2. Social Constructivist Perspective:

Sociocultural context: Academic performance is influenced by sociocultural factors, such as socioeconomic status, cultural background, and social support networks.

Constructing knowledge: Guidance and counselling intervention should acknowledge that knowledge is constructed through social interactions and experiences.

AI as a tool for social construction: Artificial intelligence can facilitate social interactions and knowledge construction by providing opportunities for collaboration and feedback.

3. Critical Perspective:

Power dynamics: Guidance and counselling intervention can perpetuate or challenge existing power dynamics, such as those related to socioeconomic status, race, or gender.

Cultural relevance: Artificial intelligence and guidance and counselling intervention should be culturally relevant and responsive to the needs of diverse student populations.

Neutrality of AI: Artificial intelligence is not neutral; it reflects the biases and values of its creators. Guidance and counselling intervention should critically evaluate the role of AI in shaping academic performance.

These philosophical perspectives offer diverse lenses through which to examine the complex relationships among guidance and counselling intervention, artificial intelligence, and academic performance based on evidences (Aguolu, 2019).

Statement of Problem

The integration of artificial intelligence (AI) in education has transformed the learning landscape, offering innovative opportunities for enhancing academic performance. However, the impact of AI on guidance and counselling services and academic performance remains unclear. Senior secondary school students in Sokoto metropolis face numerous challenges that affect their academic performance, including inadequate guidance and counselling services, limited access to career development resources, and insufficient support for students with special needs.

Despite the potential benefits of AI-based guidance and counselling interventions, several concerns have been raised about their effectiveness, accessibility, and suitability for senior secondary school students in Sokoto metropolis. There is a lack of empirical evidence on the relationship among guidance and counselling interventions, AI, and academic performance in this context.

With the launching of the Universal Basic Education (U.B.E) in September, 1999 the government is ensuring the right to education of every citizen. The U.B.E. is supposed to encompass all primary as well as Junior Secondary Education for a total of nine (9) years of formal education. Young Nigerians will enroll at about six years of age and emerge out of the school at the age of fifteen (15) years. Thus, the children will be in the school through their sensitive and formation years, the period when physical and intellectual development, sound societal values and religious and moral values will be taking firm roots in these children. By the time they emerged from the school they would already

have established the patterns of their further academic and training pursuits and therefore their likely careers choice. They would have been put into the mold which is hoped to turn them into honest and productive members of the society. It is therefore, in the light of the above that guidance and counselling and artificial intelligent is considered very important part of the educational process and achievement.

The main thrust of this study therefore, is to examine the relationship between guidance and counselling intervention, artificial intelligent and academic performance of students in senior secondary schools in Sokoto metropolis.

Research Questions:

1. What is the relationship between guidance and counselling interventions and academic performance of senior secondary school students in Sokoto metropolis?
2. What is the relationship between artificial intelligent and academic performance of students in senior secondary schools in Sokoto metropolis?
3. What is the relationship between guidance and counselling intervention and artificial intelligent of students in senior secondary school in Sokoto metropolis?

Hypotheses

This study tested the following null hypotheses:

1. There is no significant relationship between guidance and counselling intervention and academic performance of students in senior secondary schools in Sokoto metropolis.
2. There no significant relationship between artificial intelligent and academic performance of students in senior secondary schools in Sokoto metropolis.

There is no significant relationship between guidance and counselling intervention and artificial intelligent of students in senior secondary school in Sokoto metropolis

Literature Review

In Contemporary academic era, the global education system has increasingly adopted artificial intelligence (AI) tools and Guidance and counselling to improve the effectiveness of teaching and learning. For example, AI is embedded in curriculum development, adaptive learning platforms and virtual laboratories, providing educators with the opportunity to attract students in a more interactive and immersive channel (Gysbers, & Henderson 2012): This study found that comprehensive guidance and counselling programs have a positive impact on students' academic achievement and career development.

Lapan (2012) believe that, teachers can address learners' needs by using a variety of teaching methods so that learners are exposed to multiple ways of learning there by ultimately giving them opportunities to excel. Students differ in their readiness level in learning a particular concept, they also differ in interest and learning profiles. Lapan's study highlighted the importance of school counsellors in promoting students' academic success and career readiness.

Baker & Siemens (2014): claimed that the teaching of the subject still characterized with the use of conventional method of teaching which does not give room for active participation of learners in the teaching and learning of the subject. They stated further that conventional method of teaching is teacher centered in nature. The use of this inappropriate method of teaching and poor guidance and counselling often leads to poor academic achievement of learners in the subject. This study explored the potential of AI in education, including its application in personalized learning and assessment.

Luckin,, Holmes, Griffiths, & Forcier (2016), documented that AI for education and Guidance and counselling can provide virtualized academic achievement, simulation tools, and artificial intelligence-oriented platforms to help simplify complex scientific concepts However, these benefits are often hampered by gaps in infrastructure and teacher preparation, especially in underdeveloped nation with less infrastructural development in classrooms. Discussed the role of AI in enhancing teaching and learning, including its potential to support guidance and counselling services.

Theoretical Framework

Social Cognitive Career Theory (SCCT): This theory, developed by Lent, Brown, and Hackett (1994), explains how individuals develop career interests and make career choices. SCCT can be applied to understand how guidance and counselling interventions, AI, and academic performance interact.

Self-Determination Theory (SDT): SDT, proposed by Deci and Ryan (2000), emphasizes the importance of autonomy, competence, and relatedness in motivation and learning. This theory can be used to explore how AI-based guidance and counselling interventions affect students' motivation and academic performance.

Hattie (2009): Hattie's study identified factors that influence academic achievement, including student motivation, teacher support, and parental involvement.

Schunk and Meece (2012): Schunk and Meece's study explored the relationship between motivation and academic performance, highlighting the importance of self-efficacy and goal-setting Intersection of Guidance and Counselling, AI, and Academic Performance

Kim and Lee (2015): This study examined the impact of AI-based guidance and counselling systems on students' academic achievement and career development, it also

revealed that effective AI based Guidance and Counselling improve academic achievement.

Wang and Zhang (2020): Wang and Zhang's study explored the effectiveness of AI-powered guidance and counselling interventions in improving students' academic performance and reducing dropout rates.

These literature references provide a foundation for exploring the relationship among guidance and counselling intervention, artificial intelligence, and academic performance of senior secondary school students.

Educational counseling has a profound impact on student's lives and futures Subasinghe, (2016), as the choice of a specific field of study upon entering higher education holds immense weight in shaping a student's career path and can significantly impact the likelihood of securing employment in a related field, as well as the potential for long-term career growth and success Silver, (2023): Kim, (2020), & Ersoy (2018). This makes educational counseling a fundamental component in establishing a smooth connection between the realms of academia and the professional sphere. (Maree & DiFabio 2018). Educational counselors hold a critical responsibility in guiding students to make informed decisions regarding their choice of majors Paolini. (2019), especially given the high rates of field of study changes observed among students. Research conducted by the U.S. Department of Education found that approximately 30% of first-time associate and bachelor's degree students changed their majors within three years. Leu, (2017). Furthermore, a survey conducted in 2014/2015 with 1725 participants revealed that receiving effective academic advising during the first and second years of college can significantly.

We implemented a simple and user-friendly interface using Py Charm (2020) software to facilitate students' interactions and explore the application's services, enhancing the counseling experience with innovative functionalities.

In many countries, including Morocco, counseling services are unavailable in schools, and counselors can only visit schools once or twice a year due to limited human resources. Sellamy.; Fakhri & Moumen, (2022). This lack of support leads to many students facing confusion, depression, and other mental health challenges as they struggle to pave a path toward a prosperous future Hinkelman & Luzzo. (2007), Hammoudi, Soltani, Dalli.; Alsarraj. & Malki, (2022). Making an ill-informed decision about one's academic or career pursuits can result in severe consequences, such as dropping out of school. Subasinghe, (2016), poor job performance, decreased community involvement, and, ultimately, the hindrance of society's growth.

Methodology

The research design used in this study was the correlational survey design. This is because the research is a correlational study which is a type of descriptive research that is

concerned with determining the relationship between variables. Neuman (2000) & Robson (1995) observed that the correlational method is the most appropriate for obtaining factual data or attitudinal information or for research questions about self-reported beliefs, opinions, values, motives, ideas, habits, feelings, desires, characteristics and present or past behaviors. Since the present study sought to obtain data from senior secondary schools' students, on their artificial intelligent, their Guidance and counselling intervention and academic achievement the correlational design is appropriate.

The population for this study included all senior secondary school two (SS11) students in Sokoto state metropolis. The number of senior secondary schools in the metropolis is nineteen (19) and they have a total of population eleven thousand eight hundred and thirty (12830) SS II students UBEC 2024.

The sample for this study was obtained from six purposively selected senior secondary schools in Sokoto metropolis. The decision to select only six senior secondary schools was deliberate. In the selection of the subjects that participated in this study, the simple random sampling technique was employed for this study.

A total of three hundred and eighty-one (381) SS-II students were randomly selected from the selected secondary schools as the sample for this study. This is evidence based according to Krejcie and Morgan (1971) three hundred and eighty-one (381) should serve as sample for a population that is up to ten thousand (10,000).

The instruments used for this study were three sets of questionnaires namely:

1. Adopted AI Inventory ("AII")
2. Guidance and Counselling Services Provision Rating Scale ("GCSPRS") constructed by Kolo (2002)
3. Self-constructed Achievement Tests in Chemistry and English.

Three out of the three aforementioned instruments were validated by different experts from departments of Guidance and Counselling SSUEs and the Academic achievement test validated by researcher.

The reliability of the two out of three instruments was established by the originator of the instruments and the following results were obtained: -The reliability of Guidance and Counselling rating scale was established by Kolo (2002) using Pearson Product Moment Correlation statistics a reliability level of 0.88 and 0.86 was achieved with an interval of two weeks between first and second administration. The reliability of artificial intelligent was established using test re-test. The instrument was administered to 20 students, 10 male and 10 females. The reliability of 0.72 and 0.74 were established after an interval of four weeks. The reliability of Academic Achievement test in Chemistry and English was established by the researcher through test re-test. Twenty students were selected

randomly selected in two schools with the Sokoto metropolis. The Pearson Product Moment Correlation statistic was used to analyzed the result and a reliability of 0.68 and 0.67 was obtained after first and second test between an interval of two weeks.

All the schools were visited by the researcher. In seeking Permission to administer the questionnaires from the principals of these schools. The researcher with the help of trained research assistants and the class teachers administered the questionnaires.

The respondents were advised to give honest answers to the questions since they will remain anonymous to assured their confidentiality. Each student was given a set of the three questionnaires for response. Out of the 381 questionnaires administered only 325 students filled properly and returned the questionnaires.

Results

The data collected were analyzed using the Pearson Product Moment Correlation Coefficient to test the 3 null hypotheses. Pearson Product Moment Correlation Coefficient is used because it is very fast and suitable for the type of data obtained.

To retain or reject hypotheses, an alpha level of 0.05 was set.

Hypotheses 1: There is no significant relationship between guidance and counselling intervention and academic performance of students in senior secondary schools in Sokoto metropolis.

Table 1: Academic performance and Guidance and Counselling Intervention

Variables	No	Mean	SD	r-cal	r-crit	Remark
Academic Achievement	325	48.751	20.52	0.794	0.336	Rejected
Guidance & Counselling	325	47.489	20.218			

Table 1 above, the value of correlation coefficient is of their r-cal is 0.791 while the r-crit is 0.326. As can be seen the r-cal is high which indicates relationship, the null hypothesis is hereby rejected. Meaning there is significant relationship between academic achievement and guidance and counselling intervention.

Hypothesis 2: There is no significant relationship between students' academic achievement and Artificial intelligent.

Table 2: Academic Achievement and Artificial intelligent

Variables	No	Mean	SD	r-cal	r-crit	Remark
Academic Achievement	325	48.751	20.520	0.702	0.428	Rejected
Artificial intelligent	325	61.378	27.727			

Table 2 above it can be seen that the r-cal is positive and stands at 0.702 while r-crit stands as 0.428. Following this finding, the correlation coefficient is high, thus there is significant relationship between students' academic achievement and artificial intelligent. Therefore, the hypothesis is rejected null hypothesis that says there is no significant

relationship between academic achievement and artificial intelligent. In other words, relationship exists between students' academic achievement and artificial intelligent.

Hypothesis 3: There is no significant relationship between guidance and counselling intervention and artificial intelligent.

Table 3: Academic Achievement and Artificial intelligent

Variables	No	Mean	SD	r-cal	r-crit	Remark
Artificial intelligent	325	58.455	24.143	0.680	0.336	Rejected
Guidance & Counselling	325	47.479	20.218			

Table 3 above we can see that the correlation coefficient between scores on artificial intelligent and those of guidance and counselling is both significant and positive. The value of the r-cal stands at 0.680 while r-crit stands at 0.336. This indicates a strong and positive relationship between the variables. This discovery also leads us to reject null hypothesis therefore, there is significant relationship between guidance and counselling and artificial intelligent.

Findings

The major findings of the study are:

1. There was significant relationship between guidance and counselling intervention and academic performance of students.
2. There was significant relationship between students' academic achievement and Artificial intelligent.
3. There was significant relationship between guidance and counselling intervention and artificial intelligent.

Discussion

The findings in this study indicated that there was significant relationship between guidance and counselling intervention and academic achievement. In other words, the provision of guidance and counselling in these schools has made the students to attained success in their Education. This can be seen from the analysis of hypothesis one. Therefore, guidance and counselling if well designed, guided and effectively provided the capacity of improving the academic performance of students. This finding is in line with Lapan (2012) who identified that students' academic performance has significant positive relationship with guidance and counselling

From the result of the findings of hypothesis two, it was observed that significant relationship exists between students' academic achievement and Artificial intelligent.

This study also observed that there is significant relationship between academic achievement and artificial intelligent. This can further be seen from the result of the

analysis of hypothesis three. This indicated that the provision of guidance and counselling in these schools has made the students to develop positive attitude toward utilization of artificial intelligent in the school. This is in agreement with Wang & Zhang (2020) states that guidance and counselling provide an integral part of the educational process because it motivates the student to improve and fit in the school with artificial system. When a child adjusts well in school and is assisted in finding his way around the complicated curriculum, he will definitely develop positive digital attitude towards the school.

This study also discovered that there is significant relationship between students' academic achievement and parental expectation. The way children perceive their parental expectations towards them, greatly influence their behaviour because it leaves the deepest and most profound marks on the children's digital behaviour and this leads to either positive or negative academic achievement depending on the parental influence.

Conclusion

From the findings of this study, it is concluded that guidance and counselling have positive relationship on students' academic achievements, Artificial intelligent and students' academic achievement as well as Guidance and counselling and artificial intelligent also assists students to overcome negative parental expectations toward schooling. It is also concluded that Guidance and Counselling intervention and students' artificial intelligent have significant relationship with their academic achievement. It is also concluded that students in secondary school needs guidance and counselling intervention and that guidance and counselling in secondary schools should be provided by professionally qualified counsellors.

Recommendations

Based on the above findings, the research makes the following recommendations:

1. Truly, guidance and counselling have significant relationship with students' academic achievement, the Sokoto state government should employ qualified guidance counsellors and post at list one or two of such counsellors to each secondary school in Sokoto state.
2. The government should effectively monitor and support the efficiency with which the guidance and counselling services are rendered. They should give support to guidance and counselling in all secondary schools by providing available facilities and equipment for effective functioning of the guidance program in schools.
3. It was also found that guidance and counselling have significant relationship to students' artificial intelligent in school therefore, the principals should provide initial needs for the effective running guidance and counselling toward utilization of artificial intelligent in their schools. This includes, computers, internet, office

space, time set on the time-table during which students will be free from regular teaching-learning chores to seek guidance on individual or group basis.

4. Counsellors should know that students no matter what level of education they are, need to understand themselves, their individuality, their aptitude, attitudes and abilities to plan, decide and choose to succeed in life. They should provide relevant and useful materials. These materials should include information that is valid and accurate, which will assist the student in making choice and adjustment.
5. The counsellor needs to encourage the students to open up to them, so that they can help them especially those with negative parents. They should assist the students by guiding them to choose the right subjects. Left alone the students are prone to choose subjects without directly relating them to their interest, abilities and aptitude and without thinking of their future careers and subject that are pre-requisite for them.

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Prevalence of Alcohol Consumption and Factors Influencing Alcohol Abuse Among In-School Adolescents in Lagos State, Nigeria: Implications for Prevention Interventions

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Abstract

Alcohol is the most common drug of abuse in adolescence, much more than tobacco and other illicit drugs. This study was carried out to examine the prevalence of alcohol consumption and factors influencing alcohol use among in-school adolescents in Lagos metropolis. The study employed a descriptive survey. Four research objectives, four research questions and three research hypotheses were formulated to guide the study. A total of 450 in-school adolescents constituted the respondents. Questionnaires were used to collect relevant data for the study. Data generated and analyzed using the descriptive and inferential statistical methods showed the prevalence of alcohol consumption among in-school adolescents. The Pearson Product Moment Correlation (PPMC) and t-test whereas used to analyze the hypotheses. Findings revealed that alcohol consumption was prevalent. The PPMC analysis revealed a very significant positive correlation between peer pressure and alcohol consumption among in-school adolescents ($r=0.816$, $p=0.001$). A significant positive correlation also exists between cheap alcohol and consumption among in-school adolescents ($r=0.653$, $p=0.021$). However, a significant gender difference does not exist among in-school adolescents. It was recommended that schools' curricula should include prevention education based on pro social skills in self-control, decision-making, goal setting, strengthening motivations not to use substances, resisting pro-drug influences, analyzing tobacco and alcohol advertisements. Teachers should be trained on classroom management and improvement programmes that will foster positive and non-threatening climates for school bonding, class attendance, participation and academic progress thereby reducing the consumption of alcohol, other substances and risky behaviours.

Keywords: Prevalence, Adolescents, Alcohol consumption, Prevention, Interventions

Introduction

Alcohol consumption among adolescents is a serious public health issue globally and in Nigeria. According to the World Health Organization (WHO) (2024), alcohol consumption is now the world's third largest risk factor for disease and disability, with almost 40% of all global deaths attributed to alcohol. Underage drinking is associated with an increased risk of depression, anxiety, sleep disturbance, self-injuries, and suicidal behaviour and greater involvement in other risky behaviours and adolescents are particularly vulnerable to the harmful effects of alcohol. Early onset of drinking and heavy drinking in adolescence increases the risk of problematic drinking in adulthood and reasons for this vulnerability include genetic and neurobiological factors.

Adolescence has been viewed as the most critical period of human life where health is one of the essential requirements for proper adolescent development (Awusabo-Asare, Abane & Kumi 2004; Heslin & McNulty, 2023). Recent studies have demonstrated that exposure to alcohol during adolescence has long-term effects on the brain that persist into adulthood. Alcohol and drug use affects brain functions in adolescents. It is well documented that adolescence (i.e., the period between age 10 and 19) is a time that is often associated with increasing experimentation and risk-taking behaviours such as alcohol use (Duell et al., 2018).

The prefrontal cortex of the brain, which plays an important role in executive control functions (i.e. planning, emotional regulation, decision making) starts to develop early in life and continues after adolescence and into the early 20s is affected by early alcohol and other substances use. The phenomenon of adolescent alcohol consumption has been investigated in numerous studies (Hussong, Ennett, Cox & Haroon, 2017; Jun, Sacco, Bright & Camlin, 2015; Marshall, 2014). Findings derived from basic research indicate that adolescents and adults experience alcohol differently. In general, adolescents are less sensitive to the negative effects of alcohol consumption (sedation, motor impairment, anxiety), but more sensitive to its positive and rewarding effects. Thus, adolescents are “resistant” to the negative effects of alcohol that limit consumption progression. In general, during adolescence, more drinks are necessary to elicit a signal that it is time to stop. Conversely, adolescents are more sensitive to the effects that facilitate the maintenance, progression and escalation of alcohol consumption. This pattern of response to alcohol would be a vulnerability factor for adolescents to engage in problematic drinking trajectories.

Environmental and genetic factors may also contribute to alcohol consumption among adolescents. The environment and heritability factors play a dramatic role in controlling individual predisposition to developing alcohol abuse. Knowing the characteristics that increase the risk of adolescent alcohol use disorder can be helpful in preventing or attenuating such risk (Simons-Morton, Haynie, & Crompt, 2001; Somani & Megani, 2016).

There are a few variables that should be considered in connection to the abuse of alcohol among secondary school students in Nigeria. They include; curiosity, desire or cravings, accessibility, affordability and substance use by parents and guardians at home. A permissive parental attitude towards alcohol that may include drinking at home is associated with higher alcohol use (Ngamije, Melgosa and Yadufashije, 2017).

Objectives of the Study

The main purpose of this study was to investigate the prevalence of alcohol consumption and alcohol abuse among in-school adolescents in Lagos State, Nigeria: implications for prevention interventions.

The specific objectives of the study are:

1. To determine the prevalence of alcohol consumption and alcohol abuse among in-school adolescents.
2. To examine the influence of peer pressure on alcohol consumption among in-school adolescents.
3. To determine the influence of access to cheap alcohol on alcohol consumption among in-school adolescents.
4. To examine if there is any gender difference in alcohol consumption among in-school adolescents.

Research Questions

The following research questions were raised in relation to the objectives of the study

1. What is the prevalence of alcohol consumption among in-school adolescents in Lagos metropolis?
2. Is there any influence of peer pressure on alcohol consumption among in-school adolescents?
3. Does access to cheap alcohol have any influence on alcohol consumption among in-school adolescents
4. Is there any significant gender difference in alcohol consumption among in – school adolescents?

Research Hypotheses

The following research hypotheses were tested at 0.05 level of significance.

1. There is no significant influence of peer pressure on alcohol consumption among in-school adolescents.
2. There is no significant influence of access to cheap alcohol on alcohol consumption among in-school adolescents.
3. There is no significant gender difference in alcohol consumption among in-school adolescents.

Methodology

The research design that was adopted for this study was survey design. A total number of four hundred and fifty students participated in the study. The participants were drawn from secondary schools in Lagos metropolis. A questionnaire titled “Alcohol Consumption and Factors Influencing Alcohol Abuse Questionnaire” was used to collect relevant data for the study.

This study employed a descriptive survey design to investigate alcohol consumption and factors influencing alcohol abuse among secondary school students in Lagos metropolis. A total of 450 students participated in the study, randomly selected from five secondary schools in Lagos metropolis using stratified random sampling. First, five Local Government Areas (LGAs)/Local Council Development Areas (LCDAs) were randomly selected. Then, a simple random sampling technique was used to select one school from each of the sampled LGAs/LCDAs.

A questionnaire titled "Alcohol Consumption and Factors Influencing Alcohol Abuse Questionnaire" was specifically designed to collect relevant data for this study. The questionnaire was adapted from two validated instruments: the Monitoring the Future Survey (MTF) and the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). The questionnaire comprised two sections: Section 1 elicited personal information from respondents, while Section 2 contained 15 items. The content validity of the questionnaire was verified by the researcher's supervisors. Test-retest reliability was conducted to determine the psychometric properties of the instrument. The Pearson Product Moment Correlation (PPMC) and t-test were used to analyze the hypotheses and investigate the relationships between variables.

Results

This section presents the analyses of the data generated from this study and the interpretations of the findings based on the research objectives and hypotheses stated. The descriptive and inferential statistical tool was used in this work. Data collected from the administered questionnaire were analyzed using the statistical package for social science to carry out the correlation analysis and t-test for the three hypotheses stated. Interpretations are therefore made accordingly based on the results generated.

Table 1: Demographic Characteristics of the Respondents (N = 450)

Variable	Category	Frequency (n)	Percentage (%)
Age	10-12	48	18.6
	13-15	149	57.8
	16-18	61	23.6
Sex	Male	136	52.7
	Female	122	47.3
Age of First Alcohol Use	<10	54	20.9
	10-12	83	32.2
	13-15	101	39.1
Factors Influencing Alcohol Initiation	16-18	20	7.8
	Peer Pressure	57	22.1
	Curiosity	57	22.1
	Feel like	88	34.1
	Influence of Adult	20	7.8
	Parental Influence	10	3.9
	Access to Cheap Alcohol	10	3.9
	Poor Educational	16	6.2

Achievement and School Relationship		
On Special Occasions	215	83.3
Once a Week	28	10.9
Everyday	15	5.8

The evidence from Table 1 reveals that a total of 232 representing (51.6%) of the respondents are males while females accounted for 218 with (48.4%).

Table 2: Characteristics of Adolescents Consuming Alcohol. (N = 258)

Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	323	51.6
	Female	218	48.4
Age	10-12	96	21.3
	13-15	250	55.6
	16-18	104	23.1
Ever Consumed Alcohol?	Yes	258	57.3
	No	192	42.7

The Table 2 shows the age distribution of the respondents. Those within the age bracket of 13 – 15 have the highest number of 250 with a total of 55.6%, followed by adolescents that fall within the age range of 16 – 18 having (104)23.1%. Respondents within 10 – 12 have the lowest number with 96 (21.3%).

The Table 2 also revealed that 258 adolescents with a percentage of 57.3 are into alcohol consumption while 192 adolescents with a percentage of 42.6 % do not consume alcohol of which the respective tables are therefore presented in the bar chart above.

Evidence from the Table 2 reveals the prevalence of alcohol consumption among adolescents in secondary school. Where adolescents between the ages of 13-15 years are the highest with 149 (57.8%), ages 16 - 18 accounted for 61 (23.6%) while those within the age of 10 - 12 years accounted for 18.6% of the adolescents.

The Table 2 indicates that male adolescents that are into alcohol consumption are 136 (52.7%) while the female are 122 (47.3).

It was also revealed that majority of the adolescents started consuming alcohol between the ages of 13 - 15 with a frequency counts of 101 (39.2), followed by those that started the consumption of alcohol in ages 10 - 12 with 83 (32.2%), it also showed that some of the respondents started below the age of 10 with 54 (20.9%), however, only 20 respondents with 7.8% commenced alcohol between ages 16-18 years old while none was above 18 years old as at the time of this research as such no one commenced alcohol at that age.

From the data in Table 2, majority of the adolescents consumed alcohol because they feel like with a frequency counts of 88(34.1%), those that were lured into the consumption of alcohol by peer pressure and curiosity accounts for the same frequency of 57 (22.1%). 20

(7.8%) adolescents were influenced by adults. Some of the adolescents were also induced by their poor educational achievements and school relationship with 16 (6.2%). While parental influence and access to cheap alcohol both has a frequency count of 10 (3.9%) respectively. Based on their response to why they Consume alcohol, majority of the respondents 215(83.3%) only consume alcohol on special occasion while 28 (10.9%) consume it once a week while 15 (5.8%) of the respondents consume alcohol on a daily basis. as shown in Table II above

Analysis of Research Hypotheses

Hypothesis one: There is no significant relationship between the influence of peer group and alcohol consumption among adolescents in secondary school.

Table 3: Relationship between Peer Group Influence and Alcohol Consumption

Variables	N	Mean	Sd	r.	Sig.	Remark
Peer group influence	450	9.40	8.27			
Alcohol consumption	450	11.58	10.27	.816	.001	Significant

Results from Table 3 shows r. value of (.816) which depicts that there is a strong correlation between peer group influence and alcohol consumption of adolescents. However, the significant value of (.001) which is less than 0.05, indicates that the relationship is significant. Therefore, the null hypothesis that was stated is rejected and it is concluded that peer influence has a significant relationship with alcohol consumption among adolescents in secondary school.

Hypothesis two: There is no significant relationship between access to cheap alcohol and alcohol consumption among adolescents in secondary schools.

Table 4: Relationship between access to cheap alcohol and alcohol consumption

Variables	N	Mean	Sd	r.	Sig.	Remark
Access to cheap alcohol	450	9.40	8.27			
Alcohol consumption	450	11.55	10.21	.654	.002	Significant

Results from Table 4 shows r. value of (.654) which depicts that there is an average correlation between access to cheap alcohol and alcohol consumption. However, the significant value of (.002) which is less than 0.05, indicates that the relationship is significant. Therefore, the null hypothesis that was stated is rejected and it can be concluded that access to cheap alcohol has significant relationship with alcohol consumption among adolescents in secondary school students.

Hypotheses Three: There is no significant gender difference on the consumption of alcohol among adolescents in secondary school.

Table 5: Difference in The Consumption Pattern of Alcohol Based on Gender

Variables		N	Mean	Sd	df	t.cal	t.tab	P.value	Remark
Alcohol consumption	Male	232	16.44	6.81	98	.643			
	Female	218	16.17	7.16			1.98	.448	Not Significant

The Table 5 presents the difference in the consumption pattern of adolescents based on their gender. Its findings reveal that t.cal. of (.643) is less than the table value of (1.98). Similarly, the p-value of (.448) is greater than the significant level of (0.05), this depicts that the hypothesis is not significant hence the null hypothesis which states that no significant difference exists between the consumption pattern of adolescents in secondary school based on gender is therefore accepted.

Discussions

The current study examined the prevalence of alcohol consumption and factors influencing alcohol abuse among in-school adolescents in Lagos metropolis in Nigeria. This study revealed that the highest levels of alcohol use were among adolescents aged 13-15 years at while the lowest level was within the ages of 10 - 12 years. The age of initiation for majority of the adolescents was between the ages of 13-15, followed by those the ages of 10-12. although a fewer number started below the age of 10. Those between ages 16-18 years were among the lowest to commence the use of alcohol.

The biggest influence for alcohol consumption among adolescents was because they felt like it (cravings). This is contrary to the study carried by Chongo & Sester (2019) in Zambia among 8–13-year-olds which found out that parental substance use was the biggest factor for alcohol consumption among participants. Another reason was peer pressure and curiosity in equal proportion followed by those influenced by adults. Others were induced by their poor educational achievements and school relationship, parental influence and access to cheap alcohol. This is line with the system review of literature by Ekpenyong, Jagun, Stephen, Bakre, Odejimi, ... & Miller (2024) on the prevalence and factors influencing tobacco and alcohol use among adolescents in Nigeria which found out that peer influence and lack of parental monitoring were factors identified to influence adolescents' alcohol use.

On the frequency of consumption, majority of the adolescent respondents only consume alcohol on special occasions (end of year school party, birthday party, festivities). This was followed by those who consume it once a week. The lowest level of consumers was from respondents who consume on a daily basis.

In terms of gender, both male and adolescents consume alcohol than their female counterparts. This is line with studies by Olaniyi & Jimoh (2021) which stated that alcohol use is also associated with peer influence and environmental variables, while age and gender did not have any relationship with alcohol consumption. On the number of adolescents who had initiated the use of alcohol was slightly higher than those who had not in selected secondary schools in Lagos in this study.

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Play Facilities as Predictors of Pre-Reading Skills Acquisition among Preschoolers in Chanchaga Local Government Education Area of Niger State

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Abstract

The study investigates the play facilities as predictors of pre-reading skills acquisition among preschoolers in Chanchaga Local Government Education Area of Niger State. Two research questions and two null hypotheses guided the study. The study adopted a correlation survey research design. The population of the study is 4087 preschoolers in the 29 early child care centers in all the public primary schools in Chanchaga Local Government Area of Niger state. A sample of 356 preschoolers were used for the study. Play Facilities Questionnaire (PFQ) and Pre-reading Skills Acquisition Rating Scale (PSARS) were used for data collection. The two sets of the instrument were face validated by three experts (Two in Department of Early Childhood and Primary Education and one from Measurement and Evaluation Unit, Department of Science Education all from Faculty of Education University of Nigeria, Nsukka). Internal consistency reliability through Cronbach alpha gave a reliability coefficient for pre-reading rating scale as 0.886. The internal consistency reliability coefficients for the clusters of A and B are given as 0.85, and 0.84 respectively in pre-reading skills. Linear regression analysis was used in answering the research question while t-test associated with linear regression was used in testing the formulated hypotheses at 0.05 level of significance. The finding of the study revealed that play facilities have a high significant predictive power on print motivation skills and print awareness skills of preschoolers in Chanchaga Local Government Education Authority of Niger State. Based on the findings and conclusion, the following recommendations were made, that the school authority should provide pictorial and video games that can increase pupil's motivation skills. The parents of preschoolers should provide print materials as based on school text listings in order to enhance the acquisition of print awareness skills.

Keywords: Play Facilities, Pre-schoolers, Pre reading skills, Print motivation, Print awareness

Introduction

Pre-reading skills build preschoolers foundation pertaining to reading materials which are identifications of alphabet or Alphabet knowledge, print motivation, Print awareness, Phonological awareness, and Vocabulary, among others. Heilmann et al, (2018) found that early alphabet knowledge is a powerful predictor of long-term reading and academic outcomes. Children who enter school with robust alphabet skills are more likely to achieve reading proficiency by third grade, which correlates strongly with ongoing academic success. This was in view with the studied of Albuquerque and Martins (2022) who observed that letter-writing skills are significant predictors of spelling abilities. This highlights the importance of alphabet knowledge not only for recognizing and naming letters but also for writing and spelling skills among the pupils. Throne (2020) asserts that

the development of spelling skills, which starts in preschool, involves letter-writing and blending skills as well as print knowledge. Effective instructional strategies are key to enhancing alphabet knowledge.

Pre-reading activities are enabling activities, which also provide early readers with comprehensive and necessary background to organize activities and to comprehend materials to be read. Thus, in this view, pre-reading activities unearth and elicit prior knowledge, the purpose for reading and building a knowledge base necessary for dealing with the content and the structure of the materials ascertained (Yılmaz & Saraçoğlu, 2022). Nicholas and Rouse (2021) emphasize that skills such as letter recognition and letter-writing contribute significantly to name writing, letter writing, and spelling. These abilities are foundational as they support more complex literacy tasks, including decoding and word recognition. Understanding letter-sound correspondence and letter recognition forms the bedrock upon which reading proficiency is built.

Print motivation is a child's interest in and enjoyment of books (McGeown, et al, 2020). According to the authors above, a child with strong print motivation enjoys being read to plays with books, pretends to write and asks to be read to. Children who enjoy books and reading will be curious about reading and motivated to learn to read for themselves. The authors further encourage parents to print motivation for their children by making shared book reading a special time, keeping books accessible and letting their child see that they enjoy reading. Similarly, Sandhu, (2016) studied that print awareness is also a crucial foundational skill for preschoolers as it involves recognizing and understanding the function and structure of print. This awareness encompasses a child's ability to identify symbols and signs such as letters, words, punctuation marks, logos, and warning signs.

It also includes understanding that letters form words, words create sentences, and sentences are structured with capital letters and punctuation. According to Jaluo (2021), print awareness involves recognizing the directionality of text knowing that text is read from left to right and top to bottom and understanding how to navigate a book, including which page to read first, how to hold a book, and how to turn pages. This skill is vital for developing pre-reading abilities because it lays the groundwork for reading comprehension and fluency. Children who develop strong print awareness are better equipped to understand the relationship between written and spoken language, which is essential for decoding text and making meaning from it. Bayraktar and Temel (2017) studied that print awareness also helps children grasp the conventions of print, such as the spaces between words and the purpose of punctuation, which are critical for developing literacy.

They also point out that fostering print awareness in preschoolers, educators can enhance their ability to read and write effectively, setting them on a path toward academic success. To encourage the acquisition of a child's pre-reading skills, it is critical to actively engage in quality interactions on a daily basis, such as talking with learners and naming commonly used objects, exposing them to books and puzzles, allowing the

learners to move around and explore toys and move around which are very important to early childhood education. Preschoolers, typically aged 3-5, are in the early childhood phase and are often experiencing school for the first time. This stage, often called pre-primary education, focuses on preparing children for primary school (UNESCO, 2022). The government showed concern in recognizing the importance of pre-primary education since this level of education must start early in life.

Statement of the Problem

Preschool serves a vital role in early childhood development, laying the groundwork for both social-emotional growth and academic readiness. The acquisition of pre-reading skills during this period is particularly crucial, as it sets the stage for future literacy and learning success. Preschool provides children with opportunities to interact with peers, helping them develop essential social skills such as sharing, cooperation, and conflict resolution. These interactions foster emotional intelligence and confidence in social settings.

The acquisition of pre-reading skills among preschoolers is essential for their future literacy and academic success. However, several challenges have hindered this development. some of the primary issues faced by preschoolers in the Chanchaga local government of area of Niger state.

Objectives of the Study

The general purpose of this study is to investigate the play facilities as predictors of pre reading skills acquisition among preschoolers in Chanchaga Local Government Education Area in Niger State, Niger, is the determinant of this study

1. Predictive power of play facilities on print motivation skills acquisition among preschoolers in Chanchaga Local Government Education Area, Niger State.
2. Predictive power of play facilities on print awareness skills acquisition among preschoolers in Chanchaga Local Government Education Area, Niger State.

Research Questions

The following research questions guided the study.

1. What is the predictive power of play facilities on print motivation skill acquisition among preschoolers in Chanchaga Local Government Education Area, Niger State.?
2. What is the predictive power of play facilities on print awareness skills acquisition among preschoolers in Chanchaga Local Government Education Area, Niger State.?

Hypotheses

The following null hypotheses guided the study and were tested at 0.05 level of significance.

H₀₁: Play facilities has no significant predictive power on the acquisition of print motivation skills among preschoolers in Chanchaga Local Government Education Area, Niger State.

H₀₂: Play facilities has no significant predictive power on print awareness skills acquisition among preschoolers in Chanchaga Local Government Education Area, Niger State.

Methodology

The study adopted a correlation survey research design. The design seeks to establish the relationships method of data collection and method of data analysis. The population of the study is 4087 preschoolers in the 29 early child care centers in all the public primary schools in Chanchaga local government area of Niger state. A sample of 356 preschoolers was used for the study. The sample size was ascertained using Krejcie and Morgan sample table. Multi stage sampling technique was used to ascertain the sample size. Two self -designed instrument were used for the purpose of data collection. The instruments are Play Facilities checklist (PFQ) and Pre-reading Skills Acquisition Rating Scale (PSARS). The instruments were face validated by three experts Two from the Department of Early Childhood and Primary Education and one from Measurement and Evaluation Unit, Department of Science Education all from Faculty of Education University of Nigeria, Nsukka. Cronbach Alpha statistics was used to determine the internal consistency reliability coefficient of application of play facilities to be 0.182. The reliability coefficient for pre-reading rating scale is 0.89. The internal consistency reliability coefficients for the clusters of A and B are given as 0.85 and 0.84. Linear regression analysis was used in answering the research question while t-test associated with linear regression was used in testing the formulated hypotheses at 0.05 level of significance.

Results

Table 1: linear regression analysis of the predictive power of play facilities on print motivation skill acquisition among preschoolers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870 ^a	.757	.756	2.46155

Data of table 1 showed that the regression and regression square coefficients are 0.870 and 0.757 respectively. The regression square coefficient value of 75.7% showed that play facilities to a high extent has a predictive power on print motivation skill acquisition among preschoolers in Chanchaga Local Government Education Area, Niger State.

Table 2: t-test associated with linear regression analysis of the predictive power of play facilities on print motivation skill acquisition among preschoolers

New factor loadings and t-values among preservice teachers						
		Un standardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.458	.981		2.505	.013
	Play facilities application	.913	.028	.870	33.119	.000

Data on table 2 showed that the t-test value associated with linear regression is given as 33.119. The hypothesis is rejected because the significant value of 0.000 is less than the alpha value of 0.05. Therefore, play facilities have a significant predictive power on the acquisition of print motivation skills among preschoolers in Chanchaga Local Government Education Authority, Niger State.

Table 3: linear regression analysis of the predictive power of play facilities on print motivation skill acquisition among preschoolers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.779 ^a	.607	.606	2.93575

Data of table 3 showed that the regression and regression square coefficients are 0.779 and 0.607 respectively. The regression square coefficient value of 60.7% showed that play facilities to a high extent has a predictive power on print awareness skill acquisition among preschoolers in Chanchaga Local Government Education Authority, Niger State.

Table 4: t-test associated with linear regression analysis of the predictive power of play facilities on print awareness skill acquisition among preschoolers

		Un standardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	7.342	1.170		6.274	.000
	Play facilities application	.767	.033	.779	23.318	.000

Data on Table 4 showed that the t-test value associated with linear regression is given as 23.318. The hypothesis is rejected because the significant value of 0.000 is less than the alpha value of 0.05. Therefore, play facilities have a significant predictive power on the acquisition of print awareness skills among preschoolers in Chanchaga Local Government Education Authority, Niger State.

Discussion

The finding showed that play facilities have a high predictive power on the acquisition of motivation skills among preschoolers in Chanchaga Local Government Education. The hypothesis showed that play facilities have a significant predictive power on the acquisition of print motivation skills among preschoolers in Chanchaga Local

Government Education, Niger State. The finding of this study has shown that play facilities are very important in improving preschoolers' motivation in pre-reading activities. This implies that schools with the required play facilities are more likely to record to a high extent print motivational skill in pre-reading activities in the school. The finding of this study is in line with that of Chebutuk and Aiko (2019) who reported that play facilities are needed for the improvement of preschoolers' interest and motivation.

The finding showed that play facilities have a high predictive power on the acquisition of print awareness skills among preschoolers in Chanchaga Local Government Education Authority. The hypothesis showed that play facilities have a significant predictive power on print awareness skills acquisition among preschoolers in Chanchaga Local Government Education Authority, Niger State. The finding of this study has shown that play facilities can create awareness on the usage, importance and application of print materials in pre-reading skills development. Print awareness skills were able to develop to high extent because through play facilities provision and utilization, the preschoolers can have concrete understanding of print materials. The finding of this study buttressed that of Bayraktar (2018) which revealed a significant relationship between print awareness skills and play method. The finding of this study supported that of Charles, Anthonia, Olisaeke, Ibiam, and Ebizie (2022) which revealed that children taught basic science using the play-way method acquired significantly higher basic science process skills than those taught using conventional methods. Similarly, the finding of this study corroborated that of Taylor (2022) which indicated that dialogic reading was effective and that print awareness tasks were performed slightly better with printed books.

Conclusion

Based on the findings of this study, the researcher concluded that play facilities are indispensable in the promotion of preschoolers pre-reading skills in Chanchaga Local Government Education Authority of Niger State. Seeing that play facilities predicted pre-reading skills acquisition among preschoolers, teachers are encourage to implement this in the classroom learning. More so, this support the policy of the Federal Republic of Nigeria that skill should be used in teaching preschoolers.

Recommendations

Based on the findings and conclusion, the following recommendations were made.

1. The school authority should provide pictorial and video games that can increase pupils' motivation skills
2. The parents of preschoolers should provide print materials as based on school text listings in order to enhance the acquisition of print awareness skills.

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A Qualitative Approach to Harvesting Sustainable Futures: The Role of Science in Ensuring Global Food Security in Nigeria

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Abstract

This qualitative research explores the perspectives of science educators in Nigeria regarding their role in promoting global food security through effective education. Targeting educators at both secondary and tertiary levels, the study investigates how science education influences agricultural productivity and the adoption of sustainable practices. Utilizing semi-structured interviews with 500 science educators from diverse regions, thematic analysis revealed key insights into the importance of scientific principles in understanding plant physiology, animal management, and soil health. Science educators emphasized the need for integrating food security concepts into the science curricula and highlighted the potential of combining indigenous knowledge with modern scientific techniques to enhance sustainable agriculture. The findings underscore the critical role of science education in equipping future generations to address food security challenges, thereby informing curriculum development and policy recommendations aimed at fostering sustainable agricultural practices in Nigeria. This study contributes to the understanding of how educational strategies can effectively support food security initiatives and improve agricultural outcomes in the country.

Keywords: Sustainable Futures, Science, Food Security, Global Agriculture and Nigeria

Introduction

Educators underscored the vital role of science education in fostering students' understanding of the scientific processes related to food production, ecosystem resilience, and sustainable agricultural practices. They also pointed out the need for professional development opportunities to improve their ability to effectively teach topics related to food security. Education, broadly defined, is the process of acquiring knowledge, skills, values, beliefs, and habits. It encompasses both formal instruction in schools and universities and informal learning through experiences, interactions, and self-directed study (Dodo & Okike, 2021). Education is not only a fundamental human right but also a crucial driver of individual and societal development. It empowers individuals to think critically, solve problems, and adapt to changing circumstances.

Within this broader context, biology which is the scientific study of life provides an essential lens for examining the intricate relationships between living organisms and their environments (Adam *et al.*, 2024). Biology explores fundamental concepts such as the structure, function, growth, evolution, distribution, and classification of living things. A strong foundation in biological principles is crucial for understanding the interconnectedness of ecosystems, the impact of human activities on biodiversity, and the potential for leveraging biological processes to address pressing global challenges such as food security (Kariuki *et al.*, 2023).

Science in general and biology in particular plays a fundamental role in sustainable agriculture by providing the knowledge base for understanding plant physiology, genetics, and interactions between organisms (Amoah, *et al.*, 2024). These concepts are critical for developing sustainable agricultural practices, exploring the genetic diversity of crops, and understanding plant disease resistance mechanisms. Additionally, biological research fosters innovative approaches to improving crop yields while minimizing environmental impacts.

Global food security is defined as the availability of, and access to, sufficient, safe, and nutritious food to maintain an active and healthy life at all times. This challenge is becoming increasingly complex due to climate change, population growth, and resource depletion (Onyeaka *et al.*, 2024). Ensuring food security necessitates a holistic approach that integrates scientific advancements with social, economic, and political considerations. Science is central to this endeavor, offering tools and knowledge to enhance agricultural productivity, improve the nutritional value of crops, and develop sustainable food systems. For example, a deeper understanding of photosynthesis has led to advances in crop efficiency, the knowledge of physics improved the production of different machines and equipment while biotechnology has facilitated the development of climate-resilient crops that can withstand environmental stresses. Research on plant-microbe interactions has contributed to the development of biofertilizers and biopesticides, reducing reliance on synthetic inputs and promoting sustainable farming practices (Njeru & Koskey, 2021).

In Nigeria, where food security remains a significant concern, the role of science in addressing agricultural challenges is particularly critical. The country's diverse agroecological zones offer immense potential for cultivating a variety of crops, but realizing this potential requires investment in research, education, and infrastructure. Applying biological principles to enhance crop yields, improve nutritional content, and develop climate-smart agricultural strategies is essential to ensuring food security for Nigeria's growing population (Sulaimon, 2024).

Furthermore, the integration of indigenous knowledge systems with modern biological techniques presents an opportunity for sustainable agricultural advancement. Traditional farming practices, coupled with scientific research, can lead to innovative solutions for enhancing productivity while preserving biodiversity. Fostering a new generation of

biologists and agricultural scientists equipped with the knowledge and skills to address food security challenges is paramount (Akpa *et al.*, 2024).

Despite Nigeria's vast agricultural potential, food security remains a persistent challenge due to inadequate agricultural education, lack of integration between traditional and modern farming techniques, and the adverse effects of climate change. There is a need for a comprehensive approach that combines biological principles with innovative agricultural practices to ensure food security. This study seeks to address these gaps by investigating the role of science education in fostering sustainable agricultural development and improving food security in Nigeria.

Review Literature

Science education equips farmers with knowledge to implement sustainable agricultural practices, improving food availability in Nigeria. Practices such as crop rotation and integrated pest management enhance soil health and reduce resource usage, ultimately leading to higher crop yields. (Abobatta & Fouad, 2024). According to Balogun et al. (2024) Science education is essential for advancing sustainable agricultural practices, such as climate-smart agriculture, which can greatly improve agricultural productivity, food security, and resilience to climate change in Nigeria. A strong foundation in biological concepts enables farmers and agricultural professionals to implement innovative techniques that enhance soil health, maximize resource efficiency, and boost crop yields. For example, understanding soil microbiology supports soil fertility through organic farming, composting, and the application of biofertilizers, reducing dependence on chemical inputs that harm the environment (Kamaurewe, 2022). Also, knowledge of plant physiology and genetics facilitates the selection of high-yield, climate-resilient crop varieties, ensuring better adaptation to shifting climatic conditions. Science education also encourages the adoption of integrated pest management (IPM), which minimizes crop losses by employing natural predators, biological pesticides, and crop rotation rather than excessive chemical use (Akinsorotan et al., 2023).

Increase in farmers' awareness of water conservation strategies, such as rainwater harvesting and drip irrigation, which are crucial for sustaining agricultural productivity in drought-prone areas. (Oiganji, et al., 2025). Incorporating science education into agricultural training programs and school curricula can help Nigeria develop an informed farming community that embraces scientific, eco-friendly approaches. As a result, this will lead to higher agricultural output, enhanced food security, and improved resilience to climate change, ultimately contributing to the nation's long-term economic and environmental sustainability. Effective crop management practices, guided by biological education, are essential for maximizing agricultural productivity and ensuring food security in Nigeria. (Ariom et al., 2022)

A strong understanding of biological principles enables farmers to make informed decisions regarding soil fertility, pest control, irrigation, and crop selection, all of which contribute to higher yields and sustainable farming systems (Orina et al., 2024). When

farmers lack proper knowledge, they may engage in poor agricultural practices such as excessive use of chemical fertilizers, improper crop rotation, and inadequate pest control measures. These practices can deplete soil nutrients, reduce plant resistance to diseases, and ultimately lead to lower crop yields. Declining agricultural output not only affects individual farmers' livelihoods but also threatens national food availability, making it harder to meet the demands of a growing population. By integrating biological education into agricultural training programs, farmers can learn to adopt scientifically proven agronomic techniques that enhance productivity. For example, understanding plant physiology helps in selecting suitable crop varieties for different climatic conditions, while knowledge of soil microbiology promotes the use of organic fertilizers and composting to improve soil health. Educating farmers about integrated pest management (IPM) can reduce reliance on chemical pesticides, promoting environmentally friendly farming practices. Raising awareness about these best practices is crucial for improving agricultural outcomes in Nigeria. Government agencies, educational institutions, and agricultural extension services should collaborate to provide training programs, workshops, and accessible resources for farmers. By equipping them with the necessary knowledge and skills, farmers can optimize crop production, reduce post-harvest losses, and contribute to national food security, economic growth, and environmental sustainability. (Eheazu, 2023). Environmental literacy education, equips farmers with the knowledge needed to adopt sustainable agricultural practices such as Conservation Agriculture. By highlighting the environmental consequences of traditional farming methods such as soil degradation, deforestation, and excessive chemical use it fosters a shift toward eco-friendly techniques that improve soil health, conserve natural resources, and enhance crop resilience. This knowledge enables farmers to make well-informed choices, resulting in improved agricultural productivity, enhanced earnings, and sustainable development in rural Nigeria.

Objectives of the study

The following objectives were generated for the study:

1. To examine the role of science education in enhancing agricultural productivity and food security.
2. To explore the integration of indigenous knowledge with modern biological techniques for sustainable farming.
3. To evaluate the impact of climate change on agricultural productivity and the biological strategies to mitigate its effects.
4. To assess the effectiveness of biotechnological advancements in improving crop yield and sustainability in Nigeria.

Research Questions:

1. How does science education contribute to enhancing agricultural productivity and food security in Nigeria?
2. In what ways can indigenous farming knowledge be integrated with modern biological techniques to promote sustainable agricultural practices in Nigeria?

Research Hypotheses:

H01: Science education positively influences farmers' ability to adopt sustainable agricultural practices, leading to increased agricultural productivity and improved food security in Nigeria.

H02: The integration of indigenous knowledge with modern biological techniques significantly enhances the sustainability and productivity of farming in Nigeria.

Methods

This study employed a qualitative approach, utilizing semi-structured interviews, to explore the perspectives and experiences of science educators in Nigeria regarding their role in achieving global food security. The study focused on understanding how these educators perceived their role in shaping future generations equipped to address food security challenges. A purposive sampling strategy was used to select 500 science educators at the secondary and tertiary levels from diverse geographical regions within Nigeria, focusing on those with relevant experience and expertise. Semi-structured interviews, guided by an interview protocol, explored educators' perceptions of food security, the role of science education in addressing it, current curriculum integration and opportunities for improvement, teaching practices and resources, challenges and opportunities faced by educators, and their recommendations for enhancing science education to contribute to food security solutions. Interviews were conducted in English, audio-recorded, and transcribed verbatim. The transcribed interviews were analyzed using thematic analysis, involving familiarization with the data, coding key concepts, developing and refining themes, and reporting findings in a narrative format with illustrative quotes. Ethical considerations, including informed consent, confidentiality, data security, and the right to withdraw, were strictly adhered to. Trustworthiness was ensured through strategies such as credibility (prolonged engagement, member checking, triangulation), transferability (detailed descriptions of context and procedures), dependability (audit trail of the research process), and confirmability (grounding findings in the data).

Results

Answering of Research Questions

Research Question 1: How does science education contribute to enhancing agricultural productivity and food security in Nigeria?

Key Themes Identified:

- a. **Understanding Plant Physiology:** Interviewees emphasized that their science education provided them with insights into plant growth processes, photosynthesis, and nutrient requirements. This knowledge enables them to make informed decisions about crop selection and management practices that enhance yield and sustainability.
- b. **Animal Physiology Insights:** Participants noted that an understanding of animal physiology, including nutrition and breeding, allows for better livestock management. This contributes to increased productivity and health of livestock, which is crucial for food security.
- c. **Microorganisms and Soil Health:** The role of microorganisms in soil fertility was highlighted as a critical area of knowledge. Educated farmers expressed that their science background helps them implement practices that enhance soil health, such as crop rotation and composting, leading to improved crop yields.
- d. **Genetics in Crop Improvement:** Insights into genetics have empowered farmers to adopt improved varieties of crops and livestock, which are better adapted to local conditions and resist pests and diseases, directly impacting agricultural productivity.
- e. **Pest and Disease Management:** Knowledge gained from science education about pest and disease cycles allows farmers to apply integrated pest management strategies effectively, reducing crop loss and ensuring a stable food supply.

Conclusion: Overall, science education equips farmers with essential knowledge and skills that enhance agricultural productivity through better management of plants and animals, improved soil health, and effective pest management strategies, thereby contributing to food security in Nigeria.

Research Question 2: In what ways can indigenous farming knowledge be integrated with modern biological techniques to promote sustainable agricultural practices in Nigeria?

Key Themes Identified:

- a. **Complementing Traditional Practices with Scientific Knowledge:** Interviewees highlighted examples where traditional practices, such as intercropping and organic fertilization, can be enhanced with scientific insights on soil health and pest resistance, leading to more sustainable outcomes.

- b. **Utilizing Indigenous Knowledge of Local Ecosystems:** Participants pointed out that indigenous knowledge regarding local climate and soil types can be integrated with biological techniques, such as soil testing and crop modeling, to optimize planting schedules and crop selection.
- c. **Community-Based Approaches:** The importance of community engagement was stressed; combining local wisdom with modern techniques fosters collaboration and collective learning, which enhances the adoption of sustainable practices.
- d. **Education and Capacity Building:** Interviewees suggested that training programs that respect and incorporate indigenous knowledge while introducing modern biological techniques can empower farmers, making them more resilient to environmental changes.
- e. **Biodiversity Preservation:** Integrating indigenous practices that promote biodiversity with modern conservation science can lead to more resilient agricultural systems, ensuring long-term sustainability.

Conclusion: The integration of indigenous farming knowledge with modern biological techniques can create a robust framework for sustainable agricultural practices in Nigeria. This approach respects local traditions while enhancing productivity and resilience through scientific understanding, ultimately promoting food security.

Testing of Hypotheses

H0₁: Science education positively influences farmers' ability to adopt sustainable agricultural practices, leading to increased agricultural productivity and improved food security in Nigeria.

Evidence from Interviews:

- a. **Understanding of Biological Principles:** Many educators noted that their science education equips farmers with essential knowledge about plant and animal physiology, which is crucial for making informed decisions regarding crop selection and livestock management.
- b. **Sustainable Practices Adoption:** Interviewees highlighted specific sustainable practices, such as organic farming, integrated pest management (IPM), and soil fertility management that farmers are more likely to adopt after receiving science education. These practices directly contribute to increased agricultural productivity.
- c. **Improved Crop Yields:** Educators shared examples of how understanding science has led to higher crop yields and better resource management. For instance, knowledge of soil microbiology helps farmers improve soil health, which is vital for crop productivity.

- d. **Food Security Awareness:** The interviews revealed that science education fosters a greater awareness of food security issues among farmers, motivating them to adopt practices that contribute to sustainable food systems.

Conclusion for H01: The responses indicate a strong correlation between science education and the adoption of sustainable agricultural practices, suggesting that it positively influences farmers' abilities to enhance productivity and improve food security in Nigeria. Thus, H01 is supported by the evidence gathered from the interviews.

H02: The integration of indigenous knowledge with modern biological techniques significantly enhances the sustainability and productivity of farming in Nigeria.

Evidence from Interviews:

1. **Synergy of Knowledge Systems:** Educators emphasized the value of combining indigenous farming practices with modern scientific approaches. Many participants noted that traditional methods often align well with biological principles, leading to innovative solutions for sustainable agriculture.
2. **Cultural Relevance and Acceptance:** Interviewees pointed out that integrating indigenous knowledge fosters greater acceptance among local farmers, making them more likely to adopt new practices. This cultural relevance enhances the overall sustainability of farming systems.
3. **Case Studies and Success Stories:** Several educators provided examples where the integration of traditional techniques, such as crop rotation and natural pest control, with modern biological methods has resulted in increased productivity and reduced environmental impact.
4. **Resilience to Climate Change:** The combination of indigenous knowledge and modern techniques was viewed as a way to improve resilience against climate change, which is critical for ensuring food security in Nigeria.

Conclusion for H02: The insights gathered from the interviews indicate a significant positive impact of integrating indigenous knowledge with modern biological techniques on the sustainability and productivity of farming practices in Nigeria. Therefore, H02 is also supported by the evidence from the interviews.

Discussion

The findings of this study highlight the integral role that science education plays in enhancing agricultural productivity and addressing food security challenges in Nigeria. The perspectives of science educators reveal a consensus on the importance of equipping future generations with a robust understanding of biological principles that underpin sustainable agricultural practices.

One of the key themes that emerged from the interviews is the significance of understanding plant physiology. Educators noted that knowledge of how plants grow and respond to various environmental factors allows farmers to make informed decisions regarding crop selection and management. This understanding is crucial, especially in a nation like Nigeria, where diverse agroecological zones present unique challenges and opportunities for crop cultivation. By applying concepts learned in sciences, farmers can optimize their practices to improve yields while minimizing environmental impacts.

Similarly, insights into animal physiology were deemed essential for effective livestock management. Educators emphasized that a solid grasp of animal nutrition and breeding principles leads to healthier livestock and increased productivity. This is particularly relevant in Nigeria, where livestock farming is a significant component of the agricultural sector and contributes to the livelihoods of many families.

The role of microorganisms in soil health and fertility was another critical area highlighted by the educators. Understanding the interactions between soil microbes and plants enables farmers to adopt practices such as organic farming and the use of biofertilizers, which can enhance soil fertility and reduce reliance on harmful chemical inputs. This aligns with the growing global emphasis on sustainable agriculture and the need to preserve natural ecosystems.

Moreover, the integration of indigenous knowledge with modern biological techniques emerged as a prominent theme in the discussions. Educators recognized that traditional farming practices, rooted in local knowledge and experience, can be effectively combined with scientific advancements to create innovative solutions for sustainable agriculture. This synergy can lead to improved resilience against climate change and resource scarcity, which are pressing concerns for Nigeria's agricultural future.

However, the study also identified significant challenges that educators face in implementing effective science education. Limited resources, inadequate infrastructure, and a lack of professional development opportunities hinder the ability of educators to teach food security concepts effectively. Addressing these challenges is critical to maximizing the impact of science education on agricultural practices.

In light of these findings, it is evident that there is a pressing need for educational reforms that prioritize the integration of science into agricultural training programs. Policymakers should consider investing in curriculum development that includes food security topics, hands-on learning experiences, and collaboration with local communities to harness indigenous knowledge. By fostering a comprehensive understanding of biological principles and promoting sustainable practices, Nigeria can work towards achieving food security and enhancing agricultural productivity.

Conclusion

This paper concludes that investing in science education is essential for equipping future generations with the knowledge and skills necessary to tackle food security issues in Nigeria. By fostering an informed farming community that embraces sustainable practices, Nigeria can enhance agricultural productivity, improve food security, and promote long-term environmental sustainability. Further research and policy initiatives should focus on bridging the gap between traditional and modern agricultural practices to ensure a sustainable and food-secure future.

Recommendations

Based on the findings of this study, several key recommendations can be made to enhance the role of science education in promoting sustainable agricultural practices and improving food security in Nigeria:

1. **Curriculum Integration:** Integrate food security and sustainability topics into the science curriculum at both secondary and tertiary levels. This should include hands-on learning experiences that connect theoretical knowledge with practical applications in agriculture.
2. **Professional Development for Educators:** Provide ongoing professional development opportunities for science educators to enhance their understanding of current agricultural practices, sustainable techniques, and innovative teaching methodologies. Workshops and training programs can empower educators to effectively convey relevant concepts to their students.
3. **Collaboration with Agricultural Institutions:** Foster partnerships between educational institutions and agricultural research organizations to facilitate knowledge exchange and practical training. Such collaborations can help in developing resource materials and establishing demonstration farms that serve as learning hubs for students and local farmers.
4. **Emphasizing Indigenous Knowledge:** Create programs that promote the integration of indigenous farming knowledge with modern biological techniques. This approach can enhance the effectiveness of agricultural practices while respecting local traditions and biodiversity.
5. **Community Engagement:** Involve local communities in the educational process by organizing workshops, seminars, and field days that educate farmers about sustainable practices and the benefits of science education. Engaging the community fosters a collaborative environment where knowledge sharing can thrive.
6. **Resource Allocation:** Advocate for increased investment in educational resources, infrastructure, and research initiatives aimed at promoting sustainable agriculture.

Adequate funding and resources are essential for implementing effective science education programs.

7. **Policy Support:** Encourage policymakers to support initiatives that promote the importance of science education in agriculture as part of broader strategies for enhancing food security. Policies should prioritize the development of sustainable agricultural practices and the training of future generations.
8. **Monitoring and Evaluation:** Establish frameworks for monitoring and evaluating the impact of science education on agricultural productivity and food security. Regular assessment can help identify best practices and areas for improvement, ensuring that educational programs remain relevant and effective.

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Effects of Audiovisual Teaching on Academic Achievement in Agricultural Science for Senior Secondary Students in Mubi, Nigeria

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Abstract

This study investigates the impact of audiovisual teaching methods on the academic achievement of senior secondary school students in Agricultural Science in Mubi Educational Zone, Adamawa State, Nigeria, addressing the declining student interest in the subject. Utilizing a pre-test, post-test, non-randomized quasi-experimental design, 100 students were sampled from a population of 5,400, with data analyzed using t-tests at a 0.05 significance level. Findings reveal that students taught with audiovisual materials significantly outperformed their peers receiving conventional instruction, and male students exhibited higher mean scores than females. The study concludes that audiovisual aids can enhance student engagement and learning outcomes, recommending their integration into teaching practices and curricula to foster better educational experiences.

Keywords: Academic Achievement, Audiovisual Teaching, Agricultural Science, Post-Test, Pre-Test, Quasi-Experimental Design

Introduction

The integration of audio-visual materials significantly enhances the teaching and learning process across all educational levels. These resources, encompassing videos, animations, and interactive software, serve as essential tools that increase educators' effectiveness by making learning more engaging and accessible. They simplify complex concepts, cater to diverse learning styles, and improve information retention among students (National Literacy Trust, 2025). However, challenges such as unequal access to technology and the need for teacher training persist, necessitating ongoing efforts to ensure equitable and effective use of audio-visual materials in education. Abubakar *et al.* (2021) opined that “the advance made in technology has provided for teachers of particular subjects to teach in a way that learners or students are able to retain knowledge better through visualizing what has been taught. Therefore, audio-visual materials are teaching aids using both sight and sound, which could be models or videos.” The audio-visual materials in our schools exist to support the goals of teaching and learning, thereby making teaching and learning more effective. This fact is proven by the adage that says, “Tell me I forget, show me I remember, involve me, and I understand” (Abubakar *et al.*, 2021).

Innovative teaching methods are essential to engage today's students, who are accustomed to interactive and sensory-rich experiences. The use of audio-visual instructional materials combining images, sounds, and text enhances learning by making it more enjoyable and memorable. These materials stimulate multiple senses, facilitating better comprehension and retention of information. Research has demonstrated that incorporating audio-visual aids in teaching science concepts significantly improves student achievement and maintains effectiveness across genders without disparity. Therefore, educators are encouraged to integrate appropriate audio-visual tools to enrich learning experiences and sustain student interest. (Ojelade *et al.*, 2020). It is important to note that “the basic aim of education must be to lead students towards self-learning and life-long learning, and this aim can be achieved through the use of audio-visual instructional material as it improves the learning capacities of individual students, i.e., a learning experience that is worth remembering” (Singh *et al.*, 2019).

The key to individual success and progress at all levels of educational development is the act of teaching and learning (Ode, 2014). Hence, a well-planned and directed process is essential for an effective teaching and learning process (Lari, 2019). The resources for adequate teaching and learning of science-related subjects are necessary for the development of science and science-related subjects in Nigerian schools (Badmus *et al.*, 2019). Several challenges arise from learning science in Nigeria. Students are faced with challenges that include but are not limited to teachers' incompetence in the delivery of the subject matter, outdated laboratories, obsolete textbooks, unavailability of instructional materials, unrealistic methods of teaching, and attitudinal corruption in science as a result of a lack of mass and real representation of the subject matter, among others (Badmus *et al.*, 2019).

The integration of audio-visual instructional materials in teaching has been shown to significantly enhance students' academic performance, particularly in subjects like Agricultural Science. Ehiem (2023) conducted a study in Abia State, Nigeria, revealing that students taught with audio-visual aids outperformed those who received traditional instruction. This finding underscores the effectiveness of multimedia tools in enriching the learning experience and improving comprehension.

Similarly, a study by Abdullahi (2019) in Taraba State, Nigeria, examined the effects of visual instructional materials such as diagrams, maps, and specimens on students' performance in Agricultural Science. The research demonstrated that these visual aids significantly enhanced students' understanding and retention of the subject matter, leading to improved academic outcomes.

In Enugu State, Nigeria, Eze and colleagues (2021) explored the impact of multimedia applications on students' academic achievement in Agricultural Science. Their mixed-method study found that incorporating multimedia elements into teaching strategies not only increased student engagement but also led to higher achievement levels compared to conventional teaching methods.

Furthermore, research by Olayinka (2021) in Ekiti State, Nigeria, assessed the effects of technology-enhanced instruction on Agricultural Science students' learning outcomes. The quasi-experimental study concluded that students exposed to technology-enhanced instructional methods exhibited superior performance and a deeper understanding of the subject matter than those taught through traditional approaches.

Statement of the Problem

Despite the proven benefits of audio-visual materials in enhancing learning, many Agricultural Science teachers in Nigeria underutilize these resources, leading to decreased student engagement and performance. Given the vital role of agriculture in Nigeria's economy, it is crucial to adopt effective teaching strategies to improve students' understanding and retention of Agricultural Science concepts. Research indicates that students exposed to instructional materials perform better than those who rely solely on traditional teaching methods. However, existing studies primarily compare group performances rather than assessing the direct impact on individual student achievement. This study seeks to bridge this gap by examining the effect of audio-visual materials on the academic performance of Agricultural Science students in the Mubi Educational Zone, Adamawa State, Nigeria.

Objectives of the Study

The primary aim of this research is to determine the effects of audiovisual materials on the academic achievement of Senior Secondary School students in Agricultural Science within the Mubi Educational Zone, Adamawa State, Nigeria. The specific objectives are to:

1. Assess the effect of audiovisual instructional materials on students' performance in Agricultural Science.
2. Compare the effectiveness of audiovisual materials with traditional teaching methods in enhancing students' understanding of Agricultural Science concepts.
3. Analyze variations in achievement between male and female students taught using audiovisual methods.

Hypotheses

The following null hypotheses were formulated and tested at a 0.05 level of significance:

H₀₁: There is no significant difference in pre-test scores between the audiovisual and conventional groups.

H₀₂: There is no significant difference in post-test scores between the two groups.

H₀₃: There is no significant difference in post-test scores between male and female students taught using audiovisual methods.

Methodology

This study has adopted a pretest, post-test non-randomized quasi experimental, non-equivalent control group design, which was designed by Donald Thomas Campbell in 1963 and was used by Barai (2018) in a study on the effectiveness of audio-visual aids in the teaching-learning process at Darsh College of Education, Gohana, Haryana, India. The experimental group was taught using audio-visual materials, while the control group received conventional instruction.

The Study Population

The population comprises Senior Secondary School students in the Mubi Educational Zone, which includes five Local Government Areas and approximately 5,400 students offering Agricultural Science.

Sample and Sampling Techniques

Using a multi-stage sampling technique, two Local Government Areas were selected, followed by random selection of four schools (two for the experimental group and two for the control group). The sample size was determined using Slovin's formula, resulting in 100 students.

Instrumentation

The Agricultural Science Achievement Test (AAT) was validated by experts to ensure content relevance and construct validity. Reliability was assessed through a pilot study, yielding a Cronbach's Alpha of 0.82.

Reliability of the Instrument

The reliability of the instrument for this study was determined by a pilot study carried out in Government Secondary School, Hong, Hong Local Government Area, that was not part of the study, but have the same characteristics with the study groups. They are SS II agricultural science students in the same State. The scores from the test were subjected to the Cronbach's Alpha Reliability test using SPSS statistics version 25. The Coefficient of the Cronbach Alpha Statistics was 0.82, this determines the reliability of the instrument as very reliable, as was suggested by Anrijs (2020), that any reliability coefficient of an instrument found greater than an alpha value of 0.7 is considered reliable.

Data Analysis

The data were analyzed using descriptive and inferential statistics. t-Tests were used to evaluate the null hypotheses at a 0.05 significance level.

RESULTS

The results of the data analysis are presented as below in the following tables

Table 1: The Mean and Standard Deviation of the Pre-test mean Scores of Students Taught Agricultural Science in Secondary Schools.

Schools	Mean	SD	Mean SE	Minimum	Maximum
GSS Mubi	27.00	7.89	1.12	5.00	45.00
ADSU Staff Sch.	24.30	7.89	1.12	5.00	40.00
GDSS Kabang	23.90	9.10	1.29	5.00	40.00
GDSS Mubi (ii)	36.70	12.60	1.78	15.00	65.00

The result presented in Table 1 shows the mean and standard deviation of the pre-test mean scores of the students taught agricultural science in secondary schools in Mubi Zone. It shows that the mean score ranged from 36.70±12.60, which was the highest in GDSS Mubi (two, to GDSS Kabang having the least mean score of 23.90±9.10. A closer look at the mean scores of all the schools in the pre-test in comparison with their respective maximum scores is an indication that most of the schools performed below average in the pre-test. Only GDSS Mubi (ii), which had a maximum mean of 65. This could be due to a lack of interest in the subject by some students.

Table 2: The Mean and Standard Deviation of the Post-test Mean Scores of Students Taught Agricultural Science in Secondary Schools.

Schools	Mean	SD	Mean SE	Minimum	Maximum
GSS Mubi	53.40	10.22	1.45	35.00	75.00
ADSU Staff Sch	64.40	17.86	2.53	40.00	95.00
GDSS Kabang	60.10	18.58	2.63	20.00	95.00
GDSS Mubi (ii)	59.00	15.97	2.26	30.00	95.00

The result presented in table 2 shows the post-test mean scores of the students taught Agricultural Science in the Secondary Schools in Mubi Educational Zone, Adamawa State. It was revealed that ADSU Staff Sch. has the highest mean score with a corresponding standard deviation of 53.40±10.22, followed by GDSS Mubi two with a mean and standard deviation of 60.10±18.58. The mean scores of schools in the table further illustrated that GDSS has the mean score of 59.00±15.97 and GSS Mubi is the least in the ordering with a mean score of 53.40±10.22. The result further shows that ADSU Staff Sch., GDSS Mubi two, and GDSS Kabang have the students with the highest post-test scores of 95% among the students taught agricultural science in the secondary schools in Mubi Educational Zone.

Table 3: Independent t-Test Statistics of Student's Pre-test Scores in the Experimental and Conventional Groups.

Groups	N	Mean	Mean difference	SD	Df	T	Sig. (2-tailed)
Experimental	100	23.45	1.03	6.91	198	1.14	0.10
Conventional	100	22.42		5.84			

Not significant; P>0.05

The descriptive analysis of the pre-test scores of the students in the research and conventional groups at the start of the study is displayed in Table 3. According to the

descriptive analysis, there was little difference in the mean scores of the students in the two groups, suggesting that the experimental and conventional groups performed equally well on the pre-test, that is, there was no significant difference in the pre-test mean scores of the experimental and conventional groups at pre-test level. The result shows that the experimental group had a mean score of 23.45 and the conventional group had a mean score of 22.42 with a mean difference of 1.03. The result of the independent t-Test, which is the result of the comparison of mean achievement scores of students in the experimental and conventional groups, shows that there was no statistical difference in the academic achievement of students in the agricultural science achievement test at the pre-test level ($P < 0.05$) hence, we accept the null hypothesis. This implies that both the students in the experimental and conventional groups had adequate entry behaviour prior to the administration of the treatment.

Table 4: Independent t-Test Statistics of Student's Post-test Scores Based on their Study Group

Groups	N	Mean	Mean difference	SD	Df	T	Sig. (2-tailed)
Experimental	100	59.30	10.15	14.92	198	10.30	0.000
Conventional	100	49.15		10.92			

Significant at $P < 0.05$.

The results presented in Table 4 found that students in the experimental group, taught agricultural science using audiovisual methods, achieved a mean score of 69.30, significantly higher than the conventional group's mean score of 49.15. The mean difference of 10.15 indicates a statistically significant advantage for the audiovisual approach ($P < 0.05$). This suggests that integrating audiovisual instructional materials enhances student performance in agricultural science. Consequently, the null hypothesis, which posited no difference in academic achievement between the two teaching methods, is rejected.

Table 5: Independent t-Test Statistics of Student's Post-test Scores Using Experimental Approach

Gender	N	Mean	Mean difference	SD	Df	T	Sig. (2-tailed)
Male	60	75.50	20.87	11.00	98	10.30	0.000
Female	40	54.63		8.04			

Significant at $P < 0.05$

The result presented in Table 5 shows the summary of the post-test scores for agricultural science taught using an audiovisual teaching approach. It was revealed that males were 60 and females were 40. The descriptive statistics revealed that male students gained the highest mean score of 75.50, while the female mean score was 54.63, and the mean difference of 20.87 was recorded. The result of the independent sample t-Test statistics analysed shows that there is a high significant difference in the mean scores of male and female students taught agricultural science using an audiovisual teaching approach ($P < 0.05$). Therefore, it was concluded that, there was a significant difference in the mean scores of male and female students taught agricultural science using audiovisuals. Hence,

the null hypothesis is rejected. This result indicates that the gender of the student can influence their academic achievement simply because some parents have less interest in girl child education.

Discussion

The study found no significant difference in academic achievement between conventional and experimental students in agricultural science tests, indicating equal entry behavior before treatment. This aligns with Karadeniz and Akpinar's (2015) findings, which showed no significant differences at $P < 0.05$.

The study found a statistical difference in the mean scores of students taught agricultural science using audiovisuals and conventional methods in secondary schools in Mubi Educational Zone, Adamawa State. This study was in line with Samreen, et al., (2012) who observed that “the use of audiovisual aids brought positive and constructive change in the learning achievements of students”, John, Musa and Waziri, (2018) found out that, “statistically significant differences exist between the conventional and experimental groups in post academic achievement test in favor of the experimental group”.

The study found a significant difference in mean scores between male and female secondary school students taught agricultural science using audiovisual approach method. Male students had better academic achievement than female students, indicating a gender-specific difference in the experimental group. This study was contrary to the findings of kumar, jaafar, and Yahaya, (2016) who reported that “there was no significant difference between gender and all learning outcomes and the results were similar for high and low CGPA group but overall, male students were more motivated than female students to use the Multimedia Learning Environment (MLE) irrespective of design type”.

The result on the third hypothesis disclose that there was significant difference in the mean scores of students that are taught agricultural science using audiovisual teaching approach based on gender and the male performed better than the female in the conventional group in the secondary schools in Mubi Educational Zone, Adamawa State.

Conclusion

This research confirms that audio-visual technologies can significantly enhance student engagement and academic achievement in Agricultural Science. The effective use of these materials transforms teaching methods, fostering an interactive learning environment that benefits all students.

Recommendations

1. Teacher Training: Implement professional development programs focused on the use of audio-visual aids.

2. Early Integration: Encourage the use of audio-visual aids from early education stages to foster familiarity and engagement.
3. Curriculum Development: Introduce audio-visual methods into the curriculum to enhance learning experiences.
4. Resource Allocation: Governments should invest in equipping schools with necessary audio-visual instructional materials.

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Communication Process in Teaching and Learning in the Classroom

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Abstract

Communication is central and indispensable in the classroom teaching and learning process. It is a very important component of the teaching and learning, without which it would be impossible to teach or learn. Classroom communication is positive, purposive and pragmatic in nature, it is a systematic and planned activity to share information and knowledge in educational institutions. In school system, some students may fail to cope academically because of ineffective communication in the classrooms. Learning in classrooms occurs through interpersonal communication between teachers among students. Teacher in the classroom requires communication skills to deliver content of learning that could lead to the attainment of educational aims and objectives. This paper discussed concept of teaching, learning and communication process in the classroom. The channels and styles of communication, nonverbal, visual communication, communication and classroom teaching skills. Communication barriers in class room and possible solutions. It was concluded that teachers should therefore try as much as possible to reduce communication barriers' by enabling student to link various information from different sources to the same content being taught will enhance good understanding and ensure attainment of the goals of teaching- learning in schools in Nigeria.

Keywords: Communication, Interpersonal, Skills, Classroom, Teaching/Learning

Introduction

Communication has been an important aspect of human daily living. Its place is so central formal organization in every society. Its importance is now heightened by the fact that the whole world is now a global village due to the development of modern technology. Incidences suggest that larger percentage of crisis in any organization as well as class room, result from breakdown in communication. Teaching is any activities capable of influencing and bringing about changes of behaviour of another person. Teaching process is a two way process and chain of activities where teachers instruct the learners in or outside the classroom and the learner is expected to responds. Teaching and learning as a three-way communication process involves active participation and interaction between the teacher, students, and content. The teacher facilitates understanding by presenting information effectively, while students engage through listening, questioning, and discussing Mark 2023.

There are several processes involved in teaching and learning process which range from teaching methods and approaches. Teachers know education is a two-way process so

learners cannot be treated as an empty vessels waiting to be filled with knowledge, rather they need to be challenged. Jonathan, (2023)

Interpersonal communication is effective communication between teachers and students. educators communicating with students need to pay attention to different ways of learning for each individual, serving students differently according to their needs, interests and interests and conveying ideas freely and directly so as to create a pleasant learning atmosphere, communicative and effective learning. ((Rohana, 2024)

This implies that every individual is a teacher and we all are involved in the business of teaching both formally and informally must involve more than two persons. Communication in teaching and learning process between the sender, who holds the role of the teacher or university professor, and the receiver, who represents the students to achieve this it is important to find a relationship between educational technologies and educational communication and knowledge of all the foundations, elements, and theories related to educational communication.

Since the purpose of teaching is to effects changes in human behaviour, then the direction of the changes depends on the objective and goals of the instructions. Effective communication in education helps create a conducive learning environment and improves student understanding and learning outcomes. Teachers who apply good communication strategies can achieve educational

goals more effectively (Mahdi 2023) communication in classroom is considered group communication because it involves many students, if students actively participate, communication can become two-way or dialogue, where both teacher and learners act as communicators. Students need to realize the importance of their role in this learning process and be active, responsive, ask questions, and participate in discussions. If students listen without contributing, communication will be one-way and less effective.

Learning is the change in behaviour resulting from experience, listening and following instruction which must be permanent. ([Kendra Cherry](#) 2025) Teaching and learning is a multi-dimensional process of activities which complex interactions between the various elements of education. Teaching has made a man to known what was unknown in or der to face the reality of his environment, hence a teachers has to employ various devices in the process of teaching another.

Communication, it is also a communication that occurs between two or more parties to exchange information and send and receive different data to achieve a specific and clear goal. (Rise vision 2023) Where the source of the information is the teacher, the student receives that information. In order for this communication to take place correctly, a response must occur between the two parties. And this is a prerequisite for it to be correct for us to say that communication has taken place in teaching and learning process, there must be

1. Thinking
2. Problem solving
3. Physical expression
4. Understanding and application
5. Demonstration

All these express responses that demonstrate that the student has received specific information and has shown an appropriate response.

Communication in the classroom

Classroom communication is the interaction between teachers and learners and between learners and learners. Communication is key in the classroom: successful teaching is generally considered to require only 50% knowledge to 50% communication skills. As a result, a teacher should be proficient in all four modes of communication – listening, speaking, reading, and writing – and should know how to utilize this proficiency effectively in a school environment. (Sward, 2020). Classroom discourse refers to the language that teachers and students use to communicate with each other in the classroom. Talking, or conversation, is the medium through which most teaching takes place, so the study of classroom discourse is the study of the process of face-to-face classroom teaching. It is generally claimed to form an isolated discourse domain. Teachers and students construct an understanding of their roles and relationships, and the expectations for their involvement in the classroom. To be successful, students must develop the communicative competence.

Communication in the classroom involves the teacher and the learner who share common meanings and experiences of the environment. To be able to communicate effectively the content of the subject matter must be encoded in verbal or symbolic form. This can be transmitted through media and the receiver who is the learner must receive the message and decode and interpret it for understanding. Communication within the classroom is important in order for students to learn effectively and should be put in place from an early stage of learning. Classroom communication is different from group communication because it serves a unique purpose that combines: content delivery, procedures, or behaviour control (Open textbook cc. 2016).

Content Delivery focuses on *what* is to be learned, it describes the material to be delivered and for example, when a teacher explains or elaborates on a concept of new knowledge, it refers to the content (Zoe, S. Gill, C. 2022). Usually content relates to the curriculum and current learning objectives.

Procedure refers to the administrative routines needed to accomplish tasks in teaching and learning in a classroom. It provides information about how students coordinate their

activities in the classroom. Procedures in classroom is to correct unwanted behaviour in the classroom and the school environment in general. (Allison teacher's course.docx 2024). Administrative procedures provide the guidance that students need to coordinate with the teachers as well as the students.

Correcting Misbehaviors. Most times correcting misbehaviours originates from the teacher, but students sometimes engage in it with each other as well as the teacher. One student may look at a nearby classmate and whisper, the teacher may attempt to silence the behavior. Or a student may respond to being teased by a classmate by saying simply, "Stop it!" Whether originating from the teacher or a student, correction of misbehaviours may not totally be effective in the classroom. The purpose is to influence or control inappropriate behaviour, hence it is obviously important for managing class effectively. The goal of the classroom is to keep the focus on learning, while maintaining discipline physically and emotionally for all. To achieve this, teachers should respond to misbehavior by

- Stopping the misbehavior and reestablish positive behaviour as quickly as possible
- Maintain learners' dignity
- Develop learners' self-control and self-regulation skills
- Demonstrate that rules the classroom safe

In classrooms where teachers use this approach, learners respond quickly and respectfully when there is misbehavior. Teachers must address minor problems before such behavior gets out of control. Children are held accountable for their behavior, with teachers guiding their learning so they can make better choices next time. (Responsive classroom 2024)

Many class activities are patterned in such a way that guide class members to learn without being reminded. A Teacher, for example, has a particular participation structure of teaching, or exposing students to the content or materials while, students are responsible for listening and asking questions or comments when called on. The teacher, on the other hand, has the responsibility to teach at length depending on the duration of the lesson. The following is are class activities according to Andrew Jocuns (2012).

1. Lecturing
2. Questions and answers
3. Discussion
4. Group work

Each of these influences how communication process in the class room among teachers and students. Classroom communication exists in three categories: verbal, nonverbal, and written.

Verbal communication refers to as oral communication implies communication through vocal sound in oral in form and are accompanied by auditory signals produced by a vibrating organ, such as the larynx in mammals' throats (Akhigbe, 2024). The vocal communication is the process through which teachers express the nonverbal components of their speech to verbal form during classroom lesson, through speeches, presentations, demonstration and discussions. Technically, written words are considered verbal forms of communication because written information can be read out. to learners using vocal sound.

Non-verbal communication entails conveying information, ideas or messages through visual elements, such as body language, images, charts, diagrams, videos, and may others (Akhigbe, 2024). Non-verbal communication has a role to play in education, such as teaching and demonstration using diagram, videos chats and may others. This is very relevant in engineering, advertising and so on. Having a good baseline of visual communication skills is very important, as it can be one of the most effective forms of communication for keeping people engaged and helping them retain new information in graphic and in pictorial form. For example, if a teacher is nodding their head while a student is speaking, this can be encouraging or show that they agree with the student. Non-verbal communication refers to any communication between two or more people that involves the use of facial expressions, hand motions, body language, postures, and gestures. These non-vocal cues can provide insights, supplementary information and significance in addition to spoken communication in teaching and learning process

Written communication in the classroom refers to the exchange of information or subject content through written text. It's an essential component of **Communication** encompassing everything from assignments and emails to interactive digital platforms. This form of communication disseminates knowledge and plays a critical role in evaluating student understanding and progress. Effective written communication skills are crucial for success in various class room settings, each highlighting a specific aspect of written communication from *academic report writing* to *interactive whiteboard usage*. The following are areas where written communication is used in the class room: Lab Reports, The use of Whiteboards, Group Projects, Research Assignments and Creative Writing/ Essays. Written communication is the sending or receiving information in written forms. For example, a teacher may arrange a written assignment for students to test their knowledge or present lecture slides or notes for complicated information.

Teachers may propose several different classification schemes of communication, which are organized in a hierarchical order or in a multidimensional space following a set of levels of representation that are potentially related

1. Teacher - Student

2. Students - Students
3. Small peer group
4. Teacher — All Classroom Students
5. All students of the classroom

Visual communication is the use of graphics images, videos to represent information. Visual communication is mainly used to add better meaning and understanding to the information communicated. Individuals use visual communications to help them depict emotions in the audience, thus making the communication more relatable. Videos form of visual communication is popular and assists in relaying information about a new idea concerning a company new product, a video can tell the company's stakeholders about it (Study.com 2025) Visual communication has a role to play in teaching and learning process. Having a good baseline of visual communication skills is important, as it is one of the most effective forms of communication for keeping learners engage on new content with the help of graphics, info graphic, chart, maps, pictures, gifs and animations.

Teacher/Class Communication. Teacher/class communication exists when a teacher communicates with his entire class. Verbal communication exists when a teacher tells students information they need to know. For example, if a teacher asks a student to "stop talking," this is a direct form of verbal communication. There are ways for teachers to communicate nonverbally with their classes, such as through their posture, gesticulations and proximity to the students. Instead of telling a student to stop talking, a teacher could use nonverbal communication by moving toward the disruptive student's desk. Not only does the disruptive student receive the message, but other students in the class who observe the intervention receive it as well. Written instructions for an assignment are given from the teacher for the whole class

Teacher/Student Communication. Teacher/student communication occurs when a teacher interacts directly with a particular student. Since a teacher interacts with her students mostly in front of the whole class, it can be difficult to distinguish teacher/student communication from teacher/class communication. Teacher/student communication requires that the teacher act one-on-one with a student, such as in a conference during class activities, before or after class or after school. This type of communication is effective for teachers who want to communicate a private message, such as a talk about constant inappropriate behavior or about taking more of a leadership role in class.

Student/Teacher Communication. Student/teacher communication is also direct communication between a student and the teacher, but this time it is the student who initiates the conversation. Also, this can occur during whole-class participation. For example, a student who asks a teacher a question during class discussion engages in

student/teacher communication because it is a single student communicating with a single teacher. The reason the reverse situation constitutes teacher/class communication and not teacher/student is that the teacher's actions and messages are directed toward the whole class while the student's questions here are only directed at the teacher. When students write emails to their teacher on graded assignments, this constitutes a written form of student/teacher communication

Student/Student Communication. Student/student communication occurs when two or more students interact with one another. Successful whole-class discussion stimulates student/student communication because students should talk to each other and not just to the teacher. Two students may disagree and talk back and forth to each other during such discussions. Student/student communication also occurs when students work in groups or pairs to complete assignments.

Student/Class Communication. Student/class communication exists when a student or group of students direct their information to the entire class. Whole-class discussion can also stimulate this type of communication. For example, if a student asks the class a question during a discussion, the student's message is directed at the entire class. Individual or group presentations also constitute student/class communication, and it is this type of communication about which students feel most nervous or self-conscious.

Types of Classroom Interaction

1. Collaborative learning Interaction
2. Discussion And Debate Interaction
3. Interactive Session Interaction
4. Conversation With Learners Interaction
5. Loud Reading Interaction
6. Story Telling Interaction
7. Role-play Interaction

Nature of Classroom Communication

1. Power belongs to both teachers and students.
2. Teacher and student bring their own agenda to the classroom.
3. Human interaction creates a context in which further interaction occurs.
4. Some of the resources teachers and students use as they built a of structure relationship.

Significance of Communication in the Classroom

According to Everstudy Classes (2025), the significance of communication in the classroom is that:

1. It brings clarity and distinctiveness in the speech.
2. During interaction teachers have the scope to identify the talent, intelligence and excellence of the learners.
3. Learners can be prompted to think and do something new in subject area.
4. It provides learners the scope of speaking and probing into his/her subjects.
5. Learners-can-acquaint-themselves with the—new—topics—of interactions.

Classroom Communication

Classroom communication is the type of discourse in form of narration (stories), exposition, persuasion, demonstration, instruction etc. According Shah (2021) posited that a typical process of communication in the classroom includes the following five distinct stages:

1. Formulation of message
2. Message encoding
3. Message transmission
4. Message decoding and interpretation
5. Feedback and evaluation

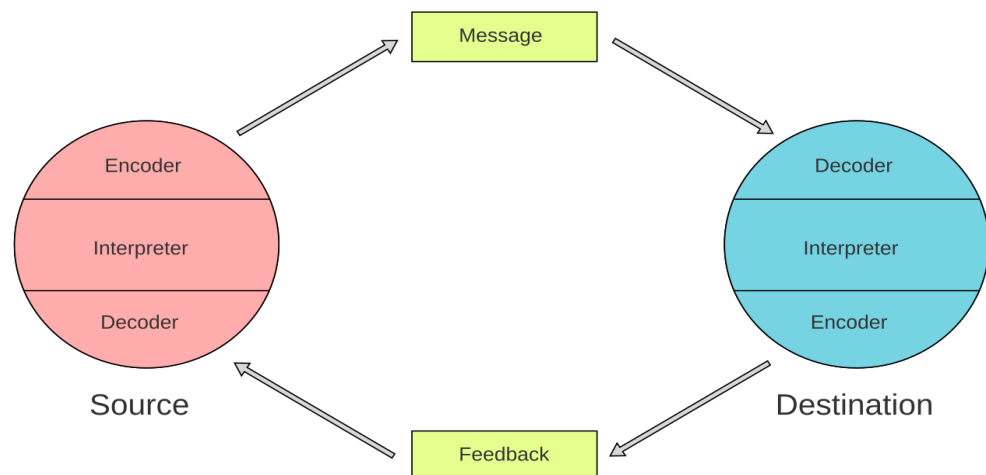


Figure 1: Schramm's model https://en.wikipedia.org/wiki/Schramm%27s_model_of_communication

Schramm's model of communication was proposed by Wilbur Schramm in 1954 it is one of the earliest interactive models of communication. It holds the view that communication occurs in a circular way, which implies that both the sender and the receiver exchange roles and participate equally in communication in the same environment and are subject to the same experience. This differentiates it from other models, which view communication as linear. Communication in teaching and learning involves elements such as the sender, the message, the medium or channel and the receiver in the classroom environment, where both the receiver and sender are subject to the same experiences. The sender in the teaching and learning situation encode, decode and interprets responses from the learners while in the same way, the receiver decode message from the sender, interprets and encode responses as feedback to the sender.

Classroom communication is mainly on the message and feedback, as the main focus of the teaching and learning situation. The purpose of classroom communication it to educate others: through communication, the teacher is able to pass information or instruction to the learner, which help to educate inform and transform the learned. As indicated by Kumar (2021) and Everstudy Classes (2025), communication during teaching and learning focus on the following:

1. Content of the subject matter
2. The goal of the communication should be clearly and specifically stated
3. Receiving reactions and a response from the receiver or learners
4. Instilling the motives of the content for all parties to understand.
5. The knowledge of the teacher about the content and subject matter
6. Language used by the teacher during interaction
7. Teachers teaching methodology and style
8. Teaching learning material and teaching aids
9. Physical and social environment of the class room
10. Teachers' communication skills (gestures/ body language etc)
11. Teacher and students' relationship.
12. The use of technologies

When teachers observe the factors above it means teaching and learning will be successful and the success will depend directly on communication skills, without having a good communication the teacher cannot interact positively with students.

Another relevant model to classroom communication is the interactive model. The interaction model of communication includes physical and psychological contexts. The physical context refers to the environmental factors like temperature, layout, size and lighting of a place and how it has an impact on the communication.

The psychological context refers to the emotional and mental factors like anxiety and stress in the interactive communication process. For instance, a student is set to appear in his final examinations and he comes to know that his father is ill, this will have an impact on his emotional and mental state that can lead to anxiety and stress. Thus, he will not be able to utilize his full potential and write his examination paper properly. In both examples, the physical and psychological contexts have created an impact on communication. Examples of the interactive models of communication include:

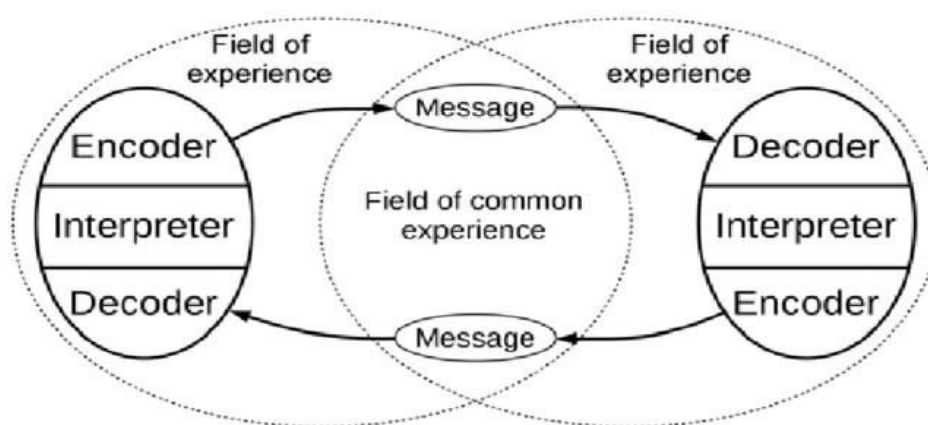


Figure 2: The Interactive Model: Adoted from Adoted from https://www.researchgate.net/publication/311739283_A_Multimodal_Nonverbal_Human-Robot_Communication_System/figures?lo=1

The interactive model is also regarded as Osgood –Schramm model because it was developed by the two of them (Wilbur Schramm and Charles Osgood) in 1950. It is a combination of the linear model and the cyclic model which emphasize that communication is continuous and dynamic and interactive rather than pone way process. Important components of the Interactive model for communication are as follows-

Encoder-Source-Decoder: In this component of interactive communication, the source is the person who originally sends the message and the encoder and decoder is the same source or person. The second source is also referred to as encoder and decoder. The source while sending a message will act as an encoder and while receiving it will act as a decoder. The second source in communication will decode the message and again originate another message. It will then encode it and transmit it to the first source. It is the source who is referred to as encoder and decoder when encoding and decoding take place.

Message: The information that is sent and received in the interactive communication process is referred to as message

Feedback: After the decoder receives the first message he/ she will responds to the message which form a second message and known as feedback.

Field of Experience. The field of experience in the interactive communication process refers to the knowledge and experience that the sources already has. It has a direct impact on the way the message is formed and how it is interpreted. An example will be how the behaviour, values, psychology and culture will affect a person's interpretation of the actual message.

Barriers to Communication in Teaching and Learning Process

1. Using the same old traditional methods without taking into account individual differences among the learners.
2. The inability to control the student's attention and focus, and mind wandering most of the time of educational communication
3. The presence of the student and the teacher in a study environment that is not equipped with the necessary tools to facilitate communication process.
4. Semantics: Semantics refer to messages that are unclear, ambiguous, or lacking necessary context that can lead to misunderstandings and misinterpretations such as the concept of subject-verb agreement and gender pronouns.
5. Information Overload: Excessive information can overwhelm learners and make it challenging to prioritize essential information in regard to a content. It can led to decreased attention to retain information due to too many assignments, engagements and notifications.
6. Denotation and Connotation: Confusion may arise from the use of language by a teacher from different educational levels, culture, and dialect. Some words may have a certain connotation for a group of persons that is not shared, for instance "That's sick!" could be a compliment or an insult, depending on the listener.
7. Emotional Disconnects: Emotional factors such as stress, hunger, anxiety, frustration, or conflict can hinder listening skills, and it can result in cloud judgment.
8. Credibility of the teacher: In academics, the validity of learning depends on the reputation of the teacher/the instructor. If learners do not trust the capability of the teacher, they will view the teaching and learning process with skepticism and suspicion.

How to communicate effectively in Teaching and learning process

There are different skills and approaches that make Communication in Teaching and Learning Process more valuable, they are:

1. Teachers should focus on the tools used to communicate in the classroom, innovate in them, and also use modern technologies.
2. Teachers must be able to make clear the content and goal of the curriculum and focus on it, when delivery lecture.
3. Taking into consideration individual differences among learners or students in terms of behavior, culture and social life is very crucial for classroom communication.
4. Finding distinctive tools and methods to attract learners' attention and arouse their interest is also very important.
5. Choosing a suitable place that is free from noise that may enhance students' concentration.
6. Teaching the student how to search and obtain information is important because information is constantly evolving.
7. Enabling the student to link various pieces of information from different sources to the same topic is essential.
8. Courses and textbooks are not the only source of knowledge, there are many ways, including e-mail, social media, discussions and debates, online research, and browsing trusted blogs.
9. The learner's skills and ability to link different fields and ideas are what develops education and enriches educational communication.

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Unlocking the Potential of E-Learning in Zamfara State: A Study on Awareness, Access, and Utilization Among Upper Basic and Senior School Teachers

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Abstract

The study conducted in Zamfara State, Nigeria, assesses the awareness, accessibility, and utilization of e-learning facilities among upper-basic and senior school-teachers. A descriptive research design was adopted for the study. A sample size of 356 teachers from 15 public schools in Bukkuyum, Bungudu, and Zurmi LGAs participated in the research. The instrument used for data collection was a researchers'-designed questionnaire focusing on "Awareness, Availability, Accessibility, Usability, and Challenges of E-learning Facilities for Teaching." This questionnaire demonstrated psychometric properties of content validity and a reliability index of 0.84. Data was collected through self-administration with the assistance of five research assistants. Results and Discussion: The findings revealed that a significant percentage of teachers were unaware of available e-learning facilities, facing challenges related to internet connectivity, technical support, electricity supply, affordability of tools, and digital literacy. Conclusion: This study underscores the need for increased awareness, training, and infrastructure improvement to enhance the effective integration of e-learning in educational practices in Zamfara State.

Keywords: E-learning, Availability, Awareness, Challenges, Accessibility and Utilizability

Introduction

Technology is significant in education and training globally, enhancing both teaching and learning. The incorporation of Information and Communication Technology (ICT) into educational delivery has introduced e-learning, transforming the traditional teacher-centered approach into a more learner-centered model (Evarest & Laura, 2011). E-learning, increasingly popular in tertiary institutions worldwide, leverages ICT to support and enhance teaching, learning, and research. ICT has created a dynamic environment for interactive learning, replacing basic teaching aids with advanced technological tools (Saheed et al., 2019). Despite several programs promoting the use of IT in Nigerian Higher Education Institutions (HEIs), the adoption of IT innovations like e-service has only recently begun transforming these institutions from traditional methods to more contemporary approaches (Al-Gahtani, 2016).

E-learning involves IT-based innovations that offer alternative and innovative learning methodologies compared to conventional methods. These technologies include

systematic feedback systems, computer-based networks, video and audio conferencing, internet websites, and computer-assisted instruction, significantly expanding the possibilities for lifelong learning (Ajayi, 2008). Both lecturers and students are particularly enthusiastic about e-learning's potential for just-in-time learning delivery. The application of ICT in education has introduced new terminologies such as e-teaching and e-learning, facilitated via the internet. E-learning, or electronic learning, involves teaching and learning using computers and the Internet. This method includes sending structured instructional materials electronically from instructors to learners and receiving assignments electronically for feedback (Erah, 2006). E-learning enhances learning by providing flexible access to educational resources and fostering greater interaction between teachers and students.

For successful e-learning implementation, it is essential to assess an organization's readiness, including the willingness of students, teachers, administrative staff, and developers to adopt e-learning facilities. Countries must ensure "e-readiness" regarding ICT amenities and regulatory frameworks to support e-learning (CIPESA, 2023). Educators and researchers believe that e-learning can revolutionize education by providing more access to information and communication, ultimately improving education quality and reducing costs. The demand for e-learning is high among teachers and students due to its cost-effectiveness, flexibility, elimination of distance barriers, and support for diverse learning needs (Gold, 2001). The rapid growth of e-learning is influenced by the high demand and supply of e-learning products and channels (Okoro, 2008). However, the uptake of e-learning technologies in many institutions remains slow, particularly in developing countries like Nigeria, where the pace of development and utilization is low compared to developed countries.

The quality of teaching and learning in Nigerian secondary schools has faced significant disruptions, notably due to the COVID-19 pandemic, which necessitated global lockdowns to curb the virus's spread. These disruptions threaten the objectives of the secondary school curriculum. However, technology can alleviate the adverse effects of these disruptions. Technology has transformed the world into a global village (Oluwalola & Awodiji, 2019) and has provided instructional materials that ease the stress of achieving educational objectives. Educational technology involves analyzing, designing, developing, implementing, and evaluating instructional environments, learning materials, learners, and the learning process to improve education.

Instructional materials assist in classroom teaching, reducing the need for repetitive explanations and easing the struggles of teachers and students. Technology offers various opportunities to overcome physical disruptions in education. Halim et al. (2020) argue that the development of education is intertwined with advancements in science and technology. Akanbi and Akanbi, (2012) adds that technology enhances teaching and learning inside and outside school premises. This advantage over traditional face-to-face teaching, which can be disrupted by strikes, natural disasters, and pandemics, makes technology a vital educational tool.

Computer-Assisted Instruction (CAI), an integral part of educational technology, exemplifies how technology facilitates development and innovation. Ramma et al. (2018) emphasize that technology in education serves as an information source rather than just a knowledge-construction process. Fully leveraging technological products can enhance teaching and learning outcomes. Kopish and Marques (2020) highlight that technology enables collaborative work between institutions in different countries and allows learners to take an active role through various instructional modes.

For e-learning to succeed, it is crucial to assess the readiness of stakeholders, including students, teachers, administrative staff, and e-learning developers. A country must be "e-ready" regarding ICT amenities and accessibility, supported by an appropriate legal and regulatory framework. Educators and researchers hope that e-learning will revolutionize education by providing greater access to information and communication. E-learning technologies can transform how and when learners engage with educational content. These technologies include systematic feedback systems, computer-based networks, video and audio conferencing, internet websites, and computer-assisted instruction (Ajayi, 2008). Such methods enhance lifelong learning opportunities and are increasingly popular in tertiary institutions for tutoring, course management, simulations, and problem-solving. The growth of e-learning is driven by its suitability for simulation and experiential learning via the Internet and computer applications. The internet offers free, practical exercises applicable in education.

For institutions to adopt e-learning effectively, they must provide adequate and reliable technical infrastructure (Pirani, 2004). E-learning can be defined as sharing and storing knowledge through interaction, updated as needed, and delivered via the internet. E-learning creates an engaging learning environment, allowing students to learn at their own pace and review material as needed. It also enhances teacher-student interaction, fostering conversations and questions. Interactive interfaces and engaging course content significantly increase students' motivation and participation.

E-learning technology is highly sought after by educators for its cost-effectiveness, flexible access, elimination of distance barriers for globally distributed learners, just-in-time training, and support for alternative pedagogies like simulation, experiential learning, interactivity, and self-paced learning. Gold (2001) noted that e-learning technologies are available across all functional areas of education, with the primary limitation being the creativity of teachers in utilizing these tools. The rapid growth in e-learning is driven by high demand and the availability of e-learning products and channels. Okoro (2008) highlighted that students' learning can be significantly enhanced through the use of e-learning technologies. However, the Organization for Economic Co-operation and Development (OECD, 2005) observed that the adoption of e-learning technology has been slow in many educational institutions. According to Nwagbo and Ugwuanyi (2011), the development and utilization of e-learning technologies in developing countries like Nigeria lag behind those in developed countries.

In the 21st century, awareness of available e-learning facilities for effective instruction is crucial. Some teachers may not fully realize the e-learning tools at their disposal, posing a challenge. Previous studies (Okorieocha & Eronini, 2016) have focused on the availability and use of e-learning facilities, primarily at the secondary and primary school levels. The availability and utilization of e-learning facilities in Nigerian secondary schools must be assessed to determine their impact on knowledge delivery. Ngwu (2014) reported that most ICT facilities are not adequately available in schools. This scarcity hinders teachers, even when trained, from effectively using these technologies. Research also reveals a low extent of ICT utilization in schools. E-learning aims to transform traditional curriculum implementation methods to foster behavioral changes in learners. Studies (Owulu, 2016) have found that secondary schools often face issues with the availability, adequacy, or effective utilization of e-learning facilities.

The rapid advancements in information and communication technology have significantly impacted education, shifting it from teacher-centered to student-centered learning, which can occur independently of physical environments. ICT has made teaching and learning more interactive and even virtual. Despite these advancements, several factors hinder the effective utilization of ICT in education across different countries. Mungai (2010) identified obstacles such as a lack of qualified teachers, unreliable electricity, inadequate computers, high procurement costs, computer breakdowns, computer phobia, and increased moral degradation through inappropriate internet use. Langat (2015) pointed out barriers like infrastructure shortages, insufficient teachers, lack of a clear digital curriculum, political factors, poor planning and timing, communication barriers, corruption, and high crime rates.

E-learning creates a more engaging learning environment, allowing students to learn at their own pace and review materials as needed. It enhances teacher-student interactions, facilitating conversations and questions (Ong & Quek, 2023). Interactive interfaces and engaging course content significantly boost students' motivation. For example, China's Rain Classroom, an effective online educational platform, has over 19 million registered users since its inception in 2016 (University of Macau, 2018). In Turkey, the Education Information Network (EBA) supports more than 12 million public school students, integrating technology into education and providing an important alternative for online education during local or global disruptions. While e-learning technology offers numerous benefits and has the potential to revolutionize education, its effective implementation requires overcoming significant challenges, including resource availability, infrastructure, stakeholder awareness, readiness and usability.

Problem Statement

Zamfara State, located in Nigeria's North-Western region, is often classified as an educationally disadvantaged area. The state faces significant challenges in educating its citizens, which hinder the effective implementation of both traditional and e-learning education. Successful teaching and learning require collaboration between teachers and

students to achieve curriculum objectives. However, these goals are often obstructed by the lack of essential facilities for both physical and virtual education.

In the 21st century, education has increasingly adopted a blended approach, a shift accelerated by the Covid-19 pandemic, which necessitated virtual teaching and learning. This transition to virtual education requires the use of e-learning facilities by both teachers and students. Communities in Zamfara State, like many others, struggle with this switch, finding it difficult to fully utilize digital educational tools and resources. This study addresses several crucial questions: Are teachers in Zamfara State aware of e-learning facilities? Are these facilities available? If available, are they accessible and usable? What challenges do teachers face in utilizing them? These questions are the main focus of this research.

Research Questions

The following research questions guided this study:

1. What is the Upper basic and senior school teachers' current level of awareness of e-learning facilities for teaching in three local government areas of Zamfara State?
2. Do upper basic and senior school-teachers in three local government areas of Zamfara State have access to e-learning facilities for their teaching?
3. To what extent do upper basic and senior school-teachers in three local government areas of Zamfara State utilize e-learning facilities in their teaching practices?
4. What challenges do upper basic and senior school-teachers in three local government areas of Zamfara State face in accessing e-learning facilities for their teaching?

Methodology

The research design for this research is descriptive research survey type. The population for the study is all the 14 local government areas of Zamfara State and a purposive sampling procedure was used to select three local government areas. This is in line with the study of Sambo (2008) who maintained that research can purposely if the research finds the population meeting its characteristics. The three local government areas are Bukkuyum, Bungudu and Zurmi. These three local governments constituted the target population. There are 32 upper basic and senior public schools in the three local government areas, out of which 15 were sampled using simple sampling techniques. These 15 schools have a total population of 1,531 teachers. Three hundred and six where teachers were sampled in the ratio 183:122 respectively, this was in line with the research advisors (2006).

The instrument used to elicit the data for this study is a Researcher's designed questionnaire with psychometric properties of contents validity and a reliability index of 0.84. The questionnaire is tagged Questionnaire on "Awareness, Availability, Accessibility, Usability and Challenges of E-learning Facilities for Teaching". With 30-items in to three sections to take care of each of the variables of the study.

Self-administration with the help of five research assistants was employed to collect the needed data for the study. A descriptive data analysis procedure was adopted to answer the research questions raised in the study.

Results

The findings of the study were presented in pie charts and table percentages.

Research Question 1: What is the Upper basic and senior school teachers' current level of awareness of e-learning facilities for teaching in three local government areas of Zamfara State?

The findings of the study were presented in pie charts and tables percentages

Research Question 1: What is the Upper basic and senior school teachers' current level of awareness of e-learning facilities for teaching in three local government areas of Zamfara State?

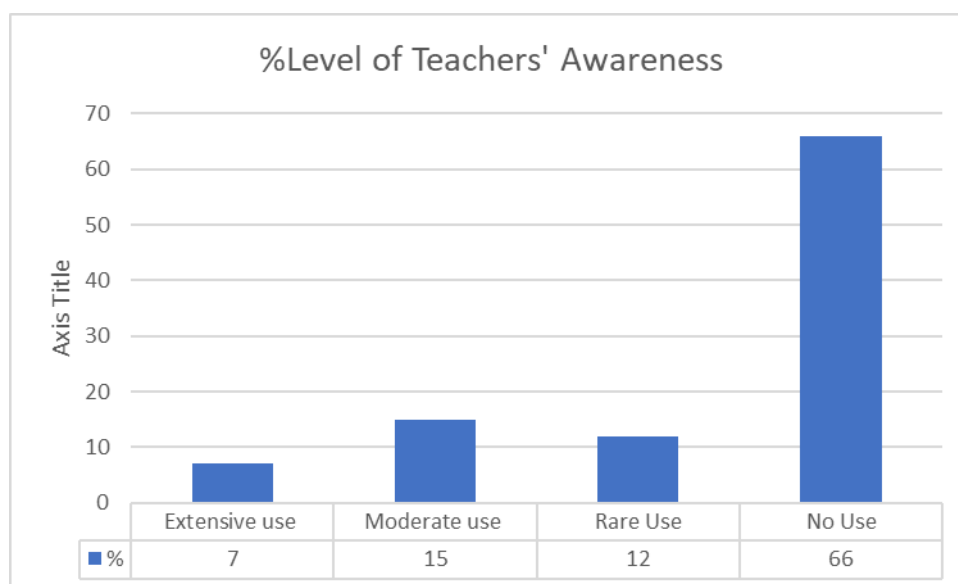


Figure 1: % Level of Teachers' Awareness

Figure 1 shows that most of the 356 teachers in Bukkuyum, Bungudu, and Zurmi are unaware of available e-learning facilities, highlighting a need for increased awareness and training.

Research Question two: How accessible are E-learning facilities to teachers in Bukkuyum, Bungudu and Zurmi, considering factors such as physical availability and connectivity?

Table 1: Percentage table of Accessibility

Accessibility factors	N	VA (%)	A(%)	NA(%)	NAA(%)	Mean	Std.
Physical Availability of Devices	356	40(11)	60 (17)	131 (37)	125 (35)	181.75	58.13
Internet Connectivity	356	32 (9)	68 (19)	140 (39)	116 (33)	182	76.07
Technical Support	356	35 (10)	80 (22)	132 (37)	109 (31)	188.25	75.33
Electricity Supply	356	30 (8)	64 (18)	136 (38)	126 36	177.50	70.94
Affordability of E-learning Tools	356	42 (12)	83 (23)	131(37)	100 (28)	194.75	75.63
Digital Literacy	356	43 (12)	88(25)	118(33)	103(29)	193.75	71.71

Table 1 shows that over half of respondents find e-learning facilities inaccessible due to issues like internet connectivity, technical support, electricity, affordability, and digital literacy.

Research Question three: To what extent do teachers in Bukkuyum, Bungudu and Zurmi utilize E-learning facilities in their teaching practices?

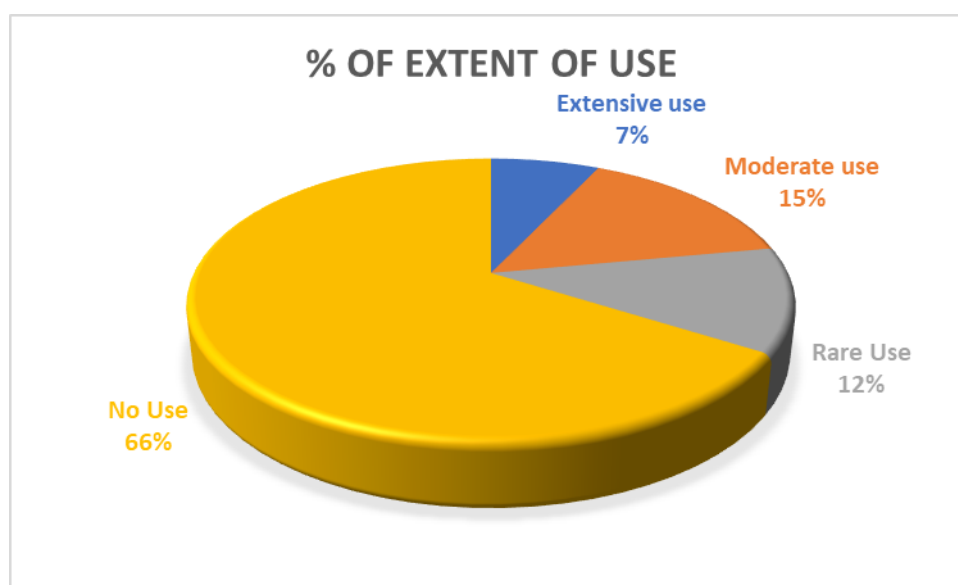


Figure 2: extent of use of E-learning facilities

The pie chart shows that most teachers in Bukkuyum, Bungudu, and Zurmi do not use e-learning facilities, with only a few making extensive or moderate use.

Research question four: What are the main challenges faced by teachers in Bukkuyum, Bungudu and Zurmi in accessing E-learning facilities for their teaching activities?

Table 2: Percentage table of challenges

Challenges	N	Freq. of Agree	%	Freq. of Disagree	%
Frequently face issues with unreliable or	356	290	82%	66	18%

unavailable internet connectivity when trying to use e-learning facilities.					
Inconsistent electricity supply is a significant barrier to my use of e-learning facilities.	356	275	77%	81	23%
There is insufficient technical support available to help me with e-learning tools and resources.	356	265	74%	91	26%
The cost of necessary e-learning tools and devices is a major obstacle for me.	356	280	78%	76	22%
My lack of digital literacy skills hinders my ability to effectively use e-learning facilities.	356	245	69%	111	31%
There are not enough e-learning resources available for my teaching needs.	356	260	73%	96	27%
I receive adequate support from the school administration in using e-learning facilities.	356	186	52%	170	48%
There are sufficient training opportunities available to help me improve my e-learning skills.	356	180	51%	176	49%
My students have difficulty engaging with e-learning activities due to their own lack of access or skills.	356	285	80%	71	20%
The current curriculum does not integrate e-learning effectively, making it challenging to use these facilities.	356	270	76%	86	24%

The table highlights that teacher in the three sampled LGAs of Zamfara State struggle with major challenges such as unreliable internet, inconsistent electricity, insufficient technical support, high costs, and inadequate digital literacy, hindering effective e-learning implementation.

Research Question five: What support mechanisms (training, resources, technical assistance) are provided to teachers in the three sampled LGA to enhance their use of E-learning facilities?

Table 3: Percentage of Support Mechanism

Support Mechanisms for Teachers	N	Availability	Effectiveness
Workshops and professional development courses on using E-learning tools	356	26%	25%
Provision of digital devices (computers, tablets) and internet access	356	2%	--%
On-site and remote technical support for troubleshooting and software use	356	--%	--%
Collaboration and sharing of best practices among teachers	356	2%	--%
Access to digital libraries and online teaching materials	356	--%	--%
Rewards and recognition for integrating E-learning into teaching practices	356	4%	--0%
Availability of reliable electricity and modern classroom technology	356	--%	--%

The table shows that support mechanisms for teachers in the three LGAs are largely ineffective. Workshops and professional development courses have 26% availability and 25% effectiveness, while digital devices, technical support, and collaboration efforts are almost nonexistent. Rewards for integrating e-learning and reliable electricity are also insufficient.

Discussion

The study revealed a significant lack of awareness among teachers in Bukkuyum, Bungudu, and Zurmi about available e-learning facilities, highlighting the critical need for increased awareness and training initiatives. This is supported by Abdullahi et al. (2022), who noted common awareness gaps in rural Nigerian communities due to limited exposure to digital technologies and educational resources. Alhassan and Soykan (2022) also emphasize targeted awareness campaigns and training programs to address these knowledge gaps among educators, advocating for workshops, seminars, and digital literacy initiatives to empower teachers in utilizing e-learning tools effectively and preparing students for a digital-driven future.

Additionally, the study underscored the shortfall in the availability of e-learning facilities for teachers in these areas, pointing to substantial challenges in accessing essential digital resources needed for effective teaching and learning. Abdullahi et al. (2022) highlight the lack of adequate infrastructure in rural Nigeria to support widespread e-learning initiatives, including access to computers, tablets, and reliable internet connectivity. This infrastructure deficit directly contributes to the limited availability of e-learning facilities observed in the study, echoing broader research on educational disparities in developing regions (Edeh, 2023).

The extent of e-learning facility use among secondary school teachers in Zamfara State was also examined, focusing on awareness, access, usability, and challenges. Research indicates varying degrees of e-learning adoption are influenced by factors such as infrastructure, training, and institutional support (Gikandi et al., 2011; Ally, 2020; Ong & Lai, 2019; Jung & Latchem, 2022).

Moreover, the study found profound challenges hindering the effective adoption and usage of digital resources among teachers, including unreliable internet connectivity, inconsistent electricity supply, insufficient technical support, and limited institutional support. These issues underscore the critical need for infrastructure development, resource allocation, and policy support to improve e-learning experiences and create a conducive digital learning environment in Zamfara State.

Addressing these challenges requires a coordinated effort to enhance infrastructure, technical and administrative support, digital literacy among teachers, and access to comprehensive e-learning resources. By investing in these areas, Zamfara State can foster a robust e-learning ecosystem in secondary education, ultimately enhancing educational quality and accessibility in the region and preparing students for a digital future.

Conclusion

Addressing Zamfara State's e-learning challenges demands targeted efforts to enhance infrastructure, digital literacy among teachers, and institutional support. Investments in internet access, digital devices, and technical assistance are crucial. Equally vital are comprehensive training programs to empower educators in utilizing e-learning effectively. Recognizing and rewarding innovation in digital education can further motivate teachers. These initiatives aim to create a supportive environment that fosters educational advancement and prepares students for a digital future, ensuring equitable access to quality education across the region.

Recommendations

Based on this, the following recommendations were made:

- i. Raise teacher's awareness of the existence of different e-learning facilities available for teaching.
- ii. Provide upper basic and senior school-teachers in three local government areas of Zamfara State with adequate access to e-learning facilities for their teaching.
- iii. Provide upper basic and senior school-teachers in three local government areas of Zamfara State with adequate training to be able to utilize the e-learning facilities required for teaching.
- iv. Expand internet infrastructure to improve connectivity for e-learning.
- v. Zamfara State should try to implement mandatory digital literacy training for teachers to enhance their professional development.
- vi. Establish a dedicated technical support system for e-learning tools in public schools in the local government and across the state generally.
- vii. Enhance administrative support and funding for e-learning initiatives.

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Community Based Security and Curbing of Kidnapping in Oke-Ogun, Oyo State, Nigeria

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Abstract

This research explores the impact of community-focused security measures on reducing kidnapping incidents in Oke-Ogun, Oyo State, Nigeria. Kidnapping poses a serious threat to public safety and economic well-being, especially in rural regions like Oke-Ogun, where insufficient security infrastructure and extensive unmonitored areas worsen the situation. Despite various initiatives by law enforcement, instances of kidnapping continue to increase, highlighting the necessity for alternative security strategies. The objective of this research was to evaluate the effectiveness of community-based security in lowering kidnapping rates in the Oke-Ogun region of Oyo State. A descriptive quantitative research design was employed, involving a sample of 126 participants chosen through stratified random sampling from various towns within Oke-Ogun. Data collection was carried out using a structured questionnaire to gauge local perceptions regarding community-based security initiatives, including vigilante groups, neighborhood watch programs, and partnerships with formal security agencies. The data was analyzed utilizing descriptive statistics, including frequency, percentage, and mean values. The study identified the primary factors contributing to kidnapping in Oke-Ogun as weak law enforcement, insufficient security, unemployment, and poverty. Furthermore, it highlighted challenges such as inadequate funding, insufficient training, and poor collaboration with formal security entities. The results indicate that community-based security, when adequately supported and coordinated, has the capacity to significantly decrease the occurrence of kidnappings in Oke-Ogun. The study advocates for strengthening law enforcement presence, enhancing community engagement initiatives, addressing socioeconomic issues like unemployment and poverty, and increasing public awareness regarding security practices.

Keywords: Community, community-based security, security, curbing, kidnapping

Introduction

Nigeria is currently facing a severe surge in kidnapping cases, which is critically affecting both public safety and economic stability (Ngwama, 2014; Punch, 2024). The last few years have seen a significant increase in kidnapping incidents, with 2024 already reporting distressing figures. Statistics indicate that from January to July, at least 2,140 people have been abducted across 24 states, with Zamfara and Kaduna being the most affected, recording 667 and 454 cases, respectively (Punch, 2024). Among the notable events are the mass kidnapping of 287 students in Kaduna State in March and the

abduction of 200 locals during a single incident in Niger State, underscoring the widespread nature of these offenses (Braga, 2024). Additionally, in Oyo State, the abduction of six people, including a traditional leader, along the Oyo-Ibadan Expressway on August 25, 2024, illustrates the growing security issues in the area, reflecting the nationwide rise in kidnappings (Punch, 2024). The financial implications of ransom payments are also staggering. Families reportedly paid around N389 million as ransom in the first seven months of 2024, which includes a payment of N60 million for the release of six sisters in Abuja (Punch, 2024). These statistics highlight the economic and emotional burden on victims and their families. Although the government claims to have improved security measures, the increasing frequency and severity of kidnappings undermine these assertions.

Public perception continues to be doubtful as the crisis worsens, leaving citizens fearful and uncertain. Many now think twice before embarking on early morning trips, and routine travel has become a dangerous endeavor due to the elevated risk of kidnappings. This intensifying crisis disrupts everyday life and stunts economic development, as business activities are interrupted and investors are deterred from regions suffering from insecurity. The current situation demands urgent intervention that combines both state and community initiatives to effectively address this issue. Therefore, this troubling situation highlights the necessity for timely and sustainable solutions, with community-based security emerging as a potential strategy, as suggested by Zubairu (2020). This study aims to investigate the effectiveness of Zubairu's proposed strategy specifically in Oke-Ogun, Oyo State, to assess its impact on reducing kidnappings in the area. Community-based security represents a localized strategy that utilizes community involvement, local expertise, and resources to improve safety and tackle security challenges, including kidnapping (Acha et al., 2023). Research by Abiloye et al. (2024) indicates that crime rates noticeably decline when communities actively engage in their own security, which supports findings from Adefemi (2020) who noted that community vigilante groups in northern Nigeria have greatly reduced kidnapping incidents. This observation aligns with conclusions drawn by Abrahams (2018), who found that community policing in South Africa resulted in a drop in violent crimes, including kidnapping. Relating these findings to the situation in Nigeria, it becomes evident that community-based security shows considerable potential if adequately supported. The key lies in integrating these community efforts with broader national security strategies. Uzochukwu (2022) advocates for policies that encourage cooperation and mutual assistance, stressing the importance of a strong partnership between community groups and law enforcement agencies.

Kidnapping

Kidnapping is generally described as the illegal abduction or confinement of an individual, often for ransom, coercion, or other illicit purposes (Ibrahim and Mukhtar, 2017). While some definitions highlight the financial dimension, others focus on the psychological and physical harm inflicted upon victims. These divergent perspectives

underscore the complexity of the crime, requiring a nuanced understanding before exploring its ramifications (Peter & Osaat, 2021). Over the last ten years, Nigeria has witnessed a marked increase in kidnapping events, particularly involving the abduction of schoolchildren, expatriates, and political figures. Research has indicated that the reasons behind kidnapping vary from insufficient and ineffective law enforcement, political instability, to economic inequality (Okoli & Agada, 2014). The Niger Delta and northern Nigeria are regions where the incidence is notably high, with socio-economic challenges being more apparent. Kidnapping in Nigeria has transitioned from isolated acts to a widespread criminal phenomenon. Initially linked primarily to the Niger Delta, where militants engaged in kidnapping expatriates for ransom to finance their activities and highlight their grievances against the federal government (Ikelegbe, 2005; Aliyu & Lawal, 2020).

Community-based Security

Community-based security encompasses grassroots initiatives, such as neighborhood watch programs and vigilant groups, which have become more prominent due to the constraints faced by formal security agencies. As stated by Aliyu and Lawal (2020), these initiatives offer prompt responses and have played a crucial role in mitigating the risks associated with kidnapping and similar crimes. They further highlighted that these groups are able to act swiftly and effectively because of their familiarity with local areas and social networks. Additionally, the effectiveness of community-based security in regions like the South-East was underscored by Onuoha (2018), who noted that local security measures have led to a marked decrease in kidnapping incidents. Onuoha also points out the significance of local knowledge and the trust community members place in these groups, a trust that is frequently absent in state security organizations. This perspective aligns with Afolabi (2021), who noted that involving community leaders and traditional rulers in security initiatives bolsters the legitimacy and acceptance of these efforts. In northern Nigeria, Chikwendu, Nwankwo, and Oli (2016) reported that vigilante groups have become a vital element of community-based security, as these groups work closely with local police to combat kidnapping and other crimes and engage in regular patrols. Similarly, Gilbert and Ordu (2017) noted the pivotal role of these groups in reducing instances of kidnapping through prompt threat responses and vigilant surveillance, which is enhanced by the involvement of community members who possess deep knowledge of their surroundings.

Otu and Apeh (2022) sought to evaluate the influence of regional policing on crime prevention, specifically examining the efforts of Amotekun in the Oke Ogun and Ibarapa communities of Oyo State. The research employed a descriptive survey approach, collecting data from 139 participants selected randomly from a population of 1,602,979 using Taro Yamane's statistical formula. The results indicated that criminal activities, including kidnappings, significantly impeded socio-economic progress in these areas, leading to issues such as restricted movement, decreased investments, and social instability. Although Amotekun contributed to crime prevention, the study identified

challenges such as community distrust, lack of funding, and inadequate modern equipment. The study suggested increasing funding, acquiring advanced security technologies, and enhancing public awareness of Amotekun's successes to improve its crime-fighting effectiveness. Adewale (2023) investigated the impacts of insecurity on agricultural activities, community mobility, and social cohesion in the Ibarapa North Local Government Area of Oyo State. The study utilized a descriptive survey design, sampling 1,000 residents from a targeted population of 3,000 through random and stratified sampling methods. Findings revealed that insecurity, including kidnapping, had a profound effect on agricultural activities, disrupted community mobility, and contributed to disunity among citizens. The study concluded that insecurity significantly affects community development and recommended collaborative efforts by stakeholders, including government officials and community leaders, through town hall dialogues to tackle security issues and promote unity.

Ojedokun et al. (2023) examined the counter-banditry strategies implemented by communities affected by banditry in Oyo State. The research utilized an exploratory and cross-sectional approach, guided by situational crime prevention theory, and data collection involved in-depth interviews, key informant interviews, and focus group discussions. Findings revealed that although communities had executed various internal and external measures to combat banditry, these actions had only partially alleviated the frequency of kidnappings and related crimes. Despite some degree of success, the study revealed that the challenges persisted, as individuals continued to fall victim to kidnappers, emphasizing the ongoing vulnerability of these communities. Adesola (2019) sought to explore the influence of Geographic Information Systems (GIS) in the management of crime and security in the Ido Local Government Area of Oyo State. The research utilized field surveying techniques, incorporating Hi-target differential GPS and GIS software to pinpoint crime hotspots and evaluate how close police stations were to these locations. The findings indicated that GIS could greatly improve crime management by recognizing patterns and enhancing response times. Nevertheless, even with the efficacy of GIS in security management, the study highlighted the need for further initiatives and more attention from governmental and law enforcement entities to sufficiently tackle crime, including kidnapping, in the area.

Theoretical Framework

This investigation is grounded in Social Capital Theory, which underscores the significance of social networks, trust, and collaboration in promoting collective action within communities. Initially formulated by thinkers like Pierre Bourdieu and subsequently elaborated on by Robert Putnam, Social Capital Theory asserts that communities with elevated levels of trust and robust social connections are better positioned to confront shared challenges, such as security threats. In the setting of community-based security (CBS) efforts in Oke-Ogun, Oyo State, this theory offers a perspective for understanding how local residents can unite to address the escalating risk of kidnapping through mutual resources, cooperation, and vigilance within the

community. The availability of social capital facilitates efficient collaboration among inhabitants, traditional leaders, and local authorities, thereby increasing the efficiency of CBS. Putnam's idea of bonding social capital, depicting how tightly-knit communities utilize strong internal networks to tackle shared issues, corresponds with the operational dynamics of CBS units leveraging local trust and collaboration to combat insecurity at the grassroots level. Empirical data supports the relevance of Social Capital Theory in security initiatives. For example, research by Adefemi (2020) indicates that well-funded and organized community-based security groups demonstrate higher efficacy in areas with strong social capital, as residents are more likely to engage and place trust in each other to safeguard their interests. Furthermore, Eze and Obiora (2022) contend that robust community ties between CBS groups and local law enforcement in certain regions of Northern Nigeria have resulted in notable reductions in crime rates, including kidnapping. This suggests that community-based security initiatives, when bolstered by strong social capital, can serve as an informal yet effective mechanism for crime prevention. Consequently, Social Capital Theory offers an appropriate framework to comprehend how the Oke-Ogun community can utilize internal trust, cooperation, and shared accountability to mitigate kidnapping and improve local security measures.

Statement of the problem

The ongoing increase in kidnapping cases throughout Nigeria has fostered an environment filled with fear, insecurity, and economic stagnation, especially in rural regions such as Oke-Ogun, Oyo State. In spite of the attempts made by law enforcement agencies, these abductions continue to rise, as criminals exploit weak security systems, extensive unmonitored areas, and police units that lack resources (Alemika, 2013; Eze, 2020). Oke-Ogun, which is noted for its agricultural output, is particularly at risk due to its isolated location and dependence on poorly protected transport routes (Oyedokun et al., 2022). Farmers, merchants, and travelers often become targets of kidnappers, resulting in interruptions in farming activities and endangering the livelihoods of local inhabitants. Although community-driven security initiatives have been suggested and enacted in various regions of Nigeria, obstacles such as insufficient funding, inadequate training, and limited collaboration with official security forces frequently hinder their success. This gap raises questions about whether Oke-Ogun's current security arrangements can effectively tackle the kidnapping dilemma. Consequently, it is crucial to implement an improved and well-coordinated community-based security strategy that addresses these issues to ensure the safety and welfare of the people in Oke-Ogun.

Objectives of the Study

The primary aim of this study is to evaluate the effectiveness of community-based security in decreasing kidnapping occurrences in the Oke-Ogun region of Oyo State. The specific objectives are:

1. To evaluate the present situation regarding kidnapping in Oke-Ogun, Oyo State.

2. To identify the main factors that contribute to its prevalence.
3. To assess the efficacy of community-based security measures in thwarting
 1. kidnappings in Oke-Ogun.
4. To examine the views and experiences of community members concerning the effect of these security measures on their safety and welfare.

Research Questions

1. What is the current situation regarding kidnapping in Oke-Ogun, Oyo State?
2. What are the primary factors contributing to the prevalence of kidnapping in Oke-Ogun?
3. How effective are community-based security measures in preventing kidnappings in Oke-Ogun?
4. How do community members perceive and experience the effects of these security measures on their safety and welfare?

Methodology

This research adopted a descriptive quantitative research design to examine the role of community-based security in addressing kidnapping in the Oke-Ogun region of Oyo State, Nigeria. The quantitative method was selected to yield measurable and statistical insights regarding the effectiveness of community-based security initiatives in reducing incidents of kidnapping. The target population comprised residents of Oke-Ogun, including community members, local security personnel, and individuals familiar with the security measures deployed. A sample of 126 participants was chosen through a stratified random sampling method to ensure representation from various towns and demographic segments within the area. This approach facilitated the inclusion of participants from diverse backgrounds, enhancing the generalizability of the results.

Data was gathered using a structured questionnaire named "Community-Based Security and Kidnapping Reduction Questionnaire" (CBSKRQ). This questionnaire was developed to evaluate participants' views on the efficacy of local security measures in deterring kidnapping. It comprised closed-ended questions formatted on a 5-point Likert scale. The questions concentrated on aspects such as the effectiveness of local vigilante groups, cooperation with formal security agencies, and the participation of community members in security initiatives. To confirm the content validity of the instrument, experts in community policing and security studies reviewed the questionnaire. These experts offered feedback regarding the relevance and clarity of the questions, ensuring their alignment with the study's goals. The reliability of the questionnaire was assessed through a pilot study with 30 individuals who were not included in the main research. A

Cronbach's alpha reliability coefficient of 0.82 was achieved, signifying a high degree of internal consistency. Data collection took place over a period of three weeks, during which the questionnaires were distributed to the chosen participants. The completed questionnaires were collected, and the data were analyzed using descriptive statistics such as frequencies, percentages and mean.

Result

Demographic Information

Table 1: Gender Distribution

Gender

Gender	Frequency	Percentage
Male	74	58.7%
Female	52	41.3%
Total	126	100%

Table 1 revealed fifty-two (52) (41.3%) of the respondents are female while seventy-four (74) (58.7%) are male. This implies that the majority of respondents are male.

Table 2: Age Distribution

Gender	Frequency	Percentage
18 – 25yrs	56	44.4%
26- 35yrs	50	39.7%
36 – 45yrs	14	11.1%
46 – 55yrs	2	1.6%
56yrs and above	4	3.3%
Total	126	100%

Table 2 shows that the largest segment of respondents (44.4%) falls within the 18–25 years range, followed by 39.7% aged 26–35 years. Smaller portions are aged 36–45 years (11.1%), 46–55 years (1.6%), and 56 years and above (3.2%). This means that majority of the respondents are youths

Table 3: Distribution on duration of staying in Oke-Ogun.

Items	Frequency	Percentage
Less than a year	16	12.7%
1- 5yrs	32	25.4%
6 - 10yrs	4	3.2%
10yrs and above	74	58.7%
Total	126	100%

Table 3 shows that 58.7% of respondents have lived there within Oke-ogun for more than 10 years. Those with 1-5 years of residence make up 25.4%, while 12.7% have been in the area for less than one year, and 3.2% have lived there for 6-10 years. This implies that most of the respondents have an idea of the security situation within the area and have lived within Oke-ogun for 5yrs and above.

Research Question 1: What are the causes of kidnapping in Oke-Ogun, Oyo State?

Table 4: Perception on the causes of kidnapping in Oke-Ogun, Oyo State.

S/N	Items	SA	A	N	D	SD	Mean
Decision							
		Fre. (%)	Freg.(%)	Freg.(%)	Freg.(%)	Freg.(%)	
1.	Unemployment Agree	56(33.3)	40(31.7)	18(14.3)	10(7.9)	2(1.6)	4.18
2.	Lack of security Agree	44(34.9)	62(49.2)	6(4.8)	8(6.3)	6(4.8)	4.11
3.	Poverty Agree	42(33.3)	50(39.7)	10(7.9)	20(15.9)	4(3.2)	4.03
4.	Weak law enforcement	60(47.6)	56(44.4)	2(1.6)	4(3.2)	4(3.2)	4.32

Weighted Mean = 4.08; Criterion Mean = 3.00

Table 4 shows that the major causes of kidnapping in Ogun is weak law enforcement with level of agreement of 116(92.0%) and mean of 4.32. This is followed by lack of security with the agreement level of 106 (84%) and mean of 4.11. The least factor that

causes kidnapping in Oke-Ogun is poverty with the agreement level of 92(73%) and mean of 4.03. This showed that the causes of kidnapping as expressed by the respondents are weak law enforcement, lack of security, unemployment and poverty are the major causes of kidnapping in Oke-Ogun area of Oyo State.

Table 3: Community-Based Security Strategies

S/N	Items	SA	A	N	D	SD	Mean	Decision
1	Local vigilante groups	50 (39.7%)	52 (41.3%)	10 (7.9%)	6 (4.8%)	8 (6.3%)	4.02	Agree
2	Collaboration between local vigilante groups and formal security agencies	44 (34.9%)	56 (44.4%)	18 (14.3%)	2 (1.6%)	6 (4.8%)	4.09	Agree
3	The presence of local vigilantes.	40 (31.7%)	46 (36.5%)	18 (14.3%)	14 (11.1%)	8 (6.3%)	4.03	Agree
4	There are regular patrols or checkpoints	36 (28.6%)	60 (47.6%)	8 (6.3%)	16 (12.7%)	6 (4.8%)	4.01	Agree
5	Neighborhood watch	60 (47.6%)	48 (38.1%)	8 (6.3%)	4 (3.2%)	6 (4.8%)	4.19	Agree
6	Community surveillance cameras	64 (50.8%)	36 (28.6%)	6 (4.8%)	8 (6.3%)	12 (9.5%)	4.19	Agree
7	Use of local whistleblowers	58 (46.0%)	48 (38.1%)	10 (7.9%)	4 (3.2%)	6 (4.8%)	4.13	Agree

8	Public security meetings	62 (49.2%)	54 (42.9%)	6 (4.8%)	2 (1.6%)	2 (1.6%)	4.23	Agree

Weighted Mean = 4.11

Criterion Mean = 3.00

The results, with a weighted mean of 4.11, show strong support for community-based security strategies in Oke-Ogun. All items scored above 4.00, indicating widespread agreement on the importance of community involvement in enhancing security. The highest agreement was for "Public security meetings," with 92.1% (49.2% strongly agree, 42.9% agree) supporting it (mean = 4.23). "Neighborhood watch" and "Community surveillance cameras" received mean scores of 4.19, with 85.7% (47.6% strongly agree, 38.1% agree) supporting neighborhood watch and 79.4% (50.8% strongly agree, 28.6% agree) endorsing surveillance cameras. "Use of local whistleblowers" had 84.1% (46% strongly agree, 38.1% agree) support (mean = 4.13), and "Collaboration between local vigilante groups and formal security agencies" was endorsed by 79.3% (34.9% strongly agree, 44.4% agree). Other strategies like regular patrols, local vigilantes, and checkpoints also received favorable responses, with mean scores around 4.00.

Table 4: Community Perception and Experiences

S/N	Items	SA	A	N	D	SD	Mean	Decision
1	Felt safer	52 (41.3%)	52 (41.3%)	16 (12.7%)	4 (3.2%)	2 (1.6%)	4.14	Agree
2	Reduced overall crime rate	38 (30.2%)	70 (55.6%)	12 (9.5%)	4 (3.2%)	2 (1.6%)	4.14	Agree
3	Confident with CBS	44 (34.9%)	56 (44.4%)	10 (7.9%)	8 (6.3%)	8 (6.3%)	4.02	Agree
4	CBS contribution	40 (31.7%)	46 (36.5%)	26 (20.6%)	10 (7.9%)	4 (3.2%)	3.94	Agree
5	Satisfaction	28	34	20	28	16	3.38	Agree

with CBS (22.2%) (27.0%) (15.9%) (22.2%) (12.7%)

Weighted Mean = 3.92

Criterion Mean = 3.00

The results, which have a weighted average of 3.92, indicate strong backing for community-oriented security initiatives in Oke-Ogun. A significant 82.6% (41.3% strongly in favor, 41.3% in favor) report feeling safer following the introduction of these initiatives (average = 4.14), and 85.8% (30.2% strongly in favor, 55.6% in favor) believe that these strategies have led to a reduction in crime rates. Concerning personal safety, 79.3% (34.9% strongly in favor, 44.4% in favor) expressed trust in the effectiveness of these measures (average = 4.02), while 68.2% (31.7% strongly in favor, 36.5% in favor) actively engage in security initiatives (average = 3.94). Nevertheless, satisfaction with the overall security level was a bit lower, with an average score of 3.38, as 49.2% reported satisfaction, whereas 22.2% were neutral, and 15.9% disagreed.

Discussion

The results of the first research question regarding the factors contributing to kidnapping in Oke-Ogun indicated that the primary causes are inadequate law enforcement, insufficient security, unemployment, and poverty. This supports the conclusions of Ebobo and Akujobi (2022), Ebobo et al. (2020), and Obarisiagbon and Akintoye (2019), who argue that elevated unemployment, poverty, and feeble security infrastructures worsen crime rates, especially kidnapping. The perception of heightened insecurity and an increase in kidnappings in recent years mirrors national patterns, where economic declines and ineffective law enforcement play a significant role in the crisis. Socioeconomic conditions, notably unemployment and poverty, are viewed as critical motivators of kidnapping, reaffirming Inyang and Abraham's (2013) argument that economic deprivation in developing nations encourages criminal behavior. The lack of strong law enforcement in Oke-Ogun, as highlighted by respondents, also corresponds with Ajayi and Longe's (2015) findings on the necessity of efficient policing for crime reduction. Tackling the underlying causes of insecurity through economic empowerment and reinforced security is crucial for diminishing kidnapping in the area.

Furthermore, the study reveals a robust endorsement for community-driven security measures, particularly public safety meetings, neighborhood watch initiatives, and surveillance cameras, showcasing a belief in the significance of local engagement in improving security. This aligns with research by Joseph, Umar, and Amshi (2024), which illustrated that community-focused initiatives encourage collaboration between residents and law enforcement, resulting in safer neighborhoods. The focus on collective effort and information sharing resonates with Arisukwu et al. (2020), who pointed out that local involvement nurtures a sense of ownership and accountability, encouraging proactive

crime prevention actions. The study emphasizes strong support for local whistleblowers and cooperation between vigilante groups and official security agencies, implying that merging informal and formal security strategies is more effective in addressing intricate security issues. This complements Ragolane and Khoza's (2024) focus on combining local insights with formal law enforcement capabilities to combat organized crime and boost community safety. The endorsement of these strategies demonstrates that Oke-Ogun communities appreciate the complementary role of community-led initiatives alongside formal security frameworks, acknowledging their limitations and recognizing the need for multi-tiered approaches to crime prevention.

The results also show that there is a largely favorable view of community-based security initiatives, with numerous residents feeling more secure and believing that crime rates have dropped. This is in line with the findings of Adebayo et al. (2020), who suggested that community policing and local security initiatives promote a sense of collective efficacy, which in turn reduces crime rates and builds trust. The residents' perception of declining crime in Oke-Ogun supports the work of Nubani et al. (2023), who concluded that effectively implemented community-based security strategies enhance safety through active participation from the community. Additionally, the involvement of residents in security activities, such as attending community meetings and reporting suspicious activities, reinforces the beneficial effects of these initiatives, echoing Maidawa's (2023) research on the crucial role of community participation in successful crime prevention. Nevertheless, the somewhat diminished satisfaction with the overall security situation indicates areas needing improvement, highlighting lingering concerns despite the favorable results. This points to broader issues concerning rural security, as highlighted by Reniers et al. (2020), who asserted that community-based security must evolve to address changing threats and vulnerabilities.

Conclusion

The research indicates that kidnapping is viewed as a major and growing worry in Oke-Ogun, driven by issues like unemployment, poverty, weak law enforcement, and insufficient security presence. Community-based security strategies, such as public security meetings, neighborhood watch programs, and local whistleblower initiatives, are strongly supported as a means to improve safety. Survey participants express feeling safer and believe in a reduction of crime due to these efforts. While active community involvement in security initiatives is a positive sign, there remains room for improvement regarding general satisfaction with security. These insights underscore the effectiveness and promise of community participation in addressing local security issues.

Recommendations

- a. Enhance law enforcement and increase security visibility to fill gaps in policing and improve the efficiency of community-based security measures.

- b. Broaden community engagement efforts by boosting participation in initiatives such as public security meetings, neighborhood watch groups, and local whistleblower programs to encourage cooperation in crime prevention.
- c. Tackle socioeconomic issues, including unemployment and poverty, through initiatives focused on job creation and poverty reduction to alleviate the root causes of kidnapping.
- d. Elevate public awareness and education by implementing campaigns that inform residents about the importance of security measures and motivate them to take an active role in community safety.

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Impact of TikTok Content on Teenagers' Lifestyle and Behaviours among Senior Secondary School Students in Ogun State — Zabur Olayiwola Soluade

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Abstract

The youth acceptance and addiction to TikTok application calls for the attention of stakeholders in the educator sectors. This study assesses the impact of TikTok content on teenagers' lifestyle and behaviours among senior secondary school students in Ogun State. The study examines the extent of students' usage of TikTok, analyze the types of video content mostly watched by the students on TikTok, identify levels of students' addiction to TikTok and explore the impact of TikTok video contents on students' behaviour. Survey research designed was adopted for the study, with population covering all SS1 SS3 urban students in Ijebu-Ode local government area of Ogun State. Three hundred and seventy-nine (379) students were selected using simple random sampling procedure. Data collection was conducted using a self-structured questionnaire named "TikTok and Teenagers Lifestyle Questionnaire" (TTLQ) which had a reliability coefficient of $R = 0.86$. The collected data were coded and analysed using descriptive statistics of simple percentages. The results indicated that students' levels of addiction to TikTok were found to be high and student exposure to videos on TikTok has effects on students' behaviour and lifestyle. It was recommended that the government should regulate social media and educators should upload mostly videos that will serve dual purposes of educating and entertaining on TikTok to encourage the curiosity of the students.

Keywords: TikTok, TikTok content, teenagers, lifestyle, behaviours

Introduction

The digital revolution has brought about concern among scholars about the consequences of the digital revolution on the well-being and development of Nigerian youth. Social media are Internet-based tools that allow individuals to communicate, interact, and share evidence, content, pictures, ideas, personal messages, and pictures with other users (Kaplan and Haenlein, 2010, Abraham, 2020, Lutkevich & Wigmore, 2022). Social media applications, Facebook, Twitter, Instagram, WhatsApp, and TikTok, which allow users to communicate with one another interactively, have been on the increase recently. Social media are mobile and web-based internet services that create a highly interactive

platform for people to interact with others (Malik & Ahmad, 2019). The advent of social media has changed young people's perspectives and become an integral part of young people's daily lives. It has helped to keep people updated on the events in every part of the world and meet new people irrespective of their distance and race (Scalvini, 2024). Social media have helped to bridge the gap between old and new friends, serve as tools to solve problems, share ideas without physical contact, and help to enhance teaching and learning (Lutkevich & Wigmore, 2022). It has helped to strengthen communication and connectivity among the citizens as well as promoted social awareness, activism, and advocacy for a better society by the youth (Abraham, 2020). However, social media are not without shortcomings they have led to distraction for students and adults; waste time and reduced family and personal relationships, negative impacts on the academic performance of students, make students participate in dangerous challenges, and encourage bullying and misspelling of words (Lin et al., 2016; Kennedy, 2019; Abraham, 2020; Sumadevi, 2024).

Social media in recent times, despite different measures put in place to regulate users' attitudes and protect users' rights, have been used to promote offensive posts, disinformation, deception, most especially by content social media influencers, promote nudity and uncensored content that have effects on lives of Nigerian youths (Kuppuswamy & Narayan, 2010; Kennedy, 2019). Improper social media usage has the potential to distract teenagers who also have access to the usage of smartphones and copy what they see on social media, disrupt sleep, and expose them to bullying, rumor spreading, unrealistic views of other people's lives, and peer pressure (Hinduja & Patchin, 2009). Addiction to social media, which is most common among youths, can undermine teenagers and young people's moral development, and increase anxiety, depression, and sleep problems among the teenagers and the youths (A'lam Elhuda and Dimetry, 2014, Kennedy, 2019).

TikTok is one of the applications of social media that is perceived to be encouraging immorality among the youths in Nigeria. Immorality is an antisocial behavior which is posing a threat to cultural values and acceptable behavior of the youths in Nigeria (Oloyode & Oloyede, 2022). Through TikTok, pornography, lesbianism, homosexuality, derogatory and disparaging, cyberbullying, indecent dressing, and violent messages are promoted. Cyberbullying, lesbianism, homosexuality, pornography, and derogatory and disparaging remarks usually leading to violent acts have been traced to improper use of social media. A morally decadent society is on its way to ruin. Although TikTok is said to have promoted inclusivity and diversity, there are problems with the promotion of ethical standards by TikTok (Scalvini, 2024).

TikTok over time has grown to become a popular platform and the most downloaded app among youths in Nigeria. Due to low-regulated content created on TikTok and unrestricted access to the platform by TikTok, the platform has been making headlines in some countries. Former president of the US Donald Trump signed an executive order to ban TikTok in the US in 2020. In 2019, TikTok was also fined \$5.7m by the US

government for violation of the personal information of their subscribers (Washington Post, 2019). The African continent holds morality in high esteem and conformity with moral standards set by holds is what is used to measure good citizens. However, most of the uncensored content on TikTok does not promote African ideas of morality, as the contents promote promiscuity and sexual immorality, pre-marital sex, homosexuality, and lesbianism among teenagers and youths (Kamaku & Mberia, 2014, Oloyede & Oloyede, 2024). TikTok allows for the production and exchanging of user-generated content, there is growing concerns that limited regulations such as those provided by social media platforms have encouraged online predators, sexting, cyber-bullying, and exposure to violent and pornographic content (Gabriel, 2014; Milosevic, 2015).

Social media platforms such as TikTok, Twitter and Facebook have become an avenue for teenagers and youths to promote substance abuse, cultism, improper dressing, bullying, pornography, prostitution hook up and fraud, called G-guy (Ngohi et al., 2020; Oyediran, 2020). The sex scandal involving pupils of Chrisland Schools Lagos shows the level of how teenagers and young people can go to practice what they view on social media (Sun Newspaper, 2022). Also, in Ogun state, the arrest of Wariz Oladeinde (17 years), Abdul Gafar Lukman (19 years), Mustakeem Balogun, and Saliu Majekodunmi (20 years) for killing Rofiat (22 years) for money rituals which they claim they access the manual for the rituals from online Facebook page show the contents the teenagers are exposed to can influence their behaviors (Malik, et al., 2022). Online content influences how young people form their opinions, stereotypes, and impressions of others, and it has an impact on young people's decision-making processes (Balmas & Halperin, 2022; Guo *et al.*, 2021, González-Padilla & Tortolero-Blanco, 2020). More than 80% of individuals from age 18 to 35 years old use social media (Lin, 2023). Social media have become an integral part of society and have effects on nearly all areas of our everyday lives. However, its increased usage and addiction have created problems such as information overload, cyberbullying, online shaming, the spread of fake news and an increase in mental health issues (Haug *et al.*, 2024, Yusuf *et al.*, 2020). There has been an estimated 30% increase in daily social media usage in recent years (Elsier *et al.*, 2024). Faverio (2024) stated that in 2023, the Cyberbullying Research Center surveyed a nationally representative sample of U.S. youth aged 13-17. They found that almost one in four (23%) teens had been bullied online in the last month, up from 16% in 2016.

Social Media usage has cut across different age groups media, younger adolescents and even adults spend considerable time on different social media platforms. This has made social media to be an integral part of the daily lives of the people in our society in recent.

Teenagers use social media platforms for almost three hours a day on average. On Tiktok, activities that promote drug use, risky sexual behavior, and violent behavior are displayed for teenagers to watch and download and this puts young people in danger of harm to themselves or others (Simone et al., 2021; Kerusha, et al., 2024). Exposure of teenagers and young people to social media platforms which allow unregulated content on their platform promotes violent alterations that have negative effects such as health effects, legal repercussions, and early death for teenagers and young people in society.

The Covid-19 has made the usage of use smartphones a necessity among teenagers to participate in their academic activities. However, this has given them platforms have access to social media platforms and, despite age restrictions during the registration process on social media, there has been a rise in social media usage among teens in the last decade and this has led to changes in their dangerous behaviors.

Social media have made teenagers connect not only to their age group but also expose them to people outside their peer groups. Teenagers, due to their level of exposure, most of the time, want to take chances and participate in dangerous activities where social media interaction encourages their risk-taking urges (Fanni et al., 2017). On average, individuals spend 151 minutes on social media each day (Dixon, 2022). Youth's levels of discipline are now called into question due to the influence of social media exposure. On social media you find celebrity immorality, content creators portraying fake lives, violent criminality, publicizing lawlessness and coordinating anti-social behavior (Baym, 2015; Sternheimer, 2014). Such fears have frequently culminated in attempts by adult society to intensify surveillance, censorship, and control over online platforms. Content creators on TikTok, often referred to as influencers, play a significant role in shaping the attitudes and behaviors of their followers. Research by Abidin (2016) on influencer culture highlights how influencers establish credibility and trust in their audience, making their opinions and behavior highly influential. In the context of secondary school students, popular TikTok creators can impact fashion choices, language use, and even career aspirations.

Ghulam et al., (2014) examine how social networking sites have affected young people's evolving attitudes. Results show that the majority of respondents used Facebook as their preferred social networking platform. The results further indicated that social media help educate young people, but they may also erode social standards and hurt research on young people. It encourages immoral images, videos, and photographs, incites animosity between various populations, and deteriorates international relations. However, social media are crucial in raising young people's political consciousness. Vatera (2018) reports a non-representative survey of high school students done by Montana State University on the impact of technology on romantic relationships. The study found that almost all (95%) of high school students report that technology and social media have influenced adolescent dating relationships as it has helped them to bridge physical communication barriers more easily, but many also note the increased risk of misunderstanding and conflict from communication that is not face-to-face. Sushma (2019) in his study assesses the impact of social media on young people. The results revealed that 20% of the respondents benefited positively from social media; another 20% of the respondents could stay connected with friends through social media, 28% of the respondents gained benefits like entertainment and fun, and 18% of the respondents got benefits like in quest of job opportunities. Results also show that social media causes health problems and affects Arabian culture. Abraham (2020) examines the attitudes of adolescents toward social media. The results show that social media influences their

social life and relationships, lifestyle, health, academic performance, and privacy and security.

Syam et al., (2022) explore the students' behavior in using TikTok in their daily life using quantitative design. The findings show that students enjoy using TikTok; most students at least use TikTok once a day for entertainment video content. The most favorite content watched by the students affects the purpose of using TikTok is to entertain themselves and there are no direct effects of using TikTok for their communication skills. Hanum Neng and Yunus (2023) assess the impact of using the TikTok application on changes in student lifestyles using mixed methods with data collected through questionnaires. The findings show that the application of TikTok results in a positive impact on students lifestyles in the areas of being to be current on what is going on around the world, learn and engaging in buying and selling. Also, the results show a negative impact on students in the area of being addicted, not knowing the time, and being lazy. Oloyede and Oloyede (2024) assess the role of religion in ameliorating the effects of social media on the morality of youths in Nigeria and the role of religion. The study shows that social media have undoubtedly been a large promoter of vices and have led to moral decadence in our society and there is also the need to keep shared content in positive favorite applications.

Theoretical Frameworks

The rapid rise of TikTok as a social media platform has had significant implications for content creation and consumption among youths, particularly secondary school students. The two theoretical frameworks upon which this study is situated are social learning theory and uses and gratification theory. Social Learning Theory was postulated by Albert Bandura in 1977. Social learning theory (SLT) posits that individuals learn by observing the behaviors of others, especially those they consider role models. TikTok, with its short, engaging videos, provides a platform where students can easily observe and emulate content creators. According to Bandura (1977), this observational learning is particularly potent when the observer identifies with the model and perceives the behaviors as rewarding or beneficial. TikTok content creators often display lifestyles, skills, and attitudes that secondary school students might aspire to, thereby influencing their behavior and attitudes. The second theory that this study is situated in is the uses and Gratifications Theory of Katz, Blumler, & Gurevitch, (1974). The theory suggests that media users actively seek out media that fulfills their needs and desires. Katz, et al., (1974) identified various gratifications that users seek from the media, such as entertainment, social interaction, and personal identity. Secondary school students in Ogun State might use TikTok to satisfy these needs, which can shape their attitudes and behaviors. For instance, the desire for social interaction might lead students to engage with trending challenges and hashtags, while the need for personal identity might drive them to create content that reflects their personalities and aspirations.

Statement of the Problem

The increasing popularity of TikTok among secondary school students in Ogun State, Nigeria, has raised concerns about its impact on their attitudes and behaviours. As these students spend considerable time consuming and creating content on TikTok, there is a growing need to understand how the platform influences their social interactions, self-perception, and academic performance. Previous studies have highlighted the powerful role of social media in shaping youth behaviors and attitudes, but specific research on TikTok's influence in the context of Nigerian students remains limited. This study aims to fill this gap by investigating the influence of the TikTok Application on student's lifestyle and behavior among senior secondary school students in Ogun State.

Objectives of the Study

The main objective of the study is to assess impact of TikTok and content creators on youths attitudes among secondary school students in Ogun state. The other specifics objectives of the study are to:

1. examine the extent of students' usage of TikTok,
2. analyze the types of video content mostly watched by the students on TikTok.
3. identify levels of students' addiction to TikTok.
4. explore the impact of TikTok video contents on students' behaviour.

Research Questions

The following research questions guide the study.

1. To what extent do students use TikTok in Ogun state?
2. What types of content are mostly watched by the students?
3. What are the levels of students' addiction to TikTok?
4. Does TikTok content affects students' personal behaviour

Methodology

The study employed a descriptive research design. This design helps to get the views of the students on the impact of TikTok's content on teenagers' lifestyles and behaviors among senior secondary school students in Ijebu-Ode, Ogun state. The population of this study comprises all the senior secondary school students in Ijebu-Ode, Ogun state. The population is appropriate because it will allow for assessing the attitudes of the students

towards the usage of TikTok and its impact on their attitudes and behavior. Three hundred and seventy-nine (379) students made up the sample for the study. Simple random sampling was adopted in selecting the respondents from students in senior secondary one to three (SS 1 -SS 3). This is to give all the students equal access to participate in the study. The instrument used for this study was a self-designed questionnaire tagged “TikTok and Teenagers Lifestyle Questionnaire” (TTLQ). This is constructed from the research questions that were raised to guide the study. The instrument is made up of 10 questionnaire items. Section A of the instrument was designed to elicit demographic information from the respondents, while Section B contained 10 items with their options based on the question asked. The instrument face and content were established by two experts in the field of testing and measurement who scrutinized it and made necessary corrections. Also, a pilot test of the instruments was carried out at another institution outside the study area. Cronbach alpha was used to determine the reliability coefficient of the instrument, which was found to be 0.89. The collected data was coded and analyzed using descriptive statistics of simple percentages for data analysis.

Results

Demographic Analysis

Table 1: Age distributions of respondents

Gender	N	Percentage
Male	145	38.3%
Female	234	61.7%
Total	379	100%

Table 1 above shows the age distributions of the respondents. One hundred and forty-five (145) (38.3%) of the respondents are male while two hundred and thirty-four of the respondents are female (234) (61.7%). This shows that the majority of the respondents are female.

Age

Table 2: Age distributions of the respondents

Age	N	Percentage
10-12yrs	65	17.2%
13-15yrs	182	48.0%
16yrs and above	131	34.6%

Total	378	99.7%

Table 2 above shows the age distributions of the respondents. Sixty-five (65) (17.2%) of the respondents are between the ages of 10-12yrs; one hundred and eight two (182) (48.0%) are between the ages of 13-15yrs, while one hundred and thirty-one (131) (34.6%) are ages 16yrs and above. This shows that the majority of the respondents are between the ages of 13-15 years.

Research Question 1: To what extent do students use TikTok in Ogun state?

Table 3: Distributions on how long the respondents have been using TikTok Application

SN	Items	N	Percentage
1.	Less than 6months	47	12.4%
2.	6months -1yr	83	21.9%
3.	1yr -3yrs	135	35.6%
4.	3yrs and above	109	28.8%
Total		374	98.7%

Table 3 above shows the duration of times the respondents have been using the TikTok application. Forty-seven (47) (12.4%) have been using TikTok for less than 6months. Eight-three (83) (21.9%) have been using TikTok within 6 months -1yr, while one hundred and thirty-five respondents (135) (35.6%) have been using TikTok between the period of 1yr-3months. Lastly, one hundred and nine (109) (28.8%) respondents have been using TikTok in the last three years and above. This shows that many students have been using TikTok for more than a year.

Table 4: TikTok usage among the students.

SN	Items	N	Percentage
1.	Everyday	255	67.6%
2.	Once in a week	90	23.9%
3.	Once in a month	26	6.9%
4.	Never	6	1.6%
Total		377	99.5%

Table 4 above shows the frequency of the usage of TikTok by students. Item 1 which states 'everyday' has the highest frequency of 255 (67.7%), followed by item 2 which

states ‘once in a week’ with a frequency of 90(23.9%). The lowest frequency in the distribution is item 4, which states ‘never’ with a frequency of 6(1.6%). This shows that most students open TikTok applications everyday.

Research Question 2: What types of content are mostly watched by the students?

Table 5: Content mostly watch on TikTok by the students

SN	Items	frequency	Percentage
What attracted you to TikTok?			
1.	Entertainment	199	52.5%
2.	Education content	82	21.6%
3.	Awareness	19	5.0%
4.	Fashion	21	5.5%
5.	Making content	32	8.4%
6.	Bosting of image	25	6.6%
Total		378	99.7%

Table 5 above shows that the majority of the students were attracted to TikTok by entertainment content 199 (52.5%), this is followed by educational content 82 (21.6%). The least content that attracts students to TikTok is ‘boosting of image’ with a total frequency of 25(6.6%). This shows that more than half of the respondents were attracted to TikTok other than education.

SN	Items	N	Percentage
1.	Entertainment	192	50.7%
2.	Education content	125	33.0%
3.	Fashion and beauty	48	12.7%
4	Product	12	3.2%
Total		377	99.5%

Table 6 shows the kind of video most enjoyed by the students. The table shows that “entertainment” content 192(50.7%) is the most enjoyed video by the students on

TikTok, followed by “education” content 125(33.0%). The least enjoyed video on TikTok is the “product” content 12(3.2%). This implies that students enjoy mostly entertainment and educational content and most enjoy TikTok.

Research Question 3: What are the levels of students’ addiction to TikTok?

Table 7: Students levels of addiction to TikTok.

SN	Items	N	Percentage
1.	High	269	32.7%
2.	Medium	90	57.5%
3.	Low	19	9.8%
Total		378	99.7%

Table 7 shows students' levels of addiction to TikTok. Item 1 shows that 269(57.5%) respondents picked “high”, Item 2 shows that 90(32.7%) picked “medium” while 19(9.8%) picked “no”. This shows that most students think that students' level of addiction to social media is high.

Research Question 4: Does TikTok content affects students’ personal behaviour

Table 8: TikTok and students’ personal behaviour

SN	Items	N	Percentage
1.	Yes	304	80.2%
2.	No	30	7.9%
3.	Not sure	44	11.6%
Total		378	99.7%

Table 8 shows the influence of TikTok on students' behaviour. 304 (80.2%) picked Yes, 30 (7.9%) picked No, and 44 (11.6%) picked Not Sure. This shows that the majority of the respondents think that TikTok affects students' behaviour.

Table 9: Effects of TikTok on students lifestyle

SN	Items	N	Percentage
1.	Makes students to smiles to themselves	120	31.7%
2.	Make student to be sad and laugh at the content	52	13.7%
3.	Tiktok is addictive	103	27.2%
4.	Makes students to be lazy to do other things	102	26.9%
Total		377	99.5%

Table 9 shows the influence of TikTok on students' lifestyles. Item one which states that TikTok makes students smile to themselves recorded the highest frequency of 120(31.7%), followed by item 3 which states that “TikTok makes students addicted to social media” is 103(27.2%). The least influence of TikTok on students' lifestyles is ‘TikTok makes students sad and laugh at the content 52(13.7%). This implies that TikTok makes students smile at themselves, become addicted to social media and make students to be lazy at doing some other things.

Table 10: Negative impact of TikTok on students.

SN	Items	N	Percentage
1.	Promote offensive post/cyber bullying	48	12.7%
2.	Encourage deception	64	16.9%
3.	Aid spreading of rumours and wrong information	71	18.7%
4.	Student share nudes pictures and uncensored contents through TikTok	31	8.2%
5.	Indecent dressing	30	7.9%
6.	Violent messages	69	18.2%
7.	Encourages dangerous challenge	62	16.4%
Total		375	98.9%

Table 10 above shows the negative impact of TikTok on students. Item 3 which states that “TikTok aids the spreading of spread and wrong information among the students”, has the highest frequency, 71(18.7%), followed by item 6 which states that “students send violent messages through Tikytok” 69(18.2%). The least negative impact of TikTok on students is recorded by item 4 which states “Students share nude pictures and uncensored content through TikTok” 31(8.2%). This shows that TikTok aids the sharing of rumours and wrong information, violent messages and encourages deception among students.

Discussion

The findings of research question one show show that many students have been using TikTok for more than a year and that students open TikTok Application every day. This supports the findings of Simeone et al., (2021), Syam and Meldawati, (2022) and Kemsha et al., (2024) who found out that teenagers use social media almost three hours a day. However, the finding is in contrast with the findings of Rosdiana & Nurnazmi, (2021), which show that TikTok is not very good for students’ mental and personalities. There are unexpected findings which show that few students ever opened TikTok. This may be due to the fact they considered TikTok not to have a positive influence on academic performance, mental health and personal growth. The findings of research question 2 show that ost of the students are motivated to open a educational account for entertainment rather than for education purposes and that students most enjoy entertainment and educational content on TikTok. This supports the findings of Mana (2021) and Syam et al. (2022), who have also found out that most students open TikTok to entertain themselves as well as support their learning process. This finding also supports the finding of Gustika (2022), whose findings show that the most watched video on TikTok by students is an entertainment video. This result is in contrast with the findings of Puspitasari (2022) and Daniati (2022) who found out that students mostly watch educational videos on TikTok.

The findings of research question 3 show that most of the students are of the opinion that students' level of addiction to social media is high. This implies that most of the students are addicted to opening TikTok applications every day, which makes its level of addiction be higher. This finding is supported by the that of Hanum-Neng, et al. (2023) who found high levels of student addiction in his study. This suggested that students access to TikTok application and the videos that motivated their opening of the application increase their level of addiction to Tiktok. The findings of research question four shows that the majority of the respondents are of the opinion that TikTok affects students' personal behaviour. Video contents watch in the TikTok makes students to smiles at themselves, be addictive to social media and make students to be lazy at doing some other things; The findings also shows that TikTok aids shearing of rumours and wrong information, violent messages and encourage deception among the students. This finding supports the findings of Agianto et al. (2020), Fauziah (2021) and Hanum-Neng et al. (2023) who found TikTok increasing the levels of students’ addiction to social media and positive and negative impacts of TikTok on students’ lifestyle and behaviour.

The implication of this is that the video watched by the students has effects on their lifestyles and behavior and in most cases the effects are more negative than positive.

Conclusion

This study investigated the influence of the TikTok Application on students' lifestyles and behavior among teenagers in senior secondary schools in Ogun State. The study found that most of the students have been using applications for more than a year and open the application almost every day. This might be because the schools used are in urban areas and students, in the pretense of using mobile phones for their assignments, open applications. The findings might also be due to peer influence and the popularity of the application in allowing people to assess the application, open the page and upload videos which seem not to be regulated.

Teenagers are mostly attracted to the TikTok Application by the entertainment videos uploaded on TikTok and most of students download and watch videos for entertainment and education. This suggests that students, although watch educational videos, are mostly attracted to TikTok by the entertainment content. Students' levels of addiction to TikTok were found to be high. This suggests that students spend most of their time watching videos in TikTok almost every day. Exposure to videos on TikTok has effects on students' behavior as most of the students smile at themselves, are addicted to social media, and make students lazy at doing some other things. TikTok is found to have aided the sharing of rumors and wrong information, encouraged dangerous challenges, sent violent messages, encouraged deception, and promoted indecent dressing and cyberbullying among students.

Recommendations

1. The TikTok Application must be regulated and teenagers should not have open access to the application.
2. Access to teenagers to watch and upload entertainment videos should be regulated. Apart from the age required, the Application should develop a programme to detect students' age through their pictures to block teenagers from watching some videos.
3. The federal government should promulgate laws that will regulate social media to curtail the negative effects of TikTok among teenagers.
4. Educators should upload videos that will serve mostly the dual purposes of educating and entertaining on TikTok to encourage the curiosity of the students.

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Online Counselling Practices and Female Students' Academic Achievement in Colleges of Education, Sokoto State, Nigeria

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Abstract

The study investigated on an online counselling practices and female students' academic achievement in colleges of educations, Sokoto state. The study employed correlational survey design. A sample size of 331 were used in representing the population 1,215 final-year female students from Shehu Shagari College of Education, Biga College of Education, and Federal College of Education Gidan Madi, with and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Two objectives and two hypotheses were formulated as guide to the study. Two instruments titled Online Counseling Practices Questionnaire (OCPQ) and Academic Achievement Student Questionnaire were used to collect data from the respondents and the data collected were analysed using statistical tool Peason Product Moment Correlation Coefficient (PPMC) with the help of SPSS Version 20. The finding revealed that online counselling and e-learning platforms have a significant positive effect on female students' academic achievement, based on the above it was recommended that online counselling services and e-learning platform should be encourage in promoting students' academic achievement.

Keywords: Online Counselling Services, e-earning Platform and Academic Achievement

Introduction

Online counselling resource centers have emerged as a crucial component of Information Communication Technology Counselling Practices (ICTCP) usage in guidance and counseling. These platforms provide students with access to a wide range of counseling materials, self-help resources, and relevant information (UNESCO, 2013). The integration of Online counseling practices (ICTCP) in guidance and counseling offers a range of potential benefits for female students. Online counseling resource centers, for example, provide students with easy access to a wide range of counseling materials, self-help resources, and relevant information (Effiom, Amuchi, Ojedor, Ebuka, & Ubi. 2023). By utilizing online counseling resource centers, students can independently explore topics related to their academic success and personal development, ultimately benefiting their academic achievement (Dahiru, 2017). Online counseling resource centers offer a comprehensive collection of resources that cater to students' diverse needs. These centers provide information on various career paths, job market trends, and academic requirements, enabling students to make informed decisions about their educational

pathways (Wells, 2023). Moreover, online counseling resource centers offer self-assessment tools that help students identify their strengths, interests, and values, which are essential factors in aligning their academic pursuits with their personal aspirations (Gysbers & Henderson, 2012).

One important form of Online counseling practices (ICTCP) integration in guidance and counseling is the utilization of E-Learning platforms. E-Learning platforms provide flexible and interactive learning environments that can enhance engagement and academic performance (Effiom, Amuchi, Ojedor, Ebuka, & Ubi, 2023). These platforms offer online courses, multimedia resources, discussion forums, and virtual collaboration tools, enabling female students to access educational materials and engage in interactive learning experiences outside of traditional classroom settings (Tsagem, 2016). E-Learning platforms have been found to positively impact academic achievement by promoting self-directed learning, facilitating active engagement, and offering flexibility in terms of time and pace of learning (Wells, 2023). Research has shown that female students who engage with E-Learning platforms display increased motivation, improved information retention, and enhanced critical thinking (Okpe, D., Asuquo, Abuo, & Unimna, A. 2018). E-Learning platforms can provide personalized learning experiences, allowing female students to tailor their educational journey according to their specific needs and preferences (Makinde, 2021).

Nigeria. Existing studies have highlighted the potential benefits of integrating Online counseling practices (ICTCP) in counseling practice, including online counseling resource centers, mobile applications, E-Learning platforms, and online counseling platforms (Johnson & Rice, 2019).

Richards & Viganó, (2013) aims to critically review the existing literature on online counseling. The researchers conducted a comprehensive search using both databases and hand-searches, using specific search terms and eligibility criteria. This led to the identification of a total of 123 studies. The review covers various aspects of online counseling, including its characteristics, outcome and process research, cyber behaviors, ethical considerations, professional training, client suitability, and the attitudes and experiences of both clients and therapists. The study concludes that the growing body of knowledge in the field of online counseling suggests that it can have a similar impact to face-to-face encounters and replicate the facilitative conditions. However, the researchers emphasize the need for stronger empirical evidence to establish the efficacy and effectiveness of online counseling and to gain a better understanding of the unique mediating and facilitative variables involved. The study does not explicitly address the generalizability of the findings

Onyema, Ezeanya, & Nkiruka, (2020) aimed to examine the impact of an e-learning platform on students' interest and academic achievement in the Data Structure course. The study utilized a quasi-experimental design and involved 50 Computer Science students enrolled in the Data Structure course at a tertiary institution. The participants

were divided into two groups: an experimental group (EG) consisting of 25 students taught using the e-learning platform, and a control group (CG) consisting of 25 students taught using the traditional classroom approach the researchers tested the hypotheses using analysis of variance (ANOVA). The post-test results indicated a statistically significant difference in academic achievement between the experimental group and the control group, favoring the experimental group after the treatment. The mean score of the EG was found to be significantly higher than that of the CG, suggesting that students in the experimental group performed better after the treatment. In addition, the study found that the use of e-learning platforms had a statistically significant effect on the learning interests of the experimental group after the treatment. The study had a relatively small sample size of 50 students from a specific course and institution.

Benedict & Bando (2022) examined the availability of e-counseling services for students in secondary schools in Niger State during the COVID-19 pandemic. The specific objectives of the study were to assess the availability of ICT facilities in guidance and counseling services and the availability of trained e-counselors in secondary schools in Niger State. The sample consisted of 480 participants selected through simple random and purposive selection procedures. Data collection was conducted using the E-counseling Facilities' Availability for Guidance and Counseling Services in Schools Questionnaire (EFAGCSSQ). The study employed frequencies and percentages as the main statistical techniques for analyzing the acquired data. Additionally, t-test statistics were used to test the null hypothesis at a significance level of 0.05. The findings of the study indicated that senior secondary schools in Niger State lacked suitable e-counseling facilities, and trained e-counselors were scarcely accessible. However, without further details provided about the specific findings and their implications, it is challenging to provide a comprehensive empirical review of the study. The study primarily relied on frequencies, percentages, and t-tests for data analysis. While these techniques provide basic descriptive and inferential information, they may not capture the complexity of the research questions. Incorporating more advanced statistical techniques, such as regression analysis or factor analysis, could provide a deeper understanding of the factors influencing the availability of e-counseling services.

Objectives of the Study

The following research Objectives and hypotheses were formulated to guide the study;

1. To assess the contribution of e-learning platforms to female students' academic achievement in tertiary institutions in Sokoto State.
2. To examine how online counselling platforms influence academic achievement of female students in tertiary institutions in Sokoto State.

H₀₁ There is no significant relationship between e-learning platforms and the academic achievement of female students in tertiary institutions in Sokoto State.

H02 There is no significant relationship between online counseling platforms and the academic achievement of female students in tertiary institutions in Sokoto State.

Methodology

The study employed correlational research design where relationship between variables were examined. The population for this study consists of final year female students from Federal and State-owned colleges of Education in the state. These are; Shehu Shagari College of Education, Biga College of Education, and Federal College of Education Gidan Madi in Sokoto State, Nigeria. The total population of 1,215 final year female students represented by a sample size **310** female students across the colleges under study. The following table shows the distribution of population and sample size.

Table 1: Distribution of the sample size According to their Educational Institutions

S/N	School Name	Level	Population	Sample Size
1	Shehu Shagari College of Education, Sokoto State	NCE III	723	$723/1,215 \times 301 = 179$
2	Biga College of Education, Sokoto State	NCE III	412	$412/1,215 \times 301 = 102$
3	Gidan Madi Federal College of Education, Sokoto state	NCE III	80	$80/1,215 \times 301 = 20$
	Total		1,215	301

Source: Field Study, 2024

The research utilized two questionnaires in this study, data was collected using a structured questionnaire titled "Investigating the Relationship between online counseling practices and Academic Achievement: A Student Questionnaire on Counseling practice" (OCPAAQ). The instrument selected for this study was an adapted version of the questionnaire developed by Effiom, B. E., Amuchi, G. O., Ojedor, F., Ebuka, G. C., and Ubi, G. M. (2023) on the Educational Imperative of Guidance and Counselling on Information and Communication Technology (ICT) Usage on Students' Academic Performance at the University of Nigeria, Nsukka, Enugu State. The adaptation process will entail a comprehensive review of the original questionnaire, followed by necessary modifications to ensure its suitability for the target population and alignment with the research objectives.

The study employed partial least squares structural equation modeling (PLS-SEM) as the data analytical technique to investigate the online counseling practices (ICTCP) usage and its impact on the academic achievement of female students in Sokoto State. PLS-SEM is selected because of its suitability for modeling complex relationships between observed and latent variables in the multidimensional context of counseling practices and online (ICTCP) usage. It enables predictive modeling, providing valuable insights for researchers and practitioners in understanding the educational imperative of online counseling practices (ICTCP) utilization in guidance and counseling practices.

Result

Hypothesis One

Null Hypothesis (H_{01}): There is no significant relationship between e-learning platforms and the academic achievement of female students in tertiary institutions in Sokoto State.

Table 2: Hypothesis Testing (Path Coefficients)

Variables	Coefficient	T statistics	P values
ELP -> FAA	0.308	3.857	0.000
MAD-> FAA	-0.260	2.350	0.019
OCRC -> FAA	0.335	4.492	0.000
OCS -> FAA	0.623	13.560	0.000
$R^2 = 0.963$, Adjusted $R^2 = 0.963$			

Source: Author's Computation from Smart PLS output, 2024

The evidence presented in Table 2 contradicts the null hypothesis, indicating a significant positive relationship between e-learning platforms (ELP) and female academic achievement (FAA). This is supported by the R-squared value of 0.963, indicating a substantial amount of variance explained. The coefficient for the path connecting ELP and FAA is estimated at 0.308. The t-statistics value associated with this coefficient is 3.857, and the p-value is 0.000. Consequently, the study rejects the null hypothesis (H_{03}) in favor of the alternative hypothesis. These findings provide strong evidence that e-learning platforms significantly influence academic achievement among female students in Sokoto State.

Hypothesis Two

H_{02} : There is no significant relationship between online counseling platforms and the academic achievement of female students in tertiary institutions in Sokoto State.

The results in table 4.9 indicate a significant positive relationship between online counseling platforms (OCP) and female academic achievement (FAA). This is corroborated by the high R-squared value of 0.963, which signifies a substantial amount of the variance explained by the model. The coefficient for the path connecting OCS and FAA is estimated at 0.623. The t-statistics value associated with this coefficient is 13.560, with a p-value of 0.000. Given that the p-value (0.000) falls below the predetermined significance level (e.g., $\alpha = 0.05$), the study rejects the null hypothesis (H_{04}) in favor of the alternative hypothesis. These outcomes underscore the significant and positive relationship between online counseling platforms and the academic achievement of female students in tertiary institutions in Sokoto State. Significantly, to ensure the validity of the obtained results, a multi-collinearity test was conducted using the variance inflation factor (VIF), and the outcomes are reported in Table 4.9 below.

Discussion

The first finding indicates significant positive effect of e-learning platforms (ELP) on female academic achievement is well-supported by previous research. For instance, Prasad (2012) found that e-learning enhances student engagement, which in turn leads to improved academic achievement. Similarly, Okpe, Asuquo, Abuo, and Unimna (2018)

highlighted that the effective use of e-learning platforms positively impacts student learning outcomes, particularly within higher education settings. Further supporting this notion, Onyema, Ezeanya, and Nkiruka (2020) demonstrated that e-learning tools facilitate better interaction and collaboration among students, contributing to higher levels of academic success. Additionally, the findings of Benedict and Bando (2022) emphasized that e-learning not only increases accessibility to educational resources but also enhances the overall learning experience, resulting in improved academic achievement for students. These studies collectively underscore the importance of e-learning platforms as effective tools for fostering academic success, particularly for female students, in environments where traditional learning methods may be less effective.

The second finding of the study reveals a strong positive relationship between online counselling services (OCS) and female academic achievement. This finding is in agreement with the research conducted by Kato, Shiono, Goto, and Tsuchida (2011), Richards and Viganó (2013), Kerr (2015), Bato and Marcial (2016), as well as Kato et al. (2022), all of which reported significant benefits of online counseling in educational settings. The substantial impact of OCS highlights their critical role in addressing the emotional and psychological barriers that female students often encounter during their academic journeys. Many female students face unique challenges, including stress, anxiety, and balancing academic responsibilities with personal and familial obligations. Online counseling services provide essential support by offering accessible and flexible options for mental health and emotional well-being. This accessibility can be particularly beneficial for students who may be hesitant to seek help in traditional settings due to stigma or logistical barriers. Moreover, institutions should ensure that these services are well-promoted so that female students are aware of their availability and can easily access the support they need. By doing so, educational institutions can create a more supportive environment that not only enhances academic performance but also contributes to the overall well-being of female students. This proactive approach to integrating online counseling services into the academic framework can lead to improved student outcomes and foster a culture of mental health awareness and support within educational settings.

Conclusion

Third, e-learning platforms demonstrated a significant positive effect on students' academic achievement, highlighting their potential as valuable educational tools that provide flexible and diverse learning opportunities for female students.

It was also concluded that online counseling services exhibited a strong positive impact on academic achievement, emphasizing their critical role in providing emotional and psychological support to female students. This finding reinforces the necessity for institutions to prioritize the development and integration of comprehensive online counselling services considering the diverse needs of their students.

Recommendations

1. It was recommended that Colleges and Universities should provide training for both students and educators on how to effectively utilize e-learning resources.
2. It was also recommended that online counselling should be accessible to all female students to enable them interact with counsellors as it reduces phobia and promotes privacy. Orientations and seminars to be organized regularly to enable students have update on online counselling services.

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Reminiscence Counselling Therapy and Loneliness Behaviors among Older Adults in Sokoto Central Constituency, Sokoto State, Nigeria

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Abstract

The study investigated on the effectiveness of Reminiscence Counselling Therapy (RCT) in reducing loneliness behaviour among female older adult population in Sokoto Central constituency, Sokoto State. The study used quasi-experimental of pre-test and post-test design. The population of the study consist of the all-female older adults affected with loneliness disorder in Sokoto Central Constituency. The sample size of 40 older adult participants were purposively selected to form Experimental /Treatment Group. Participants received reminiscence therapy session ones in each week for 12 weeks. Each therapy session lasted for 80 minutes in length. Two instruments were used for data collection during pre-test and post-test assessment period. Each participant completed the instruments before and immediately after the intervention. The data obtained from pre-test and post-test result with the help of research instruments were compared to determine the effectiveness level and indeed the differences in quality of life of older adult before and after the reminiscence counselling intervention. Paired sample t-test was used to test the formulated hypotheses with the help of Statistical Package for Social Science (SPSS) Version 20. The findings of the study, revealed that, the act of loneliness of the respondents significantly reduced after they were exposed to Reminiscence counselling Therapy (RCT). Therefore, RCT counselling should be used in managing female older adults with behavior disorder of loneliness. The findings further revealed that RCT proved to be effective among female older adults in Sokoto central constituency. The counselling intervention finally, revealed that Reminiscence counselling Therapy (RCT) helps in improving the quality of life of the female older adult.

Keywords: Reminiscence therapy & Loneliness Behaviour

Introduction

Ageing is a process that begins with conception practically, although ageing is associate with phase in life when body functioning begins to decline and characterizes by loss of adaptive responses to life stressors as well as higher level of vulnerability to risk in term of age-related diseases. The mental disorders of elderly people, especially the high incidence of geriatric anxiety, loneliness emotional blame and depression, has become an issue of increasing concern due to the rapid population growth rate of the older adult. Ageing is an unavoidable reality of life which takes place at different dimensions, such as social, behavioural, psychological morphological and otherwise. In addition to physical

challenges, mental disorder is the commonest problem surrounding the period. The identified problems associates with old age are; feelings of loneliness, feelings of unwantedness, feeling of inadequacy, obsolescence of skill and at severe stage dementia of various degree. These directly or indirectly affect the quality and quantity of the cognitive functioning of the aged individual. Quality of life is about needs and the satisfaction of one's needs values and preferences, which naturally change with the development of a human personality (Čevela R, Kalvach Z, Čeledová L. Sociální ,2013).

The WHO reports further stated that by 2050, 80 percent of those aged 60 and over will be residing in low-and-middle-income countries where there is limited access to geriatric care and support such as adequate facilities and trained personnel (World Health Organization, 2019). Moreover, a recent study indicated that 60% and 66% of older adults with mild level of dementia exhibit behavioral disorders like Loneliness behaviors and aggressive behaviors respectively (Imtiaz, Khan, & Seelye, 2018). The severity of dementia may affect interpersonal relations and working ability, increasing care-related difficulties. Dementia is the main cause of disability in older adults and of being unable to live independently.

Loneliness is the most common cause of elderly mentally unbalanced states such as depression and intense despair, which is unpleasant, negative, frustrating, and painful personal experience, which caused bored, useless, depression, anxiety in person (Hsieh & Wang, 2003). The findings indicate that loneliness is not synonymous with living alone (Kunz & Soltys 2007). Loneliness occurs when an important and meaningful social interaction in terms of quantity or quality is diminished with aging. Experts believe that any attempt to eliminate feelings of loneliness among elderly may result to psychological barrier against complex problems and such can improve their self-esteem (Hao, 2008).

Furthermore, successful treatment of loneliness may enhance general health which also improve social interaction among the elderly. Understanding of loneliness from perspective of old people can enhance the ability of providers of health and rehabilitation to check prevention and care interventions about this phenomenon (Kawamoto, Yoshida & Oka, 2005). One of the interventions that promote quality of mental health among elderly and reduce their loneliness is reminiscence of group counselling therapy. Treatment through reminiscence includes intervention situation which is often used for elderly as a reminder of events, thoughts, and feelings of the past in order to create and facilities sense of fun and enhance quality of life or cope with current situation. Reminiscence therapy reduces social isolation and loneliness and improves cognitive performance, self-esteem, life satisfaction and self-worth levels. Sharing memories with others and reminiscence help people to attain their integrity (Hsieh & Wang, 2003). It may also be a tool for individual matching with unpleasant past (Burnside, 1995). In addition, reminiscence increases elderly attention to themselves and helps them in coping with conflicts and absence of this period, (Jones, 2003), reconstruction of life stories and evaluations of positive and negative experiences Bryant, Smart & King, 2005).

The roles of reminiscence for elderly individuals include: Promoting self-understanding, preservation of individual and collective memories, overcoming physical and world limitations, creating opportunities for understanding human law and strengthening coping strategies by minimizing rate of loneliness (Chiang, 2009). It is again this background that the study ascertained the effectiveness of reminiscence counselling therapy in reducing loneliness behaviour among female older adult population in Sokoto Central constituency, Sokoto State.

Objective of the study

- i. To identify the effectiveness of Reminiscence Counselling Therapy (RCT) on the treatment of loneliness among Female older adult with dementia in Sokoto Central constituency, Sokoto State
- ii. To determine the effectiveness of Reminiscence Counselling (RCT) therapy on improving quality of life among elderly with dementia in Sokoto Central constituency, Sokoto State.

Research Hypotheses

HO₂ There is no significant effect of Reminiscence Therapy (RCT) in treatment of loneliness among female Older Adult in Sokoto Central constituency, Sokoto State

HO₃ There is no significant effect of Reminiscence Counselling (RCT) therapy in improving quality of life of elderly in Sokoto Central constituency, Sokoto State

Methodology

The study adopted Quantitative approach of Quasi- experimental two groups of one pre-test and post-test and control group design. Elderly with dementia residing at selected districts within Sokoto Central Constituency were the target population of the study. A sample size of 40 of participants with mild dementia were purposively selected to represent the entire population. Two instruments were used these are;

- Simplified Questionnaire for Early Detection of Dementia (SQEDD), designed by (Yoshimasa et al, 2016).
- The revised UCLA Loneliness Scale by; (Russell, Peplau, & Cutrona, 1980)

Research Therapeutic Process

The study used three groups: Experimental /Treatment Group and the control group. Participants in Experimental Group 1 will receive reminiscence therapy. Participants in the comparison group will engage in normal activities. Participants in the experimental groups that will receive reminiscence therapy session appears ones in each week for 14 weeks. Each therapy session will last for 120 minutes in length. Each participant

completed the instruments immediately before the intervention and 1 and 6 weeks after completion of the intervention.

The researchers and the therapy specialist developed the action plan for all of the therapy sessions before the first therapy sessions began. The week-by-week activity plan included the main theme, objectives, description of the activities, and materials needed. Each therapy session lasted for 50 minutes, which included getting everyone seated (5 minutes), a warm-up exercise (5 minutes), a main theme activity (35 minutes), and a closing activity (5 minutes). Example of warm-up activities included choosing background music for the day, greeting and passing name tags to other participants, doing light stretching exercise, sharing snacks, and introducing the main theme for the current day's session. Participants differed in terms of cognitive impairments. Active and silent older adults were placed together so that the active older adults-initiated interaction with the therapist, providing other participants with opportunities to imitate and learn. Each older adult introduced herself or himself, which improved their verbal greeting and interaction skills. Each activity was guided by a specialist who had received training in reminiscence therapy and occurred in the activity rooms of the dementia care centers included in the study.

Table 1: Descriptions of Weekly Reminiscence Therapy

Week	Main Theme	Learning Objective	Resources Used
1	Pretest assessment period	Identify the baseline level of behaviours	Questionnaires
2	Personal preferences	(a) Introducing each other (b) Establishing ground rules for weekly activities (c) Sharing things, they like and dislike (d) Assessing participant's ability for abstract thinking and communicating in a group setting	Marker pens, group calendar, picture cards for foods, clothes, houses, transportations, animals
3	Hometown	(a) Learning each other's birthplace (b) Listening and sharing special things about everyone's hometown	Maps, tour guides, computer, Internet access, projector
4	Foods	(a) Learning each other's favorite snacks or dishes they eat as a child (b) Tasting some snacks and dishes from the past	Rice tea, rice cake, sesame paste, maltose candy, computer, Internet access, projector
5	Works	(a) Learning each other's job or work they did when they were young (b) Sharing special things about everyone's former work or job	Job picture cards, computer, Internet access, protector
6	Daily routines	(a) Learning each other's daily routines or chores to do when they were young (b) Sharing the differences between the past and present daily routines	Comparative pictures of the past and the present, computer, Internet access, projector
7	Friendship	(a) Connecting with friends (b) Sharing stories about them and their old friends	Pictures of group activities and social activities, computer, Internet access, projector
8	Songs	(a) Learning each other's favorite old songs	CD and cassette players, speakers,

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		(b) Sharing the meaning of their favorite songs (c) Assessing the participant's hearing ability	music sheets, computer, Internet access, projector
9	Loves and affections	a) Learning each other's romantic or love stories when they were young (b) Sharing the ways they maintain a healthy relationship with others	Pictures of romantic themes, computer, Internet access, projector
10	Travel	(a) Learning each other's favorite place to travel (b) Sharing what makes their favorite place unique to them	Maps, tour guides, pictures, computer, Internet access projector
11	Memories	(a) Viewing pictures from this group therapy (b) Sharing their most memorable moment (c) Concluding the reminiscence therapy program	Pictures from this group therapy, computer, Internet access, projector
12	Games	(a) Learning each other's favorite games to play as a child (b) Introducing and sharing special things about everyone's favorite games	Games from the past, computer, Internet access, projector
13	Evaluation	Highlight of main activities carried out	Pictures of group activities and social activities, computer, music CDs, Internet access, projector
14	Post-test assessment period	Measure the effectiveness level	Questionnaires

Results

HO₂ There is no significant effect of Reminiscence Therapy (RCT) in treatment of loneliness among female Older Adult in Sokoto Central constituency, Sokoto State

Table 2: Reminiscence Counselling Therapy among Female Older Adult

Variables	Mean	Std. Deviation	t-Cal	p-Value	df	Decision
RT Pre / RT Pos	-2.04750	1.08573	-8.434	.000	19	Rejected

$p < 0.05$

Table 2 above shows the paired Sample t-test result of ($M = -2.04750$, $SD = 1.08573$, $t = -8.434$, $df. 19$ and $p\text{-Value} = .000$). Thus, the respondents' loneliness level reduced as a result of Reminiscence Counselling Therapy (RCT) intervention received. Because the realized $p\text{-Value}$ is less than .05 level of significance. This showed that there is significant reduction of loneliness among the respondents due to counselling intervention. Therefore, the **HO₁** which stated that, there is no significant effect of Reminiscence Counselling Therapy (RCT) in the treatment of loneliness among female older adult in Sokoto Central constituency, Sokoto State is hereby rejected.

HO₃ There is no significant effect of Reminiscence Counselling therapy (RCT) in improving quality of life Quality of elderly in Sokoto Central constituency, Sokoto State

Table 3: Reminiscence and of Life of Elderly

Variables	Mean	Std. Deviation	t-Cal	p-Value	df	Decision
QL Pre / QL Pos	-2.82830	21233	-59570	.000	19	Rejected

$p < 0.05$

Table 3 above shows the paired Sample t-test result of ($M = -2.82830$, $SD = 21233$, $t = -59570$, $df. 19$ and $p\text{-Value} = .000$). Thus, the respondents' quality of life (QL) improved as a result of Reminiscence Counselling Therapy (RCT) intervention received. Because the realized $p\text{-Value}$ is less than .05 level of significance. This showed that there is significant improvement in quality of life among the respondents due to reminiscence counselling intervention. Therefore, the H_{01} which stated that, there is no significant effect of Reminiscence Counselling Therapy (RCT) in improving quality of life among the older adult in Sokoto Central constituency, Sokoto State is hereby rejected.

Discussion

The finding of hypothesis number one and two revealed that there is significant effect of RCT in the treatment of loneliness after comparing the mean scores of pre-test and post-test among the older adult in Sokoto Central constituency, Sokoto State . The null hypothesis was rejected on the ground that the p-value of .000 is less than 0.05 level of significance. This clearly indicates that there is significant effect of reminiscence counselling therapy in the treatment of loneliness among the older adult in Sokoto Central constituency.

This finding concord with Zhou (2011) looked at 125 older adults living in eight randomly selected communities in Changsha city, divided into experimental and control groups. The former received six weeks of reminiscence therapy on the topics of self-introduction, recalling old songs, sharing old photos, recalling happy moments growing up, recalling lifetime achievements, and future expectations. The topics chosen deliberately respected the cultural background of the elderly involved. After this their mental health was assessed using three measures: Geriatric Depression Scale, Self-Esteem Scale and the Affect Balance Scale. The study found that reminiscence therapy significantly reduced the symptoms of depression and improved affect balance; however, there was no difference in the self-esteem of the experimental and control groups.

The finding also concurs with the research conducted by Meléndez-Moral, Charco-Ruiz, Mayordomo-Rodriguez, and Sales-Galan , (2013) on the extent of integrative reminiscence intervention effect using a quasi-experimental design with pre-test and post-test and control group of patients on the waiting list with 34 healthy elderly people attending eight sessions found that in comparison to the control group ,the intervention group demonstrated a statistically significant reduction in depression symptoms and a significant improvement in self-esteem, integrity, life satisfaction, and psychological well-being.

However, the finding of the third hypothesis which reveals significant improvement in quality of life among the respondents due to reminiscence counselling intervention concords with recent study by Lök, Bademli, and Selçuk-Tosun (2018) found positive effects of reminiscence therapy on reducing depression symptoms and on increasing quality of life in older patients with dementia. It's also in line with Antony, (2005) research conducted which assess the quality of life before and after laughter therapy in old age homes 30 samples were selected Quality of Life (QOL) tool was used. Intervention Laughter therapy was given for a week. After the intervention there was significant difference in quality of life. Statistical significance in all domains. Findings suggested that reminiscence therapy was effective for old age people.

Conclusion

Based on the findings of the study, the act of loneliness of the respondents significantly reduced after they were exposed to Reminiscence counselling Therapy (RCT). Therefore, RCT counselling is useful in managing female older adults with loneliness behavior. The findings further revealed that RCT proved to be effective among female older adults in Sokoto central constituency. The counselling intervention finally, revealed that Reminiscence counselling Therapy (RCT) helps in improving the quality of life of the older adult.

Recommendations

1. RCT interventions should be used by counsellors and other social workers in managing female older adults with loneliness in Sokoto Central Constituency and beyond.
2. RCT interventions should also be used by counsellors and other social workers in improving quality of life of the older adults in Sokoto Central Constituency and beyond.

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Girl-Child Education: A Genuine Tool for Poverty Reduction and Inclusive Development

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Abstract

Girl-child education refers to the aspect of education that aims at developing the skills and knowledge of girls and women from all castes, races, and backgrounds. In Nigeria, like many other developing countries, girl-child education has often been neglected due to deep-seated cultural beliefs and economic difficulties that cut across the land, from the North to the south and from the East to the West. This paper, therefore, examined girl-child education issues concerning poverty reduction and development within the setting of Nigerian society. The rampancy, causes, implications, and remedies were conspicuously highlighted with a deliberate focus on girl-child education as a tool for its reduction as well as enhancing inclusive development amidst the persistent social problems facing the nation. The concept of girl-child education was explicitly discussed. Benefits and challenges facing girl-child education as well as implications for inclusive development were also discussed. The paper observed that Nigeria is still struggling to meet its set target of a poverty-free nation despite several governments' efforts on girl-child education. The paper eventually offered appropriate solutions and recommended among others that the government should aggressively invest in girl-child education by ensuring that girls and women have access to quality education for the much-desired positive impacts on the larger economy and the overall inclusive development of the nation.

Keywords: Girl-child, Education, Poverty, Reduction, Development, Nigeria

Introduction

Education is the process by which individuals are made more functional members of their society. Education is an inalienable right of all, irrespective of the person's circumstances (Obinaju, 2014). To educate a girl child means to train her mind, character, and abilities. Education is a fundamental human right that should be availed to every girl child, irrespective of age and nationality. Education is a critical factor in reducing poverty and promoting long-term economic growth (World Bank, 2018). Girls' education is a strategic development priority. Women who are better educated are likely to be healthier than the uneducated ones (UNESCO, 2019). They tend to be involved more in the formal labour market, earn more income, give birth to fewer children, marry at a later age, and provide better health care and education to their children (Malala Fund, 2020). These factors, put together, can help households out of poverty.

However, female education has suffered great neglect in the past due to cultural beliefs and traditions, among other reasons. As reported by UNICEF (2007), and cited by Grace (2010), the global figure for out-of-school children is estimated to be 121 million, out of which 65 million (approximately 53.8%) were girls, and over 80 percent of these girls live in sub-Saharan Africa. In 2011, according to President Goodluck Jonathan, Nigeria had 9 million (37%) out-of-school children, which is more than one-third of its primary school-age children and is the highest in Africa (Tayoaka et al., 2014). In another development, the Nigerian President, Muhammed Buhari, as quoted on January 16, 2020, stated that Nigeria has 13.2 million out-of-school children, with the girl-child accounting for 60% of this figure (Buhari, 2020, as cited in Adebayo, 2021). Despite the efforts of Goodluck Jonathan, Nigerian girls not in school still number around 7 million.

Girls are discriminated against in Nigeria in access to educational opportunities, food, and nutrition (Human Rights Watch, 2019). The girls have been left behind in Nigeria's education system, particularly by many families who have often prioritized the education of boys, denying their female counterparts the same opportunity to learn and develop the skills necessary to succeed in life (Afolayan, 2018). This has not only perpetuated gender inequality but also deprived the country of the full potential of half of its population (UN Women, 2020). Girl child education in this paper is therefore being discussed in subsections under the following headings: concept of girl child education, importance of girl child education, girl child education and inclusive development, government efforts on girl child education, and challenges facing girl child education.

Concept of Girl Child Education

A girl child is described as a female child between infancy and early adulthood (Okay, 2012). A girl-child is also referred to as a female between the ages of 6–18 years (Mukhtar et al., 2011). The National Child Welfare Policy (1989, as cited in Ada, 2007) defines the girl-child as a person below 14 years of age. It is a known fact that education is a platform through which skills, knowledge, and abilities for reducing poverty and enhancing inclusive development are acquired (World Bank, 2018). Girl child education, therefore, refers to the aspect of education that aims at developing the skills and knowledge of girls and women from all castes, races, and backgrounds (UNESCO, 2020).

Education is a vital tool for girls and women to claim their rightful place in society (Malala Fund, 2019). It also helps them realize their potential in economic, political, and social aspects. Above all, it is the most powerful means to lift people out of poverty (European Journal of Social Sciences, 2021). For the girl child, education is one of the first steps in participating in society and freeing herself from economic exploitation and patriarchal oppression. Education is an instrument capable of correcting inequality in any society (UN Women, 2019). The exclusion of girls from education denies them the opportunity to develop their potential and to play a crucial role in their families, country, and the world at large (Human Rights Watch, 2021).

Providing more education for girls will increase their involvement in the political process and further the spread of information on several health-related threats, such as female circumcision, early pregnancy, and sexually transmitted diseases. Educating girls may also result in a decrease in infant and maternal mortality, domestic and sexual violence, and child marriages (UNICEF, 2021).

Importance of Girl Child Education in the Society

The benefits of girl-child education to men and society cannot be over-emphasized. Girl child education is of great benefit to the individual, her family, the community, and the country as a whole. Below are some of the benefits of girl child education in Nigeria:

1. **Impacting on the education of the future girl child:** If a girl child is educated and grows up to become a successful mother in her chosen career or vocation, she is likely to ensure that her children equally receive good education for them to enjoy the benefits she enjoyed. So if we educate a girl, we educate a family and a nation.
2. **Reduction in infant mortality rate:** Educated mothers are acquainted with diseases and the various preventive measures to avert them, unlike uneducated mothers whose children are more likely to die from preventable diseases such as cholera, tetanus, poliovirus, measles, etc. For instance, in the rural area, cultural challenges may prevent immunization from getting to the children and/or mothers that need it thereby putting them at risk of future health challenges and financial stress on the children or family. If not well handled, it may result in fatality.
3. **Contribution to national development:** Through girl-child education, important basic knowledge and vocational information are acquired for wealth creation and job placement (if she attains a higher level of education). Taxes are paid by these engaged women to government coffers which are now used for various developmental projects.
4. **Reduction in child marriage:** It is the practice in some communities in the Northern part of the country to give the hands of their young girls in marriage at early ages (around 9 years). This act abruptly put an end to their education. Denied access to education will affect the girls seriously as they grow up to become illiterate adults. There is a high tendency that educated girl children when grown-up will want to give education to their female children because of its benefits and the edge they have over the illiterate women counterparts.

Challenges Facing Girl Child Education in Nigeria

Many girl-children are not in school today for various reasons. They are denied access to education due to issues like poverty, discrimination, culture, and emergencies (UNICEF,

2021). These girls have the same aspirations as their male counterparts to attend school, secure good jobs, and support their families and communities. Instead of being encouraged, they often face discrimination and are regarded as second-class citizens (Human Rights Watch, 2020). Below are some of the key challenges facing girls' education:

1. **Early Marriage:** Child marriages occur worldwide, but the highest rates are in Niger (76%), the Central African Republic, and Chad (68% each). In Northern Nigeria, marriage is often prioritized over education, leading to an abrupt end to schooling for many girls (Okafor, 2019). While boys can also be affected, girls are disproportionately impacted, often resulting in lifelong poverty due to limited education (UNFPA, 2021).
2. **Pregnancy:** Many schools enforce policies that ban pregnant girls from attending (Plan International, 2020). Even after giving birth, many do not return due to stigma, financial constraints, or inflexible school programs (Amnesty International, 2021).
3. **Violence in Schools:** About 246 million children experience violence at or on their way to school yearly, with girls being particularly vulnerable (UNESCO, 2019). In Africa, nearly half of schoolchildren face bullying, and 18 million girls aged 15–19 experience sexual violence, often leading to school dropout (WHO, 2020).
4. **Lack of Funding:** Families and communities often prioritize boys' education, leaving girls with inadequate financial support (World Bank, 2019). Many believe investing in girls is wasteful since they will eventually marry (Adichie, 2018).
5. **Child/Domestic Labor:** Economic hardships force many girls into labor, depriving them of education (ILO, 2021). These girls face risks like trafficking, sexual abuse, and forced labor (UNODC, 2020).
6. **Unsafe Routes to School:** Long, unsafe commutes expose girls to harassment, assault, and abduction (Global Partnership for Education, 2021). Many parents keep girls home due to these dangers (Malala Fund, 2020).
7. **Hygiene Issues:** Poor sanitation facilities force menstruating girls to miss 3–5 school days monthly. Mixed-gender toilets also increase risks of sexual harassment (UN Women, 2020).
8. **Inadequate Female Teachers:** Schools with few female teachers are less welcoming to girls (Education International, 2019). In Liberia and CAR, only 20% of primary teachers are women.
9. **Conflict Zones:** Girls in war-torn areas are 90% more likely to miss secondary school (UNICEF, 2022). Attacks on girls' schools further deter attendance.

10. **Disability Discrimination:** Girls with disabilities face compounded barriers, with only 41.7% completing primary school compared to 52.9% of non-disabled girls (WHO, 2018).
11. **Poverty in Developing Countries:** Poor nations struggle to fund education, despite its proven role in reducing poverty and boosting economies (OECD, 2020).
12. **Natural Disasters:** Crises like floods and pandemics push girls into early marriage and out of school (ODI, 2021). Families losing livelihoods can no longer afford education (Brookings, 2022).

Government Efforts of Government on Girl-Child Education

In 2013, World Bank Country Director Marie-Francoise Marie-Nelly stated that 100 million Nigerians live in extreme poverty (World Bank, 2013). According to the World Bank, extreme poverty means living on less than \$1.25 daily. More recently, the World Poverty Clock (2023) reported that 71 million Nigerians live in extreme poverty. The Rivers State's All Progressives Congress governorship candidate, Tonye Cole, reinforced this by stating, "Nigeria has the awful distinction of being the world capital of poverty, with 71 million people living in extreme poverty today (World Poverty Clock, 2023) and a total of 133 million people classed as multi-dimensionally poor according to National Bureau of Statistics data" (Cole, 2023, as cited in The Guardian, 2023).

Global and local statistics demonstrate that Nigeria's poverty state requires deliberate intervention through various strategies, including significant investment in girl-child education, which has proven effective in reducing unemployment (UNDP, 2022). Below are highlights of government efforts to improve girl child education:

1. **Establishment of the National Commission for Mass Literacy and Non-formal Education in 1991.** This commission was tasked with collaborating with stakeholders to eradicate illiteracy in Nigeria (Federal Ministry of Education, 2015).
2. **Universal Basic Education (UBE) program:** Launched in 1999 to provide compulsory, qualitative basic education for all Nigerian children, including girls (UBEC, 2020).
3. **Girls' Education Project (GEP):** A UNICEF-supported initiative implemented in collaboration with state governments to increase girls' enrollment and retention in Northern Nigeria (UNICEF Nigeria, 2021).
4. **Conditional Cash Transfer (CCT) Program:** A government initiative providing cash transfers to poor households conditional on school attendance, particularly for girls.

5. **Safe School Initiative (SSI):** A government-led program to enhance school safety, especially in conflict areas (Federal Ministry of Education, 2014).
6. **National Gender Policy (NGP):** Developed in 2006 to promote gender equality and eliminate discrimination against women and girls (Federal Ministry of Women Affairs, 2006).
7. **National Plan of Action for the Education of Girls (NPAEG):** Established in 2004 to improve girls' education outcomes, particularly in Northern Nigeria (Federal Ministry of Education, 2005).

Strategies to Improve Girl Child Education in Nigeria

According to UNICEF chief field officer in Kano, Mr Rahaman Muhammed Farah, recently disclosed that 10 million girls are out of school in Nigeria and that the majority of them are from the Northern part of the country. This shows that the country must do something urgently to reverse the number. Below are the ways to improve the girl child education in Nigeria:

1. The Nigerian government and the media should increase public awareness and implement laws that forbid discrimination against girl-child education to raise the standard of female education
2. The government should make frantic efforts to remove the barriers that can prevent girls from accessing education. e.g. provision of sanitary pads and water for schools to encourage adolescent girls from coming to school during their monthly flows.
3. Parents and guardians should endeavor to reduce the house chores of the girl child. Assigning girls with plenty of domestic work is common to families in developing countries such as Nigeria etc. It is advised that house chores should be shared among members of the family so that girls can have time for education.
4. The Government should ensure adequate security in schools so that they will be safe havens for girls. This will also encourage more girls' enrolment in school and improve their attendance as well.
5. There should be massive education of teachers on gender issues: Teachers are known to be custodians of knowledge and as such must teach with open minds without biases concerning gender. Teachers should endeavor to neutralize any conceptions about girl child education.
6. Church, Mosque and other religious leaders should also join the crusade for girl child education by properly educating their followers, which may involve parents, guardians, etc about the importance of girl child education as well as neutralizing any wrong view they may be holding on firmly to.

7. The members of the public should be carried along on the issue of girl child education. This can come in the form of awareness creation for the noise about girl child education to be loud enough for all the stakeholders to begin the prioritization of girl child education.
8. The government should create a proper working system to meet the special needs or demands of female students. School calendars and timetables should be flexible enough to allow for seasonal jobs that can fetch them money to support their education.
9. The primary education management board and other related bodies should improve on their functions and activities. This body and other related ones are assigned the roles of bringing government policies to bear in the local government areas. In other words, they decentralize government policies and programs for effectiveness and easy participation of the people.
10. The government should ensure that all laws and regulations that will favor girl child education are followed and duplicated across the strata of government.

Summary

Education is a fundamental human right that should be availed to every girl-child regardless of age, sex, color, and nationality (United Nations, 1948). No question that educating girls is a prerequisite for eradicating poverty (World Bank, 2018). Education is a critical factor in reducing poverty and promoting long-term economic growth (UNESCO, 2020). Girls' education is a strategic development priority that holds numerous benefits for any society (Global Partnership for Education, 2021).

Educated women tend to participate more in the formal labor market, earn higher incomes, have fewer children, marry at a later age, and provide better healthcare and education for their children (World Bank, 2019). These factors can lift many households out of poverty (Malala Fund, 2020). Education empowers and transforms women by breaking the cycle of exclusion that keeps them at home and disengaged from decision-making (UN Women, 2021).

Higher education, in particular, prepares women for leadership roles in government, business, and civil society (UNDP, 2022). Research indicates that women make ideal leaders as they tend to allocate resources more wisely than men, with a larger percentage of their income being spent on food and education for their children (UN, 2020). Therefore, enhancing women's economic and political participation directly benefits future generations (UNICEF, 2021).

Providing quality university education for women constitutes a long-term investment in their children's futures (OECD, 2019). Deliberate investment in girls' education not only

reduces poverty but also enhances inclusive development for a better society (ADB, 2022).

Conclusion

Girl child education has become an issue of global and national concern considering the increasing number of out-of-school children yearly as evidenced by various statistics globally and Nigeria in particular. The benefits of educating the girls in the society cannot be over-emphasized. However, for Nigeria to enjoy the sweet in girl child education, it must put in deliberate efforts to confront the various challenges militating against girl child education so that the attendant benefit of gainful employment which reduces poverty can be harvested. Also, the big statistical figures on out-of-school children can only be reversed if all hands are on deck to achieve the various aims and objectives of government policies and programs on girl child education.

Recommendations

Girl child education can be a good tool to reverse the trend of unemployment in Nigeria and also achieve massive development without leaving anybody behind if the following recommendations can be considered

1. The government should employ more qualified teachers in the rural areas where the majority of vulnerable girls reside and ensure a balanced distribution of educational amenities and facilities in both the urban and rural areas. This will encourage the teachers in the rural areas to stay for a longer period of time before seeking transfer elsewhere.
2. There should be a strict follow-up and implementation of the Universal Basic Education program in the country.
3. The government should create more awareness on the promotion of girls' rights so that they can be protected by all and sundry.
4. Females should be allowed to lead or drive the implementation of most government policies and projects targeted at improving girls' education in order to have great impacts on the girls.
5. The government should encourage girl-child education using scholarships as bait of enticement to enable poor parents and those who have to consider sending only boys to school over scarce resources to be able to send their girls to school.
6. There should be thought-through strategies to strengthen the enforcement of policies to enable pregnant girls and young mothers to stay in school and discourage child marriages.

7. Government agencies should revive, review, and monitor the curriculum and teachings in classes that are gender biased.
8. The government should ensure a safe and supportive learning environment for girls. Just as the new IG, Egbetokun, has set up a special force to secure schools across the country.
9. The government should ensure that displaced girls in every part of the country have access to basic education.
10. The post-insurgency reconstruction program for the Northeastern part of the country should involve strategies that will encourage and promote girl-child education at all levels in the sub-region.

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Broken Homes and Psychological Adjustment of Students in Kebbi State Secondary Schools, Nigeria

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Abstract

This study investigated the Relationship between Broken Homes and Psychological Adjustment among Secondary School Students in Kebbi state with particularly focus on Jega Local Government Area of Kebbi State, Nigeria. In carrying out the study, two research objectives and two hypotheses were raised to guide the study. Correlational research design was employed. The proportional sampling technique was used to select a sample of 242 students from a population of 668 students of the sampled schools. Two instruments, Broken Home Inventory (BHI) and Psychological Adjustment Scale (PAS) questionnaires were used for the data collection. Data collected was subjected to statistical analysis using Pearson Product Moment Correlation statistical methods (r). Two null hypotheses were tested at 0.05 level of significance. Analysis of data shows that there is significance relationship between parental separation and students psychological adjustment ($r=0.728$, $p=.0002$.) and there is also significant relationship between single parenting and students psychological adjustment ($r=0.622$, $p=0.003$.). On the basis of these findings, it was recommended that secondary schools should have guidance services with a competent counselor to counsel students from broken homes, child raised by single parent and parents who do not pay adequate attention to their children and wards' education and those students experiencing challenges in schools. At the same time Parents should be enlightened on the need to stay together as husband and wife to raise a good family. They should persevere and tolerate each other in marriage.

Keywords: Broken homes, Psychological adjustment, Secondary school and Students

Introduction

The family is the child's first place of contact with the world. As a result of that, a child acquires initial education and socialization from parents and other members of the family. Agulana (2000) pointed out that the family lays the psychological, moral, and spiritual foundation in the overall development of the child. Structurally, family/homes are either broken or intact. A broken home in this context is one that is not structurally intact, as a result of divorce, separation, death of one of the parent. According to Frazer (2004), psychological home conditions arise mainly from illegitimacy of children, the label of

adopted child, broken homes, divorce and parental deprivation. Such abnormal conditions of the home, are likely to have a detrimental effect on school performance of the child he asserts.

Many attempts have been made to provide a generally acceptable explanation of Broken Homes. This has been mainly due to the fact that each scholar advances his own definition based on his ideological affinity or historical allegiance and interaction. Longman dictionary of contemporary English defines a Broken Home as family that no longer lives together because the parents have divorced. The definition extends to broken marriage which is a marriage that has ended because the husband and wife do not live together anymore.

Broken home is defined as one in which one of the partners loses his/her spouse by death, separation, divorce, desertion or single parenting (Conk line, 2006) in the same vein sees broken homes as a situation where two spouses separate leaving the children to the hazard of the society. Broken homes occur when husband and wife separate from each other, leaving the care and responsibility of the children to one parent. Divorce could be temporal or permanent. It is temporal when there is still hope of coming together after the relevant laws must have been put in place. This is to ensure that created the temporal separation are settled. But if the divorce is permanent, it means there is no hope of coming together, Divorce has to do with either one of the partners or saying 'bye bye' to his/her spouse as a result of infidelity, pride, superstition, religion, disagreement, in-laws interferences, alcoholism, and disrespect for one another or bulling (Birnin-tsaba 2017).

The concept of Psychological adjustment refers to an individual's general adaptation to his environment and the demands of life such as the way he relates to other people that is interpersonal behaviour, handle his responsibility, deals with stress and meet his own needs and life's satisfaction. The society is dynamic and change is the only constant thing, so the individual's ability to review his attitude and behaviour is an essential ingredient of adjustment (Birnin-tsaba 2017).

Adjustment in school has been described as a very important aspect of student s life. The primary purpose of education is to train students to be well adjusted in their emotional and psychological life (Elliot, 2005).

However, a home can either be stable or broken. A stable home is the one in which both parents (mother and father) live together with their children while a broken home is the one in which one or both parents are not living together with the children. It is the level at which the home operates that determine the psychological adjustment of the child in school. Broken homes influence to a very large extent the adjustment of the child. Children that have suffered from neglect or lack of love (in a broken home) are known to be psychologically imbalanced to face the realities of life. When there is disunity in the family, or a conflict between a mother or father, the child is caught up in the middle and will be at disadvantage/receiving end (Birnin-tsaba 2017). According to Blackby (1999)

adequate research needs to be conducted in this direction to ensure smooth transition of children from early stages to adulthood.

Life, in a single parent family or broken home can be stressful for both the child and the parent. Such families are faced with challenges of inadequate financial resources (children defense find 2004). Schults (2006) noted that if adolescents from unstable homes are to be compared with those from stable homes, it would be seen that the former have more social, academic and emotional and psychological problems. Rochlkepartain (2003) is of the opinion that the family and its structure play a great role in children's academic performance. To some extent, there is simple evidence to show the marital instability brings about stress, tension, lack of motivation and frustration obviously; these manifestations act negatively affects child's psychological adjustment.

So also, if a child is not well nurtured and mentally assisted, it will also affect his/her educational outcome. If it were to be a male child, there is every likely for the child to be anti-socials in nature by joining gangs. Also, if it were to be a female child, there is likelihood for her to become wayward. It is on this note that the researcher wants to investigate the Relationship between Broken Homes and Psychological Adjustment among Secondary School Students in Kebbi state with particularly focus on Jega Local Government Area of Kebbi State, Nigeria.

Statement of the Problem

Student's life in broken homes is observed by research to be associated with psychological stress that can impair intellectual development, thereby giving way for such children to grow up without being trained properly.

However, the absence of one or both parents deprives young children of the stable love, care, security and total support they have been accustomed to. They also tend to make children different in the eyes of their peer group. If children are asked where the missing parent is or why they have a new parent to replace the missing parents, they become embarrassed and ashamed. They may also feel guilty and may think they are unwanted by the society. Such stressful situations can lead to psychological and intellectual imbalance in growing children. Hence, However, it is observed by the researcher that absence of one or both parent deprives the young children from having love, care, security and support, which also lead them to psychological anxiety. This situation may in-turn have effect on their psychological adjustment especially at secondary school level where collective and cardinal academic relationships are to be created and to enhance learning among the young children. As such, the need for empirical study becomes pertinent to find-out the relationship between Broken Homes and Psychological adjustment among Secondary School Students in Jega Metropolis, Kebbi State, Nigeria.

Objectives of the Study

The following are the objectives of the study:

1. Determine the Relationship between Single Parenting and Psychological Adjustment among Secondary School Students.
2. Determine the Relationship between Parental Separation and Psychological Adjustment among Secondary School Students.

Null Hypotheses

The findings from the study will be of immense benefits to students, teachers, counselors and psychologists, curriculum planners, policy makers, Government and the society at large. The findings of the study will be of great help to students of divorced homes to see how broken homes affect their psychological wellbeing and about the need for them to share their problem with other family members and social welfare officers for assistance instead of indulging in any antisocial behavior like: drug abuse, delinquency, cultism, teenage pregnancy and many more. It will be of help to the teachers so as to understand the student with psychological adjustment problems as a result of broken home and how they can help those students through enlightenment on the effect of broken home.

At the same time the community will know how they can render help to the affected children of divorced homes. Furthermore, it will create the awareness of the school counselors and psychologists on the relationship between broken home and psychological adjustment of student by organizing seminar presentations on the effect of broken homes to the students' psychological wellbeing and to develop appropriate counselling strategies to counsel the victim of broken homes on how they can adjust.

It is also hoped the findings will help the government to know the strong influence of divorce is affecting the children and there is need for the government to provide help for these children out of the problems by giving out means and support to schools in other to provide counselors and the necessary assistance. The curriculum planners will understand the need to incorporate the negative effect of broken homes on psychological adjustment of students, and the coping strategies from such problems into curriculum, and the education policy makers will also be of great help to impalement special educational programs and services.

The following hypotheses guided the study:

1. There is no Significant Relationship between Single Parenting and Psychological Adjustment among Secondary School Students.
2. There is no Significant Relationship between Parental Separation and Psychological Adjustment among Secondary School Students.

Methodology

The research design adopted for this study is correlational design. Correlational design according to McMilla and Schumacher (2010) is research design in which information on

at least two variable are collected in order to investigate the relationship between the variables. In correlational research design, the researcher will not attempt to manipulate any variables. Instead, a correlational research design is used to establish the statistical association between two or more variables.

The target population of the study comprised of secondary school students from J.S.S II, who come from broken homes, selected from thirteen schools in Jega metropolis. A total of 668 students constituted the population.

Table 1: Distribution of Population of J.S.S II Students according to their School

S/No	Name of School	Separated	Single Parenting	Total Population
1.	Haliru Abdu Arabic Sec Sch.	15	31	46
2.	Govt Sci. College, Basaura	14	40	54
3.	Govt Day Sec. Sch. Jega (Boys)	91	33	124
4.	Govt Day Girls Sec Sch. Jega	53	41	94
5.	Govt Girls Day Sec Sch. Jega	23	34	57
6.	Govt Day Sec Sch. Kimba	10	26	36
7.	Govt Day Sec Sch. Jandutse	12	38	50
8.	Govt. Day Sec Sch. Dumbegu	11	30	41
9.	Govt. Day Sec Sch. Oke Jega	21	19	40
10.	Junior Sec Sch Alelu	30	20	50
11.	Junior Sec Sch Agwada	17	11	28
12.	Junior Sec Sch Katanga	12	13	25
13.	Command School (Boys)	11	12	23
Total		330	348	668

Source: Field work (2020)

The sample size for this study consisted of two hundred and seventy four students (242) selected from the total number of 668 students from broken homes. This is in line with the provision of Krejee and Morgans (1970) that a sample of 242 is appropriate for the population of 668, proportional sampling was used in selecting of respondents from the thirteen secondary schools.

Table 2: Sample Distribution per School

S/No	Name of School	Population	Sample Size	Percentage %
1.	Haliru Abdu Arabic Sec Sch.	46	17	7
2.	Govt Sci. College, Basaura	54	20	8
3.	Govt Day Sec. Sch. Jega (Boys)	124	45	19
4.	Govt Day Girls Sec Sch. Jega	94	34	14
5.	Govt Girls Day Sec Sch. Jega	57	21	9
6.	Govt Day Sec Sch. Kimba	36	13	5
7.	Govt Day Sec Sch. Jandutse	50	18	7
8.	Govt. Day Sec Sch. Dumbegu	41	15	6
9.	Govt. Day Sec Sch. Oke Jega	40	14	6
10.	Junior Sec Sch Alelu	50	18	7
11.	Junior Sec Sch Agwada	28	10	4
12.	Junior Sec Sch Katanga	25	9	4
13.	Command School (Boys)	23	8	3
Total		668	242	100

Primary Data

The instruments adapted for the study were two: Broken Home Inventory (BHI) by Schultz (2013) to measure students with Broken Homes problems, and Psychological Adjustment Scale (PAS) by Thoulacius (2015) to measure the students with Psychological Adjustment problems. It comprises of three sections, section A-Bio data of the student with eleven (11) items, section B Instrument on Broken Home with 20 items and Psychological Adjustment Inventory which consists of 19 items.

Scoring guide for Psychological Adjustment

<29- low adjustment

30-59-averagely adjusted

60-100 highly adjusted

The scoring guide shows that students with 1-29 have low psychological adjustment, meaning they have little or no psychological problems. Also those with 30 - 59 shows that they have average psychological problems, and could be reduced with proper counseling. Similarly, those with 60 - 100 indicate a very severe psychological adjustment that needs proper attention from counsellors, teachers and parents, which if care is not taken can prove dangerous to those students.

To find out validity of the instrument, copies of the adapted instruments on Broken Homes and Psychological Adjustment were submitted to the fellow colleagues to ensure the face and content validity of the instrument and their relevance and appropriateness to the study.

To ensure the reliability of the instrument, a pilot study was carried out. The coefficient index of 0.75 was found. This reliability coefficient was considered adequate for the internal consistencies of the instruments which an instrument is considered reliable if it's reliability coefficient lies between 0 and 1, therefore, the instrument was considered reliable and appropriate for this study.

The administration of the instrument was undertaken by the researcher and the research assistants. Two weeks were used to administer the questionnaire to JSS11 students, a total of two hundred and seventy-four (242) questionnaires were distributed and 100% retrieved from the respondents and used for data analysis.

The data collected was analyzed using descriptive and correlation statistics for the purpose of either accepting or rejecting them. Pearson Product Moment Correlation (r) Statistical method was used to test the hypotheses. All the hypotheses were tested at 0.05 alpha levels of significances. SPSS version 20.0 was used for data analysis.

Results

Hypothesis One: There is no Significant Relationship between Single Parenting and Student's Psychological Adjustment

Table 3: Pearson Product Moment Correlation (r) Statistics on the Relationship between Single Parenting and Psychological Adjustment

Variables	N	<i>X</i>	<i>SD</i>	<i>r</i>	<i>Df</i>	<i>P</i>
Single Parenting	242	32.6048	7.86219			
Psychological Adjustment	242	63.2649	12.24280			
					-0.622**	240 0.003

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

Table 3: above revealed that significant relationship exists between Single Parenting and student's psychological adjustment. This is because the computed p value of 0.003 is lower than the 0.05 alpha level of significance at a correlation index r level of -0.622. Meaning that, Single parenting has negative effect on student's psychological adjustment. Therefore, the null hypothesis was rejected.

Hypothesis Two: There is no Significant Relationship between Parental Separation and Student's Psychological Adjustment

Table 4: Pearson Product Moment Correlation (r) Statistics on the Relationship between Parental Separation and Student's Psychological Adjustment

Variables	N	<i>X</i>	<i>SD</i>	<i>r</i>	<i>Df</i>	<i>P</i>
Parental separation	242	56.2382	13.26504			
Psychological Adjustment	242	54.3800	11.55380			
					-0.728**	240 0.002

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

Table 4: above revealed that significant relationship exists between parental separation and student's psychological adjustment. This is because the computed p value of 0.002 is lower than the 0.05 alpha level of significance at a correlation index r level of -0.728. Meaning that, separation of parents has negative effect on student's psychological adjustment. Therefore, the null hypothesis was rejected.

Discussion

Hypothesis One: There is no Significant Relationship between Single Parenting and Student's Psychological Adjustment. The result indicated that, significant relationship exist between Single Parenting and student's psychological adjustment. It implies that, single parenting has negative effect on student's psychological adjustment. The findings agree with that of Ajika, (2012) study shows that when academic achievement was correlated with broken home of secondary school student's academic achievement had a negative significant relationship. This indicates that broken home negatively determines academic achievement.

Hypothesis Two: There is no Significant Relationship between Parental Separation and Student's Psychological Adjustment. The result revealed that, significant relationship exist between parental separation and student's psychological adjustment. It implies that, parental separation has negative effect on student's psychological adjustment. The result corroborates the findings of Roehlkepartain (2003) who found that the family and its structure play a great role in students' psychological adjustment. A broken home could be a great obstacle to a student, his ability maturation to succeed academically. Moreover, this finding is in agreement with that of Ayodele (2006) who asserted that the environment where a child finds himself goes a long way in determining his learning ability and ultimately his psychological adjustment in school.

Conclusion

Based on the findings of the study, the following conclusions were made:

1. It was concluded that significant relationship exist between Single Parenting and student's psychological adjustment. It implies that, single parenting has negative effect on student's psychological adjustment.
2. It was concluded that significant relationship exist between parental separation and student's psychological adjustment. It implies that, parental separation has negative effect on student's psychological adjustment.

Recommendations

The following recommendations are given:

1. Also, since the findings indicated that Single Parenting has negative effect on Student's psychological Adjustment, It is obvious that secondary schools should have guidance services with a competent counselor to counsel students from broken homes, child raised by single parent and parents who do not pay adequate attention to their children and wards' education and those students experiencing challenges in schools.
2. Since the findings shows that parental separation has significant relationship on Student's psychological adjustment, Parents should be enlightened on the need to stay together as husband and wife to raise a good family. They should persevere and tolerate each other in marriage.

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Internalising and Externalising Social Studies Content of Unity in Diversity among Undergraduates in Kwara Central Nigeria

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Abstract

This study examined internalizing and externalising of Social Studies contents of unity in diversity among undergraduates in Kwara Central Nigeria. The study specifically aimed to find out how undergraduates perceive and manifest behaviour related to unity in diversity within the Social Studies Curriculum based on school types. The research employed a descriptive design of a correlational type. The population for this study comprised of all undergraduates in Kwara Central Nigeria. 300 respondents were drawn through stratified and simple random sampling techniques. Data were analysed using frequency and percentage as well as Pearson Product Moment Correlation coefficient (r) at 0.05 level of significance. The result showed that majority of the undergraduates have high level of internalising and externalising Social Studies contents of unity in diversity. Secondly, undergraduates in public universities have more significant levels of internalising and externalising Social Studies content of unity in diversity than counterparts in private university. Among the recommendations from the study was that concepts of unity in diversity is should be well taught at all levels of education of schooling by qualified, competent and committed Social Studies lecturers

Keywords: Internalizing, externalising, contents, unity and diversity

Introduction

Nigeria is blessed with diverse cultural groups. The groups were stratified into three major sections for socio-economic and political reasons. Yoruba occupies the South West, Hausa/Fulani in the North while Igbo are in the South East. These groups have been interacting and contacting one another over many years at different levels of institutions such as community, schools, markets, churches, mosque, offices etc. This development ought to have united and knitted them together in actions and practices. Aisagbonhi (2009) opined that education is an effective tool for internalisation and externalisation of content of unity in diversity. Social Studies curriculum is designed within educational system to make it possible for citizen to learn concepts of unity in diversity in a multicultural setting (Coleman, 2021). The National Council for the Social Studies (NCSS) (2023) described Social Studies as a planned curriculum to study individual, communities, systems and their interaction across time and place for learners to be civically competent at grass root, national and global strata.

Citizens' consciousness of unity in diversity depends on their levels of internalising and externalising civic competences. DiSanto (2022) observed that Social Studies contents cover varieties of thematic strands such as unity in diversity, cultures and identity, time, continuance and change, peoples, places and environment, individual development and identity, individual groups and institutions, power, authority and governance, production, distribution, and consumption, science, technology, and society, global connection and civic ideals and practices. This study therefore examines levels and significant relationship of internalising and externalising content of unity in diversity because of its utmost importance in nation building. The Centre for Black and African Arts and Civilization CBAAC (2021) emphasised need for teaching learners the concepts of unity in diversity in organised formal school environment so as to foster cultural integration. Therefore, DiSanto (2022) opined that the essence of internalising or externalising Social Studies contents is to turn out productive and responsible members of a locality who are ready to live in harmonious groups and exercise cultural competence amidst diversity.

Unity in diversity occupies a prominent position in the quest for nation building. Presbyterian Senior living (2022) described unity in diversity as a phrase that shows how people come together despite many differences in culture, religions, belief, social status and geographical locations. The importance of unity in diversity includes national integration, growth and development and peaceful co-existence. Propagation of inclusivity, understanding and cooperation among multi-ethnics are active drives towards attainment of unity in diversity (Kurusumuthu, 2023). Therefore, the essence of unity in diversity is to make people realise their sense of cohesion despite their difference in culture, races, religions, gender, and socio-economic status. Similarly, unity in diversity is a sort of maintaining peaceful co-existence among dissimilar people or group in the sense that it will portray cohesion without uniformity and diversity without separation (Wikipedia, 2024).

Concept of unity in diversity is reflected in some people's mode of interaction while it doesn't manifest in others disposition and actions. This depends on low or high level of their internalising and externalising idea of unity in diversity. Concept of internalising in Social Studies refer to an individual internal or inward understanding, acceptance and integration of social and cultural values, belief and norms while externalising on the other hand deals with outwards expression of social and cultural knowledge, belief and norms in various context in demonstrative ways. This is buttressed by Wikipedia (2023) that internalization of concept begins from individual learning of why norms are valuable, sensible and worthy of accepting for personal own viewpoints. The pertinent question here is how learners accept inwardly or demonstrate outwardly the understanding of unity in diversity as they are taught in Social Studies curriculum.

Students' positive level of internalising and externalising of concept in the classroom should be the ultimate target of behavioural objective of an ideal teacher in the classroom. This is because it shows how impactful a lesson is in attitude and action of a learner overtly and covertly. Collins (2024) described internalising as act of incorporating

belief, values, norms e.t.c to be part of an individual attitude or manner of thinking or actions. Similarly, Cambridge University Press (2024) defined internalising as a psychological process that involves absorbing emotions or feeling that is not shown. The latter and former submission are showing that inward process of keeping feelings, learning, emotion or knowledge about certain thing to oneself is regarded as internalisation and if it is the other way round outwardly expressed, it connotes externalisation. Therefore, positive internalising and externalising of contents in Social Studies are very strategic in the sense that it marks the point at which the learners get the nitty-gritty of what they are taught. Internalising and externalising of contents of a subject matter could connote positive or negative depending on the situation and context they are being used. Self, peer, observation and performance-based assessments are required tools to evaluate level of internalization and externalization. Internalization and externalization are connected with individual early socialization and thus predict their future behaviour (Wikipedia, 2023). Better Help Editorial Team (2024) opined that internalising of idea deals with ability to keep or cope inwardly with some positive or negative behaviours. This implies that self-thought of keeping good relationship with people of different cultural backgrounds is positive internalising of concept of unity in diversity. On the other hand keeping malice, ill feeling or sense of isolation with other members of cultural backgrounds without showing it are negative forms of internalisation of concept of unity in diversity.

Better Help Editorial Team (2024) also described externalising of idea to mean outward expression of behaviours that are directed towards an individual's environment or people around. This also shows that positive externalisation of unity in diversity is possible when mutual interaction, cooperation, trust and willingness to work together are directed to other people of diverse culture. The negative side of this could occur when verbal aggression, physical aggression, hatred, destruction of property etc are directed to other group of people because of differences in culture and ethnicity. Hermansen et al (2022) conducted study on child internalising and externalising behaviour and found out that higher levels of concurrent maternal symptoms corresponded with higher levels of child internalising and externalising behaviour. They also found out that lower level of inhibitory control predicted a strong association between concurrent maternal depressive symptoms and child negative internalising and externalising behavioural outcome. The take of this study from their submission is that higher and low levels of internalising and externalising of idea connote positive and negative behavioural outcome of such idea respectively. Similarly, Kochanska et al (2010) conducted a study and discovered that the children that exhibited stronger internalization from 25 to 52 months perceived themselves to moral and "good". These self-perceptions, in turn, predicted the way parents and teachers would rate their competent and adaptive functioning at 80 months. This result indicates that if levels of individual self-perceptions of internalizing and externalizing of content of unity in diversity are strong, it is positive sign for attainment of enhancing unity in diversity in multicultural setting like Nigeria

Kidkonnnect (2024) suggested five Bloom Taxonomy levels to achieve innermost to outmost internalising and externalising of ideas affectively ranging receiving, responding, valuing, organising to highest level of characterising. Similarly, Byrnes (2021) highlighted six ways students could be assisted by the instructors to internalise subject matter in the classroom. These include reduction in the loading of the concepts for the learners, summarising and synthesising of new knowledge, making connection with related concept, spacing out the learning concept overtime, tackling conceptual problems from different perspectives and encouraging the learners to be tutors. This could also be applicable to the process of externalising concepts in Social Studies. As a matter of fact, process of receiving to attainment of characterising in learning a concept inwardly or outwardly situation affectively marks the learner ability to create value and appreciating unity in diversity.

Faster Capital (2024) enumerated stress, anxiety and distraction as external factors hindering internalization of learning contents among the learners. In the same vein, Babicka-Wirkus et al (2023) added anxiety, depression, social withdrawal and somatic complaint as problems attached to internalising of ideas. Aisagbonhi (2009) observed that political problems in terms of infrastructural decay, corruption, power struggles etc. have undermined people's willingness to be socially cohesive as contained in the content of unity in diversity. This is to infer that internalizing and externalizing Social Studies contents of unity in diversity could be very low or negative given the political turbulence that people may be exposed to in the polity. Harrison (2023) opined that problems affecting unity in diversity in Nigeria are connected with precedent socio-economic and political events in Nigeria. Pre-colonial, colonial and post-colonial era were marred with several inter and intra tribal wars, political, cultural and economic dominance that constitute threat to achievement of unity in diversity nowadays. It is on record that there are competition and tensions among the ethnic group over allocation of resources and power. The civil war, coups and counter coup d'état experience still lingers in the mind of Nigerians. Secession missions, religious tussles and protests over marginalisation of resources and desire to control it are seeds of disunity that prompt much of hatred feeling, stereotype and prejudice among the ethnic groups in Nigeria. These developments motivated the researchers to examine the levels of internalising and externalising the Social Studies content of unity in diversity as taught the undergraduates in tertiary educational institution in Kwara central Nigeria.

Internalizing and externalising of Social Studies content of unity in diversity are significant to the process of nation building most especially in multicultural settings like Nigeria. It is disheartening to observe that upon laudable objectives of Social Studies to achieve a united Nigeria, the nation is still plagued with numerous issues of disunity. (CBAAC) (2021) observed that African people give much attention to foreign culture which discourages promotion of unity in diversity. More so, Study.com (2024) observed that lack of positive role models is a threat and causes of bad attitude in the society. Some youths perceive Nigeria as a country with mere geographical expression. This does not show much affinity and unity among the ethnic groups in the country. Thus, there are

struggles for secession. Many youths despite their exposures to positive values of unity in diversity as contained in the Social Studies curriculum at school level, their negative attitudes towards discrimination and segregation in the society are sorts of disconnections from what they have learnt in school. This raises a question of whether the content of unity in diversity has been positively or negatively internalised or externalised among the students while in school. The take of the researchers from these submissions hinges on the facts that some factors could be possibly working against positive level of internalising and externalising concept of unity in diversity among Nigerians. This spurs the researchers' interest in examining internalizing and externalising of Social Studies contents of unity in diversity among undergraduates in Kwara Central Nigeria.

The main purpose of this study was to investigate internalizing and externalising of Social Studies contents of unity in diversity among undergraduates in Kwara Central Nigeria. Specifically, the study sought to examine the;

1. Levels of undergraduates' internalizing Social Studies content of unity in diversity in Kwara Central, Nigeria.
2. Levels of undergraduates' externalizing Social Studies content of unity in diversity in Kwara Central, Nigeria.
3. What is the relationship between internalizing and externalising of Social Studies Content of unity in diversity among undergraduates in Kwara Central Nigeria based on school type?

Research Questions

In order to give focus to this research, the following questions were raised to guide this study:

1. What are the levels of undergraduates internalizing Social Studies content of unity in diversity in Kwara Central, Nigeria?
2. What are the levels of undergraduates externalizing Social Studies content of unity in diversity in Kwara Central, Nigeria?
3. What is the relationship between levels of undergraduates internalizing and externalizing Social Studies content of unity in diversity in Kwara Central, Nigeria based on school type?

Research question three provides corresponding research hypothesis for this study and presented as follow:

H0₁: There is no relationship between levels of undergraduates internalizing and externalizing Social Studies content of unity in diversity in Kwara Central, Nigeria based on school type

Methodology

This study was a descriptive and correlational survey. The population for this study comprised all undergraduates in Kwara Central Nigeria. The target population for the study comprised of one hundred and fifty 400 level Social Studies undergraduates in selected 2 public and private universities in Kwara Central, Nigeria, making total of Three hundred (300) respondents engaged in the study. Stratified and simple random sampling techniques were considered in selecting one public and one private universities among 2 private and 2 public universities that make up the four existing universities in the locale of this study. Researcher designed questionnaire titled “Levels of internalising and externalising Social Studies content of unity in diversity in Kwara Central Nigeria” (LIESSCOUIDIKCN) was used to collect data for the study. The instrument was validated by two experts in test and measurement and Social Studies educators in University of Ado-Ekiti, Ondo State, Nigeria. The content validity index of 0.80 was obtained to make content validity of the instrument acceptable. The reliability of instrument was ascertained through test-retest method in which the instrument LIESSCOUIDIKCN was administered twice on 30 undergraduates in Kwara South. The coefficient of reliability of 0.73 was obtained which thus made instrument reliable. Percentage and Persons Product Moment Correlation Coefficient was used to analyse the demographic, research questions 1 and 2 and the hypothetical data respectively. The results were tested at 0.05 alpha level of significance.

The instrument contained two sections that show 24 items each for internalising and externalising content of unity in diversity respectively. The items in the instrument specifying the five levels that representing inward and outward progressive deeper understanding of affective domain of internalizing and externalising of Social Studies content of unity in diversity ranging from basic receiving, responding, valuing, organising and characterising. The respondents were required to identify 24 items each indicating how they internalise and externalise Social Studies content of unity in diversity based on the five levels.

In order to answer this research question, responses of the undergraduates to 24 items based on five levels of internalising of Social Studies contents of unity in diversity were collated. Responses to the items were added together. The highest possible score on the questionnaire was 24 while the lowest was 0. The responses of the undergraduates were categorized into two levels, low and high levels of internalising of unity in diversity. Undergraduates that scored between 0-12 were considered to have low level of internalising Social Studies content of unity in diversity while those that scored from 13-24 were considered to have high level of internalising Social Studies content of unity in diversity.

Results

Demographic Characteristics of the respondents

Percentage was used to describe the personal characteristics of the respondent as shown below:

Table 1: School Types Distribution of the Respondents

School Type	Frequency	Percentage
Private	150	50.0
Public	150	50.0
Total	300	100.0

Table 1 shows that out of 300 respondents 150 (50) and 150 (50.0) were from private and public universities respectively. This means equal selection of undergraduates was made in each of the selected universities.

Research Question 1: What are the levels of undergraduates internalizing Social Studies content of unity in diversity in Kwara Central, Nigeria?

Table 2: Distribution of Undergraduates Levels of internalizing Social Studies content of unity in diversity in Kwara Central, Nigeria by frequency and percentage

Scores Range	Frequency (N)	Percentage (%)	Levels
13-24	204	68.0	High
0-12	96	32.0	Low
Total	300	100	-

Table 2 showed that out of 300 undergraduates sampled, 204 undergraduates representing 68% have high level of internalising Social Studies contents of unity in diversity while 96 undergraduates representing 32% have low level of internalising Social Studies contents of unity in diversity. Majority of the undergraduates have high level of internalising Social Studies contents of unity in diversity. This implies that level of undergraduates' inward disposition and understanding of content of unity in diversity as taught them in Social Studies is positively internalised

Research Question 2: What are the levels of undergraduates externalizing Social Studies content of unity in diversity in Kwara Central, Nigeria?

Table 3: Distribution of Undergraduates Levels of externalising Social Studies content of unity in diversity in Kwara Central, Nigeria by frequency and percentage

Scores Range	Frequency (N)	Percentage (%)	Level
13-24	290	96.7	High
0 - 12	10	3.3	Low
Total	300	100.0	

Table 3 showed that out of 300 undergraduates sampled, 290 undergraduates representing 96.7% have high level of externalising Social Studies content of unity in diversity while 10 undergraduates representing 3.3% have low level of externalising Social Studies content of unity in diversity. This shows that majority of the undergraduates have high level of externalising Social Studies content of unity in diversity. This implies that level of undergraduates' outward disposition and understanding of content of unity in diversity as taught them in Social Studies is positively externalised

Hypotheses Testing

Hypothesis 1: There is no relationship between levels of undergraduates internalizing and externalizing Social Studies content of unity in diversity in Kwara Central, Nigeria based on school type.

Table 4: Pearson r Showing Relationship between levels of undergraduates internalizing and externalising Social Studies content of unity in diversity in Kwara Central, Nigeria based on school types.

School Types	Variables	No	Mean	Std	Df	Cal-r-value	Sig(2tailed)	Remark
Private	Internalising	75	89.222		73	.646	.000	Reject
University	Externalising	75	66.811	2.48				
Public	Internalising	75	92.022		73			
University	Externalising	75	71.789	3.48		.768*	.000	Reject

*Significant, $P < 0.05$

Table 4 shows that the calculated r-value for the private university is .646 with P-value of .000 at the alpha level of 0.05 significant. Since the calculated r-value of .646 is greater than critical p-value. Also calculated r-value for the public university is .768 with p-value of .000 at the alpha level of 0.05 significant. Since the calculated r-value of .768 is greater than the critical p-value, the hypothesis stating that there is no significant relationship between levels of undergraduates internalizing and externalising Social Studies content of unity in diversity in Kwara Central, Nigeria based on school types is rejected and the alternative hypothesis is thus accepted i.e There is significant relationship between levels of undergraduates internalizing and externalising Social Studies content of unity in diversity in Kwara Central, Nigeria based on school types. The above analysis shows that the calculated r-value of private (.646) is less than the calculated value of public university (.768). Therefore, the significance is in favour of public university. This implies that levels of undergraduates internalising and externalising Social Studies content of unity in diversity are more significant in public university than private university.

Discussion

Based on the findings of this study, majority of undergraduates have high level of internalising Social Studies content of unity in diversity in Kwara Central Nigeria. This result connotes positive internalising the content of unity in diversity and it is a welcome development in a nation that strives to achieve unity amidst multicultural set of people. This is in line with the submission of Better Help Editorial Team (2024) that internalising of idea deals with ability to keep or cope inwardly with some positive or negative behaviours. Although result shows majority disposition of the undergraduates to content of unity in diversity which is in line with the study, this result is in line with Kochanska et al (2010) study that the children that exhibited stronger internalization from 25 to 52 months perceived themselves to moral and "good". This sounds positive as equally expressed in this study. However, the low level of internalising recorded is still pointing to the fact that there are negative side of internalising as buttressed in opinion of Hermansen et al (2022) that lower level of inhibitory control predicted a strong

association between concurrent maternal depressive symptoms and child negative internalising and externalising behavioural outcome. This result may further establish that the view of Aisagbonhi (2009) Babicka-Wirkus et al (2023) and Faster Capital (2024) that political problems such as lack of infrastructures, corruption, power struggles hinder unity in diversity and factors such anxiety, depression, social withdrawal and somatic complaint might negatively induced internalising of ideas and resulted to low level of their internalising of the content.

Similarly, the finding of the study revealed majority of the undergraduates have high level of externalising Social Studies contents of unity in diversity. This result indicates that there is high demonstration of actions and attitude of unity in diversity towards individuals and groups. It is the good signal to the achievement of teaching and learning of Social Studies content as suggested by Centre for Black and African Arts and Civilization CBAAC (2021) that teaching the learners concepts of unity in diversity will foster cultural integration. This result is in line with Hermansen et al (2022) in which higher levels of concurrent maternal symptoms corresponded with higher levels of child internalising and externalising behaviour. The low level of externalising of unity in diversity may show the student disinterest in learning the concept perhaps it looks very abstract to them to comprehend or approaches deployed by the teacher to teach the concepts may further deactivate their passion for learning it. What is understandable that Harrison (2023) identified problems affecting people internalising or externalising unity in diversity to have been connected with precedent socio-economic and political events in Nigeria. Therefore, level of cultural discrimination, disrespect for unity in diversity is possible as in the case of low level of externalising of the concept as shown in this study.

Based on the finding from the research hypothesis, it was concluded that levels of undergraduates internalising and externalising Social Studies content of unity in diversity are more significant in public university than private university. This does not underrate private university from having a substantial level of internalising and externalising Social Studies content of unity in diversity but the more significance recorded by public university might hinge on the fact that public tertiary institutions have ample opportunity to admit students across multi-ethnic groups compare with the private schools this might influence the result.

Conclusion

Based on the findings of this study, the conclusion is that within field of Social Studies, internalising and externalising behaviours encompass the cognitive, affective and behavioural aspect of how individual engage with and navigate the complexities of social, cultural and historical phenomenon.

Recommendations

From the findings of this study, the following recommendations were made;

1. Concepts of unity in diversity is very vital aspects of Social Studies education, should be well taught at all levels of education of schooling by qualified, competent and committed Social Studies educators
2. Government, school teachers and administrators at the public and private learning institutions should device effective programmes for the improvement of interaction amidst various cultural setting to boost students understanding of unity in diversity.
3. Parents on their own part should try to inculcate the spirit of love for all, into their children, so that these children will think of other people who differ from them culturally and linguistically.

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Relationship Red Flags and Conjugal Satisfaction of Secondary School Teachers in Akwa Ibom North East Senatorial District, Nigeria

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Abstract

The researchers' investigated the difference in conjugal satisfaction of secondary school teachers based on red flags in their marital relationship in Akwa Ibom North East Senatorial District, Nigeria. Three research questions were raised for the study. Ex-post-facto design was adopted while the population comprised 2,895 teachers in the 89 public secondary schools in Akwa Ibom North East Senatorial District. A sample size of 340 legally married teachers was selected for the study through the use of a multi-stage sampling procedure. In one of the stages, balloting method of random sampling was used in the selection of 34 sampled schools as well as 10 married teachers from each of the sampled schools for instrument administration. The researchers' structured questionnaire titled "Relationship Red Flags and Conjugal Satisfaction of Teachers Questionnaire (RRFCSTQ)" was used for data collection, with the reliability co-efficient of .76 and .83 for relationship red flags and conjugal satisfaction of teachers respectively, using Cronbach Alpha statistics. Descriptive statistics (mean) was used to answer the research questions. All the findings revealed a low conjugal satisfaction of teachers based on verbal bullying, physical abuse and infidelity. Conclusion was drawn from the finding while the researchers' recommended among other things that, spouses should avoid insulting comments, name-calling and public embarrassment of their partner so that they and their children can grow up with high self-esteem.

Keywords: Relationship Red Flags, Conjugal Satisfaction, Verbal Bullying, Physical Abuse and Infidelity

Introduction

Conventional marriage is a legally and sanctioned union between a man and woman to which the society gives approval; and it places the spouses under conjugal status with legal and social obligations. It is the desire and wish of those under conjugal bond to have a united family in which children will not suffer any form of setbacks. These dreams and aspirations can only materialize if spouses do away with all forms of relationship red flags or behaviours that can cause marital distress.

Relationship red flags are warning signs in marriage that indicate unhealthy or manipulative behaviour (Porten, 2014). In this study, relationship red flags represent early warning of unhealthy traits between spouses that could cause potential damage to a

peaceful union. Examples of the red flags or warning signals in conjugal unions are faulty communication or verbal bullying, physical abuse, aggressive behaviour, substance abuse, lack of trust, infidelity, constant jealousy and unwillingness to compromise among others (Zarea and Safyari, 2015). When all these warning signs persist in marriage, there is bound to be severe challenges that may result in strong anticipation for divorce or breakup.

Every spouse needs satisfactory marital relationship because where two partners live happily and share consistent favourable interest, knowledge, values, emotions and beliefs, there is bound to be mental and emotional stability. Ojukwu (2014) affirmed that it is highly beneficial to the society when strong marriages are formed; and that putting away unhealthy marriage lifestyle is instrumental to any married life. Marriage comes with many benefits which make a satisfactory difference in one's life. It provides financial stability besides companionship and it allows one to have someone who will share one's feelings and experiences with. Marriage brings about healthy sex life, good marital health and companionship which can positively impact on children behavioural growth and development. Stable marriages will produce stable children and families which will in turn give rise to stable society and the world at large (Omeje, Ugwu and Ogidi, 2022).

Marriages do not go from being perfectly a happy one to the brink of divorce overnight. It usually takes a long process and slowly degrade the fabric of the relationship until one spouse develop the feelings of separation or divorce. However, there are many signals which can lead a happy marriage to a breakdown such that if spouses are able to identify some of the signs early enough and are willing to work at fixing the issues, such marriages can be rebuilt. Those "warning signals" are classified as in this study as red flags in marital relationship which can put marriages in jeopardy.

One of the red flags in marital relationship which may likely cause dissatisfaction to a partner is verbal bullying or abuse. Verbal bullying can affect a marriage partner emotional and psychologically. This is because words could be as powerful as actions as individual usually read meanings to every expression. Verbal bullying involved teasing, name-calling, labelling, and public embarrassment, yelling among others (Koller and Dariba, 2020). The uses of derogatory terms are sometimes used between spouses to lower the self-esteem and identity of one another. Spouses are expected to use compassionate and kind words in their daily interaction because the patterns of interaction between the spouses can affect how satisfied they are with their marriage.

Physical abuse between spouses may likely create potential harm on the satisfaction of a partner in the union. Physical abuse involves tweaking, slapping, hitting and kicking. According to Rosenthal, Byerly, Taylor and Martinovich (2018), teachers who are victims of physical abuse particularly the females, usually experience wounds, bruises, and bumps. Such teachers may long to withdraw from the surrounding environment to reduce the feeling of shame due to bodily injuries. Yun, Shim and Jeong (2019) noted that female teachers who get abused from their husband such as being beaten, scolded

and ignored usually experience low self-esteem, and low self-esteem can reduce one's confidence and satisfaction in marriage. Teachers who are mistreated by their marriage mates are most likely to fail in the development of peer relationships.

Infidelity, which is often described as adultery may likely pose severe influence on satisfaction of teachers with conjugal rights. Infidelity in marriage is a violation of a couple's emotional and / or sexual rights that commonly results in feeling of anger, sexual jealousy and rivalry (Fletcher and Kerr, 2010). In recent times, it has been observed that some couples are separated because of one reason or other, married teachers in secondary schools are not exempted from this increasing rate of divorce. Infidelity in marital relationship can cause psychological damage including feelings of rage and betrayal, low sexual and personal confident and emotional breakup.

The increasing relevance of marital stability and its effects on conjugal satisfaction of teachers calls for more intensive research and analysis of data in other to understand the warning signs or red flags that instigates feelings of dissatisfaction in marital relationship among teachers. It is against this backdrop that the researchers sought to investigate relationship red flags and conjugal satisfaction of secondary school teachers in Akwa Ibom North East Senatorial District, Nigeria.

Theoretical Review

The theory of social dominance which was propounded by Sidanius and Pratto in 1999, emphasized motivation for verbal bullying or abuse. The social dominance theory (SDT) focuses on group-based social hierarchies. The fundamental tenet of SDT is that all societies consist of group based social hierarchies that are based on gender, age, and arbitrary-set system. The gender has to do with the males having more power than females; age involved adults having more power than children while arbitrary-set system is concerned with a socially significant group differences such as ethnicity or social class that create hierarchies. These group-based social hierarchies are formed through the mechanisms of oppression, discrimination, and injustice.

Dominant groups oppress less-powerful groups to form a hierarchy with one or a few dominant groups at the top while subordinate groups are forced to the bottom. The dominant group possesses a disproportionate amount of positive social value, whereas the subordinate groups possess disproportionate amounts of negative social value. In group-based social hierarchies, the social status and power that individual possess is influenced by group members' ideologies. Interpersonal traumas, such as verbal abuse, erode victims' abilities to form social and emotional attachments to others such as an inability to successfully attach to a peer group or to a school (Sidanius and Pratto, 1999). Further, verbal abuse threatens the physical well-being of victims, who often report feeling afraid and helpless.

The relevance of this theory to this work is that it has explained the causes and effects of verbal bullying on teachers conjugal satisfaction. It is observed from this theory that the

urge to maintain social dominance between spouses increases the tendency of verbal abuse or bullying. Verbal abuse exacerbates interpersonal conflicts and results in strong, negative emotions. The fear of becoming a victim of verbal bullying or abuse creates atmosphere of trepidation and mistrust that further erodes relationships and disrupts social cohesion.

Conjugal Satisfaction of Teachers

Satisfaction is the pleasure an individual have for successfully achieving what he or she desired for. A good marriage provides individual with a sense of meaning and identity in life. Teachers with conjugal rights are those who are legally married with legal and social obligations. Conjugal satisfaction is a complex and multi-dimensional construct which has different interpretations. According to Rebello, Silva and Brito (2014), conjugal satisfaction is a global evaluation of the state of one's marriage and a reflection of marital happiness and functioning.

From an evolutionary perspective, Zainah, Nasir, Hashim and Yusof (2012) described conjugal satisfaction as a psychological state of regulated mechanisms that monitor the benefits and more cost of marriage to a particular person. The implication of this definition is that, the more cost a marriage partner inflicts on another, the less satisfied one would be with the marriage partner, but the greater the perceived benefits, the more satisfied one would be with the marriage mate. After marriage, individual seek a life full of promising future, happiness and satisfaction. A decrease in conjugal satisfaction not only creates an atmosphere of rancour but may also lead to separation or divorce. Therefore, conjugal satisfaction of teachers is defined in this study as the pleasure and comfort married teachers have towards their own marital relationship. The experience of emotional bonds created by significantly spouses through mutual relationship is significant for reaching the state of marital satisfaction and personal needs fulfillment.

Verbal Bullying and Conjugal Satisfaction of Teachers

Verbal bullying or abuse between spouses are slanderous statements or accusations that cause the victim undue emotional distress. Perpetrators of verbal abuse use derogatory words such as name-calling, labelling, inappropriate sexual comments, accusation and other insulting comments to gain power and control over a target (Ada and Anake, 2015). From the above, verbal bullies use relentless insults to belittle, demean and hurt another person. Abuses are often used to control, exploit, or maltreat a receive person without respecting his integrity and feelings.

In marriage, verbal abuse is not about a harsh word spoken in a fit of anger or even an insult thrown off-handedly. It is the systematic use of language in an abusive manner, specifically used to make the spouse feel inferior, insecure, and ran down. The patterns of communication between spouses can determine the success or failure of marriages because communication is the creation, exchange and interpretation of meaningful messages. According to Esere, Yusuf and Omotosho (2011), marriage depends on many

different things to be successful, which include trust, love, time, friendship, understanding, honesty, loyalty, sincerity and above all effective communication.

The happiness of a couple depends largely on the effectiveness of their communication. How a couple communicates can make or mar their relationship. Communicating effectively will allow the couple to negotiate problem areas, fulfill needs, avoid misunderstandings, and develop intimacy. In an empirical study on the causes and effects of communication breakdown in marriages, Uwom-Ajaegbu, Ajike and Fadolapo (2015), found that abusive languages between couples is the bane to marital satisfaction. Haris and Kumar (2018) also found that effective use of compassionate and kind words in communication is associated with marital satisfaction.

Physical Abuse and Conjugal Satisfaction of Teachers

Physical abuse could also have serious harm to conjugal on marital satisfaction of teachers. Physical abuse involves tweaking, slapping, hitting and kicking. According to Igbokwe, Ukwuma and Onugwu (2012), the physical effects experienced by some female teachers are wounds, bruises, and bumps. Such teachers may long to withdraw from the surrounding environment to reduce the feeling of shame due to bodily injuries. The act is mostly perpetrated by husbands against their wives under the justification of putting them under control. As noted by Oladepo, Yusuf and Arulogun (2011) some husbands physically abuse their wife by way of hitting, pushing, holding down, flogging, acid bath and throwing of objects at the victim. Such behaviour seriously inhibits women's ability to enjoy rights and freedom on the basis of equality with men in marriage as well as reduces their satisfaction.

Onwe, Odio and Eze (2019) conducted a study on socio-cultural factors associated with wife beating in Nigeria: A review of key issues. The authors reviews in one of findings that physical abuse perpetrated by husbands against their wives is significantly associated with marriage dissatisfaction of female spouses. The authors added that sometimes, victims of physical violence are usually unable to seek redress due to traditional believes that make the incident to remain invisible and condone as a social norm. Igbokwe, Ukwuma and Onugwe (2012) earlier discovered in one of their findings that women in both rural and urban areas are most likely to be dissatisfied with their marital relationship due to wives beating by their husbands.

Infidelity and Conjugal Satisfaction of Teachers

Infidelity is a violation of the mutually agreed rules or boundaries of an intimate relationship which constitutes an outright default, on the inherent good faith contract of a relationship, or a betrayal of core shared values with which the integrity and nature of the relationship is defined (Anyanwu, 2017). It is seen as unfaithfulness on the part of spouses. Infidelity is one of the identified "red flags or warning signs" in marital relationship which can lead to poor satisfaction on the part of marriage teachers. According to Marie (2012), some women in their husband houses are no more ashamed

to say they have male friends, while some husbands begin to see the ugliness of their wives and weakness of their character particularly when such husbands get richer. This attitude of unfaithfulness may either affect the husband or wife even the children. This could cause separation and divorce of marriage.

What makes infidelity so painful is the fact that it involves someone deliberately using deception to violate established expectations within a relationship. As noted by Clark (2011) infidelity in marriage has recently caused dissatisfaction between couple such that while the cheat enjoys intimacy out of wedlock, the other mate faces crying spells, elevated blood pressure, chest pains, sleep disturbance and other physical and emotional effects. In a study conducted by Mahmood and Najeeb (2013) on personality traits, infidelity and marital satisfaction among married men and women, the authors found that infidelity is the major cause of marital dissatisfaction among married men and women. Marie (2012) earlier discovered that indulgence in sex out of wedlock inhibits marital satisfaction.

Statement of the Problems

Red flags or strains in marriage interaction between couples living together are becoming common. In Akwa Ibom North East Senatorial District, the researcher observed that marital disharmony is on the rise because of communication issues, culture and tradition, infidelity, lack of trust, physical and verbal abuse among couples including married teachers. As a result, anger, resentment, dissatisfaction, frustration and hopelessness take control of relationship and at times break down the marriage irretrievably. These could threaten societal values as well as inhibits the satisfaction of teachers with conjugal rights. In order to present some useful recommendations on how to reduce incidences of red flags in marriage, the researcher sought to investigate the difference in satisfaction of teachers' with conjugal rights (legally married teachers) based on red flags in marital relationship in Akwa Ibom North East Senatorial District, Nigeria.

Research Questions

The following research questions were raised for the study

1. What is the difference in conjugal satisfaction of teachers based on verbal bullying between spouses in Akwa Ibom North East Senatorial District?
2. What is the difference in conjugal satisfaction of teachers based on physical abuse between spouses in Akwa Ibom North East Senatorial District?
3. What is the difference in conjugal satisfaction of teachers based on infidelity between spouses in Akwa Ibom North East Senatorial District?

Methodology

The ex-post-facto (after the fact) design was adopted for the study. According to Nassaji (2015), the ex-post facto design is useful in educational research as a means of undertaking studies in which independent variables already existing cannot be manipulated or controlled. This makes the design different from experimental study where variables of interest can be controlled or manipulated. This design allowed the researcher to determine the difference in conjugal satisfaction of teachers' based on pre-existing variables of red flags in marital relationship (verbal bullying, physical abuse and infidelity) in Akwa Ibom North East Senatorial District, Nigeria.

The main population of the study comprised 2,895 teachers in the 89 public secondary schools in Akwa Ibom North East Senatorial District. A sample size of 340 legally married teachers was selected for the study through the use of a multi-stage sampling procedure. At the first stage, the sample size was determined statistically using Krejcie and Morgan (1970) sampling procedure, which states that any population that ranges from 2,000 to 3,000, a sample of 340 will be representative of the population. At the second stage, balloting method of random sampling was used to select 34 secondary schools for the study. Therefore, in using this method, the population of schools were assigned numbers and mixed up with other numbered schools on slips of paper, blindfolded into a hat for random selection by group of teachers. Hence, schools pick by teachers that bears the assigned number 1 to 34 were selected as sampled schools for the study. At the third stage of the procedure, 10 married teachers each were selected from the sampled schools randomly using the same balloting method, which gave a total of 340 sampled respondents.

The researchers' structured questionnaire titled "Relationship Red Flags and Conjugal Satisfaction of Teachers Questionnaire (RRFCSTQ)" was used for data collection. The items were framed in line with the research questions. The instrument had three parts. Section (A) contained 5 items each on verbal bullying, physical abuse and infidelity while section (B) contained 10 items measuring conjugal satisfaction of teachers'. RRFCSTQ was measured in a four point rating scale of Very High Satisfaction (VHS) = 4; High Satisfaction (HS) = 3; Low Satisfaction (LS) = 2; Very Low Satisfaction (VLS) = 1. The respondents were requested to give their own opinions or views to the instrument using the symbol (√). Thereafter, responses for very high and high satisfaction were grouped to represent "high marital satisfaction" while responses for low and very low satisfaction were grouped to represent "low marital satisfaction".

To ensure the face validity of the instrument, draft copies of the RRFSTCRQ were given to two experts to assess the suitability or otherwise of the items in the instrument. The experts were all from the Department of Educational Psychology and Measurement, University of Uyo. These experts deleted some of the items that were not good, modified some, while the good items were allowed to remain. The inputs and corrections made by these experts were used to form the final copy of instrument before administration.

To establish the reliability of the instrument, Cronbach Alpha reliability technique was used. Here, the instrument was administered on 30 married teachers in a selected school not included in the sample size. Data were subjected to Cronbach Alpha statistics which was applied for test of internal consistency of the instrument. The overall reliability coefficient of .76 was obtained for relationship red flags and .83 for items measuring conjugal satisfaction of teachers. Descriptive statistics of mean and standard deviation was used to answer the research questions. In answering the research questions, where the mean difference between the two groups' lies was the rationale used to determine whether the respondents have high conjugal satisfaction or low based on relationship red flags.

Results

Research Question One: What is the difference in conjugal satisfaction of teachers based on verbal bullying between spouses in Akwa Ibom North East Senatorial District?

Table 1: Mean and standard deviation on the difference in conjugal satisfaction of teachers based on verbal bullying between spouses

Verbal Bullying	n	Mean	SD	Mean Difference
High	115	11.61	1.69	7.03
Low	225	18.64	2.86	

Source: Field data (2022)

The result in Table 1 indicates the mean difference in conjugal satisfaction of teachers based on verbal bullying between spouses in Akwa Ibom North East Senatorial District. From the table, the mean of teachers with high conjugal satisfaction based on verbal bullying between spouses was 11.61 while that of teachers with low satisfaction was 18.64. The mean difference between the two groups was 7.03 in favour of teachers with low conjugal satisfaction based on verbal bullying in their relationship. This is an indication that teachers differ in conjugal satisfaction based on verbal bullying. Hence, this result implies that if verbal bullying is high in marital relationship, teachers with conjugal status would likely not be satisfied in their marital unions and vice versa.

Research Question Two: What is the difference in conjugal satisfaction of teachers based on physical abuse between spouses in Akwa Ibom North East Senatorial District?

Table 2: Mean and standard deviation on the difference in conjugal satisfaction of teachers based on physical abuse between spouses

Physical Abuse	n	Mean	SD	Mean Difference
High	91	8.31	1.01	7.91
Low	249	16.22	2.62	

Source: Field data (2022)

The result in Table 2 indicates the mean difference in conjugal satisfaction of teachers based on physical abuse between spouses in Akwa Ibom North East Senatorial District. From the table, the mean of teachers with high conjugal satisfaction based on physical

abuse between spouses was 8.31 while that of teachers with low satisfaction was 16.22. The mean difference between the two groups was 7.91 in favour of teachers with low conjugal satisfaction based on physical abuse in their relationship. This is an indication that teachers differ in conjugal satisfaction based on physical abuse. Hence, this result implies that if physical abuse is high in marriage, teachers with conjugal status would likely not be satisfied in their marital relationship and vice versa.

Research Question Three: What is the difference in conjugal satisfaction of teachers based on infidelity between spouses in Akwa Ibom North East Senatorial District?

Table 3: Mean and standard deviation on the difference in conjugal satisfaction of teachers based on infidelity between spouses

Infidelity	n	Mean	SD	Mean Difference
High	132	12.21	2.40	Conjugal Satisfaction of Teachers 8.52
Low	208	20.73	3.13	

Source: Field data (2022)

The result in Table 3 indicates the mean difference in conjugal satisfaction of teachers based on infidelity between spouses in Akwa Ibom North East Senatorial District. From the table, the mean of teachers with high conjugal satisfaction based on infidelity between spouses was 12.21 while that of teachers with low satisfaction was 20.73. The mean difference between the two groups was 8.52 in favour of teachers with low conjugal satisfaction based on infidelity in their relationship. This is an indication that teachers differ in conjugal satisfaction based on infidelity. Hence, the implication of this result is that if infidelity occurs in marriage, teachers with conjugal status would likely not be satisfied in their marital relationship and vice versa.

Discussion

Result from the research question one shows the mean difference between teachers with high and low conjugal satisfaction respectively based verbal bullying in marriage. The result shows that the mean difference between the two groups was 7.03 in favour of teachers with low conjugal satisfaction based on verbal bullying in their relationship. This implies that the higher the occurrence of verbal bullying in marriage, the greater the possibility those teachers with conjugal status would likely not be satisfied in their relationship. This finding is in agreement with the finding of Uwom-Ajaegbu, Ajike and Fadolapo (2015), that abusive language between couples is the bane to marital satisfaction. This finding also corroborates the finding of Haris and Kumar (2018), that effective use of compassionate and kind words in communication is associated with marital satisfaction. Hence, it is noted from this finding that the use of verbal bullying (as a red flag in marital relationship) would likely result in marital dissatisfaction.

Result from the research question two shows the mean difference between teachers with high and low conjugal satisfaction respectively based on physical abuse in marriage. The result shows that the mean difference between the two groups was 7.91 in favour of teachers with low conjugal satisfaction based on physical abuse or violence in marital

relationship. This result therefore implies that the presence of physical violence between spouses can lead to poor marital or conjugal satisfaction. This finding is in agreement with the earlier finding of Igbokwe, Ukwuma and Onugwe (2012) that women in both rural and urban areas are most likely to be dissatisfied with their marital relationship due to wives beating by their husbands. This finding is also in tandem with the finding of Onwe, Odio and Eze (2019), that physical abuse perpetrated by husbands against their wives is significantly associated with marriage dissatisfaction of female spouses. The authors added that sometimes, victims of physical violence are usually unable to seek redress due to traditional believes that make the incidence to remain invisible and condone as a social norm. Therefore, the researchers' wish to observe from this finding that physical abuse is a major bane to marital satisfaction.

Result from the research question three shows the mean difference between teachers with high and low conjugal satisfaction respectively based on infidelity in marriage. The result shows that the mean difference between the two groups was 8.52 in favour of teachers with low conjugal satisfaction based on infidelity in marital relationship. This result therefore indicates that infidelity in marriage is a major warning sign or red flags to marital satisfaction. Hence, this finding agrees with the finding of the study conducted by Mahmood and Najeeb (2013), that infidelity is the major cause of marital dissatisfaction among married men and women. This finding also conforms to the earlier finding of Marie (2012), that indulgence in sex out of wedlock inhibits marital satisfaction. Hence, it is therefore observed that sexual affair out of wedlock is strongly connected with marital dissatisfaction.

Conclusion

Based on the finding of the study, it is therefore concluded that secondary school teachers experience low conjugal satisfaction based on red flags in marital relationship, which include physical violence, verbal bullying as well as infidelity.

Recommendations

The following recommendations were drawn from the findings:

1. Spouses should avoid insulting comments, name-calling and public embarrassment of their partner so that they and their children can grow up with high self-esteem.
2. Family counselors, educators and other respected authority should open up enlightenment programmes to both newly marriage couples and the older ones on the need to avoid physical violence in their marital relationship so as to have a strong bond for the better family function and wellbeing of members.
3. Married couples should maintain faithfulness to their partners while avoiding every forms of external relationship that could deepen the urge for extra-

marital affairs. When all these red flags in marriage are creatively handled, they will be peace in the hearts, love among spouses and joy in the home.

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An Investigation into the Sources of Threat to Educational and Employment Opportunities of Persons with Disabilities in North-Central Nigeria

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Abstract

The study investigated the sources of threat to educational and employment opportunities of person with disabilities in North-Central Nigeria. Descriptive survey research design was adopted and the population comprised of persons with disabilities and their caregivers (teachers and parents/guardians) in North-Central, Nigeria. Purposive sampling technique was utilized to sample 201 respondents. A self-developed questionnaire titled “Person with Disability Questionnaire (PWDQ)” was used to obtain information. The instruments were given to three experts in the field of Special Need Education, Psychology and Counselling for content validation and using split-half method of reliability, coefficient of 0.87 was obtained for the study. The researcher, with the help of three research assistants administered the instrument to respondents. Simple percentage was used for demographic data of the respondents; descriptive statistics of means, standard deviation and rank order were used in answering the research questions while inferential statistics of an Analysis of Variance (ANOVA) was used to test the hypotheses at 0.5 level of significance. The findings show that government, physical facilities, social perception, culture and economics are sources of threat to educational opportunities of persons with disabilities and there is significant difference in the sources of threat to educational opportunities of PWDs in North-Central, Nigeria based on disability type. It is recommended among others that government should intensify her effort in establishing schools for special need persons in every local government area of Niger State and inclusive schools should be well-equipped to augment the schools for the person with special needs in providing accessibility to education.

Keywords: Educational opportunities, employment opportunity, person with disabilities

Introduction

Education is an essential right of every citizen irrespective of his/her peculiarity. The purpose of education is to help an individual gains cognitive, affective and psychomotor skills to develop a positive and healthy attitude, aptitude and behaviour toward purposeful living. The discrimination against persons with disabilities is a global concern; the discriminations are prevalent and have been an integral part of almost every societies of the world. Disability is any condition of the body or mind that makes it more difficult for the person with the condition function appropriately and actively interacts with the environment. Disability according to Akinbola (2015) is the consequence for functionality of a physical, sensory or cognitive impairment and impact on social participation, including the barriers to such participation in particular societies. Federal

Ministry of Education (2015) in the National Policy on Special Need Education identified ten categories of persons with disabilities; visual impairment, hearing impairment, physical and health impairment, mental retardation/intellectual disability, behavioural disorders, speech impairment, learning disabilities, multiple impairment, autism spectrum disorders and albinism.

According to the World Health Organization (2022), in 2018 about 29 million of the 195 million people in Nigeria were living with a disability. Centre for Human Right (2019) stated that the total number of people with disabilities in Nigeria according to the Nigeria National Population Commission is estimated at about 19 million (i.e 9.6 per cent approximately). The right to education of person with disabilities is acknowledged explicitly by constitutions, laws and policies around the world. Though, Nigeria currently lacks all-inclusive legislations that emphatically protect the right persons with disabilities to education.

In spite of these laws and policies, disabled persons face a lot of challenges and injustice not only in education but also in employment opportunities. World Bank (2020) reported the detailed account of the stigma and discrimination faced by persons with disabilities in Nigeria, leading to ostracisation and exclusion of person with disabilities from society. This includes being kept indoors, hidden away from neighbours and visitors and mostly neglected, this is done to avoid being an embarrassment to their families.

Education is an empowerment tool in the development of the human personality of individual in specific and the society in general. Regrettably, due to some factors, many especially persons with disabilities do not have the opportunity to access education. These factors are therefore a major source of concerns to counsellors and other stakeholders in education. One of the sources of threat to educational opportunities of persons with disabilities is availability of accessible educational institutions. According to Etieyibo (2020), one way in which persons with disabilities are discriminated against is in the availability or lack of educational institutions to cater for their disability needs. In Niger State today, there are not many educational institutions designed exclusively and inclusive schools that exist for persons with disabilities. This factor affects the rate of persons with disabilities that attend schools as the available schools are far away from their locality especially at early stage. This is why enrolment at this level is difficult. In most cases, the children with disabilities at the early stage of lives are engaged in street begging. Another source of threat is the availability and accessibility of resources and facilities that attend to the needs of disability in schools. Etieyibo (2020) observed that the absence of facilities and its accessibility does not only discriminate against persons with disabilities but also makes life difficult for them. Other sources of threat include coming from a very poor family background, physical abuse, negative attitude of parents/caregivers and teachers.

Moreover, person with disabilities at school can be exposed to discouraging behaviour, violence, threats, physical abuse and bullish attitude by other students, teachers and

school staff. This is the most important and sensitive phase of disabled life which leaves psychological imprints on child's mind forever (Dunay et al., 2016). Significant obstacles to equal accessibility to education of person with disabilities include marginalization and exclusion (Aremu & Adewunmi, 2023). The marginalization of persons with disability is highly crucial as this result in over dependence on limited national resources which are typically insufficient to cater for the existing societal needs. This dependency and unmet specific needs of PWDs place them at risk of poverty. Gutterman (2023) opined that there is high connection between disability and poverty. One of the ways in which poverty can be reduced among persons with disabilities is empowerment or employment.

Employment is vital for every individual's economic and social well-being and yet persons with disabilities not only in Nigeria are discriminated against on the job market. Unemployment rates for persons with disabilities are higher than for persons without disabilities. Where some are employed, they are offered low paying jobs or may be employed in the informal sector (Mitra et al., 2013). Dunay et al (2016) observed that skills deficiency and qualifications limit the employment opportunities for persons with disabilities. Work place discrimination is also a severe encounter for persons with disabilities. Afoakwah and Dauda (2016) reported that the visually and hearing impaired or physically challenged stood a statistically significant chance of getting job offers if they had completed tertiary education.

The level of discrimination is noticed in the appointment into administrative and executive positions in Nigeria. It is difficult to see a person with disability being appointed as head teacher, principal, rector, provost or vice chancellor and even managerial positions in organizations. In most of the managerial positions of specialized organizations or institutions for special needs people, persons with no disabilities are appointed. Persons with disabilities are more regularly exposed to unaccommodating environments, contributing to their vulnerability and restraining their opportunities to learn and participate meaningfully in the society. The inverse effect of these aggravates the experience of disability. For effective societal development, meaningful participation in societal growth and reduction of dependency living pattern of the persons with disabilities requires an understanding of disability. The government, society, counsellors, teachers, parents, non-governmental organizations and other education stakeholders need the understanding of sources of threats to the educational and employment opportunities of persons with disabilities in order to provide them the opportunity to be educated and use the knowledge and skill to contribute to society and lead self-fulfilling, dependent and actualized lives. It is against this background that the researcher investigated the sources of threat to educational and employment opportunities of persons with disabilities in North-Central Nigeria.

Statement of the Problem

Persons with disabilities experience diverse problems in different aspects of life such as social, educational, occupational and personal social. PWDs need education no less than their peers, yet many of these persons receive little or no education. In accessing educational and employment opportunities, persons living with disabilities are faced with attitudinal, physical, institutional, financial and communication problems. Lack of education generally remains the crucial risk factor for poverty, lack of access to education of persons with disabilities in Nigeria, increases welfare costs, future dependence and unemployment and decreases productivity and wealth creation. Persons with disabilities therefore, are at higher risk of poverty. For effective intervention, there is need to identify the sources of threat to the educational and employment opportunities of persons living with disability, thereby providing therapeutic measures in reducing the psychological effect and lead them to achieve independence, integration, self-direction and actualization. It is on this premise that the researchers investigated the sources of threat to educational and employment opportunities of person with disabilities in North-Central Nigeria.

Research Question

The study seeks to provide answers to the following questions:

1. What are the sources of threat to educational opportunities of persons with disability in North-Central, Nigeria?
2. What are the sources of threat to employment opportunities of persons with disability in North-Central, Nigeria?

Hypotheses

Four hypotheses were tested in this study at 0.05 levels of significance.

1. There is no significant difference in the source of threat to educational opportunities of persons with disabilities in North-Central, Nigeria base on disability type
2. There is no significant difference in the source of threat to employment opportunities of persons with disabilities in North-Central, Nigeria base on disability type
3. There is no significant difference in the perception of stakeholders on the sources of threat to educational opportunities of person with disabilities in North-Central, Nigeria
4. There is no significant difference in the perception of stakeholders on the sources of threat to employment opportunities of person with disabilities in North-Central, Nigeria

Theoretical Framework

Client centered theory was developed by Carl Rogers. He holds a very optimistic perspective of man emphasizing his virtues at the expense of his vices (Ekiyor, 2009). Rogers believes that every individual (including person with disabilities) is capable of self-understanding, make constructive personality change and live an effective and productive live (Jimoh et al, 2016). These are possible according to Rogers when necessary environmental conditions are presented or provided (i.e. love and acceptance). When necessary and friendly environmental conditions are presented for person with disabilities, they will be able to overcome many life challenges, progress and achieve great in life.

Methodology

The research design adopted for this study is descriptive survey. The population for the study comprised persons with disabilities and their caregivers (teachers and parents/guardians) in North-Central, Nigeria. Using purposive sampling method, two hundred and one students with disability and their caregivers were selected from three states of the North-central, Nigeria. A self-developed questionnaire titled “Person with Disability Questionnaire (PWDQ)” was used to obtain information from the respondents. To measure contents validity of the instruments, it was given to three experts in the field of Special Need Education, Psychology and Counselling for validation. The corrections, observations and suggestions made were effected. This therefore adjudged the instruments to be valid. The validated instrument was pilot tested on a representative sample. Using split-half method of reliability, the instrument was administered once on 20 respondents. The data collected was analyzed using Spearman Brown correlation coefficient and coefficient of 0.87 was obtained which was considered adequate for the study. The researcher with the help of three research assistants provided the respondents with the instrument. The filled questionnaires were scored and coded for analysis. Simple percentage was used for demographic data of the respondents; descriptive statistics of means, standard deviation and rank order were used in answering the research questions while inferential statistics of and Analysis of variance (ANOVA) was used to test the hypotheses at 0.5 level of significance.

Result

The demographic profiles of the respondents were presented using the descriptive statistics of frequency and percentage. Table 1 presents the distribution of the respondents by gender, stakeholders, level of education and disability type.

Table 1: Distribution of Respondents by Demographic Disparities

N	Variables		Frequency	Percentage %
1	Gender	Male	99	49.3

		Female	102	50.7
		Total	201	100.0
2	Stakeholders	Parents/Guardians	54	26.9
		Teachers	56	27.9
		PLWD	91	45.3
		Total	201	100.0
3	Level of Education	Primary	8	4.0
		Dropout of primary	10	5.0
		Secondary	24	11.9
		Dropout of secondary	20	10.0
		NCE/Polytechnic	51	25.4
		First Degree	75	37.3
		Second Degree	9	4.5
		Third Degree	4	2.0
		Total	201	100.0
4	Disability Type	Physically Challenged	85	42.3
		Hearing Impaired	41	20.4
		Blind	36	17.9
		Others	39	19.4
		Total	201	100.0

Table 1 shows that out of the 201 respondents that participated in this study, 99 (49.3%) were males, while 102 (50.7%) were females. This implies that the female respondents were more than their male counterparts by 1.43%. Considering the stakeholders in the study, parents/guardians were 54 (26.9%), 56 (27.9%) were teachers, while Persons Living with Disability (PLWD) were 91 (45.3%). This indicates that more than 45% of the participants in the study constitute PLWD. The respondents' level of education revealed that 8 (4.0%) of them were primary school certificate holders, 10 (5.0%) dropped out of primary school, 24 (11.9%) attended secondary school, 20 (10.0%) dropped out of secondary school, 51 (25.4%) have NCE/Polytechnic certificates, 75 (37.3%) were first degree certificate holders, 9 (4.5%) have second (Master's) degree; while 4 (2.0%) were with their third-degree level of education. This follows that 69.2% of the respondents were highly educated. With respect to their disability type, 85 (42.3%) of the respondents were physically challenged, 41 (20.4%) were hearing impaired, 36 (17.9%) were blind, while 39 (19.4%) were in the other categories of disabilities. Hence, over 40% of the respondents that took part in this study were physically challenged individuals.

RQ1: What are the sources of threat to educational opportunities of persons with disability in North-Central, Nigeria?

Table 2: Mean, SD and Rank Order of Respondents' Responses on Sources of Threat to Educational Opportunities of PLWD

Item N	The following are the sources of threat to educational opportunities of PWD	Mean	SD	Rank
1	Attitude of legislators in passing bills that affect PWD	3.46	.721	1st
11	Discrimination against PWD	3.36	.723	2nd
15	Families often assume that PWD have lesser prospect in life	3.35	.793	3rd
2	Absence of serious commitment by government to matters affecting persons with disabilities	3.31	.710	4th
9	No school in the rural community is inclusive (i.e cater for person with disabilities)	3.29	.853	5th
10	Transportation problem	3.29	.810	5th
8	Inadequate of specialized equipment and facilities for the education of persons with disabilities	3.22	.738	7th
12	Stigmatization- labeling against person with disabilities	3.22	.708	7th
4	Lack of political will to implement policies about persons with disabilities.	3.21	.846	9th
17	Perception of person with disabilities as a tragedy	3.20	.748	10th
21	Family responsibilities	3.18	.656	11th
13	Poor attitude of parents/caregivers/teachers to the education of persons with disabilities	3.17	.736	12th
22	Person with disabilities is seen as additional expenditure	3.13	.918	13th
14	sympathetic attitude of parents/caregivers/teachers toward persons with disabilities	3.11	.733	14th
3	Lack of legal position or provision on matters concerning persons with disability	3.09	1.035	15th
7	No specialized teachers especially in inclusive schools	3.08	.796	16th
6	Schools for person with disabilities are too far from their residence, making accessibility to special school difficult	3.04	1.019	17th
5	Non-representation of persons with disability in governance and policy making	3.02	.894	18th
20	Poverty in the family	2.99	.860	19th
16	Cultural perception of person with disabilities as a curse	2.87	.988	20th
18	Cultural belief of disability as punishment for abomination committed or wrong doing	2.80	1.046	21st
23	Source of wealth through begging	2.73	1.117	22nd
19	Cultural view of person with disabilities as object for ritual	2.69	1.074	23rd

Table 2 shows that all the 23 items that measure the sources of threat to PWD's opportunities to education were above the average mean value of 2.50, which is the benchmark for determining the responses to be considered in answering the research question one. Since all these items cannot be reported and discussed as the findings of this study, the most highly ranked items were considered in this context. Items 1 (mean = 3.46 and SD = .721), 11 (mean = 3.36 and SD = .723), 15 (mean = 3.35 and SD = .7293), 2 (mean = 3.31 and SD = .710), 9 (mean = 3.29 and SD = .853) and 10 (mean = 3.29 and SD = .810) were ranked between 1st and 5th respectively. It could thus be inferred from the above that threats to educational opportunities for PWD in North-Central, Nigeria are numerous and they revolve around political, facilities, social, cultural and economic. These specifically include poor attitude towards bills that involved PWD, societal discrimination against PWDs, family/societal poor perception of PWDs, neglect of the

needs of PWDs by the government, lack of schools in the rural community for PWDs and transportation problem.

RQ2: What are the sources of threat to employment opportunities of persons with disability in North-Central, Nigeria?

Table 3: Mean, SD and Rank Order of Respondents' Responses on Sources of Threat to Employment Opportunities of PLWD

Item N	The following are the sources of threat to employment opportunities of PWD	Mean	SD	Rank
1	Education level/training	3.44	.631	1st
5	Lack of government assistance	3.33	.695	2nd
2	Disability conditions (hearing/seeing/concentrating, remembering	3.33	.744	2nd
6	Need for special features at the job	3.26	.765	4th
8	Sourcing suitable employment	3.23	.859	5th
4	Transportation	3.21	.754	6th
3	Lack of career counselling	3.17	.807	7th
9	Complete loss of confidence in the recruitment process	3.10	.961	8th
7	Employer or co-workers' attitudes	3.06	.825	9th
10	Lack of awareness	3.05	.879	10th

Table 3 shows that all the 10 items that measure the sources of threat to PWD's opportunities to employment were above the average mean value of 2.50, which is the benchmark for determining the responses to be considered in answering the research question two. The most highly ranked items include items 1 (mean = 3.44 and SD = .631), 5 (mean = 3.33 and SD = .695), 2 (mean = 3.33 and SD = .744), 6 (mean = 3.26 and SD = .765) and 8 (mean = 3.23 and SD = .859) and were ranked between 1st and 5th respectively. It could thus be inferred from the above that threats to employment opportunities for PWD in North-Central, Nigeria include poor education level/training, lack of government assistance, disability conditions, need for special features at the job and sourcing suitable employment.

Hypothesis 1: There is no significant difference in the sources of threat to educational opportunities of PWD in North-Central, Nigeria based on disability type.

Table 4: One-Way ANOVA Comparing Respondents' Responses on Sources of Threat to Educational Opportunities of PWD Based on Disability Type

Sources	Sum of squares	df	Mean square	Cal. F	p-value	Remark
Between groups	899.353	3	299.784	3.27*	.022	Rejected
Within groups	18045.871	197	91.603			
Total	18945.224	200				

* Sig. at $p < .05$

Table 4 shows that at the degrees of freedom (df) of 3 and 197, the calculated F-value of 3.27 is statistically significant ($p = .022 < .05$). This indicates that a significant difference exists in the respondents' view on the sources of threats to educational opportunities for PWD with respect to their type of disability. Therefore, the hypothesis, which states that

there is no significant difference in the sources of threat to educational opportunities of PWD in North-Central, Nigeria based on disability type, is rejected. The Duncan post-hoc test was then performed in Table 5 to identify the category of disability that was responsible for the observed difference in the respondents' responses.

Table 5: Duncan Test to Identify the Disability Category Responsible for Respondents' Disparity in View of Sources of Threat to Educational Opportunity for PWD

Disability type	N	Subset for alpha = 0.05	
		1	2
Physically impaired	85	69.56	
Others	39	72.08	
Blind	36		73.14
Hearing impaired	41		74.95
Sig.		.097	.183

Table 5 shows that the scores of both the groups 1 and 2 are significantly different from one another. Group 1 (with mean values of 69.56 and 72.08) and group 2 (with mean values of 73.14 and 74.95) respectively. This means that the responses of the respondents in the group 2 with the highest mean values contributed more to the difference in their responses. Therefore, the hearing impaired and blind of PWD could be considered having a diverse understanding of the sources of threat to their educational opportunities than those in other categories of disabilities.

Hypothesis 2: There is no significant difference in the sources of threat to employment opportunities of PWD in North-Central, Nigeria based on disability type.

Table 6: One-Way ANOVA Comparing Respondents' Responses on Sources of Threat to Employment Opportunities of PWD Based on Disability Type

Sources	Sum of squares	Df	Mean square	Cal. F	p-value	Remark
Between groups	25.927	3	8.642	.466	.706	Accepted
Within groups	3651.297	197	18.535			
Total	3677.224	200				

Table 6 shows that at the degrees of freedom (df) of 3 and 197, the calculated F-value of .46 is statistically not significant ($p = .706 > .05$). This indicates that no significant difference exists in the respondents' view on the sources of threats to employment opportunities for PWD with respect to their type of disability. Therefore, the hypothesis, which states that there is no significant difference in the sources of threat to employment opportunities of PWD in North-Central, Nigeria based on disability type is accepted.

Hypothesis 3: There is no significant difference in the perception of stakeholders on the sources of threat to educational opportunities of PWD in North-Central, Nigeria.

Table 7: One-Way ANOVA Comparing Stakeholders' Perception of Sources of Threat to Educational Opportunities for PWD

Sources	Sum of squares	df	Mean square	Cal. F	p-value	Remark
Between groups	1300.308	2	650.154	7.29*	.001	Rejected
Withing groups	17644.916	198	89.116			
Total	18945.224	200				

* Sig. at $p < .05$

Table 7 shows that at the degrees of freedom (df) of 2 and 198, the calculated F-value of 7.29 is statistically significant ($p = .001 < .05$). This indicates that a significant difference exists in the stakeholders' perception of the sources of threats to educational opportunities for PWD. Therefore, the hypothesis, which states that there is no significant difference in the stakeholder's perception of sources of threat to educational opportunities of PWD in North-Central Nigeria, is rejected. The Duncan post-hoc test was then performed in Table 8 to identify the category of stakeholder that was responsible for the observed difference in their responses.

Table 8: Duncan Test to Identify the Stakeholder Responsible for Disparity in their View of Sources of Threat to Educational Opportunity for PWD

Disability type	N	Subset for alpha = 0.05	
		1	2
PWD	91	69.05	
Teachers	56		73.36
Parents/guardians	54		74.78
Sig.		1.000	.398

Table 8 shows that the scores of both the groups 1 and 2 are significantly different from one another. Group 1 (with mean value of 69.05) and group 2 (with mean values of 73.36 and 74.78) respectively. This means that the responses of the respondents in the group 2 with the highest mean values contributed more to the difference in their responses. Therefore, the teachers and parents/guardians could be considered expressing more views of the sources of threat to their educational opportunities for PWD than those with disabilities themselves. Perhaps, because they are more involved with PWD, experienced and educated than the PWD.

Hypothesis 4: There is no significant difference in the perception of stakeholders on the sources of threat to employment opportunities of PWD in North-Central, Nigeria.

Table 9: One-Way ANOVA Comparing Stakeholders' Perception of the Sources of Threat to Employment Opportunities of PWD

Sources	Sum of squares	df	Mean square	Cal. F	p-value	Remark
Between groups	33.376	2	16.688	.907	.405	Accepted
Within groups	3643.848	198	18.403			
Total	3677.224	200				

Table 9 shows that at the degrees of freedom (df) of 2 and 198, the calculated F-value of .90 is statistically not significant ($p = .405 > .05$). This indicates that no significant difference exists in the stakeholders' perception of the sources of threats to employment opportunities for PWD. Therefore, the hypothesis, which states that there is no significant

difference in the stakeholders' perception of the sources of threat to employment opportunities for PWD in North-Central Nigeria, is accepted.

Discussion of Findings

The finding shows that government, physical facilities, social perception, culture and economics are sources of threat to educational opportunities of persons with disabilities. The government as a source of threat could be seen in their attitude to put up a legislation and policy that impact positively the education of person with disabilities. The government lacks the will to implement policies and programmes that can further enhance accessibility and sustainability of education for person with disabilities. According to Aremu and Adewunmi (2023), policy gap constitute threat to educational accessibility of PWDs. This study is also supported by the study of Etieyibo (2020) that emphasized persons with disabilities being generally discriminated against in the area of education in Nigeria. One way in which they are discriminated against is in the lack of financial resources and educational institutions to cater for their needs. In the present Niger State, there are not many educational institutions and inclusive schools for persons with disabilities especially in the remote area of the state. The government on her part has not put up policies and programmes that favour the education of PWDs.

Schools for PWDs are inaccessible and available inclusive schools lack specialized facilities, equipment and teachers. This implies that no well-equipped inclusive school in the rural areas that cater for the needs of PWDs. This inaccessibility of PWDs to school and lack of facilities in the available inclusive schools keep children with disabilities out of school. According to the Joint National Association of Persons with Disabilities - JONAPWD (2016), the reason why these children are not in school is that the school environments are not inclusive and accessible to them. In support to this finding, the study of Kabuta (2014) found high inadequacy of teaching and learning materials as well as lack of special schemes, trained staff, funds and scholarship for students with physical disabilities.

The social perception of PWDs is a source of threat to their education opportunities. The manners in which PWDs are discriminated and stigmatized serve as roadblocks to their educational advancement. According to Aremu and Adewunmi (2023), societal prejudice/misconceptions and discrimination present significant obstacles to the education of PWDs. Discriminatory attitudes and misconceptions about disability make it difficult for People with Disabilities to attend school regularly compare to their non-disabled peers. Disabled person according to Imam and Abdulrahman-Mustapha (2016) are seen as a curse and consequences of poverty. Disabled individuals as cited by Groce and Kett (2014) are denied access to education because they are considered a disgrace to their family and should not be compelled to attend school. Poor attitude of parents/caregivers/teachers to the education of persons with disabilities further compounded the threat. It is more devastating when those assigned with the responsibility of caring for the disabled have negative attitude toward them. Gonda, Sulemana and

Zakaria (2022) observed that bullying and harassment of children with disabilities is common among their peers and teachers, lowering their self-esteem and potentially leading to school dropout.

The cultural belief regarding PWDs is identified as a source of threat to their educational opportunities. This is seen in the belief that person with disabilities have lesser prospect in life as they are cursed, seen as object of ritual and punishment for abomination committed. Economic factor is a source of threat to education opportunities of PWDs. Poverty is a great threat to their education as many of the PWDs are found living below poverty line.

On the sources of threat to employment opportunities for PWDs, the finding showed that all the 10 items that measure the sources of threat to PWD's opportunities to employment were above the average mean value of 2.50 which means that threats to employment opportunities for PWDs in North-Central, Nigeria include poor education level/training, lack of government assistance, disability conditions, need for special features/traits on the job, sourcing suitable employment, transportation, lack of career counselling, complete loss of confidence in the recruitment process employer or co-workers' attitudes and lack of awareness.

Lack of access to education for people with disabilities reinforces inequalities in employment (Jarzabek & Stolarska-Szelag, 2024). Aremu and Adewunmi (2023) stated that educational limitation is a significant obstacle to the ability of PWDs to be employed and execute skills that will make them self-sustainable and contribute meaningfully to society. Inability of government to provide assistance in the area of entrepreneur training and empowerment has contributed greatly on the low employment rate of PWDs. Ntamanwa (2015) found several factors which lead to low employment rate of people with physical disability to include poor implementation of the policy of special education to people with disability, social discrimination and stigmatization towards people with disability. United State Bureau of Labour Statistics (2019) reported lack of education or training, lack of transportation and the need for special features at the job among the barriers to employment opportunities of PWDs.

The finding revealed as well that there is significant difference in the sources of threat to educational opportunities of PWDs in North-Central, Nigeria based on disability type. The reason for the disparity in their perception may be as a result of the peculiarity of each of the disability. It revealed that the blind and the hearing impaired have a diverse perception compared to the physically challenged and others. This indicated that facilities and materials required for effective accessibility and learning of various categories of disabilities differ. The perception of the stakeholders was not difference; the stakeholders differ in their perception of the sources of threat to educational opportunities of PWDs. The teachers and parents/guardians could be considered expressing more views of the sources of threat to their educational opportunities for PWDs than those with disabilities

themselves. Perhaps, because they are more involved with PWD, experienced and educated than the PWDs themselves.

In consideration of the disability type and stakeholder, the finding indicated no significant difference in the respondents' view on the sources of threats to employment opportunities for PWDs. Therefore, the two hypotheses which state that there is no significant difference in the sources of threat to employment opportunities of PWDs in North-Central, Nigeria based on disability type and stakeholders were accepted.

Conclusion

In line with the findings of the study, it is concluded that PWDs are challenged with numerous threats to their educational and employment opportunities. The sources of threats encompass government/policy, physical facilities, socio-cultural perception, economic difficulties. The sources of threats to employment opportunities of PWDs ranges from poor education level/training, lack of government assistance, disability conditions, need for special features/traits on the job, sourcing suitable employment, transportation, lack of career counselling, complete loss of confidence in the recruitment process employer or co-workers' attitudes and lack of awareness. Source of threat to educational opportunities of PWDs in North-Central, Nigeria varies based on disability type. The stakeholders express that the source of threat to educational opportunities of PWDs are difference due to peculiarities and special needs of the individual. Both the disabled and stakeholders in the education of PWDs expressed no difference in their perception of the sources of threats to employment opportunities for PWDs.

Recommendations

In line with the findings of the study, it is recommended that:

1. Government should intensify her effort in establishing schools for special need persons in every local government area of Niger State to ease accessibility to basic education.
2. Inclusive schools should be well-equipped to augment the schools for the person with special needs in providing accessibility to education.
3. Technology should be leveraged upon to increase children with disabilities accessibility to basic education. Government (federal, state and local) should provide support to schools for the disabilities and their caregivers in the area providing facilities ranging from reading, writing and technology to assist in the education for the disabled individuals.
4. For the fact that the home and community contributes to the problems confronting PWDs, therefore, sensitization programmes should be organized by counsellors for parents, guardians, caregivers and other

community individuals on the implication of negative perception of their disabled children and consequences

5. Seminars, workshops and conferences should be organized for school teachers and other school staff on their roles as stakeholders in the education of the children with disabilities.
6. Public environment and offices should be constructed in manners that ease accessibility for persons with disabilities.
7. Individual with disabilities should be given quota in the civil service and public offices and discrimination against person with disabilities should be criminalized.

Implication for Counselling

Persons living with disabilities are challenged with emotional and psychological distresses due to the ways in which they are perceived at home, school and within the community. The negative perception contributes to their inaccessibility to education, increased poverty and denial of job opportunities. This may lead to feeling of dejection, loneliness and suicidal ideation. It is therefore pertinent for counsellors to assist children with disabilities to gain positive self-concept, mental health and prevent suicidal thought in them.

Individuals with disabilities like any other 'normal person' need source of income which may be business or employment in government. In trying to make this happen, the person with disabilities are challenged with discrimination and rejection. This can foster maladaptive and disruptive behaviours as response. Counselling is needed to be designed to enhance self-understanding and acceptance, goal achievement and decision making in day-to-day routines.

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A Review of Instructional Strategies for Maximizing the Effectiveness of PhET Interactive Simulations in Chemistry Education

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Abstract

This systematic review examines the instructional strategies employed alongside PhET interactive simulations in chemistry education, focusing on their impact on student learning outcomes, including engagement, conceptual understanding, and practical application. The review encompasses studies published between 2018 and 2024, specifically targeting research that investigates the use of PhET simulations within the context of chemistry. A comprehensive literature search across multiple academic databases identified ten relevant studies, which were analyzed to identify effective instructional practices. The findings reveal that PhET simulations achieve optimal effectiveness when integrated with active, inquiry-based learning approaches, such as guided discovery and collaborative learning. These strategies significantly enhance students' comprehension of abstract concepts and their ability to apply knowledge in practical contexts. The review highlights the importance of aligning instructional strategies with specific chemistry topics to maximize the benefits of simulations. Moreover, it stressed the need for educators to adopt these innovative tools to create engaging, student-centered learning experiences. This study contributes to the growing body of literature on the role of technology in enriching chemistry education and provides valuable insights for educators seeking to implement PhET simulations effectively in their classrooms. Future research should explore further instructional innovations to enhance the learning experience in chemistry.

Keywords: PhET Simulations, Chemistry Education, Instructional Strategies, Student Engagement, Conceptual Understanding

Introduction

Chemistry can be pretty tough to teach and learn, mainly because of its complex theories and abstract ideas. Both educators and students have faced significant hurdles in this area for a long time. While traditional teaching methods have their merits, they often fall short when it comes to linking theory with practical application. Concepts like atomic structure, chemical bonding, molecular interactions, and chemical equilibrium can be especially hard to understand and imagine, particularly for those who don't have a solid foundation in the subject. To tackle these issues, many teachers are now turning to interactive tools that can create more engaging and intuitive learning experiences. One notable example is Physics Education Technology (PhET) Interactive Simulations, developed by the University of Colorado Boulder. This resource offers a variety of

interactive simulations designed to help students better visualize and explore these complex scientific concepts.

Initially, 'PhET' stood for 'Physics Education Technology.' However, given the current platform's expansion beyond physics to encompass simulations across various scientific and mathematical disciplines, the acronym has become somewhat restrictive. PhET simulations excel in creating visually compelling representations of complex concepts, making them both engaging and accessible for student exploration (Kissi *et al.*, 2024). These interactive simulations are readily available and free to use for anyone with internet access and a suitable device. PhET prioritizes visual learning by minimizing textual content. The carefully selected words serve primarily as labels for interactive controls, either providing clear and concise descriptions or introducing technical terms that students are encouraged to define through their own investigations.

PhET simulations provide a fantastic way to improve chemistry education by giving students an interactive and visual method to understand both abstract and practical ideas (Escuadro, 2024). With these simulations, learners can adjust different variables and see the results immediately, helping them develop a more personalized and deeper understanding of essential concepts. The interactive element encourages inquiry-based learning, allowing students to experiment with chemical systems, test their hypotheses, and tackle problem-solving tasks. Consequently, PhET simulations have become popular in chemistry classrooms across high schools and universities, promoting a stronger understanding of concepts and better learning results.

While research on PhET simulations exists across various scientific fields, a comprehensive review specifically focusing on chemistry education is limited. This paper aims to fill this gap by examining recent studies that investigate instructional strategies employed with PhET simulations to teach both abstract and practical chemistry concepts. The review will analyze how these strategies impact student engagement, conceptual understanding, and the application of chemical knowledge to real-world scenarios. This review aims to contribute to the body of literature on technology-enhanced chemistry education by providing a detailed analysis of the instructional effectiveness of PhET simulations.

Research Question

The central research question guiding this review is:

- I. What instructional strategies employed through PhET interactive simulations have been found to enhance learning of abstract and practical concepts in chemistry?, and
- II. How do these strategies influence student outcomes?

Methodology

This systematic review seeks to evaluate and synthesize the results from ten recent research articles that delve into the teaching strategies used with PhET interactive simulations for both abstract and practical chemistry concepts. The focus here is on identifying essential instructional practices, evaluating how they affect student outcomes, and figuring out how these strategies support effective learning in chemistry education. The approach for carrying out this review follows a well-defined process, which is detailed below:

Inclusion and Exclusion Criteria

To ensure the review focuses on relevant and high-quality studies, a set of inclusion and exclusion criteria was established:

- I. This review includes studies published within the last six years (2018-2024) in peer-reviewed journals or conference proceedings. The focus is on research that explicitly investigates the utilization of PhET simulations within the context of chemistry education, encompassing both abstract concepts (e.g., atomic structure, chemical bonding and equilibrium) and practical skills (e.g., laboratory techniques, chemical reactions). The review considers articles that discuss the integration of specific instructional strategies alongside PhET simulations, such as inquiry-based learning, collaborative learning, and simulation-based demonstrations. Finally, the inclusion criteria prioritize studies that assess the impact of PhET simulations on student learning outcomes, including engagement, conceptual understanding, and practical application.
- II. This review excludes studies that do not focus on the use of PhET simulations specifically within the context of chemistry education, including those that utilize simulations in other subjects. Studies published prior to 2018 are also excluded to ensure a focus on recent advancements in the field. Articles with incomplete or insufficient data on instructional strategies employed alongside PhET simulations, as well as those lacking adequate assessment of student learning outcomes (e.g., engagement, conceptual understanding, and practical application), will not be included. Finally, non-peer-reviewed sources, such as blogs, opinion pieces, and editorials, are excluded to maintain the rigor of the review.

Search Strategy

A comprehensive literature search was conducted across multiple academic databases, including Google Scholar, ERIC, Elsevier, ScienceDirect, SpringerLink, JSTOR, and Taylor & Francis Online. Search terms included combinations of keywords such as "PhET simulations," "chemistry education," "instructional strategies" (e.g., "active learning," "interactive learning," "simulation-based learning," "inquiry-based learning"), "abstract concepts in chemistry" (e.g., "atomic structure," "chemical bonding"), "practical chemistry concepts" (e.g., "laboratory techniques," "chemical reactions"), and "student

outcomes." The search was limited to articles published between 2018 and 2024, and all retrieved articles were meticulously reviewed for their relevance to the research question.

Article Selection Process

Article selection followed a two-stage process. (i) Initial Screening: Titles and abstracts of retrieved articles were initially screened against the inclusion and exclusion criteria. This step aimed to identify studies that explicitly addressed the use of PhET simulations in teaching chemistry, with a particular focus on instructional strategies and student learning outcomes. Studies not meeting these criteria were excluded. (ii) Full-Text Review: Subsequently, a full-text review was conducted on the remaining articles to ensure comprehensive adherence to the inclusion criteria. Final selection prioritized articles with direct relevance to the research question, clear descriptions of instructional strategy implementation, and explicit measurement of student outcomes, including conceptual understanding, engagement, and skill development. A total of 10 studies were ultimately included in this review.

Data Extraction

A standardized data extraction form was utilized to systematically collect relevant information from each selected article. Basic data points included: study details (authors, year of publication, journal/source); study objectives (primary research question or goal); instructional strategies employed alongside PhET simulations (e.g., inquiry-based learning, collaborative learning, active learning); specific chemistry topics covered (e.g., chemical reactions, atomic structure, stoichiometry, acid-base chemistry); level of education of participants (e.g., high school, undergraduate, graduate); assessment methods for student outcomes (e.g., engagement, conceptual understanding, problem-solving ability); and a concise summary of the study's findings, including the effectiveness of PhET simulations and the implemented instructional strategies.

Data Synthesis

A qualitative synthesis was conducted to identify common themes and patterns across the extracted data. The analysis focused on several crucial areas: the types of instructional strategies employed alongside PhET simulations; the specific chemistry concepts targeted in these studies; the overall impact of these strategies on student outcomes, including conceptual understanding, engagement, problem-solving ability, and practical skills; and the effectiveness of PhET simulations in fostering both abstract and practical learning within the context of chemistry education. This thematically organized synthesis provides a comprehensive overview of how PhET simulations have been utilized in chemistry instruction and the implications of these strategies for student learning.

Quality Assessment

To assess the quality of the included studies, several criteria were applied: clarity of methodology (well-defined research design, participant characteristics, and implemented

instructional strategies); validity of outcome measures (use of valid and reliable methods to assess student learning); relevance and generalizability of findings (applicability of findings to various educational contexts, such as high school and university-level chemistry); and evidence of a clear and significant impact of PhET simulations on student learning outcomes. Studies that met these rigorous criteria were considered high-quality and included in the review.

Results

Table 1 presents the results of a systematic review of 10 recent articles on instructional strategies used in PhET interactive simulations for learning abstract and practical concepts in chemistry.

Table 1: A systematic review of 10 recent articles on instructional strategies used in PhET interactive simulations in learning abstract and practical concepts in chemistry

SN	Authors	Objective	Findings	Instructional Strategies Used	Focus Area	Outcomes/Effectiveness
1	Dewi, M., Kissi, M., Astra I. M. (2024)	to develop an integrated inquiry-based worksheet PhET simulation that enhance science process skills	Students showed improved conceptual understanding and engagement	Inquiry-based learning, guided discovery	acid and base material	are feasible, practical, and effective for science learning to improve science process skills
2	Garanina, R. M. (2020)	Develop students' cognitive abilities	is an effective educational strategy that can lead to improved cognitive skills, academic performance, and a deeper understanding of the subject matter	Problem-based learning, collaborative learning	Chemical reactions, thermodynamics	Improved retention and conceptual understanding
3	Escuadro, B. A. (2024)	Evaluates the effectiveness of PhET Simulations in enhancing learners' understanding	Significant academic attainment	Hands-on, simulation-based exploration	Chemical kinetics	Improved problem-solving skills and conceptual clarity
4	Nuraida, O., Akbar, G. S., Farida, I., & Rahmatullah, S. (2021, April).	Analyze student outcomes	Improve student learning outcomes to the level sub-microscopic representation.	Active learning, scaffolding techniques	Acid-base chemistry	Improved understanding of complex acid-base concepts
5	Salame, I. I., & Samson, D. (2019)	enhance student achievement by fostering problem-solving skills determine whether providing specific practice in problem categorization improves student achievement in problem solving and in conceptual understanding.	Students able to achieve higher score thereby enhancing problem-solving skills	Simulation-based pre-lab or post-lab activity	Laboratory skills	Enhanced practical skills, better conceptual integration
6	Antonios, B., Dimitrios, S., Georgios, T. (2021)		Improved ability to predict equilibrium shifts	Inquiry-driven learning, concept mapping	Chemical equilibrium	Categorization improved student performance, particularly for those at a lower developmental level, emphasizing the importance of organized knowledge in problem-

						solving.
7	Gupta, T. (2019)	Assess the impact of PhET simulations on stoichiometry	Simulations helped students balance equations and understand mole concepts	Visual learning, peer teaching	Stoichiometry	Higher accuracy in solving stoichiometric problems
8	Ali <i>et al.</i> (2021)	Analyze PhET's role in teaching periodic trends	Dynamic visualization of periodic trends increased comprehension	Interactive lectures, demonstration-based learning	Periodic trends	Enhanced understanding of abstract periodic trends
9	Parthiban, J. (2024)	Investigate how PhET helps in teaching chemical bonding and structure	Understand the science process skills	Simulation-based demonstrations, guided inquiry	Chemical bonding, molecular structure	Improved ability to predict molecular properties and bonding behavior
10	Yao <i>et al.</i> (2024)	Investigate PhET's role in teaching electrochemistry	Students showed better conceptual understanding of electrochemical cells	Conceptual inquiry, student-driven exploration	Electrochemistry, redox reactions	Better understanding of abstract electrochemical processes

The result of this review consistently demonstrate that PhET simulations achieve optimal effectiveness when integrated with active, inquiry-driven learning approaches. Instructional strategies encompassing guided discovery, hands-on exploration, problem-based learning, and collaborative activities have been widely observed across diverse chemistry topics. A recurring finding across these studies highlights PhET simulations' ability to significantly enhance both abstract comprehension and practical application, particularly in areas traditionally challenging to visualize or grasp. Moreover, the efficacy of PhET simulations tends to amplify when seamlessly integrated into existing teaching methodologies, such as lectures or laboratory exercises. This review underscores the significant value of PhET simulations in enriching chemistry education at various levels, particularly when employed in conjunction with effective pedagogical strategies.

Inquiry-Based Learning and Guided Discovery

These strategies promote active participation and stimulate students' curiosity. Through promoting curiosity and directing pupils to independently uncover concepts, they build a deeper understanding of abstract concepts like atomic structure, molecular geometry, and chemical equilibrium. Studies (Bakolis *et al.*, 2021; Rusdiman *et al.*, 2024) reveals that Students demonstrated higher engagement, enhance science process skills, retention, and application of concepts, especially in abstract areas such as chemical bonding, chemical equilibrium and atomic structure.

Research consistently demonstrates the effectiveness of PhET interactive simulations in enhancing chemistry education. Studies by Kissi *et al.* (2024); Parthiban (2024) and Rusdiman *et al.* (2024) have shown that inquiry-based learning and guided discovery approaches, when integrated with PhET simulations, significantly improve students' scientific literacy, critical thinking, and science process skills.

Furthermore, these simulations have proven valuable in various learning contexts. Haryanto *et al.* (2024) found that discovery learning models infused with PhET applications effectively improved generic science skills in chemistry. Bakolis *et al.* (2021) demonstrated the effectiveness of combining PhET simulations with inquiry-driven learning and concept mapping in teaching chemical equilibrium. This approach not only enhances understanding and addresses misconceptions but also helps students organize knowledge and categorize problems effectively.

The benefits of PhET simulations extend to other key areas of chemistry. Ganasen & Shamuganathan (2017) found that these simulations effectively enhance students' understanding of chemical equilibrium and reduce misconceptions. Similarly, Parthiban (2024) highlights the significant role of PhET simulations in enhancing guided inquiry in teaching chemical bonding. The interactive nature of these simulations, which allows for exploration of complex concepts, enhances science process skills and fosters a deeper understanding of chemical bonding (Zohar & Levy, 2019).

While PhET simulations offer significant potential for inquiry-based learning, their effective implementation requires careful consideration. Proper teacher training and support are crucial to ensure that educators can effectively integrate these tools into their teaching practices. Furthermore, the integration of simulations should be adopted to specific educational contexts and learning objectives to maximize their impact. Similarly, while the combination of concept mapping and PhET simulations shows promise, challenges such as the need for adequate training and resources for both students and teachers must be addressed. It's important to emphasize that simulations should not be seen as a replacement for traditional teaching methods. While they can enhance understanding and engagement, they should be used to complement and enrich traditional instruction, providing a more comprehensive and effective learning experience.

Problem-Based Learning (PBL) and Collaborative Learning

PBL strategies, when integrated with PhET simulations, offer a powerful approach to enhancing chemistry education. These simulations significantly enhance students' conceptual understanding of key topics by enabling visual and interactive exploration of chemical phenomena (Arsani *et al.*, 2020). Moreover, PBL encourages the application of knowledge to real-world problems, fostering critical thinking and problem-solving abilities (Hoyland & Hyde, 2023). The interactive nature of PhET simulations can also boost student motivation, making learning more engaging and effective (Garanina, 2020).

Collaboration and diverse learning styles are further enhanced by the use of PhET simulations in PBL. These simulations accommodate various learning preferences, allowing students to engage with content in ways that best suit their individual needs (Arsani *et al.*, 2020). Furthermore, collaborative learning is fostered as students work together to explore and understand the simulations, solidifying abstract concepts and promoting peer-to-peer learning.

The use of PhET simulations within a PBL framework can effectively support learning strategies such as Predict-Observe-Explain. This approach encourages deeper conceptual understanding by prompting students to predict outcomes, observe results within the simulation, and then explain their reasoning (Jere & Mpeta, 2024). Studies have consistently shown that students utilizing PhET simulations demonstrate improved problem-solving skills and can make more accurate predictions based on their understanding of chemical phenomena (Jere & Mpeta, 2024).

Research consistently demonstrates the effectiveness of PhET simulations in enhancing student achievement in chemistry (D'Ottone & Ochonogor, 2017). Studies have shown that students exposed to PhET simulations achieve significantly higher post-test scores compared to those taught through traditional methods (Escuadro, 2024). These findings suggest that the integration of PhET simulations within a well-designed PBL framework can significantly improve student learning outcomes in chemistry.

Despite the demonstrated benefits of PBL and PhET simulations, several challenges hinder their widespread adoption. These challenges include the need for adequately trained facilitators to effectively guide student learning within a PBL framework and the integration of technology, including PhET simulations, into existing curricula (Hoyland & Hyde, 2023).

Furthermore, while PhET simulations offer significant advantages, some learners may still struggle with certain concepts. This indicates the need for additional support and resources to address individual learning needs and ensure that all students can effectively utilize these tools to their full potential.

Active Learning and Scaffolding

Scaffolding, when combined with active learning strategies facilitated by PhET simulations, can significantly enhance student understanding of acid-base chemistry. Scaffolding, combined with hands-on, visual learning through PhET simulations, enables students to explore sub-microscopic representations of acid-base solutions by breaking down complex concepts into manageable steps. This interactive approach significantly improves their ability to understand and analyze abstract concepts such as pH and titration curves, which can be challenging to grasp through traditional lecture-based methods (Nuraida *et al.*, 2021). PhET simulations provide immediate feedback and allow students to experiment at their own pace, fostering a deeper understanding of these concepts.

Scaffolding plays a crucial role in guiding student learning within this framework. It involves providing structured support, such as questioning, prompting, and providing cues, to guide students through learning tasks (Haryati *et al.*, 2024; Tiaradipa *et al.*, 2020). Research has demonstrated the effectiveness of scaffolding in inquiry-based learning, particularly in improving students' science process skills when investigating acid-base solutions (Tiaradipa *et al.*, 2020). PhET simulations can also provide implicit scaffolding, allowing students to explore and experiment with minimal explicit guidance. This approach supports guided-inquiry learning while encouraging productive inquiry without overwhelming students.

While the integration of PhET simulations and scaffolding techniques shows promise, careful consideration must be given to the balance between guided and independent exploration. Implicit scaffolding can be particularly beneficial in large classroom settings, where providing explicit guidance to every student may not be feasible. However, it is crucial to ensure that students possess the necessary foundational skills to effectively engage with exploratory learning environments and benefit from the scaffolded support offered by the simulations.

Simulation-Based Learning (Pre-lab and Post-lab Activities)

PhET simulations have demonstrated significant potential in enhancing chemistry education. Studies by Salame & Samson (2019) have shown that integrating these interactive tools, whether as pre-lab or post-lab activities, can significantly improve student learning outcomes. Simulations enhance understanding by enabling students to visualize complex concepts and actively engage with them, facilitating a deeper grasp of theoretical principles and their real-world applications.

Research by Escuadro (2024) indicates that students utilizing PhET simulations exhibit substantial gains in post-test scores compared to traditional teaching methods, highlighting their effectiveness in improving academic attainment. Furthermore, incorporating simulations into a flipped classroom model, as explored by Wu *et al.*

(2021), fosters active engagement and deepens conceptual understanding, leading to significant and lasting knowledge gains.

The interactive nature of simulations, allowing students to experiment with variables and receive immediate feedback, is particularly valuable in preparing them for laboratory experiments. Collaborative simulations, as demonstrated by Watson *et al.* (2020), have been shown to boost student confidence and understanding of fundamental concepts, such as pH, compared to traditional assignments.

While the benefits of simulations are evident, it is crucial to acknowledge the importance of traditional hands-on laboratory experiences in developing essential practical skills. A balanced approach, integrating simulations with in-person laboratory work, can provide a more comprehensive and effective learning experience for students.

Conceptual Inquiry and Concept Mapping (Articles 6, 8)

Research by Ali *et al.* (2021) demonstrates that integrating PhET simulations into the learning of periodic table trends significantly enhances student engagement and understanding. These interactive tools facilitate a deeper comprehension of complex concepts by allowing students to visualize and manipulate elements within a virtual environment, thereby enriching their learning experience.

Conceptual inquiry, which encourages students to question and explore the material, and concept mapping, which helps them organize their understanding, become more effective when used in conjunction with simulations. These strategies enable students to construct and connect abstract concepts more effectively. Studies have shown that students who utilize simulations exhibit enhanced retention and application of chemical equilibrium and periodic trends, demonstrating improved abilities to map relationships between different concepts (Cao *et al.*, 2021; Okrepka, 2020).

PhET simulations provide dynamic representations of periodic trends, such as atomic radii and ionization energies, making these abstract concepts more tangible. This allows students to actively explore the relationships between elements, fostering a better grasp of chemical properties and behaviors through interactive experimentation (Sarwoto *et al.*, 2024). The use of simulations has been linked to increased student interest and motivation in chemistry, as they enable safe and flexible experimentation (Correia *et al.*, 2020; Ali *et al.*, 2021). Moreover, interactive learning environments encouraged by simulations prompt students to formulate questions and make predictions, thereby enhancing their inquiry skills (Correia *et al.*, 2020).

PhET simulations effectively support hands-on learning, allowing students to practice skills relevant to real-world chemistry applications (Sarwoto *et al.*, 2024). Furthermore, they contribute to the development of essential competencies for mastering chemical disciplines, such as identifying cause-effect relationships (Correia *et al.*, 2020). While PhET simulations offer significant benefits, their effectiveness can vary depending on the

instructional context and the integration strategies employed by educators. This underscores the critical role of active teacher involvement in maximizing the potential of these valuable tools.

Visual Learning and Peer Teaching (Article 7)

According to Gupta (2019), visual learning and peer teaching, when integrated with PhET simulations, can significantly enhance student understanding of stoichiometry. These interactive simulations provide a platform that fosters conceptual understanding and problem-solving skills, particularly in chemistry education. The integration of visual tools, such as submicro diagrams, further aids in bridging the gap between abstract concepts and tangible representations, making stoichiometric principles more accessible to students.

Visual learning aids in the comprehension of abstract chemical concepts like stoichiometry by providing dynamic and interactive representations. Peer teaching promotes active engagement and reinforces learning. Research reveals that students who engage in peer teaching demonstrate higher accuracy in solving stoichiometry problems and a deeper conceptual understanding of the subject (Gupta, 2019).

Simulations, such as those developed by Gupta, promote mathematical reasoning and problem-solving in stoichiometry by allowing students to visualize chemical reactions and perform dimensional analysis. Interactive simulations can lead to significant gains in student understanding, as evidenced by improvements in pre- and post-test scores in chemistry courses (Parthiban, 2024).

The use of student-generated submicro diagrams helps students connect symbolic representations of chemical reactions to their underlying processes, enhancing their conceptual grasp of stoichiometry. Peer teaching, facilitated by these visual tools, encourages collaborative learning, where students can explain concepts to one another, reinforcing their understanding.

Furthermore, contextualizing stoichiometry by discussing its relevance in everyday life, using real-world examples, can engage students in active learning methodologies. This contextualization can further motivate students to grasp stoichiometric concepts. While the use of simulations and visual aids is highly beneficial, it is crucial to acknowledge the value of traditional teaching methods. A balanced approach that incorporates both innovative and conventional strategies is essential for effective stoichiometry instruction.

Interactive Lectures and Demonstration-Based Learning (Article 8)

According to Sarwoto *et al.* (2024), PhET simulations serve as an effective and innovative demonstration tool in lectures, effectively illustrating periodic trends and atomic behavior. By providing dynamic visualizations, these interactive simulations enhance student engagement and understanding by making complex concepts more accessible. This approach utilizes PhET simulations as a demonstration tool during

lectures, offering a dynamic way to illustrate periodic trends and atomic behavior. This effectively bridges the gap between theoretical learning and practical application. Research indicated that students demonstrated a more comprehensive understanding of periodic trends and the properties of elements, particularly in relation to abstract periodic concepts.

Summary of Findings

Active, inquiry-based learning approaches have consistently proven effective in enhancing student engagement and fostering a deeper understanding of abstract concepts, such as atomic structure, chemical equilibrium, and molecular bonding. Simulation-based learning, whether implemented pre- or post-laboratory activities, effectively supports hands-on learning experiences, enabling students to grasp practical concepts and apply theoretical knowledge more readily.

Furthermore, collaborative learning, including peer teaching, fosters critical thinking and solidifies understanding. Collaborative problem-solving allows students to exchange ideas, challenge assumptions, and build upon collective knowledge.

Scaffolding techniques play a crucial role in supporting student learning. Scaffolding supports gradual knowledge acquisition by breaking down complex concepts into smaller, more manageable steps, allowing students to progress at their own pace. This gradual approach enhances knowledge retention and reduces cognitive overload, particularly when dealing with challenging concepts.

Conclusion

The review of instructional strategies employed alongside PhET simulations in chemistry education stresses the significant potential of these interactive tools to enhance student learning outcomes. The findings consistently demonstrate that PhET simulations are most effective when integrated with active, inquiry-driven pedagogical approaches, such as guided discovery, problem-based learning, and collaborative activities. These strategies not only facilitate a deeper understanding of abstract concepts but also improve practical application skills, particularly in areas that are traditionally challenging for students to visualize.

Moreover, the systematic analysis of recent studies reveals that the successful implementation of PhET simulations is contingent upon their seamless integration into existing teaching methodologies, including lectures and laboratory exercises. The review highlights the importance of aligning instructional strategies with the specific chemistry topics being taught, ensuring that simulations are used to reinforce and contextualize theoretical knowledge. Finally, this study emphasizes the value of PhET simulations as a transformative educational resource, advocating for their broader adoption in chemistry curricula to foster engagement, conceptual understanding, and skill development among students at various educational levels. Future research should continue to explore

innovative instructional strategies that leverage the full potential of these simulations to further enhance chemistry education.

Limitations

This systematic review does have a few limitations. Initially, by only looking at studies published in the last six years, some key foundational research might have been overlooked. Moreover, since the review only includes studies written in English, this could restrict how broadly the findings apply in various educational settings. Finally, by not considering non-peer-reviewed literature, there's a chance that some creative or new applications of PhET simulations haven't been included.

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