



Students' Utilization of Electronic Learning Facilities in Tertiary Institutions Library in Bauchi State Nigeria

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Abstract

This paper examined students' utilization of electronic learning facilities in tertiary institutions' libraries in Bauchi state Nigeria. The study employed descriptive research design. The sample size for the study consisted of 1,680 (559 federal and 1120 state tertiary institutions) students which were used to draw the precise number of representative samples from each institution. Questionnaire were used to collect datas. The findings of the study revealed that both the federal and state tertiary institutions in Bauchi state have the facilities but not as enough as required. It also revealed that federal tertiary institution libraries are significantly better than the state tertiary institutions libraries in the state in terms of utilization of electronic learning facilities by the students. The researcher recommended that use of library' should be made one of the courses to be taught across the tertiary institutions and more computers and WiFi should be made available.

Keywords: Utilization, Electronic Learning, Electronic Learning Facilities, Tertiary Institution, Library

Introduction

The use of ICT offers a powerful learning environment and can transform teaching and learning process so that students can deal with knowledge in an active, self-directed, and constructive way of communication which include computers, internet, electronic mail (email), teleconferencing, world wide web (www), electronic whiteboards and satellites. The availability of the internet provided the channel for the use of the electronic approach in education known as electronic learning or E-learning (Ayuba, 2021).

According to (Agim Nneka C, Iroeze Pauline C, 2018b) electronic learning is a term that describes educational technology users in fundamental structural changes that can be used to achieve significant improvements in productivity which used to support both teaching and learning. Technology infuses classrooms with digital learning tools, such as computers and handheld devices; expands course offerings, experiences, and learning materials; supports learning; builds 21st-century skills; increases student engagement and motivation; and accelerates learning. Technology also has the power to transform teaching by ushering in a new model of connected teaching. This model links teacher to their students and to professional content, resources, and systems to help them improve their instruction and personalize learning (Agim Nneka C, Iroeze Pauline C, 2018a).

Accoding to (Johnson, 2019), electronic learning refers to the use of information and communication technologies to enable access to online learning/teaching resources. The use of electroniclearning is on the increase and it is gaining

appreciable grounds in the educational systems all over the world.

The involvement of electronic learning is given prominent attention especially in higher institutions and for distance learning situations (Johnson, 2019). Electronic learning facilities are those facilities that are used in this age of Information and Communication Technology (ICT), to make learning easier and effective. These facilities include a computer, printer, palmtop, laptop, electronic board, internet service, and scanner, etc. (Markus, K., Sylvester, I. S., 2017) opine that, the introduction of electronic learning facilities to the education systems is aimed at improving educational delivery and preparing students for a role in an information age. The adoption of electronic learning, and the underlying message has emerged that the level of electronic learning adoption will improve if tertiary institutions recognise the social dimensions of e-learning adoption such as interest and needs, academic and professional goals, pattern of work source of support and social network (Singh G., 2014).

According to (Markus, K., Sylvester, I. S., 2017), application of electronic learning facilities provides productive teaching and learning in order to increase people's creative and intellectual resources especially in today's infor mation society and gives ample and exceptional opportunities to the teachers and students to develop capacities for high-quality learning and to increase their ability to innovate. According to Adebayo (2002) as cited in (Markus, K., Sylvester, I. S., 2017), electronic learning facilities comprises the use of computers, radios, satellites, online self-learning packages, teleconference systems, interactive CDs, video conference, digital cameras, electronic e-mails, video cassette recorder, internet optical fiber technologies and all types of Information Technology



(IT) hardware and software.

According to (Ramkumar P, 2020), library supports higher education objectives by providing information resources to teaching-learning, research training and community service. The university library has been regarded as the heart of the academic community with essential functions to provide students, and the entire school community an enabling environment that supports higher education objectives. Without the electronic learning facilities provided by the library, teaching-learning, research and other reasons for using library resources will lack requisite support. The utilization of electronic learning facilities in the library by the students, in the context of this study means the presence of electronic learning facilities that can be easily accessed used and obtained for teaching and learning and for other purposes. It is also seen as, the process of making use of library electronics facilities such as WIFI, PCs, Cable Collection, Interactive Board for the purpose of attaining educational goals (Eze S. C, V.C. Chinedu-Eze, 2018).

The utilization of electronic learning facilities for the teaching-learning process has been an issue that needs to be assessed in order to determine the extent to which electronic learning facilities have impacted knowledge delivery and how much of these facilities are available in the teaching and learning in Nigeria. It is in this fact that the researcher intends to study students' utilization of electronic learning facilities in tertiary institutions libraries in Bauchi state Nigeria.

Nigerian institution's libraries are faced with a lot of challenges on the availability of electronic learning facilities such as computer, computer laboratories, internet and e-mail facilities, videophone systems and teleconferencing devices, fax and wireless applications, digital library, digital classrooms, multimedia systems, and multimedia courseware development. It is in this view that the researcher intends to study the student's utilization of electronic learning facilities in tertiary institutions libraries in Bauchi state Nigeria.

Statement of the problem

This study is inspired in response to the relevance of electronic learning facilities in the 21st-century education system. Nigerian institution's libraries are faced with a lot of challenges on the availability of electronic learning facilities such as computer, computer laboratories, internet, and e-mail facilities, videophone systems and teleconferencing devices, fax and wireless applications, digital library, digital

classrooms, multimedia systems and multimedia courseware development which affected the students. This fact has been alluded to by (Taiwo, J. N., & Agwu, 2017) who asserted that the number of electronic learning facilities in Nigerian higher institutions is grossly inadequate compared to a number of students admitted into the institutions. (Sanusi, A. N. Z., Abdullah, F., Kassim, M. H., & Tidjani, 2018) seems to agree with this assertion when he suggested that for electronic learning to function effectively in Nigerian institutions of learning, ICT resources such as computers, computer laboratories, internet and e-mail facilities among others must be available for use by the students to enhance their academic development. It is on this basis therefore, that the researcher seeks to investigate the utilization of electronic learning facilities in federal and state tertiary institutions' libraries in Bauchi state by the students.

Objectives of the Study

This study sought to achieve the following objectives:

1. examined students' utilization of electronic learning facilities in federal tertiary institutions' libraries in Bauchi state.
2. examined students' utilization of electronic learning facilities in state tertiary institutions' libraries in Bauchi state.
3. investigate the difference in the students' utilization of electronic learning facilities between federal and state tertiary institutions' libraries in Bauchi state.

Research Questions

1. What is the extent of students' utilization of electronic learning facilities in federal tertiary institutions' libraries in Bauchi state?
2. What is the extent of students' utilization of electronic learning facilities in state tertiary institutions' libraries in Bauchi state?
3. What is the difference in the level of utilization of electronic learning facilities between federal and state tertiary institutions' libraries in Bauchi state?

Hypothesis

H₀₁: There is no significant difference in the level of utilization of electronic learning facilities between the students in the federal and state tertiary institutions' libraries in Bauchi state.



METHODOLOGY

Research Design

The study employed descriptive research design of the survey method. This type of research design usually involves large sample to ensure meaningful representation and description which is relevant to the study. This method also enables the researcher to find out and interpret idea the way they are without manipulation.

Population

The study population was 1,680 (559 federal and 1120 state tertiary institutions) students selected from the 6 out 17 (2 federal and 4 states) public tertiary institutions in Bauchi state Nigeria. The tertiary institutions includes: Abubakar Tafawa Balewa University, Bauchi, Federal Polytechnic, Bauchi, Adamu Tafawa Balewa College of Education, Kangere, Tatar Ali Polytechnic Bauchi, Bauchi State University, Gadau, Aminu Saleh College of Education, Azare.

Sample and Sampling Techniques

The sample size for the study consisted of 1,680 (559 federal and 1120 state tertiary institutions) students was used to draw the precise number of representative samples from each institution. Multi-stage sampling technique was adopted for the study. Six tertiary institutions were purposively selected because of the number of tertiary institutions in the state.

Validity

The face validity of the instruments was carried out by an experts; one from Educational Technology, Test and Measurement and English Language from the University of Jos. They validated the items in terms of comprehensiveness, appropriateness and clarity in language based on the content. The final draft was produced with strict compliance with the corrections, suggestions and observations.

Reliability

The reliability for this study was carried out in order to ensure internal consistency of the test instruments. This is determined by using the test-retest and retest method where the same test was administered twice to a different group of respondents at about 2 weeks intervals

Research Instruments

The research instruments used for this study were Electronic Learning Facility Checklist (EFC) and

questionnaire titled Electronic Learning Facilities Questionnaire (EFQ). The checklist is a that was used to find out the utilization of electronic learning facilities among students. The questionnaire on the other hand, helped to elicit information from the respondents on the utilization of electronic learning facilities in tertiary institutions libraries in Bauchi state. The Electronic learning Facilities Checklist (EFC) comprised of 26 items. The items covered the list of the various electronic learning facilities and their utilization. It was an observation checklist that ticked “yes” or “no” to indicate their utilization or non-utilization respectively.

Method of Data Analysis

The research questions were analyzed using the using mean, and standard deviation, and t-test. The data was presented based on the research questions. The data was presented based on the research questions and the research hypothesis. The three research questions were computed using Descriptive Statistical Product and Service Solutions (SPSS) version 27 with frequency and percentage in a tabular form. The hypothesis was tested using the t-test at 0.05 level of significance because it tests the strength of differences.

Results and Discussion

Research Question 1: What is the extent of students’ utilization of electronic learning facilities in federal tertiary institutions’ libraries in Bauchi state?

Table 1: Mean and standard deviation of the responses on utilization of electronic learning facilities for students in federal tertiary institutions libraries in Bauchi State.

Utilization of Electronic Learning Facilities	N	Mean	SD
Printer	559	3.19	.648
Modern	559	3.07	.750
Flash Drive	559	3.07	.578
Memory cards	559	3.47	.863
Video Conferencing	559	3.19	.648
Projectors	559	3.07	.750
Computers	559	3.07	.578
Personal Digital Assistants	559	3.47	.863
Hard Disk Drives	559	3.19	.648
iPad	559	3.07	.750
Smart Board Interactive Whiteboard	559	3.07	.578
Audio Tapes	559	3.47	.863
Network	559	3.19	.648
Video/Video Tapes	559	3.07	.750



Mega Phone	559	3.05	.565
Visual Classroom	559	3.45	.862
Local Area Network	559	3.15	.629
Wide Area Network	559	3.05	.735
Wi-Fi	559	3.07	.578
Email	559	3.43	.860
E-book readers	559	3.14	.624
YouTube	559	3.03	.753
E-Library	559	3.05	.565
Software Packages	559	3.45	.862
Off-line ordinary computer	559	3.13	.616
Screen touch electronic board	559	3.02	.719
Total mean	559	88.68	18.28

Source: Field Study Results

Table 1 showed that memory cards, personal assistant digital and audiotapes has 3.47, visual classroom and software packages has 3.45, email has 3.43, printer, video conferencing, hard disc drives and network has 3.19, local area network have 3.15, e-book reader has 3.14, offline ordinary computer has 3.13, modern, flash drive, projector, computers iPad, smart board interactive whiteboard, video/video tapes and WiFi has 3.07, mega phone, wide area network and E-library has 3.05, YouTube have 3.03, screen touch electronic board has 3.02. Students in federal tertiary institutions has a total mean of 88.68 and the standard deviation of 18.283.

Research Question 2: What is the extent of students' utilization of electronic learning facilities in state tertiary institutions' libraries in Bauchi state?

Table 2: Mean and standard deviation of the responses on utilization of electronic learning facilities for students in state tertiary institutions libraries in Bauchi State.

Utilization of Electronic Learning Facilities	N	X	SD
Printer	1120	2.48	.873
Modern	1120	1.81	.882
Flash Drive	1120	2.44	.871
Memory cards	1120	1.85	.906
Video Conferencing	1120	2.48	.873
Projectors	1120	1.81	.883
Computers	1120	2.44	.871
Personal Digital Assistants	1120	1.85	.906
Hard Disk Drives	1120	2.48	.873
iPad	1120	1.81	.882
Smart Board Interactive Whiteboard	1120	2.44	.871
Audio Tapes	1120	1.85	.906

Network	1120	2.47	.873
Video/Video Tapes	1120	1.80	.882
Mega Phone	1120	2.43	.871
Visual Classroom	1120	1.85	.906
Local Area Network	1120	2.47	.873
Wide Area Network	1120	1.77	.858
Wi-Fi	1120	2.41	.886
Email	1120	1.83	.894
E-book readers	1120	2.41	.869
YouTube	1120	1.79	.879
E-Library	1120	2.43	.871
Software Packages	1120	1.85	.906
Off-line ordinary computer	1120	2.45	.885
Screen touch electronic board	1120	1.77	.858
Total mean	1120	55.47	22.908

Source: Field Study Results

Table 2 revealed that Printer, Video and Hard drives have the highest mean score of 2.48, Network and local area network has 2.47, Off-line ordinary computer is 2.45, flash drive, computers and smart board interactive whiteboard is 2.44, mega-phone and E-library has 2.43, while WIFI and E-book readers have 2.41. memory card, personal digital assistant, audiotapes, visual classroom, software package has 1.85, email have 1.83, modern, projector and iPad has 1.81, video/videotapes has 1.80, YouTube has 1.79, wide area network and screen touch electronic board has 1.77. Students in state tertiary institutions have a total mean of 55.47 and standard deviation of 22.908.

Table 3: Different in the utilization of electronic learning facilities between students of federal and state tertiary institutions in Bauchi state.

Type of Institution	N	Mean	Mean difference
Federal	559	88.68	
State	1120	55.47	33.21

Source: Field Study Results

Table 3 showed that the t-test result to determine the difference in the utilization of electronic learning facilities between federal and state tertiary students in Bauchi state. The federal government-owned tertiary institutions has the highest mean score of 88.68 while state government-owned tertiary institutions has 55.47. The mean difference between federal and state government-owned tertiary institutions was 33.21 in favour of federal university students.



Hypothesis

H₀₁: There is no significant difference in the level of utilization of electronic learning facilities between the students in the federal and state tertiary institutions' libraries in Bauchi state.

University	N	Mean	SD	Df	t-value	P-value	Decision
Federal	559	88.68	18.283	1677	255.40	.000	Sig.
State	1120	55.47	22.908				

Source: Field Study Results

Table 4 revealed that the t-value computed was 255.40 and the p-value of 0.000 was observed. Since the obtained p-value of 0.000 is less than the alpha value of 0.05, based on the decision rule, this study rejected the null hypothesis that says there is no significant difference in the level of utilization of electronic learning facilities between the students in the federal and state tertiary institutions' libraries in Bauchi state. The decision implies that, there is a significant difference in the level of utilization of electronic learning facilities between the students in the federal and state tertiary institutions' libraries in Bauchi state in favor of federal universities.

Discussion of the Findings

The result revealed the utilization of electronic learning facilities between the students in the federal and state tertiary institutions in Bauchi state. A total of 559 (82.68%) students in the federal and 1120 (55.47%) students in the state tertiary institutions utilized electronic learning facilities. The difference was in favor of federal institutions. Based on the responses of the respondents both the students in the categories used the electronic facilities but students of federal institutions are better than their counterpart in the state. The result disagreed with the finding of (Felicia Kikelomo Oluwalola, 2019) who conducted a research on Availability and Utilization of E-learning Facilities for Management and Business Courses in Universities in Kwara state. The findings indicated that utilization was found occasionally used for learning activities of business and management courses in the selected universities in Kwara state.

It was also discovered that majority of students in Bauchi state tertiary institutions indicated that electronic learning facilities are not fully utilized. This might be as a result some factors such as attitude of the users, 'not functional' electronic learning facilities in the libraries, lack of technical know-how and attitudes

Table 4: T-test analysis of the utilization of electronic learning facilities in the federal and state tertiary institutions' libraries in Bauchi state.

of the staff, poor internet access and students' attitudes to change. For Bauchi state tertiary institutions students to achieve full utilization of electronic learning facilities they need to ensure that the facilities are working; and the library staff are trained on how to utilize electronic learning facilities. This is in line with the findings of (Eze S. C, V.C. Chinedu-Eze, 2018) which attributed this to low level of usage of ICT equipment and facilities in schools.

Conclusion

Despite the availability of electronic learning facilities, students were not using the tool as expected. It was revealed in the study that most of the students utilize electronic learning facilities through computers, email, WiFi, etc. This implies that only limited students utilized electronic learning facilities across the state. This would help stakeholders of the various institutions to put necessary facilities like Internet, power supply, larger bandwidth among others in places. It can be concluded that federal tertiary institution libraries are better than the state tertiary institutions libraries in the state in terms of utilization of electronic learning facilities by the students.

Recommendations

In view of the findings of this study the following recommendations are enumerated for educational stakeholders to consider for effective utilization of electronic learning facilities in Bauchi state.

1. The tertiary institutions should adopt electronic learning and provide adequate and reliable technical infrastructures.
2. Most of the tertiary institutions libraries across the state lack basic electronic learning facilities in their library. It is important to provide allocation to all the tertiary institutions libraries in the budget. Furthermore, Tertiary Educational Trust



Fund (TETFUND) grants and assistance should be extended to the tertiary institutions libraries.

3. More computers, WiFi and other electronic learning facilities should be made available. This will make more rewarding search of information via the internet by the students.
4. Power Holding Company of Nigeria (PHCN) should ensure regular power supply to reduce too much overhead incurred by the school management on fuel and generator maintenance.

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