

AVAILABILITY AND USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FACILITIES IN ACADEMIC LIBRARIES FOR ACADEMIC PERFORMANCE OF COLLEGES OF EDUCATION STUDENTS IN NORTH CENTRAL, NIGERIA.

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Abstract

The study investigated the availability and use of Information and Communication Technology (ICT) facilities for academic performance of colleges of education students in academic libraries in north central, Nigeria. Five objectives and five research questions guided the study. Survey research design was used for the study, the population comprises of all the college students in the in the three selected colleges of Education in North central, Nigeria who are registered library users and the Heads of the Electronic library unit (e-library). Proportionate and stratified random sampling technique was used and Cohen, Manion and Morrison (2007) table for determining sample size was use to sample 266 students from the total population of 12,876 registered library users. Observation checklist and Questionnaire were used as the data collection instruments. The findings show that out of 266 copies of the questionnaire administered, 261 were completed, returned and found usable showing a response rate of 98.0%. Data were analyzed using descriptive statistics and results were presented in tables, frequency distribution, percentages, and mean score. The findings of the study showed that; computer, printer, scanner, photocopier, compact disc/digital disc, flash drive, projector, internet, external hardisk, institutional website, digital camera, telephone lines, television, library software, library e-mail, e-resources, cable satellite and web cam were the ICT facilities available in colleges of education libraries. The findings from the study also revealed that ICT facilities were highly accessible by college students in meeting their academic needs. It was discovered that majority of the respondents positively agreed that ICT facilities aid their academic performance in the following areas: completing their project report, learning independently, typing of course work and assignment, applying what has been learnt in real world situation, improving their organizational skills, GPA have improved remarkably through the use of ICT facilities among others. The study recommended that: more financial support should be made available to provide the basic ICT infrastructural facilities, information literacy should be incorporated in school curriculum, expansion of the e-library unit for students to have access to ICT infrastructures, provision of internet services in the students hostel as well as classroom and among others.

Keywords: *Availability, Accessibility, Academic performance, College students, College of Education, Nigeria*

Introduction

The pursuit of excellence is an important part of professionalism in any career. It involves striving to put quality into everything you do, and this disposition tends to separate the achievers, who make rapid strides in their career from others. A prudent man once said that “more disastrous than the mismanagement of natural resources is the waste of *human* resources.” Great people are never satisfy with mediocrity. They can’t take pleasure in an unfulfilled life. They are always on the lookout to see how they can become better and when they see human excellence or the opportunities for it, they get excited and look for ways to achieve

it themselves. The only way man would achieve excellence in his profession is by commitment and dedication to work. College students who are not left out in the quest for personal development always strive to perform excellently in their academic pursuit in Colleges of education.

Particularly, colleges of education in Nigeria are primarily set up to produce middle level man power for the basic schools in our educational system. The level of academic excellence in these schools is determined to a great extent by the quality of teachers produced at colleges of education. For effective learning and teaching in this set of institution of higher learning therefore, a college library is fundamental. Academic libraries are libraries found in institutions of higher learning such as universities, polytechnics, colleges of education, school of nursing and other allied institutions. They are established to support teaching, learning and research process (Akinlubi,2015).

Academic performance is necessary for every student because it measures the extent to which learning objectives have been achieved. Trowel in Odeh, Ogwuche & Ivagher (2015) defined academic performance as “knowledge attaining ability or degree of competence in academic task usually measured by standardised tests and expressed in a grade or units based on students’ performance”. In the same vein Good (2009) defined academic performance as “the knowledge obtained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher. One of the major means of achieving academic performance by college students is by the use of ICT facilities, especially the ones available in college libraries.

Information and communication Technology (ICT) has been defined by various scholars from different perspectives. Nwana (2009) defined ICT as a science of collecting and processing information, facts, values, skills, thoughts, texts, graphics, pictures, cards sounds, news and all other forms of data in digital form for dissemination in both immediate and remote locations. However, ICT can be defined as the technology use to collect, store, process, disseminate and use of information in scientific manner. It is not confined to the usage of hardware and software alone, but also recognises the importance of human in achieving the Information and Communication Technology goals. Information and communication technologies (ICTs) application in academic libraries have today not only increased and broadened the impact of information resources at their doorsteps, but also placed more emphasis on effective and efficient services. Their applications in libraries, commonly known as library automation, have indeed continued to ease and promote quick and timely access to and transfer of information resources that are found dispersed round the globe. Adenuga (2012) asserted that ICT facilities and services available in libraries include computers, access to the internet and it resources, Local Area Networks (LANs), Compact Disc- Read Only Memory (CD-ROM) databases, online databases, Online Public Access Catalogues (OPACs), Fax machines, photocopiers, Interlibrary lending and Document Delivery (ILL/DD) services, computer laboratories, scanners, printers, microfiche readers and telephones among others. Hence, the degree in which ICTs facilities are adopted within a given university (in different departments/faculties, libraries/computer centers) will determine to a great extent the level of accessibility and utilisation of electronic resources as well as the academic performance of students and scholars in their research; which increase efficiency and competitive advantage in research process. Moahi (2009) opined that ICTs have allowed information to be effectively managed and harnessed in the universities and this has obviously led to enhanced access to information.

The role of information and Communication Technology (ICT) among college students academic performance in Nigerian colleges of Education cannot be overemphasized. Harris (2005) mentioned that students use ICT to plan and build models, and use the Internet to bring a new dimension to their learning. By using software and the Internet, students manage and reduce the time typically given to design a prototype. As the time spent communicating via technology tools increases rapidly, there is a sense in which young people wish to use them to support many aspects of their lives (Goldsmith, 2009). Okoro and Ekpo (2016) opined that institutions of higher learning provide computer and Information Technology as learning materials to gain knowledge and experience. Students now have more understanding during teaching process. The internet for instance provides a wide range of information and learning tools in educational lines. The objective of the exercise is to prepare students in solving problems. One method is by using

multimedia activities. Besides learning, the instructor can attract the students' interest in learning process and they understand more if they learn by using something that will attract their interest. ICT plays some important roles in student academic performance by enabling them to associate between concrete, tangible fact from abstract ones, also help to promote the students retention and also facilitate the simulation and recovery phase. The authors further stated that the computer tends to be an excellent tool for education. The idea is that students will be active participants rather than spectator in teaching and learning process.

Problem statement

Students' academic performance remains central in any institution of learning. ICTs provide a window of opportunity for educational institutions and other organisations to harness and use technology to compliment and support the teaching and learning process. However, despite the enormous advocacy of ICT aided teaching and learning, investment and donation of ICT equipment to colleges of education in Nigeria, colleges still face the challenge of how to transform students learning process to provide functional and effective information using ICTs in this dynamic, information-rich, and continuously changing environment. College students are finding it difficult to access and use ICT facilities to achieve their information needs so as to pursue academic and research activities. The cause of concern is that unless this problem is addressed, investment in the deployment of ICTs in Colleges of Education in Nigeria is going to be a waste and improvement in the quality of teaching and learning is going to be sluggish. This may make Colleges of Education fail to achieve its mission and to produce teachers who are ready for the world of work which is increasingly reliant on ICT aided generation and dissemination of knowledge. In view of this problem, there is need to examine the availability and use of Information and Communication Technology (ICT) facilities for academic performance of colleges of education students in academic libraries in north central, Nigeria which will aim at closing the gap on availability and use of Information and Communication Technology (ICT) facilities for academic performance of colleges of education students in academic libraries in north central, Nigeria.

Justification of the Study

The need to carry out the study is necessitated by the revolution Information and Communication Technology have brought to the educational sector. Their applications in libraries, commonly known as library automation, have indeed continued to ease and promote quick and timely access to and transfer of information resources that are found dispensed round the globe. The centrality of academic performance among College students in our institutions of higher learning also necessitate this study. The three (3) selected state colleges of Education in north central, Nigeria for the study have fully implemented and embraced Information and Communication Technology in their library operations. They are FCT college of Education, Zuba, College of Education, Akwanga and Niger State College of Education, Minna. Furthermore the need to ensure the maximization of huge investment by state colleges of Education in ICT, thereby avoiding waste of huge financial resources or fund expended in this regard.

Objectives of the Study

The study examined the availability and use of Information and Communication Technology (ICT) facilities for academic performance of colleges of education students in academic libraries in north central, Nigeria. However the specific objectives are to;

1. Investigate the types of ICT facilities available in colleges of Education libraries in North Central, Nigeria;
2. Determine the level of accessibility of ICT facilities by college students in Colleges of Education libraries in North Central, Nigeria;
3. Determine the level of utilisation of ICT facilities by college students in Colleges of Education libraries in North Central, Nigeria;
4. Determine the influence of the ICT facilities on college students' academic performance in Colleges of Education libraries in North Central, Nigeria;
5. Identify the constraints to utilisation of ICT by college students in Colleges of Education libraries in North Central, Nigeria.

Research Questions

The following research questions guided the study:

1. What types of ICT facilities are available in colleges of Education libraries in North Central, Nigeria?
2. What is the level of accessibility of ICT facilities by college students in Colleges of Education libraries in North Central, Nigeria?
3. What are the reasons or purpose for the utilization of ICT facilities by college students in Colleges of Education libraries in North Central, Nigeria?
4. What influence do ICT facilities have on college students' academic performance in Colleges of Education libraries in North Central, Nigeria?
5. What are the inhibiting factors to accessibility and utilization of ICT facilities by college students in Colleges of Education libraries in North Central, Nigeria

Literature Review

Information and Communication Technology (ICT) can influence education and national development, and this has motivated academic libraries to establish electronic library (e-library) where users can readily access information from the internet. Opportunities of this nature are bound in universities and other higher institutions of learning in Nigeria in consonance with the goals of tertiary education which among others include: to acquire both physical and intellectual skills which will enable individuals to be self-reliance and useful members of the society (Igba, 2018).

Khan, Suraj-u-din and Ismail (2015) on the impact of ICT on students performance: A review of access to information. Four objectives guided the researcher and corresponding four research questions. Relevant literatures were reviewed in relation to the objectives of the study. The study adopted descriptive survey research design and was guided by four research questions. Questionnaire was used as the primary instrument for data collection. The population of the study consists of all the students of political science department in Gomal University, Pakistan and a sample size of 50 students were selected by simple random techniques. Findings from the study revealed that in Gomal University many students considered ICT tools very helpful in that it help them to do assignment, enables students with special needs and difficulties and also help to reduce social disparities between students, since they work in team in order to achieve a given task. Students also assume responsibilities when they use ICT to organize their work through digital portfolios or projects. The study showed that ICT has significant impact on students and learning process. The researcher proffer the following recommendation: (a) The management of the institution should as a matter of urgency put more ICT facilities and equipment in providing solutions to specific problems of curricula as well as recognize the impact and applicability of ICT to enhance qualitative and quantitative decision-making in the successful academic output. (b) The high ups should make the compliance of ICT facilities more relevant to encourage skill acquisition and competence of the students. (c) The administrators should show more interest in the use of ICT tools to guarantee effectively administrator the learning process of the students. (d)The administrators should build more confidence in ICT tools in having capacity to handle and process data within a fastest desired speed.

Isah (2016) investigated the effect of access and utilisation of electronic resources on academic performance of postgraduate students in universities in North central Nigeria. Five objectives of the study guided the researcher and corresponding five research questions. Relevant literatures were reviewed in relation to the objectives of the study. The study adopted descriptive survey research design and was guided by five research questions. Questionnaire was used as the primary instrument for data collection. The total population for the study is 9085 postgraduate students and sample size of 357 post graduate students were used for the study and a response rate of 77% was obtained for data analysis. Findings of the study revealed that electronic books and electronic databases are the most available electronic resources. Although the utilisation of these resources is low and access and use of e-resources has improved the academic

productivity of post graduate students in universities in north central Nigeria. The study recommended increased investment in ICT facilities at the surveyed universities to promote increase access and use of electronic resources by post graduate students in North central Nigerian Universities.

Methodology

Descriptive survey research design was used for the study. The design was considered suitable for the study because descriptive survey research is fact finding in nature. It focuses on selective dimension of a phenomenon and measure them in a systematic and precise manner (Eboh, 2009). The target population for the study consists of the total number of registered students in the libraries in the three selected colleges of education in North central Nigeria which is estimated to be twelve thousand eight hundred and seventy six (12,876). A sample size of 266 college students was drawn out of the population of 12,876 college students using stratified sampling techniques. The sampling technique used is proportionate stratified random sampling which involves arranging the population according to strata or layers. These strata within the proposed study were the various schools in selected colleges in north central, Nigeria. Using a sample size of 266 respondents in line with Cohen, Manion & Morrison (2007) which states that in a population size that ranges from 10,000-20,000 respondents, a sample size of 266 with confidence level of 90.0% is adequate. However the researcher decided to select 266 college students from a population of 12,876 which is not up to 20,000. The instrument for data collection were observation checklist and a structured questionnaire tagged “Academic Libraries and Academic Performance (ALAP)”. The questionnaire had two sections A and B. Section A sought information on personal data of the respondents; Observation checklist was used to answer research question one (Section B) on the availability or otherwise of the ICT facilities in the E-library units, while Section C-G sought answers to research questions 2, 3, 4 and 5 respectively. The items were structured on a Likert scale type. The questionnaire was subjected to face and content validation by experts in the field of Librarianship and information science. The internal consistency of the instrument was determined using Cronbach Alpha. The reliability coefficient of the instrument was $\alpha=0.70$. The instrument was administered by the researchers through personal contact.

Result and Discussion

Data were analyzed with the use of descriptive statistics using frequency count, simple percentages, and mean score. A benchmark of 3.00 mean score was considered as accepted, while below 3.00 was rejected.

Table 1: Distribution of questionnaire by institutions

S/N	Institutions	Copies of questionnaire distributed	Copies of questionnaire returned	Percentage (%)
1	College of Education, Akwanga	94	92	35
2	Niger State College of Education	88	87	33
3	FCT College of Education, Zuba	84	82	32
	Total	266	261	100

Table one shows that out of the 266 questionnaire administered, 261 were duly filled and returned by the respondents. The rate of return was 98.0% with college of education having the highest response rate of 92(35%).

Table 2: Distribution of respondents by Gender

Sex	Frequency	Percentage (%)
MALE	157	60
FEMALE	104	40
Total	20	100.0

Table 2 shows the gender of respondents. It shows that 157(60.0%) of the respondents are male and 104(40.0%) of the respondents are female. This shows that there are more male than female students in colleges of Education, North central, Nigeria.

Table 3: Distribution of respondents by Schools

S/N	Schools	Frequency	Percentage (%)
1	Education	57	22.0
2	Languages	26	10.0
3	Voc & Tech	38	15.0
4	Sciences	43	16.0
5	Art & Soc/sc	97	37.0
	Total	261	100.0

Table 3 above reveals the response rate of the five schools across the three selected colleges of education in North central, Nigeria used in this study. School of Art and Social Sciences has the highest response rate of 97(37%), School of Education has 57(22%). School of Sciences has 43(16%), School of Vocational and Technical Education has 38(15%), and School Languages 26(10%) has the lowest response rate.

Research Question 1: What types of ICT facilities are available in Colleges of Education in North

S/N	ICT FACILITIES/ RESOURCES	COLLEGES OF EDUCATION AKWANGA			FCT COLLEGE OF EDUCATION, ZUBA			NIGER STATE COLLEGE OF EDUCATION		
		AVAILABLE		NA	AVAILABLE		NA	AVAILABLE		NA
		F	NF		F	NF		F	NF	
1	Computer	√			√			√		
2	Printers	√			√			√		
3	Scanners	√	√		√					√
4	Photocopier			√			√	√		
5	Fax machines			√			√			√
6	CD ROMS	√					√	√		
7	Flash drive	√					√	√		
8	Projector	√					√	√		
9	Intercom			√			√			√
10	Internet (ISP)	√			√	√		√		
11	External Hardisk	√			√					√
12	Institutional website	√					√	√		
13	Digital camera	√				√			√	
14	Telephone lines	√				√			√	
15	Television	√				√			√	
16	Library software	√				√		√		
17	Library E-mail	√				√		√		
18	Video tape player			√		√			√	
19	Audio tape player			√		√			√	
20	Digital versatile disc (DVD)	√				√			√	
21	Cable satellite	√				√			√	
22	Speaker	√					√	√		
23	Webcam	√					√	√		
24	Plotter			√			√			√
25	E-Resources									
	E-books	√				√		√		
	E-journals	√				√		√		
	E-thesis	√				√		√		
	E-dissertation	√				√				√
	E-conference proceedings	√				√				√

central, Nigeria?

Table 4: Available ICT Facilities in Colleges of Education in North Central, Nigeria

Table 4 revealed that in Colleges of Education library, the following ICT facilities were available, thus: computer, printer, scanner, photocopier, compact disc/digital disc, flash drive, projector, internet, external hardisk, institutional website, digital camera, telephone lines, television, library software, library e-mail, e-resources, cable satellite and web cam.

Research Question 2: What is the level of accessibility to ICT facilities and academic performance of College students in Colleges of Education in North Central, Nigeria

Table 5: Accessibility of ICT facilities and College students’ academic performance

S/N	College students level of access to ICT facilities in College libraries:	VH	H	L	VL	\bar{x}	Decision
1	ICT facilities are accessible in the College library to enhance research productivity	148(57%)	91(35%)	22(8%)	0(0%)	3.48	Accepted
2	College students access ICT facilities in the library frequently for assignment	86(33%)	110(42%)	46(18%)	19(0%)	3.01	Accepted
3	Access tools are adequate for accessing ICT resources in library in preparation for examination	135(52%)	100(38%)	11(4%)	16(6%)	3.35	Accepted
4	College students access ICT facilities to meet their academic needs	89(34%)	148(57%)	19(7%)	5(2%)	3.23	Accepted
5	Basic ICT skills are used to access ICT facilities to enhance academic achievement	102(39%)	132(51%)	22(8%)	5(2%)	3.27	Accepted

The analysis on Table 5 on research question 1 above, it was showed that the mean values of 11 out of the 5 items in the table ranged from 3.01 to 3.48 which are in each case greater than the cut-off point value of 3.00 on 4 point rating scale. This revealed that the respondents agreed to the statements i.e. college students in North central, Nigeria access ICT facilities in the College library: to enhance research productivity, for assignment, for examination preparation, to meet academic needs and for enhancement of academic achievement.

Research Question 3: What are the reasons or purpose for the utilization of ICT facilities and academic performance of undergraduate students in universities in Abuja, Nigeria?

Table 6: Utilization of ICT facilities and academic performance of College students in North Central Nigeria

The analysis on Table 6 on research question 3 above, it was showed that the mean values of 8 out of the 11 items in the table ranged from 3.13 to 3.53 which are in each case greater than the cut-off point value of 3.00

S/N	College students use ICT facilities for:	SA	A	D	SD	\bar{x}	Decision
1	Obtaining current information in their field of study to enhance research productivity	137(53%)	124(47%)	0(0%)	0(0%)	3.53	Accepted
2	Processing information to enhance high CGPA	132(51%)	105(40%)	19(7%)	5(2%)	3.39	Accepted
3	Storing information for study	135(52%)	110(42%)	13(5%)	3(1%)	3.44	Accepted
4	Retrieving information for research	86(33%)	156(60%)	13(5%)	5(2%)	3.24	Accepted
5	Disseminating information for continuous assessment	97(37%)	132(51%)	32(12%)	0(0%)	3.25	Accepted
6	Online registration of courses	113(43%)	124(47%)	22(8%)	3(1%)	3.33	Accepted
7	Assignment compilation	65(25%)	172(66%)	19(7%)	5(2%)	3.13	Accepted
8	Test and examination	83(32%)	135(52%)	16(6%)	0(0%)	2.95	Rejected
9	For entertainment and relaxation	51(20%)	118(45%)	78(30%)	13(5%)	2.79	Rejected
10	Online business transaction	57(22%)	91(35%)	91(35%)	22(8%)	2.70	Rejected
11	Project work/Research compilation	118(45%)	116(44%)	16(6%)	11(4%)	3.31	Accepted

on 4 point rating scale. This revealed that the respondents agreed to the statements i.e. College students use ICT facilities for obtaining current information in their field of study, for processing information, for storing information, for retrieving information, for disseminating information, for online registration of courses, for assignment compilation and for project/research compilation. On the other hand, the mean values of item 8, 9 and 10 which are less than the cut-off point value of 3.00 on 4 point rating scale revealed that college students in North central Nigeria do not use ICT for: test and examination, online business transaction and for entertainment and relaxation.

Research Question 5: What influence do ICT facilities have on college students’ academic performance in North central, Nigeria?

Table 7: ICT facilities in Colleges of Education libraries and College Students Academic performance

S/N	Academic Performance	SA	A	D	SD	\bar{x}	Decision
1	I use the computer to complete their projects, reports	148(57%)	89(34%)	19(7%)	5(2%)	3.45	Accepted
2	ICT allows me to learn independently	108(41%)	145(56%)	8(3%)	0(0%)	3.38	Accepted
3	I use the computers to type course work and assignments	100(38%)	145(56%)	11(4%)	5(2%)	3.30	Accepted
4	I CT helps me apply what have been learnt to the real world situation	70(27%)	178(68%)	13(5%)	0(0%)	3.22	Accepted
5	ICT improves my organizational skills	97(37%)	151(58%)	13(5%)	0(0%)	3.32	Accepted
6	ICT makes me develop interest in the learning content	97(37%)	151(58%)	11(4%)	3(1%)	3.31	Accepted
7	My GPA has been on the decline	32(12%)	70(27%)	151(58%)	8(3%)	2.48	Rejected
8	I use the internet to collaborate with others/team	67(26%)	159(61%)	27(10%)	8(3%)	3.09	Accepted
9	My GPA has improved remarkably	126(48%)	124(47%)	8(3%)	3(1%)	3.43	Accepted

The analysis on Table 7 on research question 4 above, it was showed that the mean values of 8 out of the 9 items in the table ranged from 3.09 to 3.48 which are in each case greater than the cut-off point value of 3.00 on 4 point rating scale. This revealed that college students in North central Nigeria agreed to the statement i.e. ICT allow independent learning, ICT improve my GPA, ICT allow collaboration with others, ICT makes learning interesting, ICT improves organizational skills and ICT enhances completion of my project task. On the other hand, the mean values of item 7 which is less than the cut-off point value of 3.00 on 4 point rating revealed that college students in North central Nigeria disagreed that the use ICT has resulted to decline in their Grade Point Average (GPA).

Research Question 6: what are the inhibiting factors to accessibility and utilization of ICT facilities in universities in FCT, Abuja?

Table 8: Problem encountered in the application of ICT in Colleges of Education libraries

S/N	Problem encountered	SA	A	D	SD	\bar{x}	Decision
1	Inadequate funding has been a major factor militating against access to ICT facilities in libraries	178(68%)	65(25%)	16(6%)	3(1%)	3.60	Accepted
2	Erratic power supply is a major obstacle in the full utilization of ICT	116(44%)	105(40%)	30(11%)	11(4%)	3.25	Accepted
3	Both ICT unit staff and students have low IT skills	40(15%)	91(35%)	121(46%)	8(3%)	2.63	Rejected
4	Lack of search skills on the part of students and staff	51(20%)	164(63%)	38(14%)	8(3%)	2.99	Rejected
5	Negative Attitude of staff in system unit	51(20%)	153(59%)	38(14%)	19(7%)	2.91	Rejected
6	Internet connectivity problem is a major obstacle in accessing and utilizing ICT facilities	118(45%)	116(44%)	19(7%)	8(3%)	3.32	Accepted
7	Majority of the ICT facilities are Obsolete	137(53%)	97(37%)	19(7%)	8(3%)	3.39	Accepted

Table 8 revealed that out of the seven statements listed on the factors militating against the application of ICT in university libraries in FCT, Abuja; four statements have a mean score above the 3.00 mark on a 4-point Likert scale. The statements include inadequate funding; Erratic power supply; Internet connectivity problem and obsolete facilities are major obstacle in accessing and utilizing ICT facilities. the remaining three items with low mean value below 3.00 mark as shown from Table 8 reveals that; Both ICT unit staff and students have low IT skills; Lack of search skills on the part of students and staff and Negative Attitude of staff in system unit.

Summary of the Major Findings

The major findings of this study are as follows:

1. The study revealed that ICT facilities and e-resources were available in the selected College libraries in North Central, Nigeria.
2. The study also revealed that access to ICT facilities by College students in the selected colleges of Education in North Central, Nigeria is high.
3. The findings revealed that majority of the respondents positively agreed to the utilisation of ICT facilities in Colleges in North Central, Nigeria.
4. The findings revealed that majority of the respondents positively agreed that ICT facilities aid their academic performance in the following areas: completing their project report, learning independently, typing of course work and assignment, applying what has been learnt in real world situation, improving their organizational skills as well as collaborating with others.
5. The study revealed that inadequate funding; erratic power supply, obsolete facilities and internet connectivity problem are major obstacles to the full utilization of ICT facilities in colleges Education in North Central Nigeria.

Discussion of the Findings

The study investigated the availability and use of Information and Communication Technology (ICT) facilities for academic performance of colleges of education students in academic libraries in north central, Nigeria. In response to research question one, the study revealed that the heads of system units/e-libraries across the three college libraries studied indicated that the following ICT facilities were available in college libraries in north central, Nigeria: Computer, Printers, Scanners, Photocopier, CD-ROMS, Flash drive, Projector, Internet (ISP), External Hard disk, Institutional website, Digital camera, Telephone lines, Television, Library software, Library e-mail, Digital versatile disc, Cable satellite, Webcam and E-resources while Fax machine, Audio tape, Video tape and Plotter are unavailable. Generally, this implies that colleges in north central, Nigeria have acquired and subscribe to various ICT infrastructures and electronic resources respectively. The above findings were in agreement with the findings of the research conducted by Ahmed

(2014) who discovered the following as ICT facilities available in academic libraries for successful information service delivery. They include: Computer, Television, Radio cassette Player, Telephone, Video machine, Projector, Photocopier, Scanner, Printer, Internet, E-mail etc. From the above findings in relation to support from literatures, it was found that college students in colleges of Education in north central, Nigeria, have different ICT facilities at their disposal which are available at the college libraries.

The findings from the research question two revealed that college students' level of access to ICT facilities in libraries is high. From the findings of this study it shows that college students access ICT facilities in libraries to meet their academic needs. Table 5 also revealed that access tools and basic ICT skills are used to access ICT facilities/resources for enhancing academic achievement. This could be attributed to the state of advancement in Information and Communication Technology (ICT) over the years as a result of low cost of ICT gadgets like mini-computer, notepad, tablets, smartphones, laptop and also the internet which have birthed a new dimension of global access whereby information seekers, by mere click of the mouse on the computer or the button in other electronic device can have access to a whole world of information. This is supported by Okello-Obura and Magara (2008) who found that access to electronic resources has improved academic performance and allowed information to be effectively managed and harnessed in universities. The above findings also supported the assertion of Aba, Beetseh, Ogban and Umogbai (2015) that students access the internet daily, once a week, two to three times monthly and once in a month.

The majority of college students in colleges of Education in north central, Nigeria as revealed from Table 6 agreed to the utilization of ICT facilities for: obtaining current information in their field of study, processing information, storing information, retrieving information, disseminating information, online registration, assignment, test and examination and project work/research compilation. From the findings of this study it shows that college students utilize ICT facilities in meeting their academic needs. The general high utilization of ICT facilities could be as a result of students been aware of ICT infrastructures in college libraries and also having the requisite skills to access and use them. The above findings also supported the findings Oguike and Aji (2017) who discovered that library patrons and academic staff utilize ICT facilities for: acquiring information, processing information, storing information, disseminating information, entertainment and relaxation among others. In addition Mahmood (2009) discovered that students used the computer for the following: social media, collaborating with others, assignment, relaxation, entertainment among others. Mahmood's work also showed that students used computers more for word processing, presentations, statistical analysis, and emails.

In response to research question four (4) on the influence of ICT facilities on college students' academic performance. The study revealed that majority of the respondents agreed that ICT facilities aid their academic performance in the following areas: completing their project report, learning independently, typing of course work and assignment, applying what has been learnt in real world situation, improving their organizational skills as well as collaborating with others. Findings from the study also revealed that majority of the respondents positively agreed that their Cumulative Grade Point Average have increased via the use of ICT facilities. It is evident from the findings in Table 9 that ICT facilities impact positively on college students academic performance and improve their academic grades. This improvement in academic performance could be as a result of college students making use of these ICT facilities to meet their information and academic needs. This study supported the findings of Khan and Sirajudin (2015) who discovered that many students considered ICT tools very helpful because it helps them to do assignment and also helps them to reduce social disparities between students, since they work in team in order to achieve a given task. The authors also revealed from findings that students are more eager to learn due to the presence of ICT facilities.

The findings from the study revealed that majority of the college students in colleges in north central, Nigeria indicated that inadequate funding; internet connectivity problem; erratic power supply and obsolete facilities are major challenges facing the effective application of ICT facilities in libraries. The problem of inadequate funding, internet connectivity problem and obsolete facilities could be attributed to the fact that the college management are not spending much funds in the acquisition of new ICT facilities like Computers, Projectors,

Internet Service Provider (ISP), Optical cable, Router, Photocopier, Scanner, Printer etc. as well as getting a good alternative source of power (Inverter, Solar panel or a Generator set). The above findings also supported the work of Ahmed(2014) and Oguike and Aji(2017) who submitted that inadequate funding, erratic power supply, inadequate ICT infrastructures, low ICT literacy skills are problems militating against the development of ICT in academic libraries.

Conclusion

This study explored the availability and use of Information and Communication Technology (ICT) facilities for academic performance of colleges of education students in academic libraries in north central, Nigeria. The following conclusions were drawn based on the findings of this study: The results showed that colleges in north central, Nigeria have acquired and subscribed to various ICT infrastructures and electronic resources respectively. College students in colleges of Education accessed ICT facilities in the library frequently to meet their academic needs. They also believed that ICT facilities aid their academic performance in the following areas: completing their project report, learning independently, typing of course work and assignment, applying what has been learnt in real world situation, improving their organizational skills as well as collaborating with others.

Although most of the college students in North central, Nigeria have come to realize the impact of Information and Communication Technology (ICT) facilities on their academic performance as majority of the students positively agreed that their Grade Point Average (GPA) have improved remarkably through the use of ICT facilities. However some students are still having difficulties in effective usage of ICT facilities and this is due to insufficient knowledge on available ICT infrastructures and electronic resources as well as low ICT literacy skills. Also electricity interruption, inadequate space in the e-library hinders access and utilization of ICT facilities by undergraduate students.

Recommendations

Based on the findings of the study, the following recommendations are proffered:

1. Management of colleges of Education should ensure that more financial support be made adequate to procure the basic ICT infrastructural facilities.
2. There should be expansion of space in the e-library for students who want to connect to the internet with their personal computer so as to provide more connection points and also, provision of internet connectivity in the hostels can be provided for more accessibility. In the same view, the college management are encouraged to provide internet services in the students' hostels and classrooms since learning is a continuous process. This if carried out will also assist in reducing students' population in e-library.
3. Information literacy and ICT skills in searching and retrieving electronic information resources should be incorporated in the school curriculum and intensified
4. Awareness campaign to give orientation to students on the benefit of ICT on their academic performance should be carried out through seminars, lectures and symposia.
5. Access to internet aids students learning but lack of power supply hinders them from availing themselves the opportunity of its usage. It is therefore recommended that the college library management should provide steady and alternative power supply to the library through the provision of standby generator set or through the provision of inverters or solar panels to supplement existing electricity supply.

Acknowledgement

The authors wish to thank Tertiary Education Trust Fund (TETFund) of Nigeria for their support in making this research work successful

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