

PROVISION AND UTILIZAATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR EFFECTIVE TEACHING AND LEARNING IN NIGERIA'S POST BASIC SCHOOLS IN POST COVID- 19 PANDEMIC

BY

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ABSTRACT

This paper examined the provision and utilization of Information and Communication Technology (ICT) for effective teaching and learning in Nigeria's Post Basic Schools in Post COVID-19 lock down era. Literature on Information and Communication Technology (ICT) and Post Basic Education were reviewed. The adverse effects of the COVID -19 Schools closure on Post Basic Schools students and their families as well as the place of ICT in addressing these adverse effects were also explored. The paper concluded that for the Nigeria's Post Basic Schools to protect students and the staff, minimize disruption of education and ensure its continuity for all students, in Post COVID-19 era, Information and Communication Technology need to be provided and utilized in teaching and learning. Though, there are some problems that affect the provision and utilization of ICT in Nigeria's post basic schools such as electricity, high cost of ICT, lack of effective ICT training, and inadequate infrastructure among others. The paper recommended that government should look into the issues of funding education in general and ICT in particular among others.

Keywords: Information and Communication Technology, Post Basic Schools, COVID- 19, provision and utilization.

Introduction

The corona virus infectious diseases (COVID-19) outbreak was first reported from Chinese City of Wuhan in late December 2019. It rapidly spread to other countries and was declared pandemic by World Health Organization (WHO) on the 11th of March 2020 (WHO, 2020). In Nigeria the first case of COVID-19 was confirmed in Lagos State on 27th February 2020. It was from there it spread to other States of the federation and subsequently led to the closure of all educational institutions. The unscheduled closure of schools in Nigeria demonstrates the need for schools to be prepared for all disaster and emergency possibilities. This is due to the fact that schools are generally considered to be safe havens for millions of students and the greatest socializing institutions after the family. It is in recognition of the significant place of education as a universal, inalienable human right and very vital in enabling people to realize their full potential and exercise other rights, the right to education does not disappear or get suspended because of disasters and emergencies such as COVID- 19 pandemic. This is because when education is interrupted or limited, the magnitude of students drop out, with its negative and permanent economic and social impacts for students, their families, and their communities as we have been witnessing in Nigeria will be high.

Managing COVID- 19 pandemic is now part of the context for educational management and planning. Therefore for the aims and objectives of Post Basic Education to be achieved, the administrators of Post Basic Schools must plan, provide, utilize and manage Information and Communication Technology (ICT) in order to ensure the continuity of effective teaching and learning amidst and after the pandemic. This is because Post Basic Education being a bridge between the basic and tertiary education levels occupies a strategic position in Nigeria and it plays a significant role in preparing the students for useful living in the society and for higher education which are very vital in the realization of the Nigerian manpower requirement.

Information and Communication Technology (ICT) has potential roles to play in enhancing effective teaching and learning in Post Basic Schools in Nigeria, especially during this period of COVID- 19 in which social distancing is observed in all public gatherings. This is based on the conviction that the ICT brought a rapid change in the classrooms (Sarkar, 2012). It is based on this Sarkar (2012), asserts that the traditional classrooms became virtual ones, traditional

teachers became virtual instructors. The advent of computers and the internet has transformed what was once deemed an impossible feat—teaching someone remotely, regardless of their physical location—into an achievable reality. Traditional chalk board setting has now evolved into digital projectors, interactive board, even physical library to virtual library. It is against the above background this paper sought to examine the roles of Information and Communication Technology (ICT) in effective teaching and learning in Nigeria's Post Basic Schools amidst COVID- 19 pandemic.

Information and Communication Technology

Scholars defined Information and Communication Technology (ICT) differently. According to Lucy (1998), Information and Communication Technology is an organized combination of people, hardware, communication networks and data resources that collects, transfers and disseminates information in an organization. To Vernon (2001), ICT is a collective term covering all those technologies, both hardware and software, dedicated to the capture, storage, and processing, transmission and presentation of information. This indicates that the use of ICT in all spheres of human activities has changed the face of the earth. It is used in health delivery, engineering, industry, business, agriculture, military, security, law, politics and governance, all aspects of arts, science and education among others. It is against this background Hawkrige, Jaworski and McMahon (1990) opined that computers are at the heart of the ICT revolution because they are fast information processing machines, configured to receive input in the form of information, systematically process the input and provide organized information that serves the needs of the user. It has the advantage of improving administrative efficiency and overall quality of the teaching and learning process. The United Nations Educational, Scientific and Cultural Organization UNESCO (2002) defined Information and Communication Technology (ICT) as the combination of informatics technology with other related technologies, specifically communication technology. Becta (2008), conceptualized Information and Communication Technology (ICT) as technology that is used to process, store, transmit, communicate, create or exchange information. This implies that ICT is the computing and communication facilities. Meenakshi (2013), defined Information and Communication Technology (ICT) as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.

Components of Information and Communication Technology

Scholars have identified components of ICT in a number of write ups. According to Chandrasekhar & Ghosh (2001), ICTs incorporate electronic technologies and techniques used to manage information and knowledge, including information-handling tools used to produce, store, and process, distribute and exchange information. They also cover Internet service provision, telecommunication equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centers, commercial information providers, network-based information services, and other related information and communication activities (UNESCO 2002).

The ICT components as identified by Ayeni (2004), include prints media, electronic media, telephone, telex, e-mail, fax and computers. To Sarkar (2012), Information and Communication Technologies consist of the hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. Sarkar further classified ICTs into two components: Information and Communication Infrastructure (ICI) and Information Technology (IT). The Information and Communication Infrastructure (ICI) refers to physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and the services that utilize those (Internet, voice, mail, radio, and television). Information Technology (IT) on the other hand refers to the hardware and software of information collection, storage, processing, and presentation. It is discernable from the above that ICT is a set of activities that facilitate by electronic means the processing, transmission, and display of information.

Information and Communication Technology (ICT) in Education

Different scholars viewed ICT in education from different perspectives. In an attempt to explain ICT in education Meenakshi (2013), identified two different aspects of ICT in education: teaching ICT itself, and using ICT as an augmented tool to the existing teaching methods. Similarly, Olakulehin, (2007), categorized the way ICT has been used in education in to two: ICT for Education and ICT in Education. The later involves the adoption of general components of technologies in the teaching process, more specifically, often for the training of teachers in the

use of technology for teaching while the former refers to the development of information and communication technology specifically for teaching/ learning purposes. In the same vein, UNESCO (2004) classified ICT in education into three broad categories:

1. **Pedagogy:** ICT is integrated into teaching methods, enhancing learning through interactive digital tools like whiteboards and online resources. It emphasizes the importance of teachers being digitally literate to foster higher-order thinking skills and individualized learning experiences.
2. **Training:** Focuses on building teachers' capacity in ICT-related course development, updating existing training courses, and developing new ones to ensure effective ICT integration in education.
3. **Continuing Education:** Involves ongoing professional development for teachers to enhance their ICT skills, enabling them to create pedagogically sound lesson plans and adapt to technological advancements in education

Thus, ICT has the advantage of improving overall quality of the teaching and learning process. With regard to the functions of ICT in education Vogt (2003), highlighted 4 functions. These include:

1. **ICT as an Object:** This refers to learning about ICT as a subject in the curriculum, where students develop ICT-related skills and knowledge.
2. **ICT as an Assisting Tool:** ICT is used as a tool to assist in various educational activities such as making assignments, collecting data, documentation, communication, and conducting research.
3. **ICT as a Medium for Teaching and Learning:** ICT is integrated into the teaching and learning process itself, using tools like interactive whiteboards, online resources, and digital learning materials to enhance pedagogy and student engagement.
4. **ICT as a Tool for Organization and Management:** ICT is utilized for school administration and management tasks, such as communication, evaluation, monitoring of records, and financial/strategic management.

Akinyemi (1998) stated that computers used in education are in the form of Computer Managed Instruction (CMI), Computer Supported Learning Aids (CSLA), Computer Based Education (CBE) and the Computer Assisted Instruction (CAI). He further emphasized that in Computer Managed Instruction, the computer is used for data processing which facilitates decision making for effective administration, classroom management and individual student management, generation, marking, and analyzing tests, grading, diagnosis and the monitoring of the learners progress, improves efficiency and productivity of information, performs intensive tasks, carries

out repetitive tasks and stores large volumes of data and information. Nwidum (2006) listed ICT in education as motion picture or film, film strip, slide projection, overhead transparency, teletext and video text, the reprographic media are photography, photocopying, scanning and faxing microchips, microfilms and microfiche, voice mail, voice processing, the computer, the internet; multimedia systems are for example Computer-Based Training (CBT), Computer Disc Read Only Memory (CD-ROM), Compact Disc Interactive (CD-I). Digital Video Interactive (DVI), Interactive Processing Information Services.

Post-Basic Education

Post-Basic Education as defined by the National Policy on Education (FRN, 2014), is the education children received after a successful completion of ten years of Basic Education Certificate Examination (BECE) and Junior Arabic and Islamic Studies Certificate Examination (JAISCE). It includes: (i) senior secondary education (ii) higher school certificate; and (iii) continuing education given in Vocational Enterprise Institutions (VEIs) to either Basic Education graduates who are not proceeding to Senior Secondary School, or Senior Secondary graduates that are not proceeding to tertiary level as means of preparing them for the world of work, wealth creation and entrepreneurship.

Objectives of Post-Basic Education

The objectives of Post-Basic Education as provide by National Policy on Education (FRN, 2014) are to:

- provide holders of Basic Education Certificate Examination and Junior Arabic and Islamic Studies Certificate Examination with opportunity for education of a higher level irrespective of gender, social status, religious or ethnic background;
- offer diversified curriculum to cater for the differences in talents, disposition, opportunities and future roles;
- provide trained manpower in the applied sciences, technology and commerce at sub-professional grades;
- provide entrepreneurial, technical and vocational job-specific skills for self-reliance, and for agricultural, industrial, commercial and economic development;
- develop and promote Nigerian languages, art and culture in the context of world's cultural heritage;

- inspire students with a desire for self-improvement and achievement of excellence;
- foster patriotism, national unity and security education with emphasis on the common ties in spite of our diversity; and
- 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.

Provision and utilization of ICT

Human Right Watch Report on Children at the 35th Ordinary Session of the African Committee on Experts on the Rights and Welfare of the Child shows that school closures caused by the pandemic exacerbated previously existing inequalities and that children who were already most at risk of being excluded from a quality education have been most affected. The effects of school closure on Post Basic School students as highlighted by Garba, Idris and Rabe (2021), include:

1. **Disruptions of Academic Calendar:** School closures disrupt the academic calendar, leading to interruptions in the continuity of learning and potentially affecting the pace and completion of the curriculum.
2. **Postponement of Internal and External Examinations:** The closure of schools can result in the postponement of both internal and external examinations, impacting students' assessment schedules and academic progression.
3. **Debarment of Extra-Curricular Activities:** School closures can lead to the suspension of extracurricular activities, depriving students of opportunities for holistic development beyond academics.
4. **Relinquishing of New Student Administration:** The closure of schools may disrupt the admission and administrative processes for new students, causing delays and challenges in managing student enrollment and records.
5. **Suspension of Internal and External Examination:** The suspension of both internal and external examinations due to school closures can create uncertainties for students regarding their academic performance evaluation and progression.

These consequences underscore the multifaceted impact of school closures on post-basic school students, affecting not only their academic pursuits but also their overall educational experience and administrative processes.

Provision and Utilization of Information and Communication Technology (ICT) for Effective Teaching and Learning in Nigeria's Post Basic Schools in Post COVID-19 Era

Provision and utilization of ICT has the potential of playing a vital roles in facilitating effective teaching and learning in Nigeria's Post Basic Schools in this period of fourth wave of COVID-19 pandemic. Despite the Schools opening observance of social distancing and other COVID 19 protocols have become necessary in all public gatherings. These roles include:

Enhancement of teaching skills and learning ability; Adequate provision and effective utilization of ICT has the potential of playing a vital roles in enhancing teaching skills and learning ability in the Nigerian's Post Basic Schools in Post COVID -19 pandemic Lock down era, because with the help of ICT it will be easy to provide audio visual education. These learning resources are being widens and widen. With this vivid and vast technique as part of the ICT curriculum, learners would be encouraged to regard computers as tools to be used in all aspects of their studies. In particular, they need to make use of the new multimedia technologies to communicate ideas, describe projects, and other information in their work while at the same time observing COVID -19 protocols.

Virtual Learning: Virtual classroom software ensures access to digital resources for enriching learning experience. The diverse nature of learning tools offered by the platform has provided scope for meaningful interactions between students and teachers. Virtual classroom platforms with their efficient learning management systems lets teachers create presentations, screen sharing files, assessments, automated learner enrollment, video/audio files, etc. for teaching purposes. An online live class platform could be used by Nigeria's Post Basic School teachers to live stream classes and upload on-demand lessons. Some of the online live class platforms that could be used in Nigeria's Post Basic Schools for effective teaching and learning include: BrainCert, PeopleLink, Smartometry, Easyclass, ezTalks Webinar etc. On line education can also take place through the zoom, skype, face book or WhatsApp, telegrams, ICT laboratories and teleconferencing. Live online class platforms have become even popular in difficult times like COVID-19 and is an important tool to share video content with students worldwide.

On-the-Air and Off-the-Air Lesson Delivery: The traditional technologies such as on-the-air and off-the-air radio/radio-cassette, television and offline video-assisted technologies are still

considered valid and cost-effective modes of education delivery in Post Basic Schools in Post COVID -19 pandemic lock down.

Online Library Services: Educational materials at all levels from pre-school to postdoctoral are available from websites. Teachers and learners would no longer rely solely on printed books and other materials in physical media housed in libraries (and available in limited quantities) for their educational needs. With the Internet and the World Wide Web, a wealth of learning materials in almost every subject and in a variety of media could be accessed from anywhere at any time of the day and by an unlimited number of people.

Group/cluster Teaching and Learning: ICT has a significant place in making it easy for Nigeria's Post Basic Schools to study as well as teach in groups or in clusters. With ICT, students would be united together to do the desired task. Efficient postal systems, the telephone (fixed and mobile), and various recording and playback systems based on computer technology all will have a roles to play in educational broadcasting in the COVID- 19 pandemic lock down . Among the devices that could be used are; still and motion pictures, filmstrips, transparencies, teaching machines and computers. The growth of modern audiovisual education has the prospect of reflecting developments in both technology and learning theory.

Challenges of Information and Communication Technology (ICT) in Effective Teaching and Learning in Nigeria's Post Basic Schools

The provision and utilization of Information and Communication Technology (ICT) in Nigeria's Post Basic Schools in Post COVID -19 lockdown era has been a problematic. These are:

Electricity: The basic requirement of electricity and telephone networks is not available in Nigeria's post basic schools. Electrification and frequent power disruptions is one of the challenges facing integration of ICT for effective teaching and learning in Nigeria's Post Basic Schools. It is in line with this Wright (2014), noted that electrical power is highly needed to run technological devices and until power is widely available, reliable and affordable for many in the Africa and elsewhere, educational technology uptake will be slow.

High Cost of ICT Services: There is also the issue of the high cost of acquiring, installing, operating, maintaining and replacing ICTs. While potentially of great importance, the integration of ICTs into teaching in the Nigeria's Post Basic Schools is still in its infancy. Introducing ICT systems for teaching in Nigeria has a particularly high opportunity cost because installing them is usually more expensive in absolute terms than in industrialized countries whereas, in contrast, alternative investments (e.g., buildings) are relatively less costly.

Inadequate Infrastructure: Many post-basic schools in Nigeria lack the necessary infrastructure such as proper rooms, or buildings, internet connectivity, and computer labs. Without these basic facilities, integrating ICT into teaching and learning becomes difficult.

Nature of Nigerian Environment and the Demand of Educational Institutions: In an attempt to integrate ICT in teaching in Nigerian Educational Institutions, the stake holders concerned over look the internal nature of Nigerian environment and the ICT demand of the educational institutions. It is in line with this Sarkar (2012) observed that the four most common mistakes in introducing ICTs into teaching in educational institutions are: i) installing learning technology without reviewing student needs and content availability; (ii) imposing technological systems from the top down without involving faculty and students; (iii) using inappropriate content from other regions of the world without customizing it appropriately; and (iv) producing low quality content that has poor instructional design and is not adapted to the technology in use.

Lack of Effective ICT Training: This remains one of the major obstacles for integrating ICT in teaching. This could be due to shortages of trained staff to cope with the diversity of responsibilities and tasks, resistance from staff and reluctance to be retrained.

Children Living in Remote Rural Areas: Children living in remote rural areas are less likely to have resources to adapt and implement measures needed to continue education during school closures amidst COVID -19, including access to the ICT resources (even the traditional ones like radio), due to extreme poverty. The pandemic exacerbated the already dire condition for many of students. Most of the parents to these children have lost their sources of livelihood due the

pandemic making their already strained living condition much worse to the extent that they could not afford to buy batteries for their radio set.

Conclusion

From the above, the paper conclude that for the Nigeria's Post Basic Schools to protect students and the staff from the fourth wave of COVID -19 pandemic, minimize disruption of education and ensure its continuity for all students, Information and Communication Technology must be used in teaching and learning. Though, there are some problems that affect the utilization of ICT in Nigeria's Post Basic schools, integration of ICT has the potential of playing a significant roles during disaster and emergencies like COVID- 19 pandemic.

Suggestions

The following suggestions were made based on the paper:

1. the government should look into the issues of funding education in general and ICT in particular. Access to information is deemed crucial to development during this era of forth wave of COVID- 19 pandemic;
2. the federal government of Nigeria should as a matter of urgency put more effort in improving the power supply in the country;
3. similarly the government in partnership with private and Non-governmental organizations should strive to equip the Nigeria's Post Basic Schools with adequate ICT facilities;
4. the ICT require donation from the well-meaning individuals and philanthropists who have good will towards the educational provisions to the citizens. There is need for individuals to donate both in cash and kind for ICT integration amidst the pandemic;
5. apart from having enabling telecommunications and ICT policies, Nigerian Governments (Federal and States) and Post Basic Schools will need to develop strategies for effective ICT and media deployment and sustainability;

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RELATIONSHIP BETWEEN TECHNOLOGY INTEGRATION AND STUDENTS' ACADEMIC PERFORMANCE IN SOCIAL STUDIES IN JUNIOR SECONDARY SCHOOLS IN DELTASTATE, NIGERIA

BY

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ABSTRACT

The study investigated the relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta State. Three objectives, three research questions and three null hypotheses guided the study. The study adopted correlational research design. The population of the study was 49,879 students in junior secondary school in Delta State. The stratified sampling technique was used to select sample size of 1,496 students. The Instrument for this study was a questionnaire developed by the research from the three research questions. The instrument was validated by three experts in College of Education, Warri. The reliability of the instrument was calculated using Cronbach Alpha reliability coefficient which yielded coefficient of 0.82. Out of the 1,496 copies of the instrument distributed, a total of 1,481 copies of the questionnaire were later found valid for analysis. The study was analyzed using mean and standard deviation for research questions and Pearson Product Moment Correlation for hypotheses. The hypotheses were tested at 0.05 level of significance. The study revealed that: there is a significant correlation between the level of technology integration in the teaching of social studies and students' academic performance in junior secondary schools in Delta State. The study Ministry of education should integrate technology into Social Studies curriculum, School administrators should provide training for teachers on the use of technology in teaching Social Studies.

Introduction

Social Studies Association of Nigeria (SOSAN, 2000), describe Social Studies as “an integral part of the study of man and his total environment. It is an interdisciplinary field that encompasses the study of various aspects of human society and the relationships between individuals, communities, and cultures. This includes the study of history, geography, political science, sociology, anthropology and economics. The primary purpose of social studies include promoting civic education, national consciousness, national unity, and the inculcation of appropriate values for maintaining a democratic society (Federal Republic of Nigeria, 2014).

Social Studies is aimed at helping students understand complexities of social, political, economic, environmental issues, as well as developing critical thinking, problem – solving, decision – making abilities and to foster a sense of civic responsibility and promote positive attitudes towards diversity and global awareness. Similarly, Ajaja and Mezieobi (2018) stated that social studies aim at producing a responsible citizen who is well informed, concerned, participatory, reflective, productive and willing to contribute to the national development.

The main objectives of social studies in Nigeria are to provide effective instruction, develop the capacity to acquire basic skills for forming sound judgment, and ensure the acquisition of a relevant body of knowledge and information essential for personal development and positive contribution to society as a whole (Okobia cited in Igun, 2021). However, the junior secondary school social studies curriculum as a teaching syllabus has four main objectives derived from the National policy on Education (FRN, 2014). The objectives are as followed, adequate integration of contents, concepts and generalization into social studies discipline, citizenship education which encourages democratic principles and effective citizenry, adequate value laden education, and programme of skill development and environmental studies. However, despite, the laudable objectives of social studies, students’ academic performance is still poor. Ololube (2016) highlighted the issues of poor academic performance in Social Studies by junior secondary school students. The study emphasized the need for innovation and improvement in the teaching and learning of Social Studies to enhance students’ performance. Consequently, this call for technology integration in the teaching and learning of Social Studies, which will consequently improve students’ academic performance.

Technology integration in education is the use of technological tools and resources to support and enhance teaching and learning processes as well as to improved student performance. These tools include interactive whiteboards, computers, tablets, educational software and the internet. National policy on Education (FRN, 2014), technology integration in teaching and learning of Social Studies is means to enhance the quality of education. The policy recognizes the importance of harnessing technology to improve instruction and support student learning in Social Studies. Technology integration in Social Studies education provides students with the opportunities to engage in authentic learning experiences that are relevant to their lives and the world around them. Through the use of digital tools, students can access a wide range of primary

and secondary sources, as well as increased motivation and engagement, as students have flexibility to explore content in ways that are meaningful to them. Ojogan (2020) stated that the aim of technology integration in curriculum development is to equip students with the necessary digital literacy skills and competences they will need in the future workplace. This includes; the ability to navigate digital platforms, critically evaluates online information, and use technology for effective communication and collaboration. A study by Egbo (2015), discussed the significance of technology integration in Nigerian education and highlighted its potential to enhance students learning experiences. He reported that technology integration positively impacted students' academic performance by increasing their motivation, engagement, and interest in learning. He added that there is need for effective teacher training and support to maximize the benefits of technology integration in classroom. Similarly, Onyema and Ofojebe (2017) conducted research on the impact of technology integration on students' academic performance in social studies in Nigerian secondary schools. The study revealed that the use of technology, such as interactive whiteboards and digital resources, contributed to improved students understanding of social studies. Therefore, it is against this back drop that the study intended to investigate the relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta State.

Statement of the problem

Social Studies as an integrated discipline in the educational system of Nigeria, is a study which emphasizes the process of identifying and solving problems for the survival of man which also includes the ability to maintain peace, an orderly, decent and progressive life. One key impotence of Social Studies to students is to helps them develop a sense of social awareness and a broader perspective on societal issues and, also lays the foundation for the development of important civic and ethical values in students. Despite the importance of Social Studies education, there have been a growing concern about the declining academic performance of students in the subjects in Nigeria junior secondary schools (Akporhwarho, 2018). This decline is often attributed to factors such as curriculum challenges, inadequate teaching resources, and teacher preparedness. On this basis, it become imperative to investigate the relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta State.

Purpose of the study

The main aim of this study is to investigate the impact of technology integration on students' academic performance in Social Studies in junior secondary schools in Delta State.

Specifically, the study sought to:

1. examine the current level of technology integration in teaching Social Studies in junior secondary schools in Delta State;
2. assess the relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta State; and
3. identify the challenges to effective technology integration in teaching Social Studies in junior secondary schools in Delta state

Research Questions

The following research questions were raised to guide the study.

1. What is the current level of technology integration in teaching social studies in junior secondary schools in Delta State?
2. What is the relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta State?
3. What are the challenges to effective technology integration in teaching of social studies in junior secondary schools in Delta State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant correlation between the level of technology integration in the teaching of social studies and students' academic performance in junior secondary schools in Delta State.
2. There is no significant relationship between technology integration and students' academic performance in social studies in junior secondary schools in Delta State.
3. There is no significant relationship between the challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta State.

Methodology

The study adopted a correlational research design. The population of the study was 49,879 students of junior secondary schools in Delta State. The sample size of the study is 1,496 students of junior secondary schools, 3% of the total population. A stratified random sampling technique was adopted to select the students. Firstly, the school in the state were sorted into three geo – political zone in which two schools were selected each from each Zone. Therefore six secondary schools were used for the study, Therefore, the technique was used to select 1,496 students using 3% as prescribed by Atoyebi (2015) who stated that the sample size of 3% from a population is enough to ensure representation of the population that ranges from 10,000 (ten thousand above). The instrument for data collection for the study was questionnaire. Items of the instrument was developed by the researcher from the three research questions. The instrument was validated based on face and content by two experts in Curriculum and Instruction Department and one from Measurement and Evaluation Department. In order to obtain the reliability of the instrument, a test re –test was carried on a sample of sample of 20 students who were not members of sample population of the study. To established the reliability coefficient for the test. This was done using Cronbach alpha test. A reliability coefficient of 0.76 was obtained, confirming the consistency and accuracy of the questionnaire. The researcher with the aid of three research assistants administered the questionnaire to the 1,496 respondents. To ensure a high response rate, three research assistants were briefed and engaged to help in administering the questionnaire to the respondents. A period of two weeks was used for the administration of the questionnaires, filled and returned. Out of the 1,496 of the instruments distributed to the respondents, 1,481 copies of the instruments were found valid for analysis due inability of some respondents to respond to the questions. The data collected from the respondents was analysed in line with the research questions using mean scores and standard deviation. The mean was used to answer the research questions, while the standard deviation was used to determine the closeness or otherwise of the opinions of the respondents from the group mean. The mean for the scale is 2.5. The decision was that any item that scored below 2.50 was regarded as disagreed. The hypotheses were analyzed using Pearson Product Moment Correlation coefficient

Research Question 1: What is the current level of technology integration in teaching social studies in junior secondary schools in Delta State?

Table 1: Summary of Mean and Standard Deviation on the current level of technology integration in teaching social studies in junior secondary schools in Delta State

S/N	ITEMs	SA	A	D	SD	\bar{x}	\pm	Decision
1	Technology is regularly used in teaching social studies in junior secondary schools Delta state.	156	680	316	329	2.4	3.0	Disagree
2	Teachers in junior secondary school effectively integrate technology into their social studies lessons.	110	493	540	338	2.3	2.8	Disagree
3	There is sufficient infrastructure and resources to support technology integration in teaching social studies.	98	386	611	386	2.1	2.7	Disagree
4	Teachers in junior secondary schools have received adequate training on technology integration in teaching social studies.	472	843	97	52	3.2	3.3	Agree
5	Technology is an essential tool for enhancing the learning experience in the social studies lessons.	385	821	202	73	3.0	3.3	Agree
6	The use of technology positively impact students' engagement and participation in social studies lesson.	277	734	381	89	2.8	3.1	Agree
Weighted Mean		2.6>2.5				3.0		Agree

The result from table 1, shows the items 1, 2, and 3 have mean scores below the criterion mean of 2.5. This indicates disagreement that technology is not regularly used in teaching social studies in junior secondary schools Delta state, teachers in junior secondary school do not effectively integrate technology into their social studies lessons, there is no sufficient infrastructure and resources to support technology integration in teaching social studies. On the other hand, majority of the respondents agreed that teachers in junior secondary schools have received adequate training on technology integration in teaching social studies, technology is an essential tool for enhancing the learning experience in the social studies lessons, and the use of technology positively impact students' engagement and participation in social studies lesson. The weighted mean of 2.6 indicates that there is current level of technology integration in teaching social studies in junior secondary schools in Delta State.

Research Question 2: What are the impact of technology integration on student performance in social studies in junior secondary schools in Delta?

Table 2: Summary of Mean and Standard Deviation on the relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta

S/N	ITEMS	SA	A	D	SD	\bar{x}	\pm	Decision
1	Technology integration has positively influenced student academic.	139	663	327	352	2.4	2.9	Disagree
2	Students understanding of social studies concepts has improved due to the use of technology in teaching.	101	489	546	345	2.2	2.8	Disagree
3	Technology has enhance students' critical thinking skills in relation to social studied topic.	99	487	555	340	2.2	2.7	Disagree
4	The use of technology has increased students motivation and interest in learning social studies.	197	789	272	223	2.6	3.0	Agree
5	Student performance in assessment and exams has improved as a result of technology integration.	320	941	149	71	3.0	3.2	Agree
6	Technology has facilitated personalized learning experience leading to improved academic outcome in social studies.	230	935	223	93	2.9	3.1	Agree
Weighted Mean		2.5=2.5					2.9	Agree

Table 4.2 shows that most of the respondents agreed that Students understanding of social studies concepts has improved due to the use of technology in teaching , Students understanding of social studies concepts has improved due to the use of technology in teaching and technology has enhance students' critical thinking skills in relation to social studied topic. On the other hand, the respondents disagreed that the use of technology has increased students motivation and interest in learning social studies; Student performance in assessment and exams has improved as a result of technology integration and technology has facilitated personalized learning experience leading to improved academic outcome in social studies. The weighted mean of 2.5 indicate that there is a relationship between technology integration and students' academic performance in Social Studies in junior secondary schools in Delta State.

Research Question 3: What are the challenges to effective technology integration in teaching of social studies in junior secondary schools?

Table 3: Summary of Mean and Standard Deviation on the challenges to effective technology integration in teaching of social studies in junior secondary school.

	ITEMS STATEMENT	SA	A	D	SD	\bar{x}	\pm	Decision
1	Limited access of technology resources hinder effective integration in social studies teaching.	140	662	326	353	2.4	2.9	Disagree
2	Teachers face challenges in integrating technology due to a lack of technical support and maintenance.	141	671	330	338	2.4	2.9	Disagree
3	The cost of acquiring and maintaining technology tools poses a significant challenges to effective integration on social studies teaching.	139	652	342	348	2.4	2.9	Disagree
4	Teaching encounter difficulties in navigation and incorporating diverse digital resources into their social studies lesson.	321	987	100	73	3.1	3.2	Agree
5	Insufficient training and professionals development opportunities hinders effective technology integration in social studies teaching.	326	945	144	66	3.0	3.2	Agree
6	Limited internets connectivity and network issues impede the seamless use to technology in social studies.	239	943	213	86	2.9	3.1	Agree
	Weighted Mean					2.7>2.5		3.3 Agree

The result from table 3 shows that most of the respondents agreed that Limited access of technology resources hinder effective integration in social studies teaching, teachers face challenges in integrating technology due to a lack of technical support and maintenance and the cost of acquiring and maintaining technology tools poses a significant challenges to effective integration on social studies teaching and, teaching encounter difficulties in navigation and incorporating diverse digital resources into their social studies lesson, Insufficient training and professionals development opportunities hinders effective technology integration in social studies teaching and Limited internets connectivity and network issues impede the seamless use to technology in social studies . The weighted mean of 2.7 indicates that there are challenges to effective technology integration in teaching of social studies in junior secondary schools

Hypothesis One: There is no significant correlation between the level of technology integration in the teaching of social studies and students’ academic performance in junior secondary schools in Delta State

Table 4: Summary of Pearson Product Moment Correlation between the current level of technology integration in teaching of Social Studies and student academic performance in junior secondary schools in Delta State

S/N	Variables	Level of technology integration in teaching of Social Studies	Students’ academic performance in junior secondary schools	Decision
1	Level of technology integration in teaching of Social Studies	Pearson Correlation 1 Sig. (2-tailed) N 1481	.532* .001 1481	Significant
2	Students’ academic performance in junior secondary schools	Pearson Correlation .532* Sig. (2-tailed) N 1481	1 1481	

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

Table 4 shows the pair of level of technology integration in the teaching of social studies and students’ academic performance in junior secondary schools in Delta State obtained a correlation coefficient of $r = 0.532$. This indicates a positive and moderate relationship and is statistically significant at 0.05 alpha level (Sig. $0.001 < 0.05$). The hypothesis which stated there is no significant correlation between the level of technology integration in the teaching of social studies and students’ academic performance in junior secondary schools in Delta State was rejected. It can therefore, be stated that there is a significant correlation between the level of technology integration in the teaching of social studies and students’ academic performance in Delta State

Hypothesis Two: There is no significant relationship between technology integration and students’ academic performance in social studies in junior secondary schools in Delta State.

Table 5: Summary of Pearson Product Moment correlation between technology integration and students’ academic performance in social studies in junior secondary schools in Delta State

S/N	Variables	Technology integration	Students’ Academic Performance in Social Studies	Decision
1	Technology integration	Pearson Correlation 1 Sig. (2-tailed) N 1481	.347* .003 1481	Significant
2	Students’ Academic Performance in Social Studies	Pearson Correlation .347* Sig. (2-tailed) N 1481	1 .003 1481	

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

Table 5 shows the pair of technology integration and students’ academic performance in social studies in Delta State and obtained a correlation coefficient of $r = 0.347$. This indicates a positive and weak relationship and is statistically significant at 0.05 alpha level (Sig. $0.003 < 0.05$). The hypothesis which stated that there is no significant relationship between There is no significant relationship between technology integration and students’ academic performance in social studies in junior secondary schools in Delta State was rejected. It can therefore, be stated that there is a significant relationship between technology integration and students’ academic performance in social studies in junior secondary schools in Delta State

Hypothesis Three: There is no significant relationship between the challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta State.

Table 6 : Summary of Pearson Product Moment Correlation between the challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta State

S/N	Variables		Challenges to effective technology integration	Teaching of Social Studies in junior secondary schools	Decision
1	Challenges to effective technology integration	Pearson Correlation Sig. (2-tailed) N	1 1481	.866* 1481 .001	Significant
2	Teaching of Social Studies in junior secondary schools	Pearson Correlation Sig. (2-tailed) N	.866* 1481 .001	1 1481	

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

Table 6 shows the pair of challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta state and obtained a correlation coefficient of $r = 0.866$. This indicates a positive and moderate relationship and is statistically significant at 0.05 alpha level (Sig. $0.001 < 0.05$). The hypothesis which stated that challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta State was rejected. It can therefore, be stated that there is a significant relationship between the challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta State

Discussion of the Findings

The finding of hypothesis one revealed that there is a positive and moderate relationship between technology integration and students' academic performance in social studies in junior secondary schools in Delta State. This finding is in line with Adedeji et al (2018) opined that the use of technology in teaching of Social Studies had a moderate but positive effects on students' academic performance. Also, Akasi et al (2020) posited that the integration of instructional technology positively impacted students' academic performance in social studies.

The finding of hypothesis two shows that there is a positive and weak relationship between technology integration and students' academic performance in social studies in junior secondary schools in Delta. This find in line with Okoko (2019) who found that the use of technology in teaching of Social Studies has positive and moderate relationship on students' academic performance. This present finding is also in line with the work of Adeoye(2019)asserted that there is relationship between technology integration and students' academic performance in social studies. It equally tallies with that of Ogunleye and Ogunleye (2022), that there is positive and weak relationship between the technology integration and students' academic performance in social studies in junior secondary in Nigeria.

The finding of hypothesis three revealed that there is a positive and high relationship between the challenges to effective technology integration and the teaching of social studies in junior secondary schools in Delta. Akinwunmi (2015) affirmed that the study found that while there was an increasing trend in the use of technology, there were still challenges in terms of availability of resources, infrastructure, and teachers' technological skills. The present finding tallies with the work of Azubuiké & Onuigho (2018), they found a positive relationship between technology integration and students' academic performance in Social studies in junior secondary schools in Nigeria

Conclusion

Based on the findings, it can be concluded that the level of technology integration in the teaching of Social studies has a significant correlation and relationship with students' academic performance in junior secondary schools in Delta State. This indicates that the use of technology in the teaching and learning process of Social Studies has a positive relationship on students' academic performance. The finding also concluded that there is a significant relationship between the challenges to effective technology integration and the teaching of Social Studies in junior secondary schools.

Recommendations

1. Ministry of education should integrate technology into Social Studies curriculum.

2. School administrators should provide training for teachers on the use of technology in teaching Social Studies.
3. Ministry of education should encourage collaborative learning through the use of technology platform.

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**EXPLORING THE EFFICACY OF CRITICAL THINKING SKILLS
ON THE PERFORMANCE OF UPPER BASIC STUDENTS IN READING
COMPREHENSION IN KADUNA STATE, NIGERIA**

BY

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ABSTRACT

This study investigated the effect of teaching critical thinking skills on performance of upper basic schools in reading Comprehension of students in Kaduna state, Nigeria. Two objectives and two research questions were formulated for the study. The study adopted quasi experimental design with control and experimental groups, using a sample size of sixty (60) students of upper basic schools in Kaduna state. The students were purposively selected from two schools. The instruments used for the study were reading comprehension passages from which test items were drawn on critical thinking skills. The researchers employed mean and standard deviation while answering the research questions. The study found that, there is no significant difference between the pre-test performance of control and experimental groups and there is no significant difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria. However, there is a slight difference between the two groups. Based on the findings of the study, the researchers recommended that, teachers can promote critical thinking in reading comprehension by creating conditions that activate students' thinking process and the most important thing is that language teachers should engage students in talking or purposeful discussion about the passage. Our classroom must be alive with literate tasks and rich conversations that inspire students into deeper comprehension. This can be achieved with the provision of critical thinking questions in teachers' guides and students' texts for all reading comprehension passages; and they (teachers) need to have adequate time while teaching to ensure the acquisition of critical thinking skills by the learners.

Keywords: teaching, critical thinking skills, students' performance, reading comprehension

Introduction

In today's complex society, reading is a critical skill for children's success both in and out of school. In the school setting, children are expected to read textbooks. Assignments are given to them on the assumption that they can obtain information from the printed page independently.

The school children need good reading ability to cope with the challenges of their everyday living. Despite all efforts of teaching English as a second language in Nigeria, students suffer from difficulties in language learning skills. The problem appears to be in the educational system, that teachers traditionally, do their best to teach ‘what to think’ rather than ‘how to think effectively about the subject matter which is termed as critical thinking.

The issue of incorporating critical thinking skills in education has raised contradictory ideas about whether critical thinking can be taught or not. Varieties of approaches to teaching, measuring and assessing critical thinking skills and abilities have been developed. In addition, teaching critical thinking skills has raised many issues such as culture, emotion, transferability and generalization of the taught skills which are discussed and answered by the experts. Despite all contradictory ideas and beliefs on teaching critical thinking skills, however, everyone agrees that thinking critically is the major goal of education (Duran & Garcias 2016; Igwe 2023). Bearing in mind that Nigerian students are not educated as critical thinkers in their first language, providing them with an appropriate context to foster critical thinking dispositions in second language setting is of crucial importance. This study provides the experts in the field of language teaching with empirical data on the relationship between critical thinking skills and learners’ performance in reading comprehension. It yields a realm of study for researchers who are interested in critical thinking and its relationship with reading comprehension.

The studies of Afolayan and Adeleke, (2021) and Yusuf, (2017) in reading comprehension so far conducted in Nigeria have concentrated on examining reading difficulty of students at the primary and junior secondary levels with focus on the texts being used. However, there are no empirical researches on critical thinking and its effect on reading comprehension carried out in Kaduna, Northern Nigeria based on the researchers’ knowledge. Literature search reveals that critical thinking skills have received little or no attention in Nigeria (Yusuf, 2016; Ahmed & Bello, 2021). The absence of such crucial information constitutes a problem that has motivated the present study. There is, therefore, the need to ascertain the extent to which critical thinking influence reading comprehension. To this end, this study will focus on the effect of teaching critical thinking skills on students’ reading comprehension in upper basic schools in Kaduna state, Nigeria.

Review of Related Literature

Language experts have difficulty putting forward a precise and rigorous definition of critical thinking. Wordu and Isaiah (2019) state that “critical thinking” is in a mystified concept. No single definition of critical thinking is widely accepted. Igwe (2023) also asserts that there is no consensus on a definition of critical thinking in psychology, education or philosophy, and indeed the definition of critical thinking has been changing.

Reed (1998) cited in Yusuf (2017) proposed two central components of conceptualization of critical thinking that were particularly prominent in educational contexts. The first one is ‘the ability to assess reasons properly which is referred to as the ‘reason assessment components’. The second one is disposition to base one’s actions and beliefs on reasons; that is, to do reason assessment and be guided by the results of such assessment. Reed asserts that; both components are essential to the proper conceptualization of critical thinking, possession of which is essential for the achievement of critical thinking by a person. The ultimate objective for teaching critical thinking is to help students make correct judgements based on the careful weighing of available evidence. However, critical thinking is a very intricate endeavour. Schmoker (2018) states that such an enterprise requires students to learn several subtasks which include, among others: developing a skeptical approach to problem solving and decision making; breaking down problems into their simplest outcomes; searching for evidence that both supports and refutes a given conclusions; maintaining a vigilant attitude towards their personal bias, assumptions, and values that may interfere with making an objective decision.

According to Reed 1998, cited in Yusuf (2017), the broad concept of critical thinking has brought about different definitions and terminologies. This lack of consensus on the definition of critical thinking has rested in the grounding of various theories and models in two distinct disciplines, psychology and philosophy. Philosophers focus mostly on the nature and products of critical thinking, while psychologists concentrate mostly on the process of cognition, and seeking the conclusion in empirical research. On the other hand, some educators Chapman and Davis (2014) have drawn on both psychology and philosophy to develop a rigorous theory of critical thinking for teaching.

Wordu and Isaiah (2019), also adds that critical thinking is not an easy concept to define, as it can mean quite different things to different people in different contexts and cultures.

Nevertheless, instructors can incorporate some of its key elements in their classrooms. He defines critical thinking as: *“to think critically about an issue, to consider that issue from various perspectives, to look at and challenge any possible assumptions that may underlie the issue and to explore its possible alternative.”* Supporting the necessity of teaching critical thinking skills in ESL contexts, Ojo, and Ibrahim (2021) says the idea that language learners can be proficient by mastering the mechanisms of language was overshadowed by communicative approach in 1950s, emphasizing that learners become proficient by using the language not learning about language. Today it is strongly believed that using language and knowing the meaning alone do not lead learners to proficiency. They need to display creative and critical thinking abilities in the language of expression of ideas. However, critical thinking skills should not be taught separately but incorporated in the curriculum.

Igwe (2023) stresses the connection between critical thinking and reading comprehension by stating that the reflective mind improves its thinking by reflectively thinking. Likewise, it improves its reading by reflectively thinking and reading to comprehend. His quotation follows *“improvement in one is paralleled by improvement in the other.”*

Viewing reading comprehension as a vital part of second language curriculum, Yusuf, (2022) describes several reasons for its importance: It remains an important goal in many programmes; it can be maintained after students complete formal language study; and it fosters the development of literacy skills. Some of the mental skills employed in reading comprehension, as Wordu and Isaiah (2019) states, are inference, analysis, synthesis, and evaluation which are what experts include *“as being at the very core of critical thinking”*.

Objective of the Study

The objectives of the study are to:

1. Determine the difference between the pre-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria; and
2. Examine the difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria.

Research Question

1. What is the difference between the pre-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria?

2. What is the difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria?

Methodology

The study adopted quasi experimental design with control and experimental groups, using a sample size of sixty (60) students of upper basic schools in Kaduna state. The students were purposively selected from two schools. The instruments used for the study were reading comprehension passages from which test items were drawn on critical thinking skills. Six passages were carefully selected from the Junior English Project for Junior Secondary Schools Book 3 text in use in the schools. The passages were selected because of their interesting nature, relevant subject matter and interest to both genders. The content of the passage was educative and informative and adequately provided some of the needed items for the tests. After the collection of data, the researchers employed mean and standard deviation while answering the research questions.

Result

The researchers here present the descriptive analysis of each research question as obtained from the subjects. Mean and standard deviation were the statistical tools employed in the process of the analysis.

Research Question: What is the difference between the pre-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria?

Table 1: Mean and Standard Deviation result on the difference between the pre-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria.

Groups	N	Mean	Std. Deviation	Std. Er
Experimental	30	96.10	13.087	2.380
Control	30	97.83	13.483	2.462

The pre-test result on table one shows no significant difference between the performance of student in the experimental group and those from control group, where the result reveals a mean score of 96.10 for experimental group and a mean score of 97.83 for control group. This means there is no significant difference between the pre-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria.

Research Question: What is the difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria?

Table 2: Mean and Standard Deviation result on the difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria.

Groups	N	Mean	Std. Deviation	Std. Er
Experimental	30	98.50	3.093	565
Control	30	96.37	15.384	2.809

The analysis on table two reveals a mean score of 98.50 for the experimental group and a mean score of 96.37 for the control group. Therefore, there is no significant difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria. However, there is a slight difference between the two groups.

Discussion of Findings

Finding number one shows no significant difference between the performance of student in the experimental group and those from control group, where the result reveals a mean score of 96.10 for experimental group and a mean score of 97.83 for control group. This means there is no significant difference between the pre-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria. This however not in agreement with Wordu and Isaiah (2019), who stated that inference, synthesis, analysis, and evaluation are what experts include as being at the very core of critical thinking. While Ahmed and Bello (2021), said that, ‘intentional thinking during which meaning is constructed through interactions between text and reader’. This construction of meaning during reading is “a complex merger of skills, prior knowledge and text mediated by the language skills, motivation and interest of the reader”. This covers the full spectrum of Bloom’s taxonomy in critical thinking including knowing facts, understanding concepts, application, analysis, synthesis, and reading comprehension.

The result number two reveals a mean score of 98.50 for the experimental group and a mean score of 96.37 for the control group. Therefore, there is no significant difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria. However, there is a slight difference between the two groups.

This amount of increase in the mean scores of experimental group in the post-test (96.10 to 98.50) indicates the trend in the improvement of students' critical thinking after the treatment period. It can be concluded that experimental group made small gains as compared to control group. However, the lack of significant difference can be justified from different aspects, such as the researchers' assumption, the limited time and few numbers of lessons conducted which were inevitable, the trend of improvement in students' critical thinking ability and the significant improvement in their reading comprehension, possibly a longer time can bring about better results. The studies conducted by Yusuf & El Yakub (2020), in this line were all over 6 months, mostly with significant difference in gains. Although the current study failed to achieve significance difference, rather a slight difference, the small gains seem to be suggestive of a relationship between the two variables to motivate a further research.

Conclusion

The study concluded that, there is no significant difference between the pre-test performance of control and experimental groups and there is no significant difference between the post-test performance of control and experimental groups in critical thinking skills in upper basic schools Kaduna state, Nigeria. However, there is a slight difference between the two groups.

Recommendations

The researchers recommended as follows:

1. Teachers can promote critical thinking in reading comprehension by creating conditions that activate students' thinking process. The most important thing is that language teachers should engage students in talking or purposeful discussion about the passage. Our classroom must be alive with literate tasks and rich conversations that inspire students into deeper comprehension. This can be achieved with the provision of critical thinking questions in teachers' guides and students' texts for all reading comprehension passages; and
2. Teachers need to have adequate time while teaching to ensure the acquisition of critical thinking skills by the learners.

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EFFECTS OF COMPUTER-BASED AND VIDEO-BASED INSTRUCTIONS ON BIOLOGY STUDENTS' ACADEMIC PERFORMANCE AND RETENTION IN ECOLOGICAL CONCEPTS IN KATSINA METROPOLIS

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ABSTRACT

This study investigated the effects of computer-based and video-based instructions on the academic performance and retention of ecological concepts among biology students in Katsina Metropolis. It was guided by two research objectives and two null hypotheses. Employing a quasi-experimental design, specifically the pretest-posttest non-equivalent group design, the study utilized Computer-Based Instruction (CBI) and Video-Based Instruction (VBI) as experimental groups I and II, respectively. The study was conducted in Katsina metropolis, involving all Senior Secondary School (SSS II) biology students. The population consisted of 12 schools with a total of 9,884 SSS II students. Using cluster, purposive and simple random sampling methods, two intact classes were chosen from two selected co-educational schools, totaling 223 SSS II students. Pre-tests, post-tests, and delayed post-tests were administered using the Ecology Performance Test (ECPT) and Ecology Retention Test (ERCT). ECPT test underwent validation and pilot testing, resulting in a reliability coefficient of 0.68, which makes it valid and reliable for the study. Data obtained were analyzed using independent sample t-test to test the hypotheses. The findings indicated that the CBI experimental group achieved significantly higher academic performance compared to the VBI experimental group. However, the study also found that students taught ecological concepts using VBI demonstrated better retention of learned concepts compared to those exposed to CBI. It is recommended and advisable to promote the use of CBI across all levels of education, from primary to tertiary, to equip students with the necessary skills to navigate the technological era effectively and enhance their retention of knowledge.

Keywords: Computer-Based Instruction, Video-Based Instruction, Academic Performance, Retention and Ecological Concepts.

Introduction

Science encompasses a collaborative human effort resulting in the establishment of universal principles known as laws, theories, or hypotheses, aimed at explaining observable phenomena in the universe (Emmanuel, Chiaka, & Edna, 2014). It represents a dynamic pursuit aimed at unraveling the intricacies of our world, thereby expanding humanity's understanding of the cosmos. Science involves the pursuit of knowledge, encompassing fundamental truths and the operation of underlying laws (Basa, 2016).

Branches of science, each focused on specific domains, are commonly categorized into fields such as Chemistry, Physics, and Biology.

Biology is the study of life and living organisms, which holds a pivotal position in our comprehension of the natural world (Jeronen, Palmberg, & Yli-Panula, 2017). It is a core subject offered at the senior secondary school level in Nigerian Secondary Schools (FRN, 2014). In modern Nigeria, there is a growing emphasis on scientific and technological advancement, making biology an essential subject for students to navigate effectively in the age of science and technology. Consequently, there is an increasing encouragement for students to pursue science-related disciplines, with biology being one of the popular choices (Olaleye, 2012).

Biology holds significant importance as students are required to achieve at least a credit pass in the subject in WAEC/NECO/NABTEB examinations to pursue various science-based disciplines in tertiary institutions, including Medicine, Anatomy & Physiology, Pharmacy, Horticulture, Agriculture, and Health Education. Despite its importance, there is continuous decline in performance alongside the annual production of the Chief Examiners report (WAEC & NECO) in biology recorded in Nigeria (Piwuna, & Mankilik, 2023). This poor performance is attributed to various factors, including teachers' attitudes, learners' attitudes, educational curriculum, instructional methods and materials, and mathematical deficiencies, among others (Sani, 2021).

Atiku (2016) highlighted the influence of teaching methods on student learning, noting that many secondary school teachers employ lecture, demonstration, or discussion methods. However, the lecture method, which often leads to rote memorization without fostering understanding, remains prevalent despite its drawbacks (Bichi, 2006). To address this, alternative teaching strategies aligned with global trends, such as Multimedia, Computer-based, and Filmed taped methods, are being explored (Josiah, 2012). This study focuses on implementing Computer-based and Video-based Instructions for teaching ecological concepts.

Computer-based instruction (CBI) involves using computers in teaching and learning activities, providing students with opportunities for self-directed learning and personalized instruction (Yushau, 2006). Research suggests that supplementing classroom training with CBI enhances students' academic performance (Atiku, 2019; Abdulkareem, 2017; Danjuma, 2015; Kareem, 2015).

Video as a medium in instruction, is a product of educational technology which serve as a multimedia tool that conveys information through auditory and visual channels (Obinna &

Nnenna, 2010). When effectively utilized, videos stimulate longer retention of factual information by presenting content through multiple sensory channels (Gambari, Yaki, Gana, & Ughovwa, 2014). Video-based instruction (VBI) facilitates the presentation of factual and conceptual information through visual illustrations and graphics, promoting various teaching and learning objectives. VBI offers flexibility, allowing students to access instructional content anywhere and anytime.

Retention is defined as the ability to recall learned concepts, influenced by various factors, including instructional strategies, previous experiences, and the interval between learning and evaluation (Polk, 2013). Report revealed that students' ability to remember or recall previous learning task during SSCE examination is a contributory factor to their failure (Magaji, 2018). Active and engaging pedagogies have been proposed to enhance long-term retention (Miller, McNear, & Metz, 2013). This study therefore aims to investigate the effects of CBI and VBI on the academic performance and retention of ecological concepts among senior secondary school II biology students to bridge the gap in science performance and retention in biology.

Related Works

Adejoh, Hudu, and Kanu (2020) investigated the effects of innovative instructional delivery strategies on junior secondary school students' achievement in basic science and technology. The study revealed significantly higher achievement among students exposed to sensory stimulation compared to those taught using inquiry strategies, with no significant gender differences observed. Atiku (2020) explored the effects of E-learning on students' achievement and retention at higher levels, comparing Computer-Based Instruction (CBI) with Powerpoint Presentations (PPP). The CBI group achieved significantly higher scores than the PPP group, while no significant difference was observed in retention scores.

Kadir, & Yeung; Richard, & Forbes; and Thierno (2018) investigated the effects of a dual-approach instruction on students' science achievement and motivation. Their findings indicated that the intervention had a significant effect on students' achievement in complex problem solving, as well as in the following six motivational attributes: self-regulation, engagement, sense of competence, task goal orientation, education aspiration, and career aspiration in science. Baker and Robinson (2017) studied the effects of different pedagogical delivery methods on

students' retention of knowledge over time. While both experiential learning and direct instruction initially led to increased analytical scores, the direct instruction group outperformed the experiential learning group. However, this increase was followed by a decrease in analytical scores six weeks post-instruction.

Aninweze (2014) investigated the impact of two instructional delivery methods, Videotaped Instructions (VTI) and Powerpoint Presentations (PPP), on the achievement and retention of senior secondary school students in biology. Results indicated a significant positive effect of VTI on both achievement and retention in biology. Muoneme (2014) explored the effectiveness of a Computer-Based/Multimedia Enriched Lecture Approach on academic achievement and interest in biology among senior secondary students in Niger state. Findings revealed improved academic achievement and heightened interest among students exposed to multimedia-rich teaching techniques. Chinna and Dada (2013) investigated the impact of an Electronic Instructional Medium (video-instructional package) on students' achievement in biology. Results showed a significant improvement in students' achievement with the use of electronic instructional media, emphasizing the importance of innovative instructional strategies in science education. Polk (2013) examined the effects of teaching biology concepts with animations versus static cartoons via PPP on content retention. While no statistically significant differences were found in content retention, student engagement and class discussion increased with the use of animations, as indicated by teacher observations and student surveys.

Research Objectives

The primary aim of this study is to examine the effects of Computer-Based Instruction (CBI) and Video-Based Instruction (VBI) as instructional delivery methods on the academic performance and retention of ecological concepts among biology students. Specifically, the study seeks to:

1. Investigate the effects of CBI and VBI on the academic performance of SS II biology students in ecological concepts in Katsina Metropolis.
2. Determine the effects of CBI and VBI on the retention of ecological concepts among SS II biology students in Katsina Metropolis.

Research Hypotheses

Two null hypotheses have been formulated for this study and were tested at a significance level of 0.05:

1. There is no significant difference in the mean performance scores of SS II biology students exposed to CBI compared to those exposed to VBI in Katsina Metropolis.
2. There is no significant difference in the mean retention scores of SS II biology students exposed to CBI compared to those exposed to VBI in Katsina Metropolis.

Methodology

This study employed a quasi-experimental design, specifically the pretest-posttest non-equivalent group design, to investigate the effects of Computer-Based Instruction (CBI) and Video-Based Instruction (VBI) on the academic performance and retention of ecological concepts among biology students. No control group was utilized as both treatments were administered to the two experimental groups. The study was conducted in Katsina metropolis, involving all Senior Secondary School (SSS II) biology students. The population consisted of 12 schools with a total of 9,884 SSS II students. Using a comprehensive sampling approach, utilizing cluster sampling to select co-educational schools from three sets (boys, girls, and co-educational), purposive sampling to select two schools with accessibility to computer/video-based facilities from the cluster sample, and simple random sampling to choose two intact classes from the selected schools, comprising a total of 223 SSS II students. CBI and VBI treatments were randomly assigned to each intact class.

The CBI treatment utilized the developed 'HAAF Ecological Software' package along with downloaded ecological videos as instructional materials. Both experimental groups underwent pre-testing using the Ecological Concepts Performance Test (ECPT) before receiving the respective treatments. The same ECPT, consisting of 25 multiple-choice objective items having 4 options A, B, C &D, was administered as a post-test to assess students' performance levels after the treatments. Two weeks later, the Ecological Concepts Retention Test (ECRT), which was a

re-organized version of the ECPT, was administered to evaluate the extent of content retention among the experimental groups. ECPT test underwent validation and pilot testing, resulting in a reliability coefficient of 0.68.

The topics covered in the study were derived from the Katsina State Secondary School Teaching Scheme and included concepts such as Ecological Habitat, Freshwater Habitat, Wetlands Habitat, and Terrestrial Habitat. Hence, the data obtained from the post-test and retention test scores were analyzed using independent sample t-test at a significance level of 0.05, and Statistical Package for Social Sciences (SPSS) version 20.0 software was utilized for the data analysis.

Results and Analysis

The results of this study were presented according to the research hypotheses tested.

Hypothesis One: There is no significant difference in the mean performance scores of SS II biology students exposed to CBI compared to those exposed to VBI in Katsina Metropolis.

Table 1: Independent sample *t*-test for Post Test Scores of Biology Student's exposed to CBI and VBI

Groups	N	Mean	Standard Deviation	<i>t</i>	<i>df</i>	<i>p-v</i>	Decision
CBI	98	7.35	5.21	8.80	221	.000	S
VBI	125	4.32	6.67				

S= Significant, NS = Not Significant @ 0.05 Level of Significance

Based on the results presented in Table 1, the obtained p-value of 0.000 is lower than the significance level of 0.05. Therefore, the null hypothesis is rejected, indicating a significant difference in the mean performance scores of biology students taught ecological concepts using Computer-Based Instruction (CBI) compared to those taught using Video-Based Instruction (VBI), with students in Computer-Based Instruction (CBI) performed significantly higher scores.

Hypothesis Two: There is no significant difference in the mean retention scores of SS II biology students exposed to CBI compared to those exposed to VBI in Katsina Metropolis.

Table 2: Independent sample *t*-test of Retention Test Scores of Biology Student's exposed to CBI and VBI

<i>Groups</i>	<i>N</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>t</i>	<i>Df</i>	<i>p-v</i>	<i>Decision</i>
CBI	98	4.51	2.812	-3.01	221	0.001	S
VBI	125	6.01	2.175				

S= Significant, NS = Not Significant @ 0.05 Level of Significance

According to the results presented in Table 2, the obtained p-value of 0.001 is below the significance level of 0.05. Consequently, the null hypothesis is rejected, signifying a significant difference in the mean retention scores of biology students taught ecological concepts using Computer-Based Instruction (CBI) compared to those taught using Video-Based Instruction (VBI). Hence, students in VBI demonstrated better retention of learned concepts.

Discussion

The results of hypothesis one indicate that biology students taught ecological concepts using Computer-Based Instruction (CBI) performed significantly higher scores compared to those taught using Video-Based Instruction (VBI). This notable difference may be attributed to CBI's capacity to actively engage students in the learning process, thereby enhancing their learning skills and overall academic performance. The interactive nature of CBI allows students to be fully immersed in the learning activities, a feature that VBI may not fully provide. These findings are consistent with previous studies by Aninweze (2014), Adejoh, Hudu, and Kanu (2020), and Kadir, Yeung, Richard, Forbes, and Thierno (2018), which reported higher student performance when utilizing interactive instructional methods.

Interestingly, the study also found that students taught ecological concepts using VBI demonstrated better retention of learned concepts compared to those exposed to CBI. This suggests that the instructional approach applied in experimental Group 2, utilizing VBI, facilitated superior retention scores when compared to the CBI approach employed in experimental Group 1. This finding aligns with the research conducted by Sambo (2018) and Aninweze (2014), which similarly reported enhanced retention when utilizing specific

instructional delivery methods. However, it contrasts with the results of Baker and Robinson (2017), who found no significant retention of knowledge among students six weeks post-intervention, regardless of the instructional approach used.

Conclusion

Based on the findings of the study, the researcher concluded that Computer-Based Instruction (CBI) enhances the performance of biology students in ecological concepts compared to Video-Based Instruction (VBI). Additionally, students in the CBI experimental group exhibited greater attention to the concepts taught compared to those taught using VBI. However, it was observed that students exposed to VBI treatment demonstrated higher retention of the learned concepts compared to those in the CBI experimental group.

Recommendation

Based on the findings, it is recommended that:

1. Biology teachers incorporate CBI as an instructional delivery approach, particularly for teaching abstract concepts in biology.
2. It is advisable to promote the use of CBI across all levels of education, from primary to tertiary, to equip students with the necessary skills to navigate the technological era effectively and enhance their retention of knowledge.

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**CONTRIBUTION OF FREE-EDUCATION TO THE DEVELOPMENT OF WOMEN
YOUTH EDUCATION IN TERTIARY INSTITUTION; A CASE STUDY IN SOME
SELECTED INSTITUTIONS IN JIGAWA STATE FROM 2015 TO 2023**

BY

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ABSTRACT

This research: "Contribution of Free-Education to the Development of women Youth Education in Tertiary Institution; A case study in some selected Institutions in Jigawa State from 2015 to 2023", is an attempt to provide accurate and comprehensive data of the contribution provided by the government and other organization in terms of free-education to the women in the academia from 2015 to 2023. The aim is to demonstrate the level of contribution given by pre-education in terms of building and developing an educated woman, which is a great achievement to the society and the nation in general. Thus, one University and two Colleges namely: Sule Lamido University, Kafin Hausa, Binyaminu Usman Polytechnic, Hadejia, and Jigawa State College of Education, Gumel, are selected as the case study. The basic data to be evaluated are the first degree graduated, National Certificate in Education (NCE) and Diploma successfully completed by Women in different field of Education. In Jigawa State, the importance of women's education shows that education empowers women, improves their health, reduces poverty, promotes gender equality, and improves the education of future generations. Educated women are more likely to make informed decisions about their lives and the lives of their families, have better access to healthcare, higher-paying jobs, and leadership positions, and prioritize their children's education. Policymakers and stakeholders should prioritize women's education to reap these benefits.

Introduction

The importance of women's education in Jigawa State cannot be overstated. Educated women are empowered, have better health outcomes, are more likely to escape poverty, and can promote gender equality. Additionally, educated mothers are more likely to prioritize their children's education, which can lead to better educational outcomes for future generations. It is crucial for policymakers and stakeholders in Jigawa State to prioritize women's education to reap these benefits.

In our world of today, nothing works or succeeds without education. "Today, all over The world education is the key success, to any meaningful Endeavour". (Mallum1982). So women need to

be educated if they are to successfully contribute their quota in societal development. The Blueprint on women education (1986), has identified certain problems in relations to the education of women for effective contribution to societal development.

Education which is related to employment and income, affect women's contribution to decision making. Illiterate wives contribute less to household decision-making,

This paper focuses on The Contribution of Free-Education to the Development of Women Youth Education in Tertiary Institution: A case study of some selected Institutions in Jigawa State from 2015 to 2023. It discusses the meaning of education, woman youth education and importance of woman youth education to the society, and contribution of free education towards the development and objectives of Women Education in addition to and it's content. It also highlights areas where women's education contributes fully to societal development. Also problems that hinder women's education are enumerated, suggestions and recommendations on how to improve women's education, so that it will be a success for Jigawa State and national development are given.

It is through education that both men and women maintain their rights. Education creates an opportunity where one can realize his/her potential in the social, economic, and political world. It is the strongest way of driving out poverty. Feminism is more widespread in education. The number of girls likely to access learning institutions is much lower compared to that of boys. Few of them remain in schools or make it in education, while in Jigawa State this gap has been much covered.

The word globalization raised the issues in the development of women education which course a slot for women in different offices and industries, these issues call the attention of different government officials and organizations in addition to the society in general. From 2015 to date a lot of women acquire high level education as a result of this issue. The pre-education given by government and other organization like Egyptian and others organizations help in the development and achieving a lot of opportunities towards the women development, educationally and economically. As at now there are a lot of women professors, Ph. D holders, workers in different field of education and industries.

This research aims at investigating the contribution of free-education toward the development of women education in Jigawa State. This result in having a lot of women teachers in secondary and primary school, in addition with N-Power and J-Teach program by the federal Government (N-Power) and Jigawa State (J-Power), which is the primary education is the backbone of any education.

In Jigawa State, the importance of women's education shows that education empowers women, improves their health, reduces poverty, promotes gender equality, and improves the education of future generations. Educated women are more likely to make informed decisions about their lives and the lives of their families, have better access to healthcare, higher-paying jobs, and leadership positions, and prioritize their children's education. Policymakers and stakeholders should prioritize women's education to reap these benefits.

Meaning of Education

Education is defined as learning or studying existing knowledge and cultural legacy. It is a fundamental human right, accessible to all genders or sexes. Across the world, education is viewed as a necessity yet millions of women remain illiterate because of poverty, social stigma, discrimination, lack of resources and much more.

Female education is a catch-all term for a complex set of issues and controversies surrounding education for girls and women (including elementary, secondary, and university education, as well as health education). It's also known as women's education or girls' education. Inequalities in education for girls and women are complex: some problems are more systematic and less explicit, such as science, technology, engineering, and mathematics (STEM) education disparities, while others are more systematic and less explicit, such as violence against women or prohibitions of girls from going to school.

Meaning and Objectives of Women's Education

Women's education can be regarded as a kind of knowledge given to women for enhancing their self-respect and self-dignity. This knowledge can be in form of formal, non-formal and informal education, it can also be in form of Adult Education, Community Development, Workshops, Seminars, Conferences and Training. Women's education is for making women to become

economically independent and self-reliant (Bastn, 1992) men as mothers, are educators within their families, what they learn, they pass on to their children and their future generations (Osuala, 1987) Education for women is a development priority due to the dynamic potential of educated women. Therefore, the main objectives for women's education are as follows:

1. To enable women to improve their family's health and diet.
2. To increase women's productive ability, thus raising their families' standard of living.
3. To give women access to appropriate technologies, management of cooperatives and the use of loan facilities.
4. To improve women's social and culture status.
5. To enable women to discharge their responsibilities more effectively (UNESCO, 1 985).
6. Helping women to fight their own fears and feelings of inadequacy or inferiority.
7. Educating women in all round development. That is mentally, socially, physically, psychologically, religiously and economically.
8. To make women participate fully in all the affairs of their nation and to be at centre of sustainable development.
9. To make women able to acquire their own basic needs of the society, like food, shelter, fuel, clothes and nurturing.
10. To enhance nation building in terms of economic and human development.

Content of Women's Education

The subject matter of the women's education should be selected at the national level and adapted to the needs of each society. The themes include, occupational enrichment, consumer economics, civics, health and family living

The content of women's education should be the reflection of the society's idea of the role assigned to women, namely, cooking, sewing, laundry for house-keeping and home management for rearing children (Teigeler, 1985). Other subjects are; science, technology, commerce, and arts. These are to make them able to compete with men in getting equal opportunity and income in the labour market. The content has to be the one that girls or women bring home; from school such as useful information about health and nutrition as well as vocational skill, that can be put to good service by the family. The women's education scheme should be as a professional

approach towards the eventual move to give all Nigerians the relevant and necessary education for effective economic recovery and social justice.

Ideally, women are to educate themselves, to acquire information and knowledge which will help them challenge norms, values and behavior pattern. Women need an education which will help them not only to read and understand the world, and master the 3RS (reading, writing and arithmetic), but be masters of their lives and makers of their own destinies. They need education which will help them acquire the necessary analytical skills to understand the fast changing realities of life, which will give them the confidence and strength to refuse to submit to conditions of indignity and inhumanity. It should be the type of education that will help women form strong groups so that they can gain more control over Their lives and break their silence and make them visible. The classes environment should create an atmosphere which allows women more freedom, which gives them more opportunities to realise full human potentials.

Women need an education which will not only help them in the search and acquisition of new skills and knowledge, but also help them to acquire and strenghten values like justice, equality, honesty, truthfulness and solidarity. It should also create or release energies in women to act with conviction and courage in their various struggles at different levels. Education should help women to develop an analytical and questioning mind and a scientific approach in understanding the realities around them.

Some Contribution of Women's Education to Societal Development

A Chinese proverb says "if you educate a man, you educate one person. If you educate a woman you educate. a nation". According to the World Bank report, "a country with more educated girls and women is not only healthier, but wealthier" (Grant, 1993). Women's education has of improving their (women's) living standards in particular and national development general. They include.

Man-Power

Women have entered into activities that once were exclusively the domain of men. Today there are no fields of enterprises which they have not entered into, Further still, apart from great contribution to culture by the women, they have made contributions in such fields like science,

medicine, nursing, government, welfare, education, literature, journalism, mass communication and sculpture. Other areas include, architecture, engineering, art, international relations, aviation, sports and labour organizations.

Politics

Politically, women have held key post in governments and many are still holding such post today. Examples are the Late Indira Ghandi of India, Mrs. Banda Ranaika of Srtlanka, Mrs. Aquino of the Philippines and of course Margaret Thatcher of the United Kingdom. All these countries experienced peace and progress under the women leadership. Here in Nigeria we are aware of the effective leadership of Queen Amina of Zaria, Moreni of Ife, Mikipi of Igba, Mrs. Ransome Kuti of Egbaland, Queen Emoton of Benin and Madam Tinibu of Abeokuta. AH these women leaders have gained for womenhood the respect and the prestige it deserves. Even today in Nigeria, women have been appointed Ministers, States' Secretaries, diplomats, ambassadors, commissioners and elected Local Government chairpersons. Deputy Governors, etc. But in Jigawa State yet to have governors and chairman, but we have woman as councilors and supervisory councilors more especially during governor Sule Lamido administration.

Family Up-Bringing

Education has contributed a lot to women in their socially delegated maternal roles of upbringing children. All child development specialists recognise primary role of the mother in a child's well-being. Education provides women with supplementary feeding programmes which will improve their children's nutritional status. It helps a woman to develop her mothering skills and attitudes towards family size and child-raising ability. The Nigerian educated woman has the ability to make a modern home, maintain a higher standard of cleanliness and attractive surroundings, socialize with her children, bringing them up healthy, highly motivated and well directed (Ijere 1991). An educated woman is an enlightened citizen. She stays at home with her children, caring, feeding, and teaching them how to behave in the society. She also assists in improving her children's religious and mental abilities. In addition, it is recognised world wide, that a child should be under the care of his/her mother throughout his/her childhood for his social and psyshological needs.

Personal Development

Women's education makes women to know and understand themselves better through counseling that is to know their problems, weakness and capabilities. Women are taught many strategies and they are to choose by themselves the best for the solution of their problems. Education encourages women to speak for themselves. Education qualifies women for promotion into higher levels of skill and responsibility in the occupational structure. It promotes the female well-being and provide women with techniques of social mobilization. Education makes a woman to be a successful wife, mother, worker and community leader, it makes her more useful to herself, her community and to the nation as a whole (Mackinnon, 1985).

Education

Women have now taken places in all our formal institutions of learning. Educated women have organised enlightenment programmes to enlighten Nigerian women on their roles in national development. Also workshops, seminars and conferences are organized to educate women on the means and ways of acquiring political and economic power. Adult Education classes are established in the rural areas.

There have been successful and innovative programmes such as using local extension agents in rural areas or establishing flexible educational initiatives that fit with women's schedules. Other projects include day-care centres for women who otherwise could not have attended courses.

Health

Worldwide, it has been observed that patients under female doctor and female nurses recover quicker from their sickness and other people living within the community. This is because women in health sector do not only treat patients physically but also provide them with social and psychological treatment. Women are said to be more sympathetic, emotional and more passionate. Education provides women with the knowledge of health education, emergency health care, treatments of minor ailments, immunisation of six killer diseases, and family planning. Others are maintenance and child health care, antenatal clinics, child welfare clinic and oral dehydration therapy (ORT)

Status

Various educational and socialization processes discussed above combine to awaken in the woman an awareness of their rights and obligations, the necessity for a higher standard of health and better quality of life. The status of women has been enhanced by the realization that education rather than deprive women of the means of livelihood confers on them the economic power in the extended family. Therefore, with education they are better to maintain their relations in their families of origin without necessarily depending on their husbands

Education also gives women a higher status in her husband's family. It tends to smoothen the degree of relationship between in-laws and the married couple which will reduce family conflicts to a minimum, (Qlusanya, 1970). Education enables women to be as independent of the men as possible.

Decision -Making

Education which is related to employment and income, affect women's contribution to decision making. Illiterate wives contribute less to household decision-making,

Better Standard of Living

Better standard of living for the family is one of the advantages of women/female education. It doesn't take a mathematician to conclude that a family relying on double wages is more content and happy than a family which relies on the income of a single parent.

An educated mother will earn as good as the father of the family and will look after the financial needs of her family in a much better way. Two incomes under the same roof will improve the quality of living and also ensure better education and facilities to the children, not to mention that a happy family will ultimately lead to a happy society.

Dignity and Honor

A woman is the dignity of a house, and a society is judged depending on how its women are treated and how much they are educated. It is only when a woman is able to protect her own

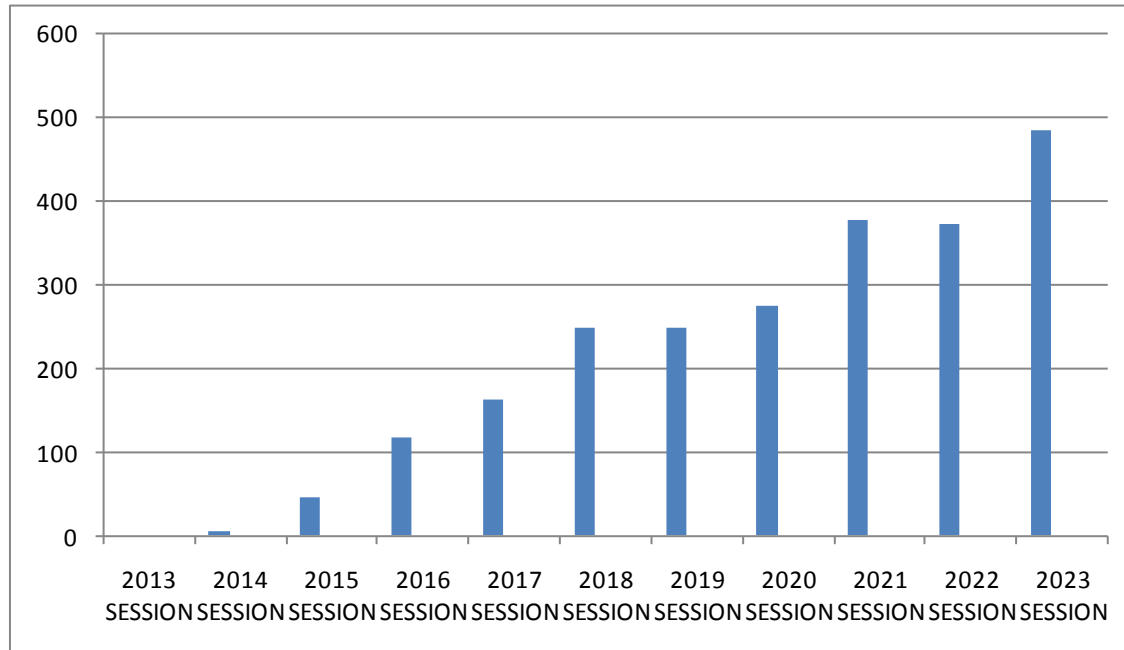
dignity and honor, that she will be able to protect the dignity and honor of her family. An uneducated woman may lack the courage to speak for her own dignity while an educated woman will be confident enough to fight for it.

Integral Development

Today the developing as well as the underdeveloped countries strive for integral development; that is, they have realized that the true development of a nation can be achieved only when no one is left behind on the path to progress. The goals of integral and sustainable developments will be nothing more than mere words if our women are not educated and empowered. Women must be provided an equal opportunity to stand shoulder to shoulder with men, and encouraged to pursue the professions they aspire- doctor, lawyer, technocrat, scientist, journalist, adventurerist etc. Only then we will be able to achieve our goal of sustainable development by 2030.

Statistical Analysis of Female Graduate in Jigawa State

Chart 1: Statistical Analysis of Female with Bachelor Degree in Different Field of Study from Sule Lamido University, Kafin Hausa in Jigawa State

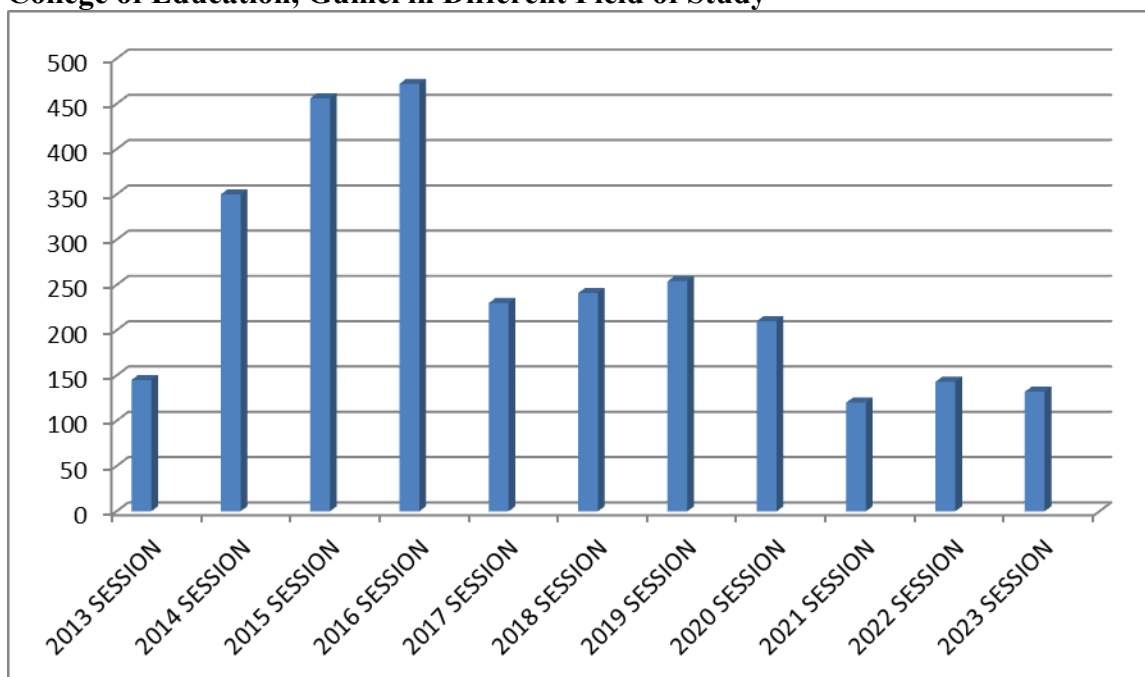


The chart above shows the level of admitted students that grow rapidly each year, which was due to the low amount paid by females in this institution. Most of the female students pay

only acceptance fee and medical, registration and hostel is paid by Jigawa State Scholarship board. Even male student pay 30% of the registration fee, the scholarship board pay 70%. This free education allow female to study for free, obtained a bachelor degree from different field of study.

A lot of females obtained bachelor degree from different field of study since 2016 which enables them acquire jobs and other skills for having good life, even in the N-Power programmed organized by Federal Government there are a lot of females that participate in the programme, and most of them obtained their education for free from the free education created by the Jigawa State government.

Chart 2: Statistical Analysis of Female with N.C.E Certificate Obtained from Jigawa State College of Education, Gumel in Different Field of Study

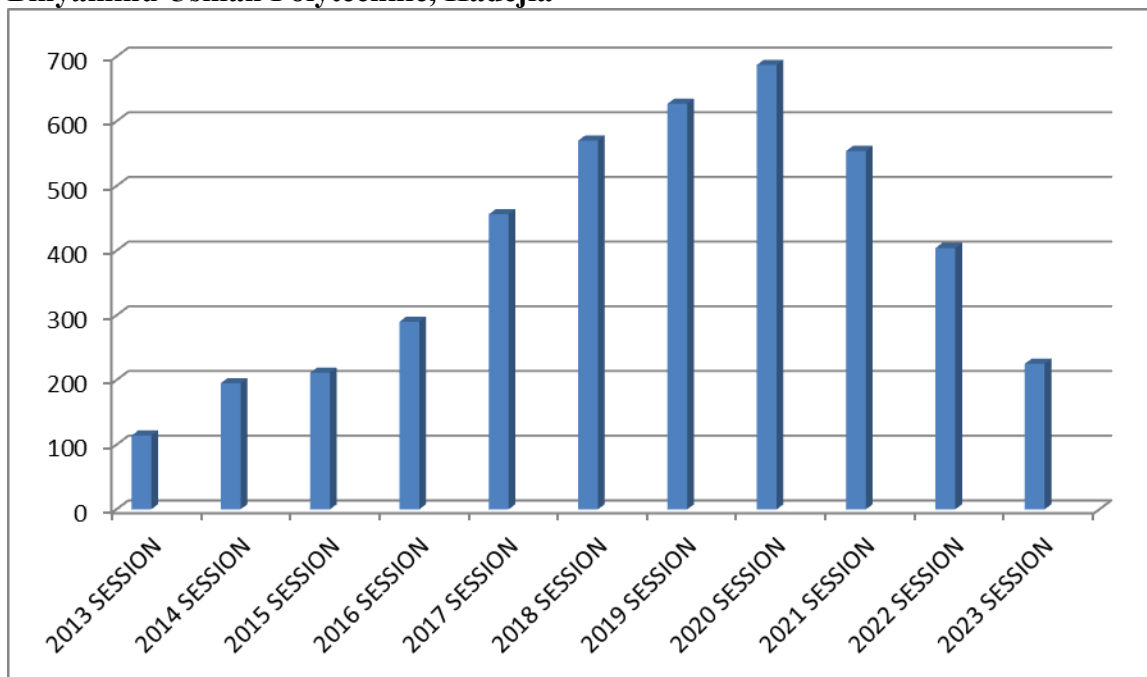


Before the opening of Sule Lamido University, Kafin Hausa most of Jigawa State student study N.C.E, and most of them at Jigawa State Collage of Education, Gumel. But after creating Sule Lamido University course the reduction of admitted student each year, this was happen due to the different level of education between N.C.E and Degree. Even though the registration fees of Jigawa State College of Education is 100% paid by the Jigawa State Government.

The chart above shows the level of admitted student's that increase each year, but after the opening of Sule Lamido University was decrease which was happen due to the different level of the qualification. Most of the female student pays only some departmental charges, registration and hostel is paid by Jigawa State Scholarship board.

A lot of females obtained N.C.E certificate from different field of study since 2013 during the administration of governor Sule Lamido, which enables females in Jigawa State acquire jobs and other skills, most of the N-Power beneficiaries are obtained their certificate free, which enables than participate in this programmed organized by Federal Government, there are a lot of females that participate in the programme, and most of them obtained their education for free from the free education created by the Jigawa State government.

Chart 3: Statistical Analysis of Female with Diploma in Different Field of Study From Binyaminu Usman Polytechnic, Hadejia



The chart above shows the level of admitted student's that increase each year unless in the 2021 which was decrease, and that increase was happen after people understand that not only male are eligible and capable to study Agric. And they have created some courses which belong to both males and females so that their admitted females increase. But after the opening of Sule Lamido University, Kafin Hausa was decrease which was happen due to the different level of the

qualification. Most of the female student pays only some departmental charges, registration and hostel is paid by Jigawa State Scholarship board, which means all the programme is free for females in that polytechnic.

A lot of females obtained Diploma certificate both National Diploma, Ordinary Diploma and Certificate from different field of study since 2013 during the administration of Governor Sule Lamido, which enables females in Jigawa State acquire jobs and other skills, most of the N-Power (N-Agro) beneficiaries are obtained their certificate free, which enables them participate in this programmed organized by Federal Government, there are a lot of females that participate in the programme, and most of them obtained their education for free from the free education created by the Jigawa State government.

Hindrances in Women's Education

In our world of today, nothing works or succeeds without education. "Today, all over The world education is the key success, to any meaningful endeavour" (Mallum, 1992). So women need to be educated if they are to successfully contribute their quota in societal development.

The Blueprint on women education (1986), has identified certain problems in relations to the education of women for effective contribution to national development.

These are:

1. Cultural and religious factors, such as early marriages and the practice of purdah by the Muslims.
2. Economic factors: such as costs of acquiring education as a tool for national development.
3. School location; schools are located far away from parents homes of the females. This brings about the problem of transportation.
4. Inaccessibility of some settlement such as the reverine areas.
5. Sex differentiation in occupational choice.
6. Opportunity gains of formal education to parents.
7. Time spent on household activities by the girls, and sometimes, girls taking care of the young ones when the mother attends school.

8. The nomadic life-style among the Fulani tribe.
9. Curriculum and instructional materials.
10. Insecurity and sexual harassment from male peers or teachers.

Suggestions for Removing the Hindrances

1. Increase the education opportunities of women at all levels of our educational system.
2. The curriculum at all levels of education has to be revised to suit women's requirement.
3. The government to edict a law that no girl should marry till she reaches 18 years or after her secondary education.
4. Girls and women's education is to be free at all levels in States and Local Governments that have few educated women.

Research Finding

The research find that most of the college and Universities who are not among the school that are giving free education in Jigawa state has low student's every year. Also find that, free education is a key to success among poor girls in the society which leads them to participate in government and non-government organization, a typical example is N-power, J-teach and many skills organize by Federal and State government.

Another benefit of free education to women youth in Jigawa State is that of some that acquire health services, they have more opportunities in and out the state, especially those that acquire CHEW (Community Health Worker) and those that acquire J-CHEW (Junior Community Health Worker). Another impact is that, the research find that free education contribute in agricultural sector, even though women were not participate fully in agricultural practices, but they are participate in teaching such skills to a younger generation, either their children or to those that are teaching in schools.

Conclusion

Conclusively, this research was conducted in order to find out more in the contribution of free education to the women youth in Jigawa State, which was conducted by taking sample with some

selected tertiary institution in order to find out the level of knowledge and skills that female acquire as a scholarship giving by Jigawa state government.

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ESSENTIAL ROLE OF LIBRARIES IN EDUCATION: A STUDY ON THE IMPACT OF LIBRARY RESOURCES AND SERVICES ON STUDENT ACHIEVEMENT AND ACADEMIC ROUTINE

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ABSTRACT

This research paper explored the relationship between education and libraries, examining the impact of library resources and services on student achievement. Through a mixed-methods approach, the study has two (2) research objectives and two (2) research questions that corresponded with the objectives. This study reveals that libraries play a vital role in supporting student learning outcomes, fostering critical thinking, and promoting literacy. The study objectives aim at examining the relationship between the utilization of library resources and services and student academic performance in educational institutions and to investigate the effectiveness of current management strategies in State University Libraries in North East Nigeria in maximizing the impact of library resources and services on student achievement. The study has population of 5,500 students and 100 educators randomly selected. Data were collected through questionnaires, interviews, focus groups, observations, and document analysis, The findings highlight the significance of libraries in bridging the knowledge gap, providing equitable access to information, and enhancing the overall educational experience of students on campus. Recommendation made include to-: improve internet connectivity, enhance awareness and training programs, optimize ease of access, select relevant resources, and adopt collaboration and feedback.

Keywords-: Library Resources, Student Academic Achievement, Management Strategies and Education

Introduction

Libraries have long been an integral part of the educational landscape, serving as a gateway to knowledge and information. As education evolves, the role of libraries has adapted to meet the changing needs of students and educators. Libraries have been the cornerstone of education for centuries, serving as a beacon of knowledge and a sanctuary for learning. From the ancient Library of Alexandria to modern-day school and academic libraries, these revered institutions have played a vital role in fostering intellectual curiosity, promoting literacy, and supporting the pursuit of knowledge. As education evolves, the role of libraries has adapted to meet the

changing needs of students and educators, cementing their position as an indispensable component of the educational landscape.

Libraries are more than just repositories of books; they are dynamic learning environments that provide equitable access to information, support diverse learning needs, and offer a safe and inclusive space for students to explore the universe of knowledge, discover new talent, and learn more tricks. They serve as a bridge between the classroom and the world beyond, connecting students to a wealth of resources, including print and digital materials, databases, and online platforms. By providing access to a vast array of resources, libraries help level the playing field, ensuring that all students have an equal opportunity to succeed, regardless of their socio-economic background or zip code.

Moreover, libraries are staffed by trained professionals who are dedicated to supporting student learning outcomes. Librarians are experts in information literacy, curriculum design, and instructional technology, making them invaluable partners in the educational process. They collaborate with educators to develop curriculum-aligned resources, provide guidance on research skills and critical thinking, and offer individualized support to students, helping them navigate the complex information landscape.

In addition to their physical collections and human resources, libraries have evolved to embrace emerging technologies, offering a range of digital services and online platforms that support remote learning, collaboration, and innovation. From online databases and e-books to virtual reality experiences and makerspaces, libraries have become hubs for innovation, creativity, and entrepreneurship, providing students with the skills and knowledge necessary to succeed in an increasingly complex and interconnected world.

As this research paper will demonstrate, the role of libraries in education is multifaceted and far-reaching, with a profound impact on student achievement, literacy, and lifelong learning. By examining the correlation between library resources, services, and student outcomes, this study aims to shed light on the indispensable role of libraries in education, highlighting their contributions to academic success, social mobility, and the development of informed, engaged, and critically thinking citizens.

Research Objectives

The objectives of the study are to: -

1. examine the relationship between the utilization of library resources and services and student academic routine in Yobe State University.
2. investigate the effectiveness of current management strategies in State University Libraries in North East Nigeria in maximizing the impact of library resources and services on student achievement in Yobe State University.

Research Questions

The study answered the research questions corresponding to the objectives:

1. What is the relationship between the utilization of library resources and services and student academic routine in Yobe State University?
2. How effective are the current management strategies in State University Libraries in North East Nigeria in maximizing the impact of library resources and services on student achievement in Yobe State University?

Methodology:

This study employed a mixed-methods approach, combining both quantitative and qualitative data collection and analysis methods. Integrating quantitative and qualitative data collection and analysis methods in this research study allows for a more comprehensive and nuanced understanding of the research topic. Where triangulate findings, validate results, and gain a deeper insight into the complexities of the phenomena under investigation. A survey of 5,500 students and 100 educators was conducted, along with focus group discussions and case studies of libraries in diverse educational surroundings. A regression analysis was used as statistical tools to identify and quantify the relationship between the variables. It helps in understanding the predictive power of certain variables on the outcome of interest. Quantitative data collection that involves structured surveys and questionnaires that yield numerical data by providing information on the frequency, patterns, and relationships between variables related such as library resources, services, and student achievement. Survey of 5,500 students were conducted

among a random sample of 5,500 students from various academic educational institutions in Yobe State. The survey aimed to gather information on students' library usage, their perceptions of library resources and services, and their experiences with library support.

Survey of 100 educators were conducted among a random sample of 100 educators (instructors, and lecturers) from various educational institutions in Yobe State. The survey aimed to gather information on educators' perspectives on the role of libraries in education, their experiences with library collaboration, and their perceptions of library resources and services.

Descriptive statistics where Frequency counts, percentages, means, and standard deviations were calculated to describe the demographic characteristics of the survey respondents and their responses, correlation analysis were conducted to examine the relationships between variables, such as library usage and academic performance, and to identify significant differences between groups.

Qualitative data were done through interviews, focus groups, observations, and document analysis, gather rich, in-depth insights into the experiences, perceptions, and behaviours of participants, it uncovers underlying motivations, attitudes, and contextual factors influencing students' academic achievement and performance.

Literature Review:

The literature highlights the positive impact of libraries on student outcomes, including improved literacy, academic performance, and critical thinking skills. Libraries provide access to a wide range of resources, covering print and digital materials, databases, and online platforms, which support curriculum development and instructional design. Additionally, libraries offer a safe and inclusive learning environment, fostering collaboration and socialization among students and their lecturers and subject content. Larson and Owusu (2012) used questionnaire and reveal that majority of users satisfied with library service. Finding of the study suggested the library to extend the opening hours of the library and provide facilities for users.

A study by Rodrigues and Mandrekar (2020) on impact of academic library services on student success and performance revealed that Libraries play an important role as a reliable and beneficial information provider in the students' academic success and performance, and the

major finding was that information literacy programme for the students promote awareness about the resources, services and facilities available in the library so that the students can take maximum advantage of the benefits provided by the library, this serves as a way to encourage the students to embrace using the library in their academic studies and explain its benefits.

On the other hand, Pandey and Singh (2014) found out in their study of a large number of respondents that were satisfied with library resources and book are most widely used at the circulation service. The study suggested to make library resources and services effective and can be used in a efficient manner. Surashe (2016), studied users' satisfaction with library resources and services among members and students of St. Claret College, Bangalore and found out that large number of the respondents were satisfied with library services and resources, the study revealed that books are most widely used by the users and circulation services is considered most preferred in the library. The study suggested library services to be more effective and efficient.

A study by Jaja and Udumukwu (2023) was conducted to determine the influence of school library utilization on the performance of secondary school student in Abuja FCT. Where descriptive survey research design was used and population of 16,362 students in public secondary schools in Abuja Metropolis was sampled. The study used questionnaire and a reliability coefficient of 0.81 was obtained. The findings of the study indicated that there is a significant influence of library utilization on academic achievement of students in Abuja Metropolis, the study recommended that government should provide all secondary schools in Abuja metropolis with modern and functional libraries. Adullayeva (2024), studied the role of libraries in academic achievement in Azerbaijan University libraries, he used questionnaire completed by staff and students, and used a comparative descriptive method to analysed the results. Finding of the study revealed university library usage is positively associated with academic achievement. The study showed that students who use libraries are more likely to succeed academically, and the role of the libraries in academic achievement is not limited to traditional academic task such as research and writing.

A study by Enakire and Onyancha (2020), investigate strategies and tools for knowledge management practices (KMPs), in selected academic libraries in Nigeria and South Africa. The study used quantitative research approach; questionnaire was used data collection instrument

from respondents in the selected academic libraries in South Africa and Nigeria. The data were analysed using descriptive statistical tools. Findings revealed that, knowledge management is practiced in diverse ways to include group discussions/meetings, apprenticeships, socialisation and communities of practice, seminars, conferences and workshops. That KM tools of decision support systems, database management systems, web portals, electronic document management systems (EDMS), management information systems, were used for generic and specific work operations in the library. The study suggested that, there is the need to continually share knowledge to advance quality service delivery in meeting users' information needs. The study also recommends insightful methods of coding information and knowledge as a way to re-organise and disseminate local collections, while librarians apply various KM platforms to regulate planning KM activities in academic libraries.

A study by Obiokafor, Abana, Nwajikwa, & Ogarlue, (2023), on Strategies for implementing library automation in Anambra State Polytechnic Mgbakwu, Awka North, Nigeria: A review of best practices was conducted and highlights strategies for implementing Library Automation in Anambra State Polytechnic Mgbakwu, Awka North, Nigeria. The study used conceptual framework for implementing library automation on four interrelated components: planning, stakeholder engagement, staff, and students training, and ongoing support and maintenance. The study used narrative review methodology of related research findings from peer-reviewed articles and adopted to provide a useful way to synthesize and summarize. The study revealed significant information on strategies for implementing Library Automation in Anambra State Polytechnic Mgbakwu, Awka North, Nigeria. It Shows how the implementation of library automation in tertiary institutions requires careful planning, stakeholder engagement, staff training, and software and hardware support and maintenance. The best practices and statistics discussed suggest effective implementation strategies can lead to successful automation projects that improve library operations and services.

Data Analysis and Results:

This section aims to provide a comprehensive understanding of the findings derived from the data collected and shed light on the factors influencing the utilization of digital library resources by undergraduate students at Yobe State University.

Qualitative Data Collection:

Focus groups: Four focus groups were conducted with a total of 300 students and 20 educators to gather in-depth insights on their experiences with libraries and their perceptions of library resources and services. The focus groups were audio recorded and transcribed verbatim.

Interviews: Ten in-depth interviews were conducted with library professionals to gather information on their experiences with library services, collection development, and community engagement.

Thematic analysis: The transcribed data from the focus groups and interviews were analysed using thematic analysis, which involved identifying, coding, and categorizing themes and patterns in the data.

Content analysis: The qualitative data were also analysed using content analysis, which involved examining the frequency and significance of words, phrases, and concepts in the data.

Mixed-Methods Integration:

Triangulation: The quantitative and qualitative data were triangulated to validate the findings and provide a comprehensive understanding of the indispensable role of libraries in education.

Data transformation: The qualitative data were transformed into quantitative data using coding and categorization, and vice versa, to facilitate the integration of the two datasets.

Ethical Considerations:

Informed consent: All participants provided informed consent before participating in the survey, focus groups, and interviews.

Confidentiality: The data were collected and stored anonymously, and all personal identifiable information was removed to maintain confidentiality.

Data security: The data were stored on a secure server, and all necessary measures were taken to prevent data breaches and unauthorized access.

By combining quantitative and qualitative data collection and analysis methods, this study aimed to provide a comprehensive understanding of the indispensable role of libraries in education, capturing both the breadth and depth of the phenomenon.

Results:

The findings indicate a strong correlation between library usage and student achievement. Students who frequently used library resources and services demonstrated higher levels of academic success, including improved grades and standardized test scores. Educators reported that libraries played a crucial role in supporting curriculum development and instructional design, enhancing teaching and learning practices.

Note

1. The survey for students and educators has different questions tailored to their perspectives and experiences.
2. The focus groups and interviews were conducted separately for students and educators to ensure homogeneity of participants.
3. The data analysis for the qualitative data were done manually by the researcher, using coding and categorization software.
4. The quantitative data were analysed using statistical software SPSS.
5. The mixed-methods integration involved triangulation, data transformation, and comparison of findings across methods to ensure validity and reliability

Results:

Quantitative Findings:

Research Question: What is the level of awareness of digital library resources among undergraduate students at Yobe State University?

Table 1: Level of Awareness of Digital Library Resources

Awareness Level	Frequency	Percentage
High	75	35%
Moderate	100	47%
Low	40	18%
Total	215	100%

The table above presents the level of awareness of digital library resources among undergraduate students at Yobe State University. The results indicate that 35% of the respondents reported a high level of awareness, 47% reported a moderate level of awareness, and 18% reported a low level of awareness. Overall, the majority of students have at least a moderate level of awareness of digital library resources, suggesting a reasonable level of familiarity with the available resources. This analysis provides insights into the current awareness levels among students and highlights the need for further promotion and education on digital library resources to enhance utilization among all students, especially those with lower levels of awareness.

Research Question: What are the factors influencing the utilization of digital library resources by undergraduate students at Yobe State University?

Table 2: Factors Influencing Utilization of Digital Library Resources

Factors	Frequency	Percentage
Internet Connectivity	85	40%
Awareness and Training	60	28%
Ease of Access	45	21%
Relevance of Resources	25	12%
Total	215	100%

The table above presents the factors influencing the utilization of digital library resources among undergraduate students at Yobe State University. The results show that 40% of respondents identified internet connectivity as a significant factor, followed by 28% citing awareness and training, 21% mentioning ease of access, and 12% indicating the relevance of resources. These findings suggest that internet connectivity is the most crucial factor influencing the utilization of digital library resources, highlighting the importance of reliable internet access for effective utilization. Additionally, the results underscore the need for increased awareness, training, and efforts to improve the accessibility and relevance of digital resources to enhance utilization among students. This analysis provides valuable insights into the factors affecting the utilization of digital library resources and can guide interventions and strategies to address the identified challenges and improve the overall utilization of digital resources among undergraduate students at Yobe State University.

In this study on the utilization of digital library resources among undergraduate students at Yobe State University, the following key findings were derived:

Qualitative Findings:

1. Research Question: What is the level of awareness of digital library resources among undergraduate students at Yobe State University?

- The majority of students (82%) reported having at least a moderate level of awareness of digital library resources, with 35% indicating a high level of awareness, 47% reporting a moderate level, and 18% reporting a low level of awareness.

2. Research Question: What are the factors influencing the utilization of digital library resources by undergraduate students at Yobe State University?

- The factors influencing the utilization of digital library resources were identified as internet connectivity (40%), awareness and training (28%), ease of access (21%), and relevance of resources (12%). These findings highlight the significance of internet connectivity and the need for improved awareness, training, and resource accessibility to enhance utilization among students.

In general, the study provides insights into the current awareness levels and factors influencing the utilization of digital library resources among undergraduate students at Yobe State University. The findings highlight the importance of addressing challenges related to internet connectivity, awareness, and resource accessibility to promote effective utilization of digital resources and enhance the inclusive learning experience for students. This information can guide educational institutions in developing targeted interventions and strategies to improve digital literacy and maximize the benefits of digital library resources for student academic success.

Mixed-Methods Integration:

1. Triangulation: Quantitative and qualitative findings converged on the importance of libraries in education, highlighting their role in supporting student learning outcomes, developing critical thinking and research skills, and fostering a sense of community.
2. Data transformation: Qualitative data were transformed into quantitative data using coding and categorization, revealing patterns and themes that were consistent with the survey findings.
3. Comparison of findings: The results from the survey, focus groups, and interviews showed a high degree of consistency, underscoring the indispensable role of libraries in education.

Discussion

The results emphasize the significance of libraries in education, highlighting their role in bridging the knowledge gap, promoting literacy, and encouraging critical thinking. Libraries provide equitable access to information, support diverse learning needs, and offer a safe and inclusive learning environment. These emphasizes are categorized into-:

Awareness of Digital Library Resources:

The study revealed that a significant proportion of undergraduate students at Yobe State University have a reasonable level of awareness of digital library resources. With 35% reporting a high level of awareness, 47% indicating a moderate level, and only 18% reporting a low level of awareness, it is evident that students possess a certain degree of familiarity with digital resources. This finding is encouraging as it indicates that students have a foundation upon which

to build their digital literacy skills and leverage digital resources for academic research and learning.

Factors Influencing Utilization - Internet Connectivity:

Internet connectivity emerged as a critical factor influencing the utilization of digital library resources among students, with 40% of respondents highlighting its significance. This underscores the pivotal role that reliable internet access plays in facilitating students' access to digital resources and conducting online research. Addressing challenges related to internet connectivity, such as improving infrastructure and network reliability, is essential to ensure that students can fully leverage the vast array of resources available in digital libraries for their academic pursuits.

Factors Influencing Utilization - Awareness and Training:

The study also identified awareness and training as key factors influencing the utilization of digital library resources, with 28% of respondents recognizing their importance. This underscores the need for educational institutions to invest in raising awareness about available digital resources and providing students with adequate training on how to effectively navigate and utilize these resources for their academic endeavours. By enhancing awareness and offering comprehensive training programs, students can enhance their research skills, digital literacy, and academic performance.

Factors Influencing Utilization - Ease of Access and Relevance of Resources:

Ease of access and the relevance of resources were also identified as significant factors influencing the utilization of digital library resources, with 21% and 12% of respondents citing these factors, respectively. Improving the accessibility of digital resources by implementing user-friendly interfaces and ensuring seamless access across devices is crucial for encouraging their utilization. Furthermore, curating and updating resources to ensure their relevance to students' academic needs is essential for maximizing the benefits of digital library resources and enhancing students' learning experiences.

Conclusion

The study's findings clearly demonstrate the indispensable role of libraries in education. Libraries are not just physical spaces but vibrant hubs of learning, providing resources, services, and support that are essential to student success. By fostering a culture of collaboration, innovation, and inclusivity, libraries contribute to the development of informed, engaged, and critically thinking citizens. As education continues to evolve, libraries must remain at the forefront, adapting to changing needs and innovations to ensure that students are well-prepared for an increasingly complex and interconnected world with other institutions in Yobe state and the world. The findings also underscore the importance of addressing factors such as internet connectivity, awareness, training, ease of access, and resource relevance to promote the effective utilization of digital library resources among undergraduate students at Yobe State University. By implementing targeted interventions and strategies to enhance these factors, educational institutions can empower students to develop their digital literacy skills, improve their research capabilities, and ultimately enhance their academic success and overall learning experience.

Recommendations

Based on the findings of the study on the utilization of digital library resources among undergraduate students at Yobe State University, the following recommendations were made to enhance students' access to and utilization of digital resources:

1. **Improve Internet Connectivity:** Given the critical role of internet connectivity in facilitating access to digital library resources, the university should prioritize improving infrastructure and network reliability. This could involve investing in robust internet infrastructure, ensuring widespread access to high-speed internet on campus, and addressing connectivity issues to enable seamless access to digital resources for all students.
2. **Enhance Awareness and Training Programs:** Educational institutions should implement comprehensive awareness campaigns to promote digital library resources among students. Additionally, providing regular training sessions on how to effectively navigate and utilize digital resources can help enhance students' digital literacy skills and research capabilities. These

initiatives can be integrated into orientation programs, workshops, and online tutorials to ensure widespread participation and engagement.

3. Optimize Ease of Access: To encourage the utilization of digital library resources, the university should focus on optimizing the ease of access to these resources. This could involve implementing user-friendly interfaces, ensuring compatibility across various devices, and streamlining the access process for students. By making digital resources easily accessible and user-friendly, students are more likely to engage with and benefit from the wealth of resources available in digital libraries.

4. Select Relevant Resources: Educational institutions should prioritize curating and updating digital resources to ensure their relevance to students' academic needs. Regularly evaluating the content available in digital libraries and aligning it with the curriculum can help enhance the value of these resources for students. By providing access to up-to-date and relevant materials, students can effectively support their academic research and learning goals.

5. Adopt Collaboration and Feedback: Encouraging collaboration among students and faculty members in utilizing digital library resources can foster a culture of knowledge sharing and mutual learning. Additionally, seeking feedback from students on their experiences with digital resources can help identify areas for improvement and tailor interventions to better meet students' needs. By fostering a collaborative environment and incorporating student feedback, educational institutions can enhance the utilization of digital library resources and promote a culture of continuous improvement.

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**IMPACT OF BOKO HARAM INSURGENCY ON UNIVERSAL BASIC EDUCATION (UBE)
SCHOOLS INFRASTRUCTURE IN BORNO STATE, NIGERIA**

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ABSTRACT

The study assessed the impact of Boko Haram insurgency on Universal Basic Education (UBE) school infrastructure in Borno State, Nigeria. The objective of the study was to determine the impact of Boko Haram on UBE school infrastructure. Based on the objective, a research question on the impact of Boko Haram on infrastructure of UBE schools was answered. A null hypothesis was also tested on the impact of the insurgency on school infrastructure at 0.05 level of significance. The study used two designs; survey and ex-post facto. The populations of the study were 1,627 UBE schools. Out of which, 1,116 schools were affected by the insurgency. Using Multi-stage stratified random sampling technique, 112 schools were selected. An instrument titled 'Impact of Boko Haram insurgency on Universal Basic Education Schools Questionnaire (IBHIUBESQ)' was used for data collection and the instrument was subjected to face and content validation by experts in the fields of educational administration and planning and measurement and evaluation. The instrument was also pilot tested through split-half method and Cronbach Alpha reliability index of 0.71 was obtained for the questionnaire. Descriptive statistics of frequency and percentage was used to answer research question and independent sample t-test was used to test the hypothesis. The findings of the study revealed that Boko Haram has negative impact infrastructure of UBE schools in Borno State. It was concluded that Boko Haram insurgency had negative impact on infrastructure of UBE schools in Borno State,

Nigeria. Based on the findings, it was recommended that the Borno State Government should allocate enough resources to reconstruct damaged schools

Key Words: Impact, Boko Haram, Insurgency, Universal Basic Education, infrastructure

Introduction

Universal Basic Education (UBE) Programme is an educational programme aimed at eradicating illiteracy, ignorance and poverty. It is in compliance with the Declaration of the World Conference on Education for All (WCEFA) which was made in Jomtien, Thailand in 1990, and Bating clearly in Article 1 that every person - child, Youth on Adult - shall be able to benefit from educational opportunities designed to meet their basic needs. This declaration was reaffirmed at the World Summit for Children also held in 1990, which stated that all children should have access to basic education by the year 2000. According to Powell and Abraham (2006), insurgency refers to a violent move by a person or group of persons to resist or oppose the enforcement of law or running of government or revolt against constituted authority of the State. Traditionally however, insurgents seek to overthrow an existing order with one that is commensurate with their political, economic, ideological or religious goals (Gompert & Gordon, 2008). According to Kilcullen (2006), "Insurgency is a struggle to control a contested political space, between a State (and a group of States or occupying powers), and one or more popularly based, non-State challengers". In the wake of its activities, the Boko Haram insurgency had caused colossal damages to lives and properties.

Statement of the Problem

Education depends largely on the encouragement from families, provision of conducive learning environment, provision of school infrastructural facilities and instructional materials. Mass displacement was a consequence of attacks against the civilians and in many cases it is a central objective of the perpetrators. Displacements have far reaching implications for individuals, the society and education. The researcher being a resident of Maiduguri, Borno State experienced series of cases of bombings, burning of schools, attacks on children on their way to school, occasional abduction of school children on their way to school, and many schools in Borno State had experienced several attacks from Boko Haram insurgents leading to closure of schools or being used as army barracks or Internally Displaced Persons (IDPs) Camps. The closure of such schools means pupils cannot be enrolled into schools, that is, not attending because the schools were officially closed for months, in some cases for years by the government and some schools

outside the Metropolis have been closed down for years. Teachers were killed or displaced, classes were burnt down or destroyed or closed down because of fear of insurgency. It is against this background that this study assessed the impact of Boko Haram insurgency on UBE in Borno State, Nigeria.

Objectives

The main objective of the study was to determine the impact of Boko Haram insurgency on UBE in Borno State, Nigeria. Specifically, the study determined:

1. The difference in the infrastructure of UBE school of pupils before and after Boko Haram insurgency in Borno State, Nigeria; and,
2. The level of UBE school infrastructure in Borno State, Nigeria.

Research Question

The study answered the following question;

1. What is the level of infrastructure damage in UBE Schools in Borno State, Nigeria before and after Boko Haram insurgency?

Hypothesis

The following hypothesis was tested at 0.05 level of significance:

1. There is no significant difference in the infrastructure of UBE schools before and after Boko Haram insurgency in Borno State, Nigeria.

Literature

Infrastructure is an integral component of teaching and learning process. This was because a school's infrastructure enables students and teachers to access a wide range of tools, services and resources to supplement teaching and learning. The school infrastructure facilitates learning and/or of it will lead to sir ineffective teaching. The school infrastructure refers to the site, building, furniture and equipment that contribute to a positive learning, available and quality education for all students. Access to basic education in the north-eastern states has been badly affected by the targeted attacks on school facilities by Boko Haram. According to UNICEF (2015) over 300 schools were destroyed and 314 children were killed or kidnapped between 2012 and 2014. For example, following the 1988-1999 war in Timor-Leste, 95% of schools required repair or reconstruction. In Iraq, 85% of schools were damaged or destroyed by the fighting during 2003 and 2004 (Buckland, 2005). A survey of schools in Iraq in 2004 found that

700 primary schools had been destroyed or damaged by bombing, and 200 burned since 2003 (UNICEF, 2015). In a World Bank funded school reconstruction project, the rehabilitation costs were around \$300,000 per school (World Bank, 2013). At this rate, the costs of reconstructing schools in the primary sector alone would have been at least \$270m.

In Borno which is the worst hit of the states, the executive chairman of the Borno State Universal Basic Education Board (SUBEB), stated that over 512 schools have been destroyed over the years. When this is done not only the building but also the teaching materials and children's school records were destroyed. According to Emeasobo and Iro, (2015) learning takes place when there is a conducive atmosphere, adequate motivation and above all facilities and infrastructure. A threat to business education in Northern Nigeria reported that many primary schools, secondary schools and some tertiary institution were vandalized, destroyed and burnt. Emeasoba and Iro (2015) also reported that in April, 2014 over 200 final year school girls were abducted in Government Girls' Secondary School, Chibok in Borno State and that the school was set ablaze thereby destroyed the school infrastructure. They also reported that maiming, kidnapping, suicide bombing, destruction of school infrastructure, killing of students and teachers by the Boko Haram insurgents greatly posed challenges to educational programmes in the north eastern region of the country.

Many schools were burnt, damaged, or destroyed by the Boko Haram insurgents in Borno State, Nigeria. The destruction and damage to school infrastructure and facilities grossly reduces the availability of access to education of many children in Borno State. Schools are burnt down, it is not only the classrooms that are lost but also teaching materials, equipment and school records leaving children with no place to learn and teachers with no place to teach (Ogwunba & Odom, 2014). Ogwunba and Odom, (2014) argued that access to primary education requires that sufficient and proper facilities and services are put in place and that students can have access to adequate books and materials that will facilitate teaching and learning. However, the books and material are damaged when school infrastructure is damaged. Galtimari, Ludiya, Lawan and Fika (2019) carried out a study on impact of Boko Haram insurgency on primary school infrastructures in Maiduguri Metropolis, Borno State, Nigeria and the findings from the study indicated that insurgency had negative impact on primary school infrastructure in primary schools in Maiduguri Metropolis, Borno State. Abdulrasheed, Onuselogu and Obioma (2015)

carried out a study on effects of insurgency on Universal Basic Education in Borno State of Nigeria and revealed that school facilities in most primary schools were destroyed beyond recognition. Ogwunba and Odom, (2014) in their study; Boko Haram insurgency: a peril to achievement in education reported that the impact of insurgency on education is devastating and equally have impact on school infrastructure. (Okoro, 2014) equally reported that about 50 schools have either been burnt or seriously damaged and more than 60 others have been force to close in northern Nigeria.

UNICEF (2015) in its study on impact of Boko Haram and armed conflict on schooling in Cameroon Far North reported that Boko Haram called for, and carried out direct attacks on schools thereby destroying school infrastructures. UNICEF (2015) reported that 30% of the schools studied are occupied by IDPs since the Boko Haram conflict started and 18% have been structurally damaged, 11% have been looted or pillaged as a direct result of the conflict and 4% indicate unexploded ordinance of war in and around school grounds which means that teaching and learning in such schools were stopped by the Boko Haram activities. UNICEF (2015) in its report on the Syrian crisis and humanitarian aids reported that in Syria, schools are burnt, damaged, looted and destroyed on regular basis, many places of learning are now deserted as children and teachers flee to safety. Since the conflict began, more than 4200 schools have been damaged, destroyed, militarized or are currently used as shelters by IDPs according to data gathered by UNICEF. One quarter of Syrian schools have been damaged, destroyed or used as shelters or for other purposes than education.

Jones and Naylor (2014) in their study titled; the quantitative impact or armed conflict on education: counting the human and material cost reported that between 2009-20 12 over 724 schools were damaged in Democratic Republic of Congo (DRC), 69 schools destroyed and 16 schools were damaged in Nigeria and at least 959 schools were damaged in Pakistan and these schools need to be rebuilt or renovated for further educational activities. Jones and Naylor (2015) and Adamu (2009) contended that some insurgency groups are ideologically opposed to secular education (for instance Boko Haram in Nigeria and Taliban in Pakistan and Afghanistan); others attack schools as they are highly visible extensions of the government they are fighting. For instance, in Sierra Leon rebels targeted schools for destruction so as to get base for their insurgency activities. Jones and Naylor (2014) also reported that schools are destroyed during

conflict simply because they provide tactical bases for insurgents and government armed force thereby leading to the closure of such schools which means halting the teaching and learning process.

Yawe and Apase (2019) studied the impact of insurgency on management of secondary schools in the north-central, Nigeria. The study found that impact of insurgency on school facilities is low in the study area. Usman and Dabai (2020) conducted a study on Boko Haram insurgency: Repercussions on educational institutions in Adamawa State, Nigeria. Findings revealed that Boko Haram insurgents destroyed structures in Adamawa State University Mubi and Federal Polytechnic Mubi in Adamawa State. Duarte and Cana (2016) investigated the shorts and long-term pernicious impact of armed conflict on education and education agents. Using a multi vocal review by means of the integration and qualitative analysis of sixty (60) research reports (voices) found in two data base: Web of Science of Pro-Quest in the periods between 1995-date of the first founding papers until 2014. Through the analysis of source data (voices) and taking the multi vocal review as a methods found that educational infrastructure was destroyed and subsequently affecting teaching and learning materials.

Thus, the reviewed literature, was evident that many primary and junior secondary schools were vandalized, destroyed and burned. This destruction of school infrastructure by Boko Haram insurgents greatly posed challenges to educational programmes in the north eastern region of the country.

Methodology

The research design used in this study was ex-post facto research design of the survey type. Ex-post facto research design of the survey type is a method of testing out possible antecedent of event that have happened and cannot therefore be controlled, engineered or manipulated by the investigator (Cohen, Manion & Morrison, 2013). In this study, Boko Haram Insurgency which is an independent variable was studied to determine its impact on the dependent variable that is, infrastructural facilities in schools in Borno state, Nigeria. The population for the study was all the one thousand, six hundred and twenty-seven (1,627) UBE schools in Borno State among which one thousand, one hundred and sixteen (1,116) were affected by the insurgency. To determine the sample that was used for the study, Krejcie and Morgan (1970) table for determining sample size was used to select the sample and cluster sampling technique was used

for the study to select the sample of one hundred and twelve (112). Cluster sampling is simply a method that divides the population into groups or clusters for conducting research (Aroh, 2002). In group, if any of the group is small in number, then, the procedure may consider ten percent, that is, four head teachers in the three education zones each were sampled. The structured questionnaire titled “Impact of Boko Haram Insurgency on Universal Basic Education Schools (IBHIUBES)” was used to collect data on school infrastructure before and after Boko Haram insurgency in UBE schools in Borno State, Nigeria. Descriptive statistics of percentage was used to answer the research questions, while inferential statistics of independent sample t-test was used to test the null hypotheses at 0.05 level of significance.

Results

This study determined the impact of Boko Haram insurgency on UBE schools in Borno State, Nigeria.

Table 3: The Level of Infrastructure Damage in UBE Schools in Borno State, Nigeria

S/N	Item	Yes	%	No	%
1.	Was your school among the destroyed ones?	103	97.17	3	2.83
2.	Were classroom destroyed in your school?	103	97.17	3	2.83
3.	Were staff offices destroyed in your school?	103	97.17	3	2.83
4.	Were school toilets destroyed in your school?	102	96.22	4	3.78
5.	Were library(s) destroyed in your school?	102	96.22	4	3.78
6.	Which of the infrastructure in your school was most affected?	104	98.11	2	1.89
7.	Do you think destruction of infrastructure affected teaching and learning in your school?	103	97.17	3	2.83

Table 3 provides a detailed insight into the level of infrastructure damage by Boko Haram insurgency in UBE schools in Borno State, Nigeria. The results reveals negative impact with 97.17% of the schools surveyed were destroyed. This destruction was not limited to the school buildings; in the second and third items, 97.17% of schools had their classrooms and staff offices destroyed, respectively. The fourth and fifth items highlight the damage inflicted on essential facilities, with 96.22% reporting the destruction of school toilets and libraries. Moreover, the sixth item indicates that 98.11% of respondents believed that some infrastructure in their schools

were severely affected, underscoring the broad impact. Lastly, the seventh item shows that 97.17% of respondents felt that the destruction of infrastructure had a detrimental effect on teaching and learning in their schools.

H₀₁: There is no significant difference in the infrastructure of UBE school of pupils before and after Boko Haram insurgency in Borno State, Nigeria.

Independent sample t-test was used to determine the impact of Boko Haram Insurgency on infrastructure of UBE school before and during the insurgency.

Table 4: Independent Sample t-test on the Impact of Boko Haram Insurgency on Infrastructure of UBE Schools Pupils Before and After the Insurgency

Period	N	Mean	SD	Df	T	p-value	Remark
Completion Before	106	26.63	4.35				
				105	2.255	0.001	Reject H ₀₄
Completion After	106	21.10	3.53				

Table 4 illustrates the results of an independent sample t-test investigating the impact of the Boko Haram Insurgency on the infrastructure of UBE school pupils before and after the insurgency. Results revealed that, the mean infrastructure after the insurgency period (21.10) is significantly lower than before the insurgency (26.63), with a t-value of 2.255 and a p-value of 0.001 less than the level of significant (0.05). Consequently, hypothesis five is rejected. Therefore, Boko Haram Insurgency has negative impact on the infrastructure of UBE school pupils.

Discussion

Findings from research question one revealed that, Boko Haram insurgency has negative impact on the infrastructure of Universal Basic Education schools in Borno State. This finding is aligned with several studies in the literature. For instance, UNICEF (2015) whose study revealed that, over 300 schools were destroyed, and 314 children were killed or kidnapped between 2012 and 2014, severely affecting access to basic education in the North-Eastern States. The current study concurred with the study of Buckland (2005) who reported that, high-intensity conflicts had cause extensive damage to school infrastructure, making it challenging to ensure access to education.

Findings on hypothesis on revealed that, Boko Haram insurgency has negative impact on the infrastructure of Universal Basic Education schools in Borno State. This finding is aligned with the findings also agreed with Ogwunba and Odom (2014) whose study directly addresses the negative impact of the Boko Haram insurgency on education in Nigeria. Their result explained how the destruction of school infrastructure, along with other factors like maiming, kidnapping, and suicide bombings, has severely disrupted Educational programs in the Northeastern Region of the country, corroborating the information you provided.

Conclusion

Based on the findings of the study, it is evident that Boko Haram insurgency adversely affected the infrastructure of these schools, causing damage and disruption. This is consistent with various sources, including Amnesty International, UNESCO, and other studies, which have pointed out the detrimental impact of conflicts and insurgency on education, particularly in conflict-affected regions. In conclusion, the study underscores the urgent need for measures to mitigate the impact of Boko Haram insurgency on the education system in Borno State and to ensure that children have access to quality education in a safe environment

Recommendations

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

1. Borno state government, in collaboration with security agencies, should implement and strengthen security measures around UBE schools in Borno State.
2. The federal and state government should allocate resources and coordinate efforts to repair and reconstruct damaged school buildings, classrooms, and facilities. This will create a conducive environment for teaching and learning.
3. Borno State government and educational stakeholders should advocate for the protection of schools and students.

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RELATIONSHIP BETWEEN SOCIAL MEDIA USAGE AND ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS OF YOBE STATE UNIVERSITY DAMATURU, YOBE STATE, NIGERIA

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ABSTRACT

This study examined the relationship between social media usage and academic performance of undergraduate students, Yobe State University. Correlation and survey research designs were used. Population was 5,321 undergraduates. Proportionate stratified and systematic random samplings were employed. Research Advisor (2006) Table was used to select 278 participants. Instrument used was Social Media Usage Questionnaire. Items were validated by seven professionals. Cronbach's Alpha was used to determine the reliability. Items were found reliable at 0.8. Data was analysed using descriptive and inferential statistics. Findings showed that: WhatsApp is the most commonly used social media, there was significant correlation between the use of Facebook, WhatsApp and academic performance, and there was no significant correlation between the use of Twitter, Instagram and YouTube. The researcher concludes that, WhatsApp and Facebook were the most commonly used by the students and thus do relate to their academic performance. It is recommended that students should be guide to improve on the use of other social media sites in relation to their academic activities. The research also suggests that University administration with the help of the department should create an awareness campaign on the use of social media sites for the students' academic purposes.

Key words: Relationship, Undergraduates, Performance, Social media Sites

Introduction

Burke and Kraut (2014) defined social media as, 'the many relatively inexpensive and widely accessible electronic tools that enable anyone to publish and access information, collaborate and build relationships'. That is, social media can afford its users unlimited access in as much as they intend to make use of it. The use of social media has also hit into the higher institutions of learning which cannot remain impartial to these rapidly changing technologies (Dumpit & Fernandez, 2017). Putting into consideration how social media became embedded within the young generation lifestyle, University student affairs professionals found a way to use social

media as a method of communication between the University administration and the students (Junco, 2012).

Academic performance is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals (Kirschner & Karpinski, 2010). Grade Point Average (GPA) is now used by most of the tertiary institutions as a convenient summary measure of the academic performance of their students. The main themes of Educational Psychology were the learner, and the learning process, and undergraduate students of Yobe State University being as learners do engage in the use social media sites like; Twitter, Instagram, WhatsApp, Facebook, YouTube and Wikipedia as tools that aid learning and this may influence their academic performance positively or negatively.

According to statistics collected from the directorate of academic planning Yobe State University Damaturu, on August, 2021. The data indicated low level of performance of undergraduate students. Students at secondary and tertiary institutions do engage in the use of social media sites. It was observed by the researcher, in Yobe State University the social media sites undergraduate students use for their academic activities may affect their academic performance.

Yobe State Government through its state of emergency on education launch on 1th May, 2019. Efforts were being made by the State Ministry of Education by organising seminars, workshops, and conferences mainly designed for the students at secondary and tertiary levels on the use of social media sites in order to provide and enlighten the students on the benefits and the dangers associated with the use of social media sites in learning related activities.

However, University management in its efforts to improve on the usage of social media sites by the students, the University through tertiary education fund established ultra-modern information and technology centre and provide all the Departments with internet server for the students to have access to the internet so as use social media sites wisely for learning and other academic purposes. It was noticed by the researcher, parents do engage by providing good information on the use of social media sites, and in some instances parents use to monitor the activities children do in the social media sites in order to reduce the dangers and improve on the good side associated with the usage of social media sites.

Academic studies in relation to social media usage have been conducted in Nigeria and other countries, and Yobe State in particular. For instance, Fori (2016), examined the use of social

media sites among students in University of Maiduguri with academic performance. The result showed that most of the users use Facebook, WhatsApp, Instagram and Twitter for chatting and making friends. It also shows that there is no significant effect of social media sites on academic performance of students. In a similar way Junco (2012) examined the relationship between multiple indices of Twitter as a social media site use and academic performance of students in Canberra Nursing College in Liberia and found that, there is significant correlation between the use of Twitter and academic performance of students.

However, Halilu (2014) conducted a study on relationship between Instagram and academic performance among students of Ahmadu Bello University and explored the students' opinions regarding social media sites and its impact on academic performance. The result indicates that most of the students agreed that there is a positive influence of Instagram on academic performance of students. Lamburu (2016), conducted a study on the frequent use of WhatsApp and Facebook sites and students' academic performance with 139 students in College of Education Jalingo. Results showed that, WhatsApp sites have positive impact on academic performance. Furthermore, Adeoye (2018) studied Perceived Influence of the use of YouTube on the Academic Performance of Undergraduate Students in Babcock University Ilesha-Remo, Ogun State Nigeria and found a positive influence between the use of YouTube, Wikipedia and Academic Performance of students.

Despite all the efforts made by the Government, University management, parents, and researchers. As such, there is still a need to explore more on the relationship between social media usage and academic performance of undergraduate students of Yobe State University Damaturu. This research was designed to add greater clarity to previous research conducted and filled the research gaps of geographical area, design, population and sample, instrument as well as methods of data analysis. Five categories of social media sites which comprises: Twitter, Instagram, Facebook, WhatsApp and YouTube were used in this study because they were commonly used among the students taking part in this research. It is therefore, this study was intended to examine the relationship between social media usage and academic performance of undergraduate students of Yobe State University, Damaturu, Nigeria.

Theories considered appropriate for this study were: *Social Learning Theory of Albert Bandura (1977)* and *Student Involvement Theory of Alexander William Astin (1984)*. The two theories

answered two aspects of the study, that is, social media usage and academic performance of students. Social learning theory gives insights to this study that, learning outcome can be influenced by what students do observe on Facebook, WhatsApp, Twitter, Instagram and YouTube. Student involvement theory is found to be relevant to this study looking at the scope of engagement of students in the contemporary Web 2.0 literacy of the 21st Century vis-à-vis their concurrent involvement in studying and the relationship between the two could spell out in terms of academic performance.

Objectives of the Study

The objectives of this study were to determine:

- 1 types of social media sites commonly used by undergraduate students of Yobe State University Damaturu;
- 2 relationship between the use of Twitter and academic performance of undergraduate students of Yobe State University Damaturu;
- 3 relationship between the use of Instagram and academic performance of undergraduate students of Yobe State University Damaturu;
- 4 relationship between the use of Facebook and academic performance of undergraduate students of Yobe State University Damaturu;
- 5 relationship between the use of WhatsApp and academic performance of undergraduate students of Yobe State University Damaturu and
- 6 relationship between the use of YouTube and academic performance of undergraduate students of Yobe State University Damaturu.

Research Question

The following research question guided the study

1. What type of social media sites do undergraduate students of Yobe State University commonly use?

Hypotheses

The following null hypotheses were generated by the researcher and tested at 0.05 level of significance:

- H0₁:** There is no significant relationship between the use of Twitter and academic performance of undergraduate students of Yobe State University Damaturu.
- H0₂:** There is no significant relationship between the use of Instagram and academic performance of undergraduate students of Yobe State University Damaturu.
- H0₃:** There is no significant relationship between the use of Facebook and academic performance of undergraduate students of Yobe State University Damaturu.
- H0₄:** There is no significant relationship between the use of WhatsApp and academic performance of undergraduate students of Yobe State University Damaturu.
- H0₅:** There is no significant relationship between the use of YouTube and academic performance of undergraduate students of Yobe State University Damaturu.

Methodology

This study employed correlation and survey research designs. Correlation was adopted because the study intends to determine whether there is a relationship between the social media usage and students' academic performance.

A correlation research design is aim at discovering the relationship between two or more variables (Lammers & Badia, 2005). On the other hand, survey research design is relevant to this study because it involved sampling of opinions of undergraduate students from different Departments of Yobe State University.

The population of the study was **5,321** undergraduate students of Yobe State University. Stratified sampling and systematic random samplings were employed for this study. Research Advisors (2006) Table of determine sample size was used to select **278** participants.

The instrument used to collect data for the study was social media usage questionnaire titled Social Media Usage Questionnaire (**SMUQ**). Proforma was designed and used to degenerate the students' academic performance. The questionnaire was given to seven professionals for content validation and the validity index was found at 0.7. Cronbach's Alpha reliability test was used to determine the reliability coefficient of the instrument. The reliability coefficient of the instrument was found around 0.86. As such, the instrument was reliable for use.

Descriptive statistics of Mean, standard deviation, frequency counts and percentages were used to answer the research question. Pearson Product Moment Correlation (PPMC) was used to analyse hypotheses on relationship at 0.05 level of significance.

Results

The research targeted a sample of 278 participants, but due to the error from the students while providing the I. D number, mistakes while ticking the options only 221 filled the questionnaires correctly and returned them which gave a total of 80% and was considered enough to adequately represent the population targeted by the researcher.

Research Question. What types of social media sites do undergraduate students of Yobe State University commonly use?

Table 1: Frequency Counts and Percentages of Types of Social Media Sites Commonly Used by Undergraduate Students of Yobe State University Damaturu

N	Twitter	Instagram	Facebook	WhatsApp	YouTube	Wikipedia
Users	89(40.3%)	105(47.5%)	163(73.8%)	193(87.3%)	84(38%)	72(32.6%)
Non-Users	132(59.7%)	116(52.5%)	58(26.2%)	28(12.7%)	137(62%)	149(67.4%)
Total Sample	221	221	221	221	221	221

Source: Field Survey, 2022.

Table 1 indicates that, WhatsApp 193(87.3%) is the social media sites commonly used most by undergraduate students of Yobe State University Damaturu, followed by Facebook 163(73.8%), Instagram 105(47.5%), Twitter 89(40.3%), YouTube 84(38%), and Wikipedia 72(32.6%). This means that WhatsApp is the most commonly used social media sites and the Wikipedia is the least social media sites commonly used by the students.

Table 2: Correlation Between the use of Social Media Sites and Academic Performance of Undergraduate Students of Yobe State University Damaturu

Variables	Mean	Std. Dev.	R	P-Value	Decision
Academic Performance	2.8964	.67297	.081	.364	Not sig.
Twitter	45.8527	11.92431			
Academic Performance	2.8964	.67297	.015	.868	Not sig.
Instagram	45.4109	10.96700			
Academic Performance	2.8964	.67297	.102	.021	sig.
Facebook	45.5810	10.09382			
Academic Performance	2.8964	.67297	.133	.023	sig.
WhatsApp	47.4421	9.39798			
Academic Performance	2.8964	.67297	.049	.631	Not sig.
YouTube	43.1667	9.77781			
Academic Performance	2.8964	.67297	.050	.631	Not sig.
Wikipedia	42.4271	10.09090			

N=221

Significant at 0.01 and 0.05 (2 tailed)

Table 2 shows that, there was no significant correlation between social media sites use by undergraduate students of Yobe State University Damaturu and academic performance. Table reveals that, calculated $r =$ values were less than the $P =$ values Twitter ($r = .081$, $P = .364$), Instagram ($r = .015$, $P = .868$), Facebook ($r = .102$, $P = .021$), WhatsApp ($r = .133$, $P = .023$), YouTube ($r = .049$, $P = .631$), Wiki ($r = .050$, $P = .631$) and social Media sites ($r = .017$, $P = .801$).

The results indicates insignificant correlation between the Twitter, Instagram, YouTube, Wikipedia and academic performance of students, while; there is a significant positive correlation between Facebook, WhatsApp and academic performance. It is therefore, the null hypothesis which stated that, there is no significant relationship between the use of social media sites and academic performance of students was retained.

Discussion

Findings revealed that, the most commonly use social media sites by undergraduate students of Yobe State University Damaturu were WhatsApp and Facebook, followed by Twitter, Instagram, YouTube and Wikipedia. This corroborated with the finding of Fori (2016), which shows that commonly use social media sites by undergraduates, include WhatsApp, Facebook, Instagram, Twitter, Wikipedia, Google Plus , Snap chat and Skype.

There was no significant correlation between the use of Twitter and performance of undergraduate students of Yobe State University Damaturu. This finding disagreed with finding of Junco (2012), which states that, there was a positive correlation between the use of Twitter and academic performance of students. In addition, there was no significant correlation between the use of Instagram and performance of undergraduate students of Yobe State University Damaturu. This finding was contrary to the finding of a study conducted by Halilu (2014), which in his experiment found that the experimental group had a significantly greater increase in engagement than the control group, as well as higher semester grade point averages.

However, there was significant correlation between the use of Facebook and performance of undergraduate students of Yobe State University Damaturu. This finding was corroborated to the finding of Lamburu (2016), which indicated “more time on Facebook equals slightly higher grades”. In his study, the average Facebook user had a CGPA of 3.5 to 3.7, while the non-Facebook user had a CGPA of 2.5 - 3.0.

Findings showed that, there was significant correlation between the use of WhatsApp and performance of undergraduate students of Yobe State University Damaturu. This finding agreed with the finding of Lamburu (2016), which shows that WhatsApp media participation by students positively affected the students’ performance. Lastly the findings revealed that, there was no significant correlation between the use of YouTube and performance of undergraduate students of Yobe State University Damaturu. This finding was contrary to the findings of

Adeoye (2018), which provides that, there was positive influence of YouTube use on students' performance in phonetics and phonology.

Conclusion

This study was carried out to determine the relationship between social media usage and academic performance of undergraduate students of Yobe State University Damaturu. The use of social media in an academic course can connect students and encourage them to create a virtual community that lead to a better content learning. Social media provides an opportunity for students to expand their learning environment, explore the new resources, and be used as tool to facilitate the learning communities by encouraging collaboration and communication.

Based on the findings of this study, it can be concluded that the social media sites WhatsApp and Facebook were the most commonly used by the students and thus do relate to their academic performance. The study showed that teasing out students' use of social media sites and relate it to their academic performance is a better approach to studying the relationship between the students' use of social media and academic performance.

Recommendations

The following recommendations were hereby put forward as a result of the findings of the study;

1. Since WhatsApp and Facebook were the most commonly used social media sites, followed by Instagram, Twitter, YouTube and Wikipedia. It is recommended that students should be guide to improve on the use of other social media sites in relation to their academic activities.
2. The Departments through the students' adviser desk should monitor students' use of Twitter to the end that it will boost their academic performance.
3. The research suggests that the University administration should train students through workshop and seminars on better use of the Instagram so as to maximize the use of Instagram as a tool that would improve their academic performance.
4. University management through lecturer assist should train students on better use of the Facebook as an aid to learning and to harness the students on how to minimize time spend on chatting and other irrelevant engagements.
5. Efforts should be made by the Faculties and Departments to enlighten the students on the benefits of WhatsApp as an aid to learning and to harness the students on how to minimize time spend on chatting and other irrelevant engagements.

6. The research suggests that the University administration with the help of the department should create an awareness campaign on the use of YouTube videos for the students' academic purposes.

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RELATIONSHIP BETWEEN LEADERSHIPS' STYLES AND TEACHERS' JOB PERFORMANCE IN SENIOR SECONDARY SCHOOLS, BORNO STATE, NIGERIA

BY

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ABSTRACT

This study examined the Relationship between Principals' leadership styles and Teachers' Job Performance in Senior Secondary Schools Borno State, Nigeria. The study had two objectives and two hypotheses were tested at 0.05 level of significance. Correlation research design was used to conduct the study. The population for the study was made up of two thousand, six hundred and forty five (2,645) teachers and principals in Borno State. Stratified random sampling technique was used to select the sample from the population. In all, 23 principals (27% of 85 secondary schools principals) and 529 teachers (20% of 2,645 teachers) were sampled for the study. Self designed questionnaire was developed and validated by experts in administration and planning as well as measurement and evaluation unit, University of Maiduguri. The logical validity of index was 0.75. The instrument was also pilot tested using test re-test method and was analyzed and found reliable at 0.78 reliability index. Data were analyzed using Pearson Product Moment Correlation Coefficient (PPMC) to test the hypotheses at 0.05 level of significance. The study revealed that there was significant relationship between autocratic, democratic and teachers' job performance in Borno State Senior Secondary Schools. Based on these findings, the following recommendations were made; that Principals should adopt democratic leadership style because this leadership style has high positive relationship with job performance of teachers and Principals should adopt a mixture of autocratic and democratic leadership styles to promote better job performance of the teachers

Keywords: Relationship, Principals' Leadership and Teachers' Job Performance

Introduction

The success of an organization whether formal or informal depends on the ways and manner in which a leader operates, to succeed a leader has to adopt a particular leadership style or blending of styles together to achieve the aims and the objectives of that organization. An effective leadership style leads to achievement of school goals and objectives. Therefore, the success of any school depends on the ability of the principal and his or her leadership style; he is the leader of teachers and students of the school. A school is an institution established for the purpose of teaching and learning. It is a place where some pupils and students are refined through formal education. The successful coordination of instructional and administrative tasks within the school system depends largely on human factors. In the secondary school system there are two categories of human factors that affect educational services – the teaching and non-teaching staff. Secondary school principals are the most senior members of the teaching staff that are appointed to pilot the affairs of the school by virtue of their qualifications, intelligence or knowledge and teaching experience. They are the chief executive officers or administrators that occupy the apex position in the organizational structure of the school. They could also be regarded as the line officers responsible for making major decisions on activities necessary for the achievement of the school goals (Bass, 2017).

In Nigeria and Borno state in particular the desired level of involvement of principal leadership in the overall health and success of schools are nonnegotiable and have been consistently referenced in the Nigerian National Policy on Education documents (Federal Government of Nigeria, 2014). In Nigeria's National Policy on Education, it is clearly stated that the school principal is expected, as part of his/her statutory contribution to the health and success of the school, to carry out a number of administrative functions, amongst which is the supervision of instruction on a regular basis. In performing this particular function, the principal is to aid and guide the teachers to translate the provisions of the National Policy on Education (Federal Republic of Nigeria, 2014) and the content of the curriculum or syllabus into workable lessons for learning (Adegbesan, 2015). Peoples' perception of principals in the course of discharging their statutory duties has largely informed a rise in the variety of names and titles they are variedly identified within different quarters, including director, instructional supervisor, adviser, public relations officer, curriculum director, chief education officer, school leader, among others.

How best, these appellations tend to point to something more about school principals; that is, they are not just “titular heads” but important administrators occupying a position of leadership (Clark, 2007).

Principals’ Leadership Style is the ways and manners by which schools are administered using a particular leadership style in senior secondary schools in Borno State, which are limited to autocratic, democratic and laissez faire. According to Lawal (2009), the style of leadership is a method employed by the leader in governing his people to achieved organizational objectives. All leaders whether in formal or informal organization employ a method in dealing with the people to achieve the aims and objectives of such organization. The type of style used by a leader to govern his/her people depends on the situation prevailing at that particular point in time. Omojola (2019), posits that, the method or style of leadership a manager chooses do influence his effectiveness as a leader, without an appropriate leadership style, organizational growth and development, (Education institutions inclusive) would suffer and the teachers may feel resentful, aggressive, insecure and dissatisfied. Leadership styles range from autocratic, democratic, Laissez-faire, transactional, pseudo-democratic, transformational leadership style among other.

Adeyemi (2004), and Ajayi and Ayodele (2007), identified autocratic, democratic and laissez faire leaderships styles as types of leadership that could be used to achieve organizational goals. The scholars argued further that, the autocratic leader is authoritarian in nature; here the leader directs group members on the way things should be done, this leadership style imposes decision on others. The leader makes the decisions and simply dictates what others must do. He does not encourage input by others; he is a tough battler and a strict disciplinarian. The essential strategies of autocratic leader style include manpower planning, formulation of sound personnel politics, managerial training for managers, staff development and other routine staff and students’ welfare promotion. All powers are concentrated in his hand such that when he is away, it would be difficult for the staff to know what to do. Power and decision-making reside absolutely in the autocratic leader. On the other hand, the democratic type of leadership emphasizes group and leader participation in the making of policies. It enables the principals to help the teachers clarify instructional goals and work collaboratively; to improve teaching and learning in order to meet those goals. Principals need to help teachers shift their focus from what they are teaching to what students are learning. The role of instructional leader helps the school to maintain a focus on why

the school exists, and that is to help all students learn (Blass & Riggio, 2006 & Smylie, 2010). Shifting the focus of instruction from teaching to learning; forming collaborative structures and processes school to work together to improve instruction; and ensuring that professional development is on-going and focused toward schools goals, are among the key tasks that principals must perform to be effective instructional leaders in a professional learning community (Lunenburg & Irby, 2006). Laissez-faire leadership style on the other hand allows free contributions of ideas or opinions without interference by the leader. In this case, subordinates develop and maintain individual standards of performance, and correct themselves from their mistakes as need arises. Obi (2003), argued that, such leadership style predisposes to unproductive activities very often and could be detrimental to school welfare.

Henman (2019), identified an authoritarian approach which relies on legitimate, coercive, and reward power to influence others. Sometimes these leaders are aggressive, parental, and dictatorial in their dealings with the group. However, while these approaches often work well in crisis situations, a constant use of this style can cause followers to be apathetic and unproductive when the leaders' back is turned. In other words, when a leader constantly sees authoritarian leadership, the group members fail to develop a sense of ownership of their work. They will work if they are watched, but perhaps since they do not feel a part of the decision making process, they are not motivated to do more than absolutely necessary. Also, they may become accustomed to the parental guidance of an authoritarian leader and rely on it for motivation. Marshall (2015), indicated that directive Leadership increases follower's job satisfaction. This brings structure and direction, which is particularly relevant if the work environment is not highly structured or if the organization is going through transformational change. It clarifies the follower's role. This results in a higher performance and productivity from followers and improved departmental effectiveness. When directive leadership is combined with supportive leadership, it reduces stress and burn-out levels as well as turnover amongst followers. It increases group cohesion, a strong 'will' feeling amongst members. Felt-closeness is often reported amongst group members. Based on clear expectations, followers develop a stronger focus and motivation to achieve the organization's mission and vision. However, autocratic leadership style is more appropriate in a situation of emergence, unwillingness of teachers to work, laziness on the part of subordinates among others. In other to get thing done the leader has

to applied co-archive, force and power on their subordinates to ensure the organizational objective is achieved.

Democratic leadership style is characterized by consultation, empowerment, joint decision-making and power sharing (Clark, 2007), and should not be considered a sign of weakness. Participative Leadership style involves a leader who invites subordinates to share in the decision making. According to Liu (2012), a participative leader consults with subordinates, seeks their ideas and opinions and integrates their input into group organizational decisions. This style, is usually one of the most effective and leads to higher productivity, due to better contributions from the group members and increases group morale. Mba (2004), observed that the democratic style of leadership emphasizes group and leader participation in the making of policies. Decisions about organizational matters are arrived after consultation and communication with various people in the organization. The leader attempts as much as possible to make each individual feel that he is an important member of the organization. Communication is multidirectional while ideas are exchanged between employees and the leader. In this style of leadership, a high degree of staff morale is always enhanced. Goldman (2002), observed that leaders using a democratic style of leadership build consensus through participation, but these leaders also expect a higher level of excellence and self-direction; such leaders have time to listen and share ideas with their followers. They also tend to be more flexible and are responsive to one's needs. They are able to motivate teachers to participate in decision-making and are respectful.

Laissez-faire leadership style occurs when there is an absence or avoidance of leadership. In this case, decisions are delayed and reward for involvement absent. No attempt is made to motivate followers or to recognize and satisfy their needs (Bass & Avolio, 2017). Laissez-faire leadership is not the best leadership style to use in the school system because complete delegation without follow-up mechanisms may create performance problems, which are likely to affect the job performance of teachers.

Okoji (2016), conducted a study titled "Relationship between secondary school principals' leadership style and teachers' job performance in selected rural communities of Ondo State, Nigeria". The results showed that there was a significant relationship between autocratic

leadership style and teachers' job performance ($r = .314$, $n = 300$, $p < .01$). A significant relationship also existed between democratic leadership style and teachers' job performance ($r = .118$, $n = 300$, $p < .05$). Considering the findings of this study, a mixture of autocratic and democratic leadership styles by principals would promote better job performance among teachers.

Peterkin (2006), described participative or democratic leadership as that type of leadership style in which members of the group take a more participative role in decision making. Researchers have found that this leadership style is usually one of the most effective and leads to higher productivity, better contributions from group members and increased group morale. Peterkin further explained that participative leadership work best in situations where group members are skilled and eager to share their knowledge. It is also important to have plenty of time to allow people to contribute, develop a plan and then vote on the best course of action. This style is needed in dynamic and rapidly changing environments where very little can be taken as a constant. In these fast moving organizations (education inclusive), every option for improvement has to be considered to keep the group from falling out of date.

Teachers' job performance could be described as the duties accomplished by a teacher at a particular period in the school system in achieving organizational goals. Principals can encourage effective performance of their teachers by identifying their personal and instructional needs and trying to satisfy or meeting them. How effective the principal is in performing these roles has been a matter of concern to many educationists (Aghenta, 2000 & Ige, 2001). Research shows that many principals do not consider their leadership styles as crucial in the teachers' performance. Hence some of them seem to find it difficult to effectively administer their schools (Adeyemi, 2004). It is argued that effective leadership has a positive influence on the teachers' performance (Money, 2017).

However, some principals are not effective in their leadership styles because they do not involve the teachers in major decision making. In highly performing schools, which have reversed the trend of poor performance and declining achievement, the head teacher sets the pace leading and motivating pupils and staff to perform to their highest potential (Bush & Onduro, 2006). The concern of the study was to determine the best style of leadership out of autocratic and

democratic that would enhance the teachers' job performance in Senior Secondary Schools, in Borno State

Objectives of the Study

The objectives of the study were to determine the;

1. relationship between autocratic leadership style and teachers' job performance in Senior Secondary Schools in Borno State
2. relationship between democratic leadership style and teachers' job performance in Senior Secondary Schools in Borno State

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

Ho₁: there is no correlation between autocratic principals' leadership style and teachers' job performance in senior secondary schools in the State.

Ho₂: there is no correlation between democratic principals' leadership style and teachers' job performance in senior secondary schools in Borno State, Nigeria

Methodology

Correlation research design was used to conduct the study. The population for the study was made up of two thousand, six hundred and forty five (2,645) teachers and principals in Borno State. Stratified random sampling technique was used to select the sample from the population. In all, 23 principals (27% of 85 secondary schools principals) and 529 teachers (20% of 2,645 teachers) were sampled for the study. Self designed questionnaire was developed and validated by experts in administration and planning as well as measurement and evaluation unit, University of Maiduguri. The logical validity of index was 0.75. The instrument was also pilot tested using test re-test method and was analyzed and found reliable at 0.78 reliability index. Data were analyzed using Pearson Product Moment Correlation Coefficient (PPMC) to test the hypotheses at 0.05 level of significance.

Results

The null hypotheses on the relationship between Principals’ Leadership Styles and Teachers’ Job Performance in Senior Secondary Schools in Borno State were tested using the Pearson Product Moment Correlation Coefficient (PPMC). The results obtained from the hypotheses tested are presented in the tables bellow:

H₀₁: there is no correlation between autocratic principals’ leadership style and teachers’ job performance in senior secondary schools in the State.

Table 1: Summary of the Pearson product moment correlation (PPMC) on autocratic principals’ sleadership style and teachers’ job performance in Senior Secondary Schools Borno State

Variables	Mean	Std. Deviation	Df N	R	P-Value Decision
teachers’ job performance	43.5978	3.82340	552	0.423**	0.004 Rejected
autocratic principals’ leadership style	25.5000	1.11905	552		

(N= 552, df=550, p<0.05, r_{-calc}= 0.423) Key * significant at 0.05.

Table 1 indicates that there is significant relationship between autocratic principals’ leadership style and teachers’ job performance in Senior Secondary School in Borno State. As r=0.423, teachers’ job performance has the mean of 43.5978, Standard Deviation of 3.82340. Also, autocratic principals’ leadership style has the mean of 25.5000, Standard Deviation of 1.11905. Therefore, since the level of significant 0.05 is greater than the p-value, the null hypothesis is rejected. It implies that there is indeed a moderate relationship in the stated hypothesis which stated that, there is no correlation between autocratic principals’ leadership style and teachers’ job performance in Senior Secondary School in Borno State.

H₀₂: there is no correlation between democratic principals’ leadership style and teachers’ job performance in senior secondary schools in Borno State, Nigeria

Table 2: Summary of the Pearson product moment correlation (PPMC) on democratic principals' leadership style and teachers' job performance in Senior Secondary Schools Borno State

Variables	Mean	Std. Deviation	Df	R	P- Value	Decision
teachers' job performance	43.5978	3.82340	552	0.612**	0.004	Rejected
democratic principals' leadership style	30.1014	2.07146	552			

(N= 552, df=550, $p < 0.05$, $r_{\text{calc}} = 0.612^{**}$) Key * significant at 0.05.

Table 2 indicates that there is significant relationship between democratic principals' leadership style and teachers' job performance in Senior Secondary School in Borno State as $r = 0.612^{**}$. Teachers' job performance has the mean of 43.5978, Standard Deviation of 3.82340. Also, democratic principals' leadership style has the mean of 30.1014, Standard Deviation of 2.07146. Therefore, since the level of significant 0.05 is greater than the p-value the null hypothesis is rejected, which implies that there is indeed a strong (high) relationship in the stated hypothesis which stated that, there is no correlation between democratic principals' leadership style and teachers' job performance in Senior Secondary School in Borno State.

Discussion

It is evident from Table 1 above that; there is significant relationship between autocratic principals' leadership and teachers' job performance in senior secondary schools, Borno State. As $r = 0.423$, at $p < 0.05$ level of significance. Teachers' job performance has the Mean of 43.5978, Standard Deviation of 3.82340. Also principals' leadership style has the Mean of 25.5000, Standard Deviation of 1.11905. This implies that, there was indeed a moderate relationship between autocratic principals' leadership style and teachers' job performance; therefore, the null hypothesis was rejected. This finding is in line with the study carried out by Okoji (2016) who found a significant relationship between autocratic leadership style and teachers' job performance ($p < 0.05$). A significant relationship also existed between democratic leadership style and teachers' job performance ($p < 0.05$). Considering the findings of this study, a mixture of autocratic and democratic leadership styles by principals would promote better job performance among teachers. This study is also in agreement with the previous study of Bhatti, Maitlo, Shaikh, Hasjm and Shaikh (2012). The researchers found that leadership style of authoritarian has a positive impact on job satisfaction and public teachers have high level of job satisfaction rather than private teachers. The findings of this study also support Marshall (2015),

who explained that directive Leadership increases follower's job satisfaction. A significant relationship also existed between autocratic leadership style and teachers' job performance. He stated that autocratic leadership style results in a higher performance and productivity from followers and improved departmental effectiveness. When directive leadership is combined with supportive leadership, it reduces stress and increases performance as well as turnover amongst followers. It increases group cohesion, a strong 'will' feeling amongst members.

Table 2 indicates that there is significant relationship between democratic principals' leadership style and teachers' job performance in Senior Secondary School in Borno State as $r=0.612^{**}$ at $p<0.05$ level of significance. Teachers' job performance has the Mean of 43.5978, Standard Deviation of 3.82340. Also, democratic principals' leadership style has the Mean of 30.1014, Standard Deviation of 2.07146. This implies that there is indeed a strong (high) relationship in the stated hypothesis which stated that, there is no correlation between democratic principals' leadership style and teachers' job performance in Senior Secondary School in Borno State; therefore, the null hypothesis was rejected.

This finding confirmed the study carried out by Bassey (2010), who found that the democratic leaders and motivational behaviour of the principals have a significant effect on job performance of teachers in terms of effective teaching, lesson note preparation, and supervision of co-curricular activities, classroom teaching, students discipline and use of teaching aids. Similarly, the result of this study is also in-line with previous studies conducted by Bendikson (2010) & Hindt (2015). They found that principals' leadership behaviors do significantly impact teacher morale, and student achievement. Additionally, it was found that positive teacher morale and student achievement in the initiative schools influenced positive student behaviors, ultimately reducing student discipline referrals. The study also collaborates with Liu, Luen, Chai and Ling (2014), who studied the effects of principal's leadership styles on teacher organizational commitment among performing schools in Malaysia, they discovered that the most influential leadership style in performing schools is transformational leadership (TF) while nurturing leadership (NT) is perceived to be the most common leadership style by the teachers. The study is also in line with Ibrahim (2015), who sought to determine the appropriate leadership style that could make teachers to be effective in their job productivity and found that among the leadership style, democratic style contributed more to teachers' job productivity than autocratic style. The

findings of this study is also similar to the study of Ejaigu (2013), who investigated influence of leadership styles on teachers' performance in general secondary schools of Gambella region, Ethiopia and found a positive relationship between leadership styles and teachers' job performance.

Conclusion

Based on the findings of this study, it was concluded that autocratic principals' leadership style has a moderate relationship with teachers' job performance while democratic principals' leadership style had high positive relationship with teachers' job performance in Borno State Senior Secondary Schools.

Recommendations

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

1. Principals should adopt democratic leadership style as the study revealed that democratic leadership style has high positive relationship with job performance of teachers.
2. Principals should adopt a mixture of autocratic and democratic leadership styles to promote better job performance among teachers as the study revealed that teachers' job performance was very low.

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GENDER DIFFERENCE BETWEEN SOCIAL MEDIA USAGE AND ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS OF YOBE STATE UNIVERSITY DAMATURU, YOBE STATE, NIGERIA

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ABSTRACT

This study examined gender difference between social media usage and academic performance of undergraduate students of Yobe State University Damaturu. The study was guided by four objectives. Correlation and survey research designs were used in the study. The target Population of the study was 1,056 undergraduate students. Proportionate stratified and systematic random samplings were employed. Research Advisor (2006) Table for determining the sample size was used to select 278 participants. Instrument used to collect data for the study was Social Media Usage and Academic Performance Questionnaire (SMUAAPQ). Questionnaire Items were faced validated by seven professionals. Cronbach's Alpha was applied to determine the reliability of the questionnaire and items were found to be reliable at 0.8. Data was analysed by independent samples t-test. Findings showed that: there was no significant gender difference between the use of Twitter, Instagram, Facebook, WhatsApp and academic performance of undergraduate students. It can be concluded that, gender difference between in the use of twitter, Instagram, Facebook, WhatsApp were not significantly differed with the academic performance of undergraduate students of Yobe State University Damaturu, Nigeria. The study recommends the introduction of guidance and counselling specifically meant for the affairs of social media sites.

Keywords: Gender Difference, Social Media Usage, Undergraduates, Academic Performance

Introduction

Academic performance refers to what the student has learned or what skills the student has learned and is usually measured through assessments like standardised tests, performance assessments and portfolio assessments (Santrock, 2016). Academic Performance refers to how students deal with their studies and how they complete different assignments given to them by their teachers. Academic performance of students is a key feature in education (Rono, 2013). It is considered to be the centre around which the whole education system revolves. Grade Point Average (GPA) is now used by most of the tertiary institutions as a convenient summary measure of the academic performance of their students. The Grade Point Average (GPA) is a better measurement because it provides a greater insight into the relative level of performance of

individuals and different group of students. There are many ways to measure the academic performance either using the Grade Point Average (GPA) or the grade such as A, B, C, D, and F (Kirschner & Karpinski, 2010).

Academic performance of undergraduate students in Yobe State University, is measure and reported according to the 2009 National University Commission (NUC) Benchmark Minimum Academic Standard (BMAS). Today, continuous assessment/end of semester examination performance of students is measured by scores which is translated into Grade Point Average (GPA) in both secondary and tertiary institutions. According to statistics collected from the directorate of academic planning Yobe State University Damaturu, on August, 2021. The data indicated low level of performance of undergraduate students, Yobe State University. Researchers attributed low academic performance to several factors among which are; examination malpractice, test anxiety, lack of guidance, poor teachers qualification, inadequate instructional materials, poor study habit and ineffective classroom instruction among others (Kirschner & Karpinski, 2010). Students at secondary and tertiary institutions do engage in the use of social media sites. It was observed by the researcher, in Yobe State University the social media sites undergraduate students use for their academic activities may affect their academic performance. Efforts have been made by the Yobe State Government, university Management, Parents and community in particular in order to improve the usage of social media sites appropriately by the students.

Academic studies conducted in relation to the gender deference between the use of social media sites and academic performance of undergraduate students have been conducted in Nigeria and different parts of the word. For instance; Tiner (2019) conducted a study titled; gender difference between the usage of Twitter and academic performance of undergraduate students, Lagos State University, Lagos, Nigeria and found that, there was no significant gender difference between the use of Twitter and academic performance of undergraduate students in Class Lecture of Phonetics and Phonology of Lagos State University, Lagos, Nigeria.

Boogart (2016) examined gender difference between the usage of Instagram and academic performance of students in Ohio State College, USA and found that, there was a significant gender difference between the use of Instagram and academic performance of students in Ohio

State College, USA. The results revealed, a significant gender difference between male and female students when compare in the use of Instagram and academic performance of students.

Abdullah (2013) conducted a study on gender difference in the use of Facebook and academic performance of students of Hamad Bin Khalifa University, Doha, Qatar and found that, there was no significant gender difference in the use of Facebook and academic performance of students of Hamad Bin Khalifa University, Doha, Qatar. The results shows that male students perform better than the female students when compare to the use of Facebook as a tool that aid learning.

Nwabueze and Doris (2014) determined the gender difference in the use of WhatsApp and the performance of undergraduate students of University of Africa, Logon, Ghana and found that, there was a significant gender difference in the use of WhatsApp and the performance of undergraduate students of University of African Languages, Logon, Ghana. The results indicated that male students use WhatsApp wisely for academic related purpose than their female counterpart. Despites the efforts of the Government, University management, parents, community and the researchers, there is still a problem of usage of social media sites by different gender of undergraduate student in Yobe State University. Thus the present study was designed to examine the problem and filled in the research gaps of the objectives, design, population and sample, instrumentation, procedures and methods of data analyses. Hence, the current study was established to determine the Gender Difference Between Social Media Usage and Academic Performance of Undergraduate Students of Yobe State University Damaturu, Yobe State, Nigeria.

Undergraduate students in Yobe State University, as observed by the researcher, majority of the students were frequently online in various social media activities and students spend more time online to the detriment of their studies which leads to low academic performance. It is common to see the students busy chatting while lecture is on, the students are not engaging in doing their assignments because of chatting, coming late to the lecture, spending the whole night on chatting as well as not focusing on total academic activities due to the busy chatting on social media sites and these may affect the students' academic performance.

It is therefore of great importance to explore some of the trending issues facing students' academic performance as a result of social media usage. Students at all levels of learning now

have divided attention to studies, as a result of available opportunities to be harnessed from social media. Whether these opportunities promote studies is a question that needs to be answered. Thus, the problem this study examined was Gender Difference between Social Media Usage and Academic Performance of undergraduate students of Yobe State University Damaturu, Nigeria.

Objectives of the Study

The objectives of this study were to determine:

- 1 gender difference in the use of Twitter and academic performance of undergraduate students of Yobe State University Damaturu;
- 2 gender difference in the use of Instagram and academic performance of undergraduate students of Yobe State University Damaturu;
- 3 gender difference in the use of Facebook and academic performance of students in Yobe State University Damaturu;
- 4 gender difference in the use of WhatsApp and academic performance of undergraduate students of Yobe State University Damaturu and

Hypotheses

The following null hypotheses were generated by the researcher and tested at 0.05 level of significance.

- H0₁:** there is no significant gender difference in the use of Twitter and academic performance of undergraduate students of Yobe State University Damaturu;
- H0₂:** there is no significant gender difference in the use of Instagram and academic performance of undergraduate students of Yobe State University Damaturu;
- H0₃:** there is no significant gender difference in the use of Facebook and academic performance of undergraduate students of Yobe State University Damaturu; and
- H0₄:** there is no significant gender difference in the use of WhatsApp and academic performance of undergraduate students of Yobe State University Damaturu, Nigeria.

Theories considered appropriate for this study were: Social Learning Theory of Albert Bandura (1977) and Student Involvement Theory of Alexander William Astin (1984). The two theories answered two aspects of the study, that is, social media usage and academic performance of students. Social Learning Theory (SLT) explains how media influence people's thinking, actions and behaviours. Social learning theory explains how children learn from direct experience or from observation and modeling. Social learning theory gives insights to this study that learning outcome can be influenced by what students do observe on Twitter, Instagram, Facebook and WhatsApp. Students Involvement Theory was developed by Alexander William Astin in 1984, the theory highlights the influences of mediating factors between the personal and psycho-social amount of commitments that students give to attain desired learning outcomes. Astin (1984) defines students' involvement as, "the amount of physical and psychological energy that the student devotes to the academic experience".

Methodology

This study employed correlation and survey research designs. Correlation was adopted because the study intends to determine whether there is a relationship between the social media usage and students' academic performance. A correlation research design is aim at discovering the relationship between two or more variables (Lammers & Badia, 2005). The population of the study includes **603** male and **456** female students. Therefore, the target population of this study was **1,056** undergraduate students of Yobe State University. Stratified sampling and systematic random samplings were employed for this study. Research Advisors (2006) Table of determine sample size was used to select **278** participants. The instrument used to collect data for the study was Social media usage and Academic Performance of Students Questionnaire (**SMUAAPQ**). Proforma was designed and used to degenerate the students' academic performance for the 2022/2023 academic session. The questionnaire was given to seven professionals for content validation and the validity index was found at 0.7. Cronbach's Alpha reliability test was used to determine the reliability coefficient of the instrument. The reliability coefficient of the instrument was found around 0.86. As such, the instrument was reliable for use. Interracial statistics of independent samples t-test was used to analyse significant gender differences at 0.05 level of significance.

Results

The research targeted a sample of 278 participants, but due to the error from the students while providing the I. D number, mistakes while ticking the options only 221 filled the questionnaires correctly and returned them which gave a total of 80% and was considered enough to adequately represent the population targeted by the researcher.

Table 2: Gender Difference Between the use of Twitter, Instagram, Facebook, WhatsApp, YouTube and Academic Performance of Undergraduate Students of Yobe State University Damaturu

	Gender	N	Mean	SD	Df	t	P.Value	Decision
Twitter	Male	143	42.62	11.10	218	.102	.849	Not sig.
	Female	76	84.72	11.7				
Instagram	Male	143	45.33	9.4	218	.112	.812	Not sig.
	Female	76	115.49	10.3				
Facebook	Male	104	64.72	9.6	160	.168	.768	Not sig.
	Female	57	72.22	8.2				
WhatsApp	Male	143	62.88	9.2	218	.101	.603	Not sig.
	Female	76	66.311	10.8				

Significant at 0.01 and 0.05 (2 tailed)

Table 2 reveals that, there was no significant gender difference between male and female students in the use of Twitter, Instagram, Facebook, WhatsApp and academic performance. It shows shows that, Twitter (DF=218, t=102, P=.849); Instagram (DF=218, t=112, P=.812); Facebook (DF=218, t=112, P=.768); and WhatsApp (DF=128, t=101, P=.603). As shown in Table 2, mean scores of female students are greater than the mean scores of male students. This means that the mean differences was in Favour of female students. The results were found to be insignificant at 0.05 level of significance. Therefore, the null hypotheses which stated that, there is no significant gender difference between the use of Twitter, Instagram, Facebook, WhatsApp and academic performance of undergraduate students of Yobe State University were retained.

Summary of Findings

The following were the summary of the findings;

1. There was no significant gender difference between the use of Twitter and performance of undergraduate students of Yobe State University Damaturu. Nigeria.
2. There was no significant gender difference between the use of Instagram and performance of undergraduate students of Yobe State University Damaturu, Nigeria
3. There was significant gender difference between the use of Facebook and performance of undergraduate students of Yobe State University Damaturu, Nigeria.
4. There was no significant gender difference between the use of WhatsApp and performance of undergraduate students of Yobe State University Damaturu, Nigeria.

Discussion

This study examined gender difference between social media usage and academic performance of undergraduate students of Yobe State University, Damaturu. Some of the results of findings of the present study were corroborated with the findings of the previous studies conducted, while others were contrary to the findings of the previous studies.

It was found that, there was no significant gender difference between the use of Twitter and academic performance of undergraduate students of Yobe State University Damaturu. This indicates that, there was no difference between the performance of male and female students when compare to the usage of Twitter. This finding was agrees with the finding of Tiner (2019), which reported that levels of Twitter usage of male students were significantly the same with females in class lecture of Phonetics and Phonology.

It also was found that, there was no significant gender difference between the use of Instagram and academic performance of undergraduate students in Yobe State University Damaturu. The results revealed, no significant gender difference between male and female students when compare in the use of Instagram and academic performance of students. This finding also disagrees with the results from Boogart (2016), which reported that females scored significantly higher only in the reasons for using Instagram, this being the mechanics of spending time on studies, interaction and leisure.

However, it was found that, there was no significant gender difference in the use of Facebook and academic performance of undergraduate students of Yobe State University Damaturu. The

results shows that male and female students perform better when compare to the use of Facebook as a tool that aid learning. This finding was contrary with the finding of a research conducted by Abdullah (2013), and found out that males used Facebook sites positively than their female students.

It was also found that, there was no significant gender difference in the use of WhatsApp and the performance of undergraduate students of Yobe State University Damaturu. The results indicated that male and female students use WhatsApp wisely for academic related purpose. This finding disagrees with the finding of Nwabueze and Doris (2014), which found out that male students visit WhatsApp, than females and for different reasons. For example, to look for a job and life partners. Most students also visit these sites to relate to their peers and classmates, and for communication as well as entertainment purposes.

Conclusion

The focus of this research is to determine the gender difference between social media usage and academic performance of undergraduate students in Yobe State University Damaturu. Comprehensive theories and literature reviewed that are related to the study were also discussed. Based on the findings of the study, it can be concluded that the gender difference between the use of twitter, Instagram, Facebook, WhatsApp were not significantly differed and thus do not relate with the academic performance of undergraduate students of Yobe State University Damaturu, Nigeria.

Recommendations

The following recommendations were hereby put forward as a result of the findings of the study;

1. The research recommended that, the management of Yobe State University should organize seminars, conferences and workshops for both male and female students on the usefulness of Twitter and how to manage time in order to better the achievement of students in their academics.
2. The researcher suggests that male and female students should be encouraged to use Instagram for learning and other educational purposes.
3. Male and female students should be guide on better use of Facebook for academic related purposes.

4. The research also suggests that male and female students should be enlighten on how to use WhatsApp for the improvement of academic performance.

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**EFFECTS OF FLIPPED LEARNING STRATEGY ON STUDENTS' PERFORMANCE
ON UNDER GRADUATE STUDENTS IN EDUCATIONAL FOUNDATIONS,
ADAMAWA STATE UNIVERSITY, MUBI NIGERIA**

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ABSTRACT

The research work studied the Effects of Flipped Learning Strategy on Students' Performance on Under Graduate Students in Educational Foundations, Adamawa State University, Mubi Nigeria. It adopted Quasi-experimental research design, two intact classes were used, which warrant for pre-test, post-test and non-equivalent control group design, the study used two academic sessions 2020/2021 and 2022/2023. In the study both experimental and control classes were tested twice (pre-/post-tests) to know the level of their understanding in making valid conclusion. The population of the study was one thousand one hundred and ninety-eight (1198) for both two academic sessions, while the sample size was sixty-eight (68), in 2020/2021 while in 2022/2023 the sample size was eighty-four (84). However, 2020/2021 academic session stands as (Experimental), while in 2022/2023 academic session stands as (Control). The results revealed that flipped learning Strategy had significant effect on students' performance, therefore, two recommendations were made as; flipped learning strategy should be adopted more especially in higher institution, since it was found it have significant effect on students' performance. Also, curriculum planners should consider it while planning, policy makers, stakeholder, Non-governmental organisations among others should contribute immensely in providing equipment for integrating the strategy into learning institutions.

Keyword: Flipped classroom, academic Performance, Learning strategy, Educational Foundations

Introduction

Education is the key to every success and development for human sustainability and curbing of security issues more especially in a developing nation like Nigeria. So, it is compulsory for developing countries to stand up and find ways to make their educational section function well, having a functional educational institution can build the future for coming generation, having a good future generation can tackle so many issues either natural and human made disasters such; as Covid 19, insurgency, kidnapping, banditry, among others. In this regard, one among the ways to make functional and sounded educational sector is through imbibing technology into classroom settings.

Consequently, with the prevalent use of technology, computers and other devices, great improvements have been achieved in accessing and producing information (Usman and Umar, 2021). Education is a constantly changing and evolving field to meet the needs and expectations of parents, students and other stakeholders, using or integrating technology in classroom it is inevitable, because it develops and change in the life of society especially, with the rapid increase in natural and human disasters. Changes in information and communication technologies have also changed the qualifications and abilities expected from people in the current information age (Didem and Selçuk, 2018).

Moreover, Didem and Selçuk (2018) have stated that in the 21st century, named as the information age with changes encountered in science and technology, people are expected to be active in creating and interpreting knowledge rather than directly obtaining information presented and needing to be directed. It is quite important for people to acquire these abilities named as 21st century skills (Romiszowski, cited in Didem and Selçuk, 2018). Now, educational institutions also attempt to encourage individuals to think, criticise, know how to acquire knowledge, and have these skills, and thus develop curricula in this respect (Seferoglu and Akbiyik, 2006).

Similarly, things in society are dynamic as well as in the curricula; teacher and student roles have been changed to promote the learning of these 21st century skills. Students should actively participate in the knowledge acquisition process rather than being passive listeners; although teachers should take a counsellor role and direct students in this process. With this it is necessary to develop new strategies and pedagogical approaches that accommodate learners within and outside institution of learning this approach none but flipped learning approaches so that expected goal would be achieved through education.

Therefore, using and employing technology will improve the quality of teaching and learning to contribute to quality and sustainable education. Over the years this pedagogical approach has developed quite a bit; however, the scientific literature in physical education is still limited. According Naimie, Siraj, Abuzaid and Shagholi (2010), the most accurate and successful learning environments are up-to-date in the twenty-first century developments and the axis of information age, and suggestions should always be made to develop learning environments via traditional or internet learning.

Flipped learning has been a teaching strategy at the university level since the early 1990s originating with Erik Mazur, a physics professor at Harvard University (Gillett, Moore, and Steele, 2014). The professor incorporated flipped learning when requiring students to research articles before class the next day. Since then, technology has been evolving, such as the Internet, since the origination in the 1990s, therefore teachers are able to do more with flipped learning, such as video record, audio record or upload these items into learning management systems (Ng, 2014).

Flipped learning strategy has become one of the latest learning methods in recent years and it requires technology use. Although, it is not a new educational strategy, it has gained popularity with technology use in education (Jensen, Kummer, and Godoy, 2015). The flipped learning strategy gives students the opportunity to learn course concepts outside the classroom environment with online educational materials such as video, film and voice so that classroom time is used for active learning such as problem solving and practical applications (Bergmann and Sams, 2012). This strategy, whereby students learn the theoretical part of the course at home before class, allocates classroom time for active learning practices such as question-answer, discussion and problem solving. In this class, students take responsibility for their own learning and progress at their own speed (Davies, Dean, and Ball, 2013). Students fulfil independent and active learning by accessing the learning environments presented through the Internet whenever and wherever they want (Baker, 2000).

According to Kriengkrai (2017) stated that, the flipped learning approach is an alternative instructional approach where the direct instruction during class time and homework are reversed. The instructional materials which contain content of one particular unit are introduced and viewed by the learners at home before the class time. In this strategy it is highly emphasising in homework such as exercises, projects or class discussions are done during class time. Also, the video created by the teacher and posted online or selected from online resources or available commercial materials is the main tool in flipped classroom. (Bergmann and Sams, 2012; Davies, Dean and Ball, 2013; Driscoll, 2012; Green, 2012; Jacot, Noren, and Berge, 2014; Strayer, 2007, 2012; Tucker, 2012).

Therefore, the researchers aimed at probing the Effects of Flipped Learning approach on undergraduate students' performance in department of Educational Foundations, Adamawa State

University, Mubi Nigeria. It was thought on different occasions by many researchers that the flipped learning approach has significant effects on students' performance. Although, the study will investigate if it may have an effect on self-directed learning or will it encourage learners to develop self-learning attitude.

Based on the aforesaid, the study used undergraduates' students of 2020/2021 and 2022/2023 academic sessions of Adamawa State University to compared flipped class room and conventional class so that valid conclusion would be made.

Statement of the Problem

Nigerian Universities faced multiple challenges ranges from natural and political disasters such as strikes, riots, Covid-19, which leads to the closure of the institutions, also, the number of the applicant for admission into higher institutions yearly, among others, these and others have really affected the students' performances and even after the graduation the effects stills manifested in their primary assignment.

Considering the above mentioned, the researcher intended to study Effects of flipped learning strategy on students' performance on under graduate students in educational foundations, Adamawa State University, Mubi Nigeria.

Objectives of the Study

The researcher formulated the following objectives to:

1. determine the pre-test and post-test academic performances of students taught with flipped learning approach in undergraduate class, Adamawa State University, Mubi; and
2. find out the differences between the experimental group taught with flipped learning approach and control group taught with conventional method in undergraduate class, Adamawa State University, Mubi.

Research Questions

The following research questions were formulated to guide the researcher:

1. Does difference exist between the pre-test and post-test academic performances of students taught with flipped learning approach in undergraduate class, Adamawa State University, Mubi?

2. What is the difference between the performance of experimental group taught with flipped learning approach and control group taught with conventional method in undergraduate class, Adamawa State University, Mubi?

Hypotheses

The study has the following research hypotheses:

Ho₁ There is no significant difference between the pre-test and post-test academic performances of students taught with flipped learning approach in undergraduate class, Adamawa State University, Mubi.

Ho₂ There is no significant difference between the performance of experimental group taught with flipped learning approach and control group taught with conventional method in undergraduate class, Adamawa State University, Mubi.

Methodology

The researcher adopted Quasi-experimental research design, because two intact classes were used, which warrant for pre-test, post-test and non-equivalent control group design, from two academic session of undergraduates' students of 2020/2021 and 2022/2023 from department foundations Adamawa State University. Therefore, Aliyu (2016) stated that Quasi-experimental research design permits the use of intact classes. Therefore, in this study both experimental and control classes were tested twice (pre-/post-tests) to know the level of their understanding in making valid conclusion. The target population of this study was one thousand one hundred and ninety-eight (1198) for both two academic session, the total numbers of students in faculty of education 2020/2021 academic session was five hundred and eighteen (518) while the sample size is sixty eight (68), in 2022/2023 the target population was six hundred and seventy eight (678), the sample size is eighty-four (84) Therefore, 2020/2021 academic session stands as (Experimental), while in 2022/2023 academic session stands as (Control) both from Department of Educational Foundations Adamawa State University, Mubi.

The researcher constructed a teacher made test, named as Performance of Students of Educational Foundations (PSEF) as instruments for conducting the study. Eight lesson plans were developed for both academic sessions for the two groups experimental and control group, 2020/2021 academic session stands for experimental class was taught with Flipped Learning Approach while 2022/2023 stands as control class was taught with conventional method. The

findings determined the effect of using Flipped Learning Approach on students’ academic performance in teaching undergraduates’ students in department of educational foundations Adamawa State University, Mubi, Nigeria among the variables. The researcher used means to answer two research questions, in testing hypotheses, related t-test was used for hypothesis one and independent t-test was used for hypothesis two.

Results

The results of the study were presented according research questions and hypotheses as follows:

Research Question one: Does difference exist between the pre-test and post-test academic performances of students taught with flipped learning approach in undergraduate class, Adamawa State University, Mubi?

Table 1: Descriptive Statistics of Mean and Standard Deviation for Research Question One (pre-test and post-test)

Groups	N	Mean	Mean Differences	Std. Deviation
pre-test	68	30.26	25.90	7.601
post-test	68	56.16		11.719

The table 1 revealed the result of pre-test and post-test for experimental group, the pre-test mean scores is 30.26 while the post-test has the mean scores of 56.16. The mean differences between pre-test and post-test as 25.90. Therefore, post-test mean score is far better than the pre-test means scores. From now, the researcher concluded that flipped learning approach has positive effect on students’ academic performance in Adamawa State University, Mubi Nigeria.

Research Question 2: What is the difference between the performance of experimental group taught with flipped learning approach and control group taught with conventional method in undergraduate class, Adamawa State University, Mubi?

Table 2: Descriptive Statistics of Mean and Standard Deviation for Research Question Two (Experimental and control classes)

Groups	N	Mean	Mean Differences	Std. Deviation
Experimental Class	68	56.16	24.84	10.635
Control Class	84	31.32		09.989

Table 2 shows that mean scores of for post-test for experimental and control classes. The experimental class was taught with flipped learning approach obtained the highest mean of 56.16 while students taught with conventional method scored 31.32, therefore differences exist between those taught with flipped learning

approach and those taught with conventional method. Based on this flipped learning approach has significant effect on students' academic performance.

H₀₁ There is no significant difference between the pre-test and post-test academic performances of students taught with flipped learning approach in undergraduate class, Adamawa State University, Mubi.

Table 3: Paired Samples t-test for hypothesis one (Pre-test and Post-test)

Groups	N	Mean	Mean Dif.	Std. Dev.	Sig. (2-tailed)
pre-test	68	30.26	25.90	07.601	.000
post-test	68	56.16		11.719	

Table 3 revealed the result tested with paired sample t-test, the stated hypothesis. There is no significant difference between the pre-test and post-test academic performances of students taught with flipped learning approach in undergraduate class, Adamawa State University, Mubi is rejected. The researcher concluded the differences do exist between pre-test and post-test due obtained p-value obtained is 0.000 ($P < 0.05$). So, flipped learning approach in teaching students has positive effect on their academic performance in Adamawa State University, Mubi, Nigeria.

Hypothesis 2: There are no significant differences between experimental group taught with flipped learning approach and control group taught with conventional method in undergraduate class, Adamawa State University, Mubi.

Table 4: Hypothesis two (Experimental and control Class).

Groups	N	Mean	Mean Dif.	Std. Dev.	Sig. (2-tailed)
Experimental	68	56.16	24.84	10.635	.000
Control	84	31.32		09.989	

Therefore, table 4 stated that the null-hypothesis which said there are no significant differences between experimental group taught with flipped learning approach and control group taught with conventional method in undergraduate class, Adamawa State University, Mubi is rejected. It happened due to the p-value is 0.000 ($P < 0.05$) therefore, using flipped learning approach has positive effect on students' academic performance undergraduate class, Adamawa State University, Mubi, Nigeria.

Discussion of Findings

The researcher investigates the effects of flipped learning approach among two set of students 2020/2021 and 2022/2023 academic sessions in Adamawa State University, Mubi. The findings revealed flipped learning approach had significant effects on students' performance compare to

the conventional method of teaching in EDU 207 course. The result obtained from flipped classroom had effect on students' academic performance compare to conventional classroom. The finding is in line with Ekmekçi (2014), Overmyer (2014), Boyraz (2014), Alsancak Sırakaya (2015), and Turan, (2015); found that flipped classroom was further improved when compared to the conventional teaching method. Zou (2020) conducted a study on Gamified flipped EFL classroom for primary education: student and teacher perceptions, in found out it has significant impact on students' performance if compared to conventional method of teaching. In a nutshell, Zainuddin, Haruna, Zhang, and Chu, (2019). Have A systematic review of flipped classroom empirical evidence from different fields. Their reviewed shows significant impact of flipped strategy in classroom. In addition, study was conducted by Al-Samarraie, Shamsuddin, and Alzahrani, (2020). On A flipped classroom model in higher education: a review of the evidence across disciplines, it also agreed with the present study.

Conclusion

The results revealed that flipped learning Strategy had significant effect on students' performance, this learning approach can to improve students' performance more especially in higher institutions of learning where the populations are increasing yearly.

Recommendations

The researcher recommended the following:

1. Flipped learning Strategy should be adopted the learning institutions more especially in higher institution due to the nature of the strategy, since it was found it has significant effect on students' performance.
2. The study suggested the strategy to curriculum planners, policy makers, stakeholder, Non-governmental organisations among others to donate immensely in providing equipment for integrating the strategy into learning institutions for successful expectation.

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**EVALUATION OF THE IMPLEMENTATION OF ISLAMIC STUDIES CURRICULUM
FOR PEACE AND NATIONAL DEVELOPMENT IN UPPER BASIC SCHOOLS IN
YUSUFARI, YOBE STATE, NIGERIA**

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ABSTRACT

The study evaluates the implementation of Islamic studies curriculum for peace and national development in upper basic schools in Yusufari local government area. The study determined the level of teachers' quantity towards achieving Islamic studies objectives and the availability of Islamic studies teaching materials for the implementation of Islamic studies curriculum in Yusufari. The researchers adopted a descriptive survey research. A sample size of three hundred and twenty-two was used; simple random sampling was employed to get the respondents. A questionnaire was employed as an instrument for data collection. The data collected were analysed using frequency count and percentage. The finding of the study shows that, Islamic studies teachers in their numbers are capable of making the implementation of Islamic studies curriculum objectives a reality with much focus on promoting peace and national development; it also reveals that the schools lack computers to cope with the current technological development in Islamic studies. Based on the findings of the study, the researchers recommended that, learner be encourage to concentrate and learn the culture of living in peace for development; and adequate teaching resources be provided by stakeholders while teachers will be doubling their effort towards improvisation of teaching resources for curriculum delivery.

Keywords: Evaluation, implementation, curriculum, peace, national upper basic. Development

Introduction

Islamic studies education is one of the key subjects being taught at the Junior Secondary Schools in Nigeria to produce enlightened, well-behaved and God-fearing learners. It plays an important role in the spiritual, academic and moral development of learners at the low-grade subordinate institution category. The history of Islamic education is the same as the history of the religion of Islam itself. This is because Islam goes to any place or community along with its own form of education (Balogun 1982; Ajidagba, 1991). Islam is said to have come to the country in the 11th century. It is on record that when Kanem Jilmi of the old Borno accepted Islam, he established the first Qur'anic School in his palace (Amr- Abdalla, 2006). It is not a matter of coincidence or

accident that Islam and Islamic education go together. The fact is that, without the latter the former cannot be said to have been firmly entrenched and understood. It is appear to researchers like; there is less concern to learning Islamic studies to the extent that some schools do not teach Islamic studies. This may likely be the reason why the level of peace and development in Yobe state were abortive.

A study conducted by Aliyu (2009), on the assessment of the implementation of Islamic studies curriculum of NEC III on the performance of students of both male and female in College of Education Gumel, Jigawa State. The focus of the study is to find out the impact of the assessment of the implementation of Islamic studies curriculum of NEC III on the performance of students of both male and female in College of Education Gumel, Jigawa State. Questionnaire was used for data collection. The result of the findings revealed that there was lack of qualified Islamic studies teacher among other studies. Another study conducted by Jikas (2015), on the assessment of the implementation of Islamic studies curriculum senior secondary schools in Jigawa State. The focus of the study are to assess the availability of qualified Islamic studies teachers, content coverage use of instructional materials among others for successful implementation of Islamic studies curriculum senior secondary schools in Jigawa State, survey design was used with 384 sample size using simple random sampling. Questionnaire was used for data collection and chi-square statistical tool was used for hypotheses analysis. The findings revealed that there were inadequate instructional materials, poor appropriate teacher's utilization of teaching method and Islamic studies contents are not properly covered among other findings.

It is based on the foregoing; the researchers prompted to evaluate the level of teachers' quantity towards achieving Islamic studies objectives and examine the availability of Islamic studies teaching materials for the implementation of Islamic studies curriculum in Yusufari local government area of Yobe state.

Statement of the Problem

Despite the fact that the state is Islamic oriented state, the situation is not different in yusufari local government area where students in secondary schools are expected to benefit from the rich resources of the country through the provision of human and material resources to facilitate smooth implementation of educational curriculum in secondary schools. However, it seems like

there is an inadequate Islamic studies teacher, and the students' attitude toward learning Islamic studies in the study area might not be encouraging.

The study therefore sought to evaluate the implementation of Islamic studies curriculum for peace and national development with an emphasis to teachers' quantity and the availability of teaching materials for the implementation of Islamic studies curriculum in Yusufari local government area of Yobe state, Nigeria.

Objectives of the Study

The objectives of the study are to:

1. determine the level of teachers' quantity towards achieving Islamic studies objectives for peace and national development in Yusufari local government area of Yobe state, Nigeria; and
2. examine the availability Islamic studies teaching materials for the implementation of Islamic studies curriculum in Yusufari local government area of Yobe state, Nigeria.

Research Questions

1. What is the level of teachers' quantity towards achieving Islamic studies objectives for peace and national development in Yusufari local government area of Yobe state, Nigeria?
2. What are the availability Islamic studies teaching materials for the implementation of Islamic studies curriculum in Yusufari local government area of Yobe state, Nigeria?

Methodology

Descriptive survey research design was adopted for this research, the population of the study comprises of the teachers and students of Upper Basic schools in Yusufari local Government area of Yobe State. The instrument used for collecting of data was questionnaire, a total number of three hundred and twenty-two questionnaires (322) were distributed to the respondents and three hundred and six were retrieved and used for the analysis of the result using descriptive statistics of frequency count and percentage.

Results

After the data collection and analysis, the results were presented in tables and adequate interpretations were made.

Research Question one: What is the level of teachers' quantity towards achieving Islamic studies objectives for peace and national development in Yusufari local government area of Yobe state, Nigeria?

Table 1: Frequency and percentage on the level of teachers' quantity towards achieving Islamic studies objectives for peace and national development in Yusufari local government area of Yobe state, Nigeria

S/N	Items	SA	A	D	SD	Total
1	Teachers are adequate to teach recognition of Allah as Creator for the promotion of peace and national development	300 (98.04%)	6 (1.96%)	0 (0.00%)	0 (0.00%)	306 (100%)
2	Your school have enough Islamic studies professionals that advocate the recognition of Allah as sustainer of the universe with an intention inculcate peace and development	302 (98.69%)	4 (1.31%)	0 (0.00%)	0 (0.00%)	306 (100%)
3	All teachers show concern toward a habit of cultivating sense of gratitude to Allah and Submission	298 (97.39%)	8 (2.61%)	0 (0.00%)	0 (0.00%)	306 (100%)
4	Promotion of the Spirit of brotherhood is one of the basic responsibilities of Islamic studies teachers	285 (93.14%)	21 (6.86%)	0 (0.00%)	0 (0.00%)	306 (100%)
5	Islamic studies teachers find it easy to encourage the pursuit of Knowledge as a result of number	272 (89.87%)	34 (2.61%)	0 (0.00%)	0 (0.00%)	306 (100%)

Key: SA=Strongly Agreed, A= Agreed, D=Disagreed, SD= Strongly Disagreed

The table above shows that, the respondents strongly agreed that Teachers are adequate to teach recognition of Allah as Creator for the promotion of peace and national development, schools concerned school have enough Islamic studies professionals that advocate the recognition of Allah as sustainer of the universe with an intention inculcate peace and development, All teachers show concern toward a habit of cultivating sense of gratitude to Allah and Submission, Promotion of the Spirit of brotherhood is one of the basic responsibilities of Islamic studies teachers, and Islamic studies teachers find it easy to encourage the pursuit of Knowledge as a result of number. This means, Islamic studies teachers in their numbers are capable of making the implementation of Islamic studies curriculum objectives a reality with much focus on promoting peace and national development.

Research Question Two: What are the availability Islamic studies teaching materials for the implementation of Islamic studies curriculum in Yusufari local government area of Yobe state, Nigeria?

Table 1: Frequency and percentage on the availability Islamic studies teaching materials for the implementation of Islamic studies curriculum in Yusufari local government area of Yobe state, Nigeria

S/N	Items	Highly Available	Available	Not Available	Total
1	Classrooms	230 (75.16%)	60 (19.61%)	16 (5.22%)	306 (100%)
2	Chalks	190 (62.09%)	78 (25.49%)	38 (12.42%)	306 (100%)
3	Desks	202 (97.39%)	86 (28.10%)	18 (5.88%)	306 (100%)
4	Textbooks	01 (0.33%)	20 (6.54%)	285 (93.14%)	306 (100%)
5	Computers	01 (0.33%)	4 (1.31%)	301 (98.37%)	306 (100%)

Key: HA=Highly Available, A= Available, NA= Not Available

The table above shows the distribution of responses based on availability of facilities for teaching Islamic studies. Majority of the responses shows that class rooms were highly available with 230 respondents, equivalent to (75.16%). Most of the respondents indicated that chalks were highly available with 190 e(62.09%), The desks are highly available with 202 (66.01%). Textbooks were not available with 285(93.14%), and computers were not available, 4(1.31%) respondents said computers were not available based on the responses.

Discussion

Finding number one reveals that, respondents strongly agreed that Teachers are adequate to teach recognition of Allah as Creator for the promotion of peace and national development, schools concerned school have enough Islamic studies professionals that advocate the recognition of Allah as sustainer of the universe with an intention inculcate peace and development, All teachers show concern toward a habit of cultivating sense of gratitude to Allah and Submission, Promotion of the Spirit of brotherhood is one of the basic responsibilities of Islamic studies teachers, and Islamic studies teachers find it easy to encourage the pursuit of Knowledge as a result of number. This means, Islamic studies teachers in their numbers are capable of making

the implementation of Islamic studies curriculum objectives a reality with much focus on promoting peace and national development. This is not in agreement with the finding of Aliyu (2009) which revealed that there was lack of qualified Islamic studies teacher among other studies.

Finding number two reveals the availability of facilities for teaching Islamic studies. Majority of the responses shows that class rooms were highly available with 230 respondents, equivalent to (75.16%). Most of the respondents indicated that chalks were highly available with 190 e(62.09%), The desks are highly available with 202 (66.01%). Textbooks were not available with 285(93.14%), and computers were not available based on the responses. This is facially in conformity with the finding of Jikas (2015) which revealed that there were inadequate instructional materials, poor appropriate teacher's utilization of teaching method and Islamic studies contents are not properly covered among other findings.

Conclusion

Based on the study findings of the study, the researchers concluded that, Islamic studies teachers in their numbers are capable of making the implementation of Islamic studies curriculum objectives a reality with much focus on promoting peace and national development; and instructional resources were facially available.

Recommendations

The following recommendations were made in line with the findings of the study:

1. Learner be encourage to concentrate and learn the culture of living in peace for development; and
2. Adequate teaching resources be provided by stakeholders while teachers will be doubling their effort towards improvisation of teaching resources for curriculum delivery.

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**HUMAN RESOURCE DEVELOPMENT AS A CATALYST FOR EFFECTIVE
EDUCATIONAL ADMINISTRATION
BY**

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Abstract

This paper examined the prospects of human resource development (HRD) as a means of attaining effective educational administration. It explored the roles that HRD through activities and strategies aimed at enhancing the knowledge, skills and competencies of individuals working for educational organisations. The paper employed conceptual approach to examine human resource development, educational administration, challenges of educational administration, the nexus between human resource development and educational administration, as well as human resource development as panacea for effective educational administration. The paper revealed that HRD is critical in contributing to effective educational administration as it paves way for investments in the professional growth and development of teachers and administrators, and has the potential to enhance their leadership skills, instructional practices, positive school culture, and inclusivity and equity in education. The paper further asserts that the continuous learning and skill enhancement fostered through HRD enable administrators to effectively lead their institutions, adapt to changes in the education system, and ultimately create an environment that supports student success.

Keywords: Human Resource Development, Educational Administration, Capacity Building, Professional Growth

Introduction

Educational administration plays a critical role in shaping the quality and effectiveness of educational institutions. In recent years, there has been an increasing recognition of the significant impact that human resource development (HRD) can have on educational administration. HRD encompasses a range of activities and strategies aimed at enhancing the knowledge, skills, and competencies of individuals working within educational organizations. The understanding of the potentials of HRD in educational administration avail policymakers, administrators, and educators the opportunity to develop strategies to enhance their workforce's capabilities and drive positive change within their institutions. HRD in educational

administration encompasses various elements, including professional development programs, training initiatives, performance management systems, and talent management strategies. These practices are designed to empower administrators and educators with the necessary knowledge and skills to meet the evolving demands of the education sector. Effective HRD programmes can enhance leadership capabilities, foster innovation, improve communication and collaboration, and promote a culture of continuous improvement within educational institutions.

In today's rapidly changing world, the role of educational administration in fostering sustainable progress has become more critical than ever. Human resource development, specifically in the field of educational administration, has emerged as a powerful tool to address the challenges and complexities of the education system. Through investments in the development and support of educators and administrators, educational institutions can create an environment that promotes continuous improvement, innovation, and equitable access to quality education. This essay explores the significance of human resource development in educational administration as a panacea for sustainable progress, highlighting its potential to enhance educator competencies, foster leadership development, promote collaborative culture, address staff retention and well-being, embrace diversity and inclusion, leverage technology for professional development, and align human resource strategies with educational goals.

Human Resource Development

Human resource development (HRD) is a concept that encompasses a range of activities focused on improving the skills, knowledge, and capabilities of individuals within an organization. It involves the systematic and planned efforts to enhance employee performance, productivity, and potential through training, education, and development programs. According to Noe et al. (2020), HRD is the process of developing human expertise through activities such as training, career development, and performance management. It is essential for organizations to invest in HRD to ensure that employees have the necessary skills and knowledge to meet the demands of their roles and to support the overall goals of the organization. The field of HRD is a multifaceted discipline that integrates perspectives from psychology, sociology, economics, organizational progress, and education. It delves into the human aspect of organizational operations, investigating the interactions among employees within a business setting, and

scrutinizing the mechanisms of knowledge creation and dissemination, both formal and informal (University of Minnesota, 2023).

Those engaged in HRD are equipped to devise programs for training and development, discern requirements for systems and business processes, anticipate necessary alterations in staffing, and enhance employee engagement and productivity. This discipline often involves exploring queries such as the impact of remote working on employee's sense of belonging, the underestimated leadership traits that are pivotal for organizational innovation and success, the incentives that encourage workers to strive for continuous improvement, and the intersection of our routine practices with our political and socio-economic contexts, among others (University of Minnesota, 2023). The main goal of HRD is to support employees in enhancing their knowledge, skills, and abilities, benefiting both their personal growth and the effectiveness of the organization. HRD involves various activities such as providing formal and informal training, facilitating career development, identifying key employees, offering mentoring and coaching, providing tuition assistance, and promoting organizational development (Stone & Dulebohn, 2013).

One of the key components of HRD is training. Training programs provide employees with the opportunity to acquire new skills or improve existing ones. As stated by Goldstein and Ford (2002), training programs can be designed to address specific skill gaps or to develop new competencies required for future roles. These programmes can take various forms, including classroom-based training, on-the-job training, e-learning, and workshops. Another aspect of HRD is career development. According to Career Development Institute [CDI] (2023), career development refers to the lifelong process of managing one's career through planning, learning, and development activities. Organizations can support career development by providing employees with opportunities for growth, advancement, and skill development. This can include mentorship programs, job rotations, and education subsidies. Performance management is also an integral part of HRD. Performance management involves setting clear performance expectations, providing feedback, and supporting employee growth and development. As mentioned by DeNisi and Pritchard (2006), effective performance management systems can help identify areas for improvement, recognize and reward high performance, and provide developmental opportunities.

Educational Administration

Educational administration refers to the overseeing and coordination of educational systems. Its responsibilities encompass guiding the educational journey of students, designing educational plans, conducting evaluations, and efficiently managing both human and material resources with the aim of attaining specific objectives. Additionally, it entails supervising the various processes within the education system to guarantee the realization of desired outcomes. According to Connolly et al (2017), educational administration refers to the management and coordination of the education system, where individuals and resources are brought together to oversee, plan, strategize, and implement structures to effectively operate the education system. In other words, educational Administration is the act of combining the necessary human and material resources in order to achieve the objectives of an educational institution. "Administration" is not limited to a single process or action, but rather includes a range of activities such as planning, organizing, directing, coordinating, controlling, and evaluating performance. The same applies to educational administration, which is relevant for educational organizations that have specific purposes or goals to fulfil (Kashyap, 2023).

The concept of educational administration encompasses the management and leadership of educational institutions at all levels. It involves coordinating and overseeing various aspects of school governance to create an environment that promotes student success. According to Hoy and Miskel (2013), educational administration involves "the process of bringing together and utilizing human, financial, and material resources in a manner that enhances the attainment of educational goals" (p. 2). It is a multifaceted field that requires the application of organizational and leadership principles to effectively manage educational institutions. Educational administration encompasses several key roles and responsibilities. These include strategic planning, budgeting and financial management, curriculum development, personnel management, and assessment and evaluation. As noted by Sergiovanni (2018), educational administrators are responsible for creating a vision and mission for the school, establishing goals, and devising strategies to achieve them. They also play a vital role in allocating resources, ensuring proper budget management, and making informed decisions to support the educational needs of students and staff.

In addition, educational administrators are responsible for fostering a positive school culture and climate. They promote collaboration among teachers, students, parents, and community members to create a supportive learning environment. This involves providing opportunities for professional development and implementing policies that promote inclusivity and equity in education (Gronn, 2018; Abdullahi, 2023). The role of educational administrators has evolved over time, adapting to the changing needs and challenges of the education system. With the increasing focus on accountability and data-driven decision making, educational administrators are now tasked with using evidence-based practices to improve student outcomes (Murphy, 2018). They are also expected to stay updated with educational research and policy changes to effectively lead their institutions (Abdullahi, 2023).

Challenges of Educational Administration

A persistent challenge in educational administration is the matter of limited funding and budget restrictions. Numerous schools encounter financial constraints that hinder their capacity to deliver quality education and essential resources for students. Inadequate funding has led to insufficient staff, outdated facilities, restricted technology access, and limited extracurricular options. These budgetary limitations present significant hurdles for administrators in effectively managing resources and ensuring fair access to education. According to Haydee (2023), one of the challenges faced by educational administration is the lack of preparedness for new learning modalities. Additionally, Abdullahi et al. (2016), Hosseini and Zhang (2018) and Andras (2022) highlight the exclusion of critical perspectives in education as another significant challenge. Hennig and Jansen (2020), Kimathi et al (2021) and Babatunde (2023) emphasizes the influence of political interplay on the administration of educational inputs, while Paul and Daniel (2022) point out administrative challenges that hinder effective curriculum implementation.

These challenges have a profound impact on various aspects of educational administration, including school preparedness, parent cooperation, communication barriers, curriculum content, funding, corruption, infrastructure, and staff development. To address these challenges, it is recommended to create realistic and achievable policies, increase funding, employ more academic staff, provide adequate infrastructure, support staff development, and conduct seminars and workshops for administrators. Human resource development therefore is essential in

addressing these challenges especially because it promotes changing educational landscape, evolving technologies, and diverse student needs. The changing educational landscape presents a challenge for educational administrators. With advancements in technology and pedagogy, administrators need to stay updated with the latest trends and practices. This requires continuous professional development and training for administrators to enhance their knowledge and skills.

The Nexus between Human Resource Development and Educational Administration

The nexus between human resource development (HRD) and educational administration is a critical and inseparable connection. HRD encompasses activities and initiatives that focus on the growth, development, and support of individuals within an organization, while educational administration involves the management and leadership of educational institutions. HRD plays a significant role in enhancing the effectiveness of educational administration. By investing in the professional growth and development of administrators, HRD programs provide them with the necessary knowledge, skills, and competencies to effectively lead and manage educational institutions. These programs offer training in areas such as leadership, decision-making, strategic planning, communication, and problem-solving (Colquitt et al., 2019). As administrators acquire and refine these skills through HRD initiatives, they are better equipped to handle the complex challenges and demands of educational administration, leading to improved organizational performance.

HRD contributes to the development of a skilled and competent workforce in educational institutions. Through training and development programs, HRD helps educators and staff members enhance their teaching methods, instructional strategies, and administrative skills. These initiatives promote continuous learning and growth, enabling educators to stay updated with the latest research, technologies, and best practices in education (Bush, 2014; Abdullahi & Jarma, 2023). A skilled and competent workforce, nurtured through HRD, is vital for effective educational administration as it positively impacts the quality of teaching and learning experiences within the institution. Furthermore, HRD fosters a culture of learning and collaboration within educational institutions. By providing opportunities for professional development, HRD initiatives encourage educators and staff members to engage in continuous learning, reflection, and improvement. This creates a supportive environment where individuals

can share knowledge, exchange ideas, and collaborate on innovative projects (Hargreaves & Fullan, 2012). Such a culture of learning and collaboration is essential for effective educational administration as it promotes a sense of shared purpose, teamwork, and collective responsibility for achieving educational goals.

Moreover, HRD contributes to the retention and motivation of educators and staff members in educational institutions. By investing in the professional growth and well-being of employees, HRD initiatives demonstrate an organization's commitment to their development and success. This helps to enhance job satisfaction, increase morale, and reduce turnover rates (Colquitt et al., 2019; Abdullahi & Jarma, 2023). When educators and staff feel valued and supported through HRD programs, they are more likely to be motivated, engaged, and committed to their roles, leading to a more productive and effective educational administration. HRD plays a crucial role in addressing issues of diversity, equity, and inclusion within educational institutions. HRD initiatives can provide training and resources on cultural competency, inclusive teaching practices, and creating inclusive learning environments. Through equipping administrators, educators, and staff members with the knowledge and skills to promote diversity, equity, and inclusion, HRD contributes to creating an inclusive and equitable educational administration (Turner et al., 2019; Abdullahi, 2023). This is important for fostering a supportive and inclusive environment where all students feel valued and have equal opportunities for success.

Educational administration necessitates the integration and coordination of both physical and human resources, as well as educational elements. In addition, it requires a high level of efficiency that is rooted in qualities such as human sympathy, understanding, knowledge, and skill. The physical resources primarily consist of building equipment and instructional materials. The human resources encompass students, teachers, supervisors, administrators, and parents. The other elements encompass various aspects of educational theory and practice, including the philosophy of education, educational objectives, curriculum, teaching methods, discipline, the role of the teacher, rules, and regulations. These elements are like individual parts that come together to form a cohesive whole, creating a harmonious relationship (Kashyap, 2023).

Human Resource Development as Panacea for Effective Educational Administration

Human resource development (HRD) plays a crucial role in contributing to the attainment of effective educational administration. Investing in the professional growth and development of teachers and educational administrators can enhance their leadership skills, improve instructional practices, and create a positive school culture. Human resource development provides educational administrators with the opportunity to enhance their leadership skills and knowledge. Through professional development programs, administrators can acquire new strategies and techniques for effective management and leadership. They can learn about the latest research and best practices in educational administration, allowing them to make informed decisions and implement evidence-based policies (Bush, 2014). This continuous learning and skill enhancement enable administrators to adapt to the changing needs and challenges of the education system, ultimately contributing to effective educational administration.

HRD supports the improvement of instructional practices. By providing teachers and other staff members with professional development opportunities, administrators can enhance their teaching skills, curriculum development, and assessment strategies. This leads to improved instructional quality and student learning outcomes (Hargreaves & Fullan, 2012). When administrators prioritize the professional growth of their staff, they create a culture of continuous improvement and encourage collaboration among educators, resulting in a more effective educational environment. Furthermore, human resource development contributes to the creation of a positive school culture. When administrators invest in the development of their staff, they demonstrate their commitment to the well-being and growth of their employees. This fosters a sense of belonging and motivation among staff members, leading to increased job satisfaction and productivity (Leithwood et al., 2019). A positive school culture, characterized by trust, collaboration, and support, creates an environment where teachers and staff can thrive, ultimately benefiting the students and the overall educational administration.

Moreover, human resource development promotes inclusivity and equity in education. By providing training and resources on cultural competency, diversity, and inclusive practices, administrators can ensure that their educational institutions are welcoming and supportive of all students, regardless of their backgrounds. This helps to reduce achievement gaps and promote

educational equity (Turner et al., 2019). By actively addressing issues of diversity and inclusion through human resource development, educational administrators contribute to effective educational administration that values and respects the needs and experiences of all students.

Conclusion

In conclusion, educational administration is a vital field that plays a crucial role in ensuring the effective management and leadership of educational institutions. It involves coordinating various aspects of school governance, including strategic planning, budgeting, curriculum development, personnel management, and assessment. Educational administrators create an environment that supports student success by fostering collaboration, promoting professional development, and implementing inclusive and equitable policies. By utilizing organizational and leadership principles, educational administrators contribute to shaping a school environment that facilitates student growth and development.

Human resource development plays a vital role in contributing to effective educational administration. By investing in the professional growth and development of staff members, administrators can enhance their leadership skills, improve instructional practices, create a positive school culture, and promote inclusivity and equity in education. The continuous learning and skill enhancement fostered through human resource development enable administrators to effectively lead their institutions, adapt to changes in the education system, and ultimately create an environment that supports student success.

The nexus between human resource development and educational administration is evident in their interrelationship and mutual influence. HRD initiatives enhance the effectiveness of educational administration by equipping administrators with the necessary skills and competencies. Additionally, HRD contributes to the development of a skilled workforce, fosters a culture of learning and collaboration, improves retention and motivation, and addresses issues of diversity and inclusion within educational institutions. By recognizing and leveraging this nexus, educational institutions can cultivate effective leadership, enhance organizational performance, and create an environment conducive to student success.

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INFLUENCE OF TEACHING MATERIAL IMPROVISATION SKILLS ON SENIOR SECONDARY SCHOOL STUDENTS ACHIEVEMENT IN BIOLOGY IN KARU LOCAL GOVERNMENT, NASARAWA STATE, NIGERIA

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ABSTRACT

This study examines the influence of teaching material improvisation skills on senior secondary school students' achievement in Biology. This study is aimed at discovering ways of stimulating students' achievements in Biology in Senior Secondary School and to determine the role of material improvisation skills on senior secondary school students' achievement in Biology among other. The research design used for the study was descriptive survey. Data were collected from 180 SS 2 students which served as sample from six selected schools in Karu LGA of Nasarawa state. The researcher reviewed key Concepts such as teaching Improvisation, achievement. The instrument used for the collection of data was Biology Achievement Test (BAT). The analysis used for this study is descriptive statistic, inferential Statistic were used to test the hypotheses. Analysis of Covariance (ANCOVA) was used to test hypotheses. Findings revealed that the students engage teaching with improvisation of materials perform better than those taught using lecture method. It is therefore recommended that the government should acknowledge and commend the heightened level of teachers' materials improvisation in biology at the senior secondary school level.

Keywords: Improvisation skills, Interest, Achievement, Biology.

Introduction

Science is the pillar on which contemporary technological advancement depends upon various scholars has defined science in different ways. Fape (2007), cited in Usman and Saminu (2017) defined science as rationally structured knowledge about nature, which embraces systematic methods of positive attitudes for its acquisition, teaching, learning and application. Mberekpe

(2013) said that Biology is a very crucial science subject and are requirement for further learning of a number of science-related professional courses like Medicine, Agriculture, and Pharmacy among others. In Nigeria today, huge emphasis is placed on science and technological development. Therefore, students are being persuaded to offer science-related subjects. Presently, Biology pervades literally every field of human endeavor, and plays a fundamental role in educational advancement. This is seen in all the technological advancement in the world today, which is because of scientific investigations.

Mberekpe (2013), defined Biology as the science of life. It is a science subject taught in senior secondary schools in Nigeria. Odogwu (1998) Mberekpe (2013), pointed out that, one of the reasons for teaching Biology is to equip the students to comprehend the world around them and equip them with necessary skills to build a progressive society. Also, Odogwu (1998) cited in Mberekpe, (2013), stated that, Biology serves as a channel for teaching students the ability to apply learning of science concepts and principles in solving everyday' problems. This means that Biology remains one of the basic sciences whose teaching and learning is universally known to be efficient and successful, if only undertaken simultaneously with the help of adequate instructional resources and facilities. Mberekpe (2013) noted that Biology is a very important science subject and a requirement for further studies of other science related professional courses such as medicine, agriculture, pharmacy, biotechnology, genetic engineering, etc Poor academic achievement in Biology could also be attributed to many factors such as, lack of constant teachers presence in the classroom, low interest of students in biology, inadequate motivation from teacher, poor incentives to biology teachers, lack of adequate supply of instructional material, lack of qualified teachers, and use of teacher centered instructional strategies inadequate use of instructional materials and use of abstract standardized materials. National Policy on Education (2008), further stated that the provision and use of available instructional materials for teaching will lay a sound bases for scientific and reflective thinking among students. However, the problem remains that in some secondary schools in Nigeria, there is high rate of poor performance in biology subject. The poor funding of schools has prevented the principals from providing the few available Biology teachers with adequate improvised instructional resources. In other words, it is the art of providing and using alternative materials or resources in the absence of the real or factory made one. Oyediran (2010), cited in Usman and

Saminu (2017) also defines improvisation as the art of using materials or equipment obtained from local environment or produced by the teacher, and with the assistance of the local personnel to enhance instruction. In other to teach by inquiry method or use activity-based instructions, improvisation is required since instructional materials seem not to be adequate (Okebukola, 2012), cited in Usman and Saminu, 2017). Bassey (2012) cited in Usman and Saminu (2017) defined improvisation as the process of making equipment and materials by the students or by engaging the services of others in the absence of real or manufacture done. Generally, improvisation of instructional materials is an attempt to adapt and make use of local resources in the teaching and learning process when the ready-made materials are not available or are in short fall or not within the reach of users (Usman and Saminu,2017). The teacher and the students could produce the improvised instructional materials. According to Okebukola (2012), improvisation in the context of Biology can be seen as the process of using alternative resources for enhancing Biology teaching in the absence of the real ones. The teacher initiates the production of the alternative resources, which is constructed by either the teacher or the local artisans. carpenters, blacksmiths etc. The teacher may use the students for improvising some of the needed materials or equipment. Improvisation is a technique of originating a very new tool, instrument, materials, device or modifying existing ones for serving a particular purpose. To be able to promote quality instruction in our school system, there is the need to pay attention to improvisation of instructional materials in the teaching/learning process. Esu (2010) cited in Usman and Saminu (2017). However, noted that improvisation demands adventure, creativity, curiosity and perseverance on the part of the teacher, such skills are only realizable through well planned training programme on improvisation Fajola (2010) cited in Mberekpe (2013), sees improvisation from the creativity involved. This creativity is substitution and construction. Substitution in improvisation simply implies the techniques where by an already local material is used in place of a piece of equipment that is not available whereas construction involves making of a new instrument to serve in place of the unavailable original one, where substitution is not possible. However, Esu (2010) cited in Saminu and Usman (2017) asserted that improvisation provides connectivity between student's abstract and real experience of teaching and learning. Improvisation is a teacher-oriented activity used to effectively the teaching of Biology without improvised instructional materials may certainly result in poor academic achievement. The real

materials that are the conventional instructional materials are imported or factory-made laboratory equipment for science teaching. Examples of conventional instructional materials are: microscope, herbarium laboratory reagents, laboratory glassware, Bunsen burner, tripod stand. However, if these conventional Instructional Materials are not available or inadequate, they can be locally made by using resources in the environment as alternative. These will include used electrical bulb for round bottom flask; beverage ins for convex and concave mirror juices of unripe orange as acid, solution of ash from wood as base, candle or stove as burner, tea spoon or spatula (Okebukola,2012). Improvised instructional materials may not be identical with the conventional one. Therefore, teachers should be skillful in handling and using them (Igwe, 2008). Improvisation requires a considerable development through imaginative planning and good knowledge. According to Ajayi (2009) improvisation is the provision of alternative store things. Improvisation is the making of substitutes when the real equipment or material is not adequate or available (Okebukola,2012). It is the art of providing and using alternative materials or resources in the absence of the real or factory made one. In other to teach by inquiry method or use activity-based instructions, improvisation is required since instructional materials seem not to be adequate (Okebukola,2012) Material improvisation skills for teaching and learning of Biology in secondary schools cannot be overemphasized.

However, this makes the learning of biology fun. The absence of students' participation in biology activities makes learning of biology boring and unexciting. A teacher who teaches biology as if he is telling a story is sure to cause his students loose interest in biology (Olakehinde and Olatoye, 2014). Therefore, it's against this backdrop that the study investigated the influence of teaching material improvisation skills on senior secondary school students' achievement in Biology.

Statement of Problem

The increasing rate at which secondary school students are exhibiting low Achievement in Biology have resulted in their poor performance in examination such as the Senior secondary school certificate examinations (WAEC and NECO). Umoinyang (2019) stated that achievement of students in Biology at the end of the secondary school has not improved in the last decade. The reason for the low Achievement is not far-fetched Lack of adequate improvised materials

have been attributed as some of the causes for students' low Achievement in Biology. This is in line with the position of Ibrahim and Ibrahim (2019), as they maintained that the teaching of Biology cannot be done effectively without interaction between the teacher, students and the material resources. Similarly, Folorunso (2014), attributed poor achievement in Biology specifically to the absence of improvised materials in schools due to poor funding of the schools. It is however, worrisome that some senior secondary schools suffer from poor Biology performance as a result of lack of improvised teaching materials. Therefore, it's against this backdrop that the study investigated the influence of teaching material improvisation skills on senior secondary school students' achievement in Biology.

Objectives of the Study

The main purpose of this study is to investigate the influence of teaching material improvisation skills on senior secondary school students' achievement in Biology in Karu Local Government Area of Nasarawa State. Specifically, the study was out to:

1. Determine effect of teaching material improvisation skills on students' achievement in biology subject.
2. Determine effect of teaching material improvisation skills on male and female students' achievement in biology subject.

Research Questions

The following research questions were answered.

1. What are the mean achievement scores of students taught biology using material improvisation skills and those taught using lecture method?
2. What are the mean achievement scores of male and female students taught biology using material improvisation skills?

Statement of the Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

HO₁: There is no significant difference in the mean achievement scores of students taught biology using material improvisation skills and those taught with lecture method.

HO₂: There is no significant difference in the mean achievement scores of male and female students taught biology using material improvisation skills.

Methodology

The research design used for the study was descriptive survey design. The population of this study is the entire SS 2 Biology students of Government and Private Senior Secondary School of Karu Local Government, Nasarawa State. However, due to time and financial constraint only the Six Senior Secondary School of Karu Local Government of Nasarawa State was studied. The researcher adopted probability sampling technique for the study. The probability random sampling technique gives a member in the population an opportunity of being selected. Therefore, a total of 180 SS 2 Biology students made the sample. The instrument used for this study was Biology Achievement Test (BAT). The Biology Achievement Test (BAT) consist of 30 multiple choice questions with option letter A to D. The researchers visited senior secondary schools in the karu Local Government in Nasarawa State and administered the instrument after obtaining permission from the administrator of each school. The data collected for this study was analyzed using relevant statistical tools. The study has two objectives, Research Questions and Statement of the Hypotheses. The two research questions was answered using descriptive statistics and standard deviation while Analysis of covariance was used to test the null hypotheses at 0.05 level of significance.

Results

Research Question One

1. What are the mean achievement scores of students' taught biology using material improvisation skills and those taught using lecture method?

This research question was answered using descriptive statistics of means and standard deviations. The result of the analysis is presented in table 1.

Table 1: Means and Standard Deviations Scores of Students Taught biology Using Material Improvisation Skills and those Taught Using Lecture Method

Group	Pretest			Posttest			Mean gain
	N	\bar{X}	SD	N	\bar{X}	SD	
Experimental	72	37.44	11.86	72	56.84	15.772	19.4
Control	86	23.52	11.799	86	30.61	14.858	7.09
Total	158			158			

Table 1 presents the means and standard deviations scores of students' taught biology using material improvisation skills and those taught using lecture method. The mean achievement score of the experimental group on pretest ($M=37.44$, $SD=11.864$) is higher than ($M=23.52$, $SD=11.799$) of the control group. The mean achievement scores of the experimental group on posttest ($M=56.84$, $SD=15.772$) is higher than ($M=30.61$, $SD=14.859$) of the control group. This shows that at both pretest and posttest of the experimental groups performed significantly higher than the control group. That is, there is a difference between the mean achievement scores of students taught biology using material improvisation skills and those taught using lecture method.

Null Hypothesis One

There is no significant difference in the mean achievement scores of students taught biology using material improvisation skills and those taught with lecture method.

This null hypothesis was tested using inferential statistics of analysis of covariance for post-test scores of students taught biology using material improvisation skills and those taught with lecture method. The result of the analysis is presented in table 2.

Table 2: Result of ANCOVA on Experimental and Control Group Achievement Scores in Biology

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	36696.851 ^a	2	18348.425	153.841	.000
Intercept	4195.816	1	4195.816	35.180	.000
Posttest	14673.093	1	14673.093	123.026	.000
Group	4337.996	1	4337.996	36.372	.000
Error	14908.579	125	119.269		
Total	296343.000	128			
Corrected Total	51605.430	127			

Table 2 presents the result of the analysis of covariance for the posttest scores of the experimental and the control groups. When the experimental and the control groups achievement scores were compared, $F_{(1,125)}=36.372$, $P= 0.000 < \alpha= 0.05$; the null hypothesis which stated no significant difference was rejected. Therefore, there is significant difference in the mean achievement scores of students taught biology using material improvisation skills and those taught with lecture method.

Research Question Two

What are the mean achievement scores of male and female students taught biology using material improvisation skills?

This research question was answered using descriptive statistics of means and standard deviations. The result of the analysis is presented in table 3.

Table 3: Means and Standard Deviations Scores of Male and Female Students Taught Biology Using Material Improvisation Skills

Gender	Pretest			Posttest			Mean gain
	N	\bar{X}	SD	N	\bar{X}	SD	
Male	45	41.40	10.835	45	60.78	13.889	19.38
Female	27	28.89	9.797	27	47.53	16.396	18.64
Total	72			72			

Table 3 presents the means scores and standard deviation scores of male and female students' achievements when taught biology using material improvisation skills. The mean achievement score of the male students on pretest (M=41.04, SD=10.838) is higher than (M=28.89, SD=9.797) of the female students. The mean achievement score of the male students on posttest (M=60.78, SD=13.889) is higher than (M=47.53, SD=16.396) of the female students. This shows that at both pretest and posttest of the male students performed better than the female students. That is, there is a difference between the mean achievement scores of male and female students taught biology using material improvisation skills.

Null Hypothesis Two

There is no significant difference in the mean achievement scores of male and female students taught biology using material improvisation skills.

This null hypothesis was tested using inferential statistics of analysis of covariance for post-test scores of male and female students taught biology using material improvisation skills. The result of the analysis is presented in table 4.

Table 4. Result of ANCOVA on Male and Female Students' Achievement Scores in biology

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	5253.239 ^a	2	2626.619	15.378	.000
Intercept	5043.725	1	5043.725	29.529	.000
Pretest	2907.316	1	2907.316	17.021	.000
Group	298.729	1	298.729	1.749	.191
Error	10419.199	61	170.807		
Total	222470.000	64			
Corrected Total	15672.438	63			

Table 4 presents the result of the analysis of covariance for the posttest scores of the male and female students. When the male and female achievement scores were compared, $F_{(1,61)}=1.749$, $P=0.191 > \alpha=0.05$; the null hypothesis which stated no significant difference was accepted. Therefore, there is no significant difference in the mean achievement scores of male and female students taught biology using material improvisation skills.

Summary of the Major Findings

1. There is significant difference in the mean achievement scores of students taught biology using material improvisation skills and those taught with lecture method.
2. There is no significant difference in the mean achievement scores of male and female students taught biology using material improvisation skills.

Discussions of findings

Findings were discussed in accordance with the research questions and research hypotheses.

Finding from research hypothesis one revealed that there is significant difference in the mean achievement scores of students taught biology using material improvisation skills and those taught with lecture method. During the course of this study, it was discovered that most of the biology teachers make use of Improvised materials as teaching aids this is presented on the data from table 1, According to Mbajorgu (2003) improvised instructional materials not only bridged the achievement gap between male and female students in sciences but also promote learning by doing and skill acquisition for further use and for achievement of self-reliance of students in certificate examinations.

Findings from research hypothesis two revealed that there is no significant difference in the mean achievement scores of male and female students taught biology using material improvisation skills. The result is also in line with Olagunjo (2008) who remarked that when a teacher improvises, it enables him to re-think and research for cheaper, better and faster methods of making the learning process easy and safe for both the students and the teachers. This discovery is supported by Abolade (2004) as he maintained that improvisation of instructional materials provides direct experience with reality as well as encourage active participation and acquisition of skills especially where students are allowed to manipulate the materials Further findings revealed that improvised materials facilitate understanding of biology. This is in line with the position of Mbajorgu (2003) as he maintained that improvised instructional materials bridged the attendant achievement gap between male and female students in sciences. Similarly, this finding is in tandem with the finding of Ahmed (2010) claimed that instructional resources

ensure that the learners see, hear, feel, recognize and appreciate as they learn, utilizing almost all the five senses at the same time.

Conclusion

The study looked at the influence of teaching material improvisation skills on senior secondary school students' achievement in biology. It is obvious that this research work has proved that teaching material improvisation skills influence students' achievement in biology in senior secondary school. Therefore, the importance of teaching material improvisation skills cannot be overemphasized. Despite the fact that Biology teaching material improvisation skills are crucial. However, Significant differences were noticed in Senior Secondary School Students Biology Achievement.

Recommendations

On the strength of the findings and conclusions derived from this study, the following recommendations were made:

1. The Ministry of Education should encourage and provide ongoing support to educators to sustain their active involvement in the improvisation of instructional materials for senior secondary school biology, recognizing its pivotal role in enhancing the overall educational experience.
2. Government should offer focused assistance and training for teachers to refine their improvisation skills, acknowledging the significant variance in student biology achievement based on teachers' levels of improvisation.
3. The Ministry of Education should introduce interventions to mitigate substantial differences in student achievement in biology associated with teacher improvisation levels, ensuring the equitable application of effective teaching practices for all students.
4. The principal should acknowledge the absence of significant disparity in student biology achievement between teachers with moderate and high levels of material improvisation, and explore avenues to harness effective teaching methodologies across the senior secondary schools.

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ASSESSMENT OF DIGITAL LIBRARY RESOURCES UTILIZATION AMONG UNDERGRADUATE STUDENTS IN YOBE STATE UNIVERSITY

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ABSTRACT

The paper investigated the utilization of digital library resources among undergraduate students at Yobe State University. The study aimed to determine the current state of utilization of digital library resources and identify the challenges faced by undergraduate students in utilizing these resources. The study adopted descriptive survey research design. The targeted population consisted of 14,141 undergraduate students at Yobe State University, a proportionate stratified random sampling technique was used in the study and a sample of 384 was drawn out of the targeted population using Research advisors table. Data collection was done using a questionnaire, and the data collected was analysed using percentage, frequency and mean score. The findings revealed poor utilization of digital library resources among undergraduate students, with a focus on e-journals, e-books, e-newspapers, and online dictionaries. Other essential resources such as e-databases, e-projects, e-theses and dissertations, e-magazines, and e-conference proceedings were not widely utilized. The study also highlighted challenges including low bandwidth, poor internet connectivity, inadequate infrastructure, and a lack of effective policies. As a result, the study recommends awareness raising on the resources and services rendered by the digital library. It also suggests improvement of internet connectivity which include high bandwidth and speed of the internet service. These measures aim to enhance the utilization of digital library resources among undergraduate students at Yobe State University.

Keywords: Digital Utilization, Digital library resources, Digital Challenges

Introduction

University libraries serve as vital institutions that support teaching, learning, and research by providing relevant information resources, including digital library resources. Scholars like Lefuna (2017) emphasize that the use of digital library resources enhances the quality and effectiveness of teaching, learning, and educational research activities. Musa, Sahabi, Lawal, and Amishe (2017) define the utilization of digital library resources as the processes that enable undergraduate students to access online or offline information resources such as e-books, e-journal articles, and e-encyclopaedias for their learning endeavours. Sejane (2017) highlights that

digital information resources empower students, lecturers, and researchers to engage with global scholarly work, thereby boosting research productivity and integrating established facts and knowledge into their disciplines. Digital libraries serve as essential hubs for accessing high-quality resources that support teaching, learning, and research activities, playing a crucial role in assisting library users effectively.

Numerous studies have explored the utilization of digital library resources by students and academic staff in higher education institutions. Mishra et al. (2019) found that using digital resources led to savings in time and costs. Siwach and Malik (2019) identified common reasons for utilizing digital library resources, including research paper drafting, proposal writing, and seminar preparation. However, challenges such as lack of information skills and poor infrastructure have hindered the full potential of digital library resource utilization (Ramamurthy, Shridevi, & Ramu, 2015).

In addressing these challenges, Ciccone and Liz (2019) stress the importance of acquiring information literacy skills to navigate digital innovations effectively. In Africa, studies conducted by Dorvlo and Dadzie (2016) have shown that inadequate search strategies contribute to suboptimal use of digital library resources among students. Similarly, in Nigeria, issues related to the utilization of digital library resources parallel those in other African countries, with concerns about librarian support and information literacy skills among staff (Okachi, 2018; Etim, 2017).

The study aims to investigate the utilization of digital library resources among undergraduate students at Yobe State University, shedding light on the challenges and opportunities in accessing and leveraging these resources effectively.

Statement of the Problem

The integration of technology and digital resources in university libraries has transformed the way students and scholars access information, breaking down barriers of distance and location. In Yobe State, university libraries have made significant investments in acquiring digital resources and subscribing to online databases to enhance the learning and research experiences of their users. Additionally, information literacy programs have been implemented to equip students with the necessary skills to effectively navigate and utilize these resources. Despite the availability of these valuable digital library resources, there seems to be an issue of

underutilization observed by researchers. This underutilization could stem from a lack of awareness among students or challenges in accessing and utilizing the digital resources effectively. The statistics on user patronage at Yobe State University library highlight a concerning trend of gross underutilization of digital library resources.

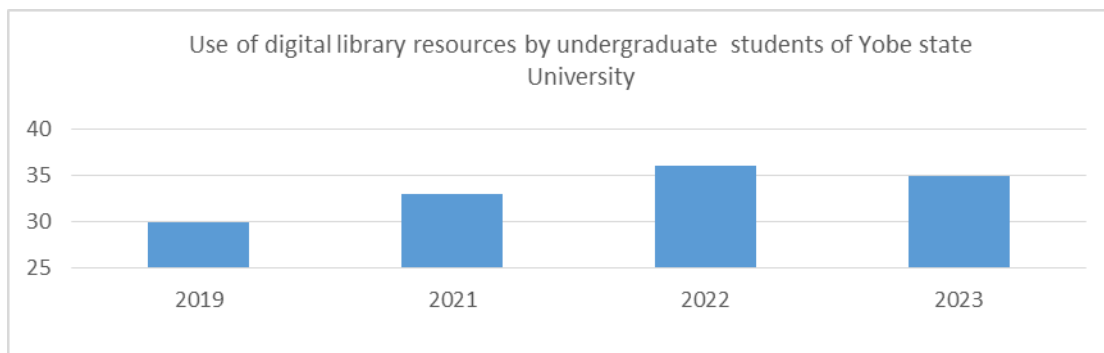


Figure 1: Patrons statistics by undergraduate students of Yobe state (Field survey, 2023)

Given this context, the study aims to delve into the factors contributing to the underutilization of digital library resources for learning among undergraduate students at Yobe State University. By investigating these challenges and potential barriers, the research seeks to identify areas for improvement and strategies to enhance the utilization of digital resources among students, ultimately maximizing the benefits that these resources can offer in supporting academic endeavours and research activities.

Research Objectives

The objectives of the study are to:

1. Determine the level of digital library resources utilization by the undergraduate students of Yobe State University.
2. Identify the challenges faced by undergraduate students in utilizing digital library resources Yobe State University.

Research Questions

1. What is the level of digital library resources utilization by the undergraduate students of Yobe State University?
2. What are the challenges faced by undergraduate students in utilizing digital library resources Yobe State University?

Literature Review

Utilization of digital library resources is a procedure that gives researchers access to information in digital format, online, or digital information material with the goal of improving the caliber and efficacy of their research efforts (Lefuna, 2017). This indicated that utilization of information resources refers to the level to which users make use of the information resources of a library so as to meet their information needs. Musa, Sahabi, Lawal and Amishe (2017) opined that utilization of digital library resources constitutes the process that enables researchers to effectively and efficiently access to online or offline databases for their research activities. With this, effective utilization of digital library resources depends on the information resources available in the library and also accessible to the student. This indicated that availability of digital information resources does not guarantee efficient utilization; the resources available must go in line with the demand of information by the users. Bala, Bansal & Sharma (2018) found that digital library resources are free of cost, saves time, easily accessible, and allows information seekers to acquire all the information needed in one place. In this regard, the motives for adoption of digital libraries in universities in Nigeria is mainly to provide digital and online information resources for staff and students in order to enhance educational development and provide educational resources so as to achieve an effective teaching, learning and research activities (Anyim, 2019). Singh and Sharma (2018) observed that digital library resources such as online databases, multi-media resources, CD-ROMs, and other types of information resources, have seen a major increase in terms of patronage in libraries.

In Asia, Sohail (2017) confirmed some of the problem associated with utilization of digital library resources are lack of knowledge on how to effectively use e-journal, lack of facilities, lack of and awareness. He further noted that there is little or no information literacy among most of the science and engineering students across the universities in Saudi Arabia. However, there are some efforts that were made by the management of the universities which include adding basic information literacy in the student's curriculum. Furthermore, Hamshri (2019) outlined some challenges which include lack of training, awareness and orientation are the main challenges faced by the students. Similarly, Humaidat and Yasin (2019) mentioned that majority of the users were encountering challenges in terms of utilization of digital information resources due to inadequate information literacy skills.

In Africa, Nigeria, Daramola, (2017) conducted a study on the reasons for utilization of digital library resources in Federal University of Technology Akure library. The study revealed that there was fair utilization of the digital library resources by the undergraduate student. However, the researcher noted some challenges faced by the student in utilization and accessibility; the challenges are large number of irrelevant information resources, poor internet connectivity, epileptic power supply and inconsistency in databases subscription among others. Nevertheless, Joshua& King (2020) found that one of the issues facing digital libraries is the collection development policies of digital library resources which include lack of subscription to the required databases, license management, maintenance of ICT facilities, and low bandwidth among others.

Research Methodology

The quantitative research methodology employed in the study involved survey research design and targeted undergraduate students of Yobe State University, Damaturu, with a population of 14,141 undergraduate students. Proportionate stratified random sampling was used to select participants, and a total of 384 questionnaires were distributed. Out of these, 324 questionnaires were filled and returned, resulting in a response rate of 82.5%, while 60 questionnaires (17.5%) were not returned. The data collected were coded and subjected to statistical analysis to determine the reliability of the instrument and internal consistency of the items. The test was conducted with the Statistical Package for the Social Sciences (SPSS IBM version 23) using Cronbach alpha formulae and the result was .819 which imply that it is reliable and internally consistent for a study.

Result

The results of the data collected from the questionnaires administered, which were completed and returned by the respondents. The analysis of the data was in line with the research questions that were generated from the research objectives.

Table 1: Opinions of the Respondents on the amount of Utilization of to Digital Library Resources among Undergraduate Students of Yobe state university under Study (N=324)

NU= Never use; AN= Almost never; O= Occasionally; AE= Almost every time; FU= frequently use; STD= Standard deviation, F= Frequency

Items	NU		AN		Occasionally		AE		FU		Mean	STD
	F	%	F	%	F	%	F	%	F	%		
E-journal articles	27	8.3	81	25.0	54	16.7	108	33.3	54	16.7	3.25	1.24
E-books	54	16.7	81	25.0	0	0	135	41.7	54	16.7	3.17	1.41
E-databases	81	25.0	108	33.3	27	8.3	108	33.3	0	0	2.50	1.19
E-projects	27	8.3	162	50.0	54	16.7	81	25.0	0	0	2.58	.96
E-theses & Dissertations	54	16.7	108	33.3	54	16.7	81	25.0	27	8.3	2.75	1.24
E-Newspaper	27	8.3	54	16.7	27	8.3	135	41.7	81	25.0	3.58	1.26
E-Magazines	135	41.7	162	50.0	0	0	27	8.3	0	0	1.75	1.01
E-conference	162	50.0	135	41.7	0	0	27	8.3	0	0	1.75	1.01
Online dictionaries	81	25.0	54	16.7	27	8.3	54	16.7	108	33.3	3.17	1.62
Online encyclopaedia	108	33.3	135	41.7	27	8.3	54	16.7	0	0	1.75	1.01
Online maps and atlases	81	25.0	108	33.3	27	8.3	108	33.3	0	0	2.50	1.19
Online abstracts and indexes	108	33.3	135	41.7	0	0	54	16.7	27	8.3	1.67	1.02

The data presented in Table 1 contained twelve (12) items responses of the respondents on the utilization of to digital library resources among undergraduate students of the universities under study on the midpoint of the mean value of 3.0 and above indicated that the utilization of digital library resources while below 3.0 indicated not utilize. A journal article and e-books were found to be utilized with a means deviation of 3.25 and 3.17 and standard deviations of 1.24 and 1.41 respectively. Conversely, e-databases, the result indicated that is utilized with a mean deviation of 2.50 and a standard of 1.19. Similarly, e-projects and e-theses and dissertation were found not utilized with a mean deviation of 2.58, 2.75 and standard deviation of .96 and 1.24 respectively. For e-newspaper, the data recorded that e-newspaper was been utilized with a mean deviation of 3.58 and standard deviation of 1.26. For e-magazines and e-conference proceedings, the data

indicated that was not utilized with a mean deviation of 1.75 and standard deviation of 1.01. For online reference materials, online dictionary was the first item listed where the data indicated that was been utilized to majority of the respondents with a mean deviation of 3.17 and standard deviation n of 1.62. Other online reference materials like online encyclopedia, online maps and atlases and online abstracts and indexes were not been utilized with means deviation of 1.75, 2.50 and 1.67 and standard deviations of 1.01, 1.19 and 1.02 respectively. The findings indicated that 2.53 was the grand mean which showed that the digital information resources were not utilized.

The data from Table 1 showed that the respondents utilized e-journal articles, e-books, e-newspapers and online dictionary sometimes. Other digital library resources like e-databases, e-theses and dissertation, e- magazines, e-conference proceedings and online abstracts and indexes were not been utilized by the majority of the respondents. It is revealed that the undergraduate students used only e-books. e-journal articles, e-newspapers and online dictionary. Other important documents such as e-databases, e-conference proceedings and among others were not used by most of the undergraduate students in the study area. Based on the above findings, the university libraries should sensitize the undergraduate students on the information resources that were not utilized. By doing so, the students will be aware of the information resources, which promotes the effective utilization of the digital library resources.

Table 2: Opinions of the Respondents on the Challenges faced by Undergraduate Students in Accessing and Utilizing Digital Library Resources in Yobe state university under the Study (N=324)

SD= strongly disagree; **D=** Disagree; **UD=** Undecided; **A=** Agree; **SA=** strongly agree; **STD=** Standard deviation, **F=** Frequency

Items	SD		D		UD		A		SA		Mean	STD
	F	%	F	%	F	%	F	%	F	%		
Lack of awareness of digital library resources	27	8.3	54	16.7	27	8.3	135	41.7	81	25.0	3.58	1.26
Poor network connectivity and low bandwidth	54	16.7	81	25.0	0	0	135	41.7	29	16.7	3.17	1.41
Slowness of Network	81	25.0	54	16.7	27	8.3	54	16.7	108	33.3	3.17	1.62
In adequate	108	33.3	27	8.3	54	16.7	81	25.0	54	16.7	2.83	1.14

computer facilities												
Constant breakdown of digital library facilities	108	33.3	27	8.3	54	16.7	81	25.0	54	16.7	2.83	1.14
Staff indifferent attitude	108	33.3	81	25.0	27	8.3	54	16.7	54	16.7	2.58	1.50
Lack of qualified staff	54	16.7	108	33.3	54	16.7	81	25.0	27	8.3	2.75	1.24
Poor enabling environment	81	25.0	81	25.0	81	25.0	81	25.0	81	25.0	3.00	1.58
Lack of workable policy	54	16.7	54	16.7	27	8.3	162	50.0	27	8.3	3.17	1.28

The data presented in Table 2 recorded the challenges faced by undergraduate students in accessing and utilizing digital library resources in the universities under the study on the midpoint of the mean value of 3.0 and above indicated that there was challenges faced by undergraduate students in accessing and utilizing digital library resources while below 3.0 indicated not challenges. Lack of awareness of digital library resources, poor network connectivity and low bandwidth and slowness of network with means deviation of 3.58 and 3.17 with a clustering standard deviation of 1.26 and 1.24 respectively. However, in adequate computer facilities, constant breakdown of digital library facilities and staff indifferent attitude; majority of the respondents indicated their disagreement with means deviation of 2.83 and 2.58 with clustering standard deviation of 1.14 and 1.50. Also, lack of qualified staff, majority of the respondents disagreed with a mean deviation of 2.58 and a standard deviation of 1.50. Poor enabling environment and lack of workable policy; majority of the respondents indicated their disagreement with means deviation of 3.00 and 3.17 with clustering standard deviation of 1.58 and 1.28. The grand mean for the above table was 3.00 which showed that there were challenges in access and use of digital library resources.

From the data in the table above, it revealed that lack of awareness of digital library resources, poor network connectivity and low bandwidth, slowness of network, poor enabling environment and lack of workable policy were the major challenges affecting the use of digital library resources by the undergraduate students in the study area. However, in adequate computer facilities, constant breakdown of digital library facilities, staff indifferent attitude and lack of qualified staff are not been considered as the challenges affecting the utilization of digital

resources by the undergraduate students in the study area. This implied that the challenges delimiting the undergraduate student to use the digital information resources include lack of awareness of digital library resources, poor network connectivity and low bandwidth, slowness of network, poor enabling environment and lack of workable policy. However, the undergraduate students attested that there are adequate computer facilities, no breakdown of digital library facilities, staff indifferent attitude and lack of qualified staff. Base on the above findings, the university libraries under study should provide an effective network connectivity, high speed bandwidth, good enabling environment in order to achieve an effective utilization of the digital library resources.

Discussion of Findings

The findings of the study provide valuable insights into the utilization of digital library resources and the challenges faced by undergraduate students in accessing and utilizing these resources at Yobe State University-;

1. Utilization of digital library resources: The finding of the study indicated that respondents utilized e-journal articles, e-books, e-newspapers and online dictionary sometimes. Other digital library resources like e-databases, e-theses and dissertation, e- magazines, e-conference proceedings and online abstracts and indexes were not utilized by the majority of the respondents. Similar to the finding of this study, scholars (Bamidele et al., 2018; Bala, Bansal & Sharma, 2018; Aladeniyi, 2017; Qasim & Khan, 2015; Tella, Orim, Ibrahim, & Memudu. 2018) which showed that the students are sometimes utilizing journal articles, e-books and e-newspapers.
2. Challenges faced by undergraduate students in accessing and utilizing digital library resource: The finding of the study revealed that lack of awareness of digital library resources, poor network connectivity and low bandwidth, slowness of network, poor enabling environment and lack of workable policy were the major challenges affecting the use of digital library resources by the undergraduate students in the study area. However, in adequate computer facilities, constant breakdown of digital library facilities, staff in-different attitude and lack of qualified staff are not considered as the challenges affecting the utilization of digital resources by the undergraduate students in universities of Yobe state. Similar with the finding of the study, Adeleke and Nwalo (2017) found

that ineffective use of digital library resources by postgraduate students at the University of Ibadan occurred due to factors which include interrupted power supply, speed and capacity of computers, non-possession of requisite IT skills and problems accessing the internet. This finding is in agreement with those of Iroeze, James, Ngozi and Opara (2018) who found that online information resources are available but are not accessible due to poor network connections and power outage. Contrary to the finding of this study Joshua and King (2020) found that one of the issues facing academic libraries is the collection development policies of digital library resources which include lack of subscription to the required databases, license management, maintenance and archiving.

Conclusion

In conclusion, the study highlights that there is a significant gap in the utilization of digital library resources among undergraduate students at Yobe State University. The findings indicate that while some resources such as e-journals, e-books, e-newspapers, and online dictionaries are being utilized to some extent, other critical resources like e-databases, e-theses, and dissertations are not being effectively accessed by the students. Moreover, the study identifies key challenges that hinder the utilization of digital library resources, including poor internet connectivity, low bandwidth, inadequate enabling environment, and the absence of effective policies. These challenges contribute to a limited engagement with digital resources and impact the overall academic experience of undergraduate students at the university.

In light of these findings, it is imperative for the university administration to address these challenges and enhance the accessibility and usability of digital library resources for undergraduate students. Improving internet connectivity, increasing bandwidth, creating a conducive environment for accessing digital resources, and implementing effective policies are crucial steps that can be taken to bridge the gap and facilitate better utilization of digital library resources. By addressing these issues, the university can empower students to leverage the full potential of digital resources for their academic and research needs, ultimately enhancing the quality of education and learning outcomes at the institution.

Recommendations

Based on the findings of the study, the following recommendations were suggested to address the challenges and improve the utilization of digital library resources by undergraduate students at Yobe State University:

1. Orientation and Awareness Programs: - University libraries should conduct regular orientation programs to educate undergraduate students about the availability of new digital library resources and databases. By raising awareness about the resources and services offered by the digital libraries, students can be encouraged to explore and utilize a wider range of digital resources for their academic needs.

2. Improvement of Internet Connectivity: - The university management should prioritize the provision of reliable internet connections within the digital libraries. Upgrading the bandwidth for internet connectivity is essential to enhance the speed and efficiency of accessing online information resources. A stable and high-speed internet connection is crucial for students to effectively utilize digital library resources without facing connectivity issues.

By implementing these recommendations, the university can create a more conducive environment for students to access and utilize digital library resources effectively. Enhancing awareness and improving internet connectivity will not only facilitate better utilization of digital resources but also contribute to enhancing the overall academic experience and learning outcomes of undergraduate students at Yobe State University.

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