

INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FACILITIES USE IN THE UNIVERSITY LIBRARY ON ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS IN UNIVERSITY OF ABUJA, NIGERIA

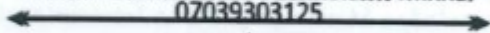
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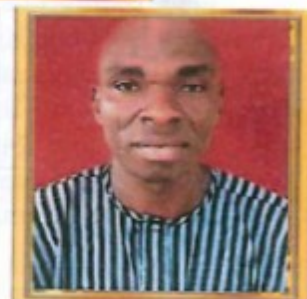
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Abstract

The study investigated the influence of Information and Communication Technology (ICT) facilities in the university library on academic performance of undergraduate students in University of Abuja, Nigeria. The study was guided by three objectives and three research questions. Survey research design was used for the study; the population comprises of all the undergraduate students in the University of Abuja. Proportionate and stratified random sampling technique was used and Cohen, Manion and Morrison (2007) table for determining sample size was used to sample 320 students from the total population of 15,283. Observation checklist and Questionnaire were used as the data collection instruments. Data were analyzed using descriptive statistics and results were presented in tables, frequency distribution, percentages, mean and standard deviation. The findings of the study showed that; computer, printer, scanner, photocopier, fax machine, compact disc/digital disc, flash drive, projector intercom, 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 university of Abuja library. The findings from the study also revealed that ICT facilities were highly accessible by undergraduate students in meeting their academic needs. It was discovered that majority of the respondents agreed that ICT facilities aid their academic performance in the following areas: completion of 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 student's hostel as well as classroom among others.

KEYWORDS: Availability, Accessibility, Academic performance, Undergraduate students, University of Abuja

INTRODUCTION

Striving for excellence is an important part of professionalism in any job. It involves trying to put quality into everything you do, and this attitude tends to separate the achievers, who make rapid strides in their career from others. A wise man once said that "more tragic than the waste of natural resources is the waste of *human* resources." Great people are never complacent with mediocrity. They can't enjoy 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. Undergraduate students who are not left out in the quest for personal development always strive to perform excellently in their academic pursuit in universities.

Academic performance is necessary for every undergraduate student because it measures the extent to which learning objectives have been achieved. Trowel in Odeh, Ogwuche and Ivagher (2015) defined academic performance as "knowledge attaining ability or degree of competence in academic task usually measured by standardized 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. For the purpose of this study academic performance refers to the extent to which a student achieves an educational task via the use of ICT. One of the major means of achieving academic performance by undergraduate students is by the use of ICT facilities, especially the ones available in university 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 used 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 recognizes 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 dispensed round the globe.

Adenuga (2012) asserted that ICT facilities and services available in libraries include computers, access to the internet and its 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 undergraduate student's academic performance in Nigerian university 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 programmes. 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 in turn understand more if they learn by using something that will attract their interest. ICT plays some important roles on 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.

STATEMENT OF THE PROBLEM

Students' academic performance remains central in any institution of learning. ICTs provide a window of opportunity for educational institutions and other organizations 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 Universities in Nigeria, Universities still face the challenge of how to transform students learning process to provide students with the skills to function effectively in this dynamic, information-rich, and continuously changing environment. Preliminary investigation by the researcher revealed that undergraduate 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 ICT skills of the students were very low and sometimes completely absent. This thus affects the academic performance of students negatively. In view of this discrepancy, there is need to examine the influence of ICT facilities in the university library on academic performance of undergraduate students in university of Abuja.

OBJECTIVES OF THE STUDY

The study examined the influence of ICT facilities in the university library on academic performance of undergraduate students in university of Abuja. However, the specific objectives are to:

1. investigate the type of ICT facilities available in University of Abuja, Nigeria
2. determine the level of accessibility of ICT facilities and academic performance of undergraduate students in university of Abuja, Nigeria;
3. to determine the influence of the ICT facilities on the academic performance of undergraduate students' in university of Abuja, Nigeria.

RESEARCH QUESTIONS

The following research questions will guide the study:

1. What types of ICT facilities are available in University of Abuja library?
2. What is the level of accessibility to ICT facilities and academic performance of undergraduate students in university of Abuja, Nigeria?

3. What is the influence of ICT usage on academic performance of undergraduate students' in university of Abuja, Nigeria?

LITERATURE REVIEW: EMPIRICAL REVIEW

According to Adenuga (2012) ICT facilities and services available in libraries include computers, access to the internet and its 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.

Okafor (2010) carried out a study on the availability and accessibility of information services for academics in Federal University Libraries in southern Nigeria: Implication for Information Delivery. Descriptive survey method was used for the study. The study was conducted in Southern Nigeria. Southern Nigeria is made up of three geo-political zones of south-east, south-south and south-west. There are 13 federal universities in southern Nigeria at the time this study was conducted. Through stratified sampling six universities were selected for the study, two universities from each zone. The population of the study was made of academics in science and engineering. The total of 435 academics in the rank of professors, readers, senior lecturers, lecturers I and II were used for the study. There was a response rate of 67% with 291 questionnaire returned. These six universities had faculties of science and engineering in University of Ibadan (UI), University of Nigeria, Nsukka (UNN), University of Benin (UNIBEN), Nnamdi Azikiwe University, Awka (NAU), University of Agriculture, Abeokuta (UNAAB) and University of Uyo (UNIUYO). Data collected were analysed using percentages and bar charts. The study disclosed that the University libraries do not meet up the researchers' information needs. The researcher proffer the following recommendations: (a) University libraries should have internet connectivity, (b) Training of librarians and library staff on different aspect of information technology, (c) User education should include having computer laboratory for practice, (d) Employing staff in different language areas for translation of documents to different languages, (e) Establishment of information in the library and open access to library resources include online services and OPAC etc.

In a related study by 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 helps 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

The design for this study is descriptive survey. 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 constitutes 15,283 undergraduate students of the university of Abuja. A sample size of 320 undergraduate students was drawn out of the population of 15,283 undergraduate students using stratified random 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 faculties in University of Abuja.

Using a sample size of 320 respondents in line with Cohen, Manion and Morrison (2007) which states that in a population size of 16,000 respondents, a sample size of 320 with confidence level of 90.0% is adequate. However, the researcher decided to select 320 undergraduate students from a population of 15,283 which is not up to 16,000.

Observation checklist and Questionnaire were used to collect data. The observation checklist is used to answer research question one (section B) on the availability of ICT facilities in University of Abuja library. The questionnaire consists of three (3) sections which include Section A: Demographic Data of the respondents, Section C: will answer questions on the level of accessibility to ICT facilities and academic performance of undergraduate students in university of Abuja, Nigeria, and Section D: answer questions on the influence of ICT facilities on undergraduate student's academic performance in university of Abuja, Nigeria. Finally, descriptive statistic using frequency count was used for data analysis.

Result and Discussion

Data were analyzed with the use of descriptive statistics using frequency count, simple percentages, mean and standard deviation. A benchmark of 2.50 mean score was considered as accepted, while below 2,50 was rejected.

4.1 Response Rate

Out of the 320 copies of questionnaire administered on undergraduate students in University of Abuja, 307 copies were returned and found useful for the research which constitutes 95.9% of the total questionnaires administered.

4.2 Demographic variables

Table 1: Distribution of respondents by Gender

Sex	Frequency	Percentage (%)
MALE	168	55
FEMALE	139	45
Total	307	100.0

Table 1 shows the gender of respondents. It shows that 168(55%) of the respondents are male and 139(45%) of the respondents are female. This shows that university of Abuja have more male students than female.

Table 2: Distribution of respondents by Faculties

S/N	Faculties	Frequency	Percentage (%)
1	Law	16	5
2	Art/ Soc Sciences	11	4
3	Sciences	57	19
4	Vet/Medicine	15	5
5	Education	36	12
6	Engineering	10	3
7	Agric/Sciences	15	5

8	Health/Sciences	24	8
9	Bus/Management	81	26
10	Art/Humanities	42	14
Total		307	100.0

Table 2 reveals the response rate of the ten faculties in University of Abuja used in this study. Faculty of Business management has the highest response rate of 81(26%). Faculty of sciences has 57(19%), Faculty of Art and Humanities has 42(14%), Faculty of Education has 36(12%), Faculty of Health Sciences has 24(8%), Faculty of Law has 16(5%), and Faculty of Agricultural Sciences and Faculty of Veterinary Medicine both have 15 (5%). Faculty of Art and Social Sciences has 11(4%) while Faculty of Engineering has 10(3%).

Table 3: Distribution of respondents by Level

S/N	Level	Frequency	Percentage (%)
1	100	111	36
2	200	93	30
3	300	64	21
4	400	27	9
5	500	12	4
Total		307	100.0

Table 3 shows the various levels of undergraduate students across the ten faculties in University of Abuja. The table shows that 100L has 111(36%) respondents; 200L has 93(30%) respondents, 300L has 64(21%) respondents, 400L has 27(9%) respondents and 500L has 12(4%) respondents.

Table 4: Available ICT Facilities in University of Abuja Library

S/N	ICT FACILITIES	A	NA	S/N	ICT FACILITIES	A	NA
1	Computer	√		13	Digital camera	√	
2	Printers	√		14	Telephone lines	√	
3	Scanners	√		15	Television	√	

4	Photocopier	√	16	Library software	√
5	Fax machines	√	17	Library E-mail	√
6	CD/DVD ROM	√	18	Video tape player	√
7	Flash drive	√	19	Audio tape player	√
8	Projector	√	20	E-Resources	√
9	Intercom	√	21	Cable satellite	√
10	Internet (ISP)	√	22	Speaker	√
11	External Hardisk	√	23	Webcam	√
12	Institutional website	√	24	Plotter	√

Key: Available = A, Not Available =NA

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

Table 5: Level of Accessibility to ICT facilities

S/N	Undergraduate students level of access to ICT facilities in university libraries	Very High(VH)	High(H)	Low(L)	Very Low(VL)	\bar{X}	STD	Decision
1	ICT facilities are accessible in the university library for student research	57(17.6%)	123(40.1%)	100(32.6%)	30(9.8%)	2.72	0.88	Accepted
2	Undergraduate students access ICT facilities in the library frequently for assignment	34(11.1%)	102(33.2%)	127(41.4%)	44(14.3%)	2.41	0.87	Rejected
3	Access tools are adequate for accessing ICT resources in library in preparation for examination	58(18.9%)	115(37.5%)	103(33.6%)	31(10.1%)	2.98	0.90	Accepted
4	Undergraduate students access ICT facilities to meet their academic needs	76(24.8%)	124(40.4%)	86(28.0%)	21(6.8%)	2.83	0.88	Accepted

5	Basic ICT skills are used to access ICT facilities to enhance academic achievement	61(19.9%)	112(36.5%)	100(32.6%)	34(11.1%)	2.65	0.92	Accepted
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Table 5 showed the level of accessibility of ICT facilities by undergraduate students in university of Abuja. On accessibility of ICT facilities in library for research, the table revealed that majority of the respondents indicated that the level of access to ICT facilities in library is high with a mean score and standard deviation of ($x=2.72$ and $STD =0.88$) respectively. On the frequency of access to ICT facilities in library by undergraduate students for assignment, majority of the respondents indicated that the frequency of access to ICT facilities in library is low with a mean score and standard deviation of ($x=2.41$ and $STD =0.87$). On the adequacy of access tools for accessing ICT resources in library in preparation for examination majority of the respondents indicated that the level of adequacy of access tools for accessing ICT resources is high with a mean score and standard deviation of ($x=2.98$ and $STD =0.90$). On accessing ICT facilities by undergraduate students in library to meet their academic needs most of the respondents indicated that the level of access to ICT facilities in meeting their academic needs is high with a mean score and standard deviation of ($x=2.83$ and $STD =0.88$). Majority of the respondents also indicated that the level of ICT literacy skills for accessing ICT facilities in library to enhance academic achievement is high with a mean score and standard deviation of ($x=2.65$ and $STD =0.92$).

Table 6: Influence of the use of ICT facilities on Academic performance of undergraduate students

S/N	Academic Performance	SA	A	D	SD	\bar{X}	STD	Decision
1	I use the computer to aid completion of my projects, reports	72(23.5%)	147(47.9%)	53(17.3%)	35(11.4%)	2.83	0.92	Accepted
2	ICT allows me to learn independently	91(29.6%)	124(40.4%)	72(23.5%)	20(6.5%)	2.93	0.89	Accepted
3	I use the computers to enhance the typing of my course work and assignments	75(24.4%)	138(45.0%)	56(18.2%)	38(12.4%)	2.81	0.94	Accepted
4	I CT helps me apply what have been learnt to the real world situation	88(28.7%)	123(40.1%)	75(24.4%)	21(6.8%)	2.91	0.89	Accepted
5	ICT improves my organizational skills	98(31.9%)	107(34.9%)	61(19.9%)	41(13.4%)	2.85	1.02	Accepted

6	ICT makes me develop interest in the learning content	75(24.4%)	147(47.9%)	63(20.5%)	22(7.2%)	2.90	0.85	Accepted
7	My GPA has been on the decline via the use of ICT	54(17.6%)	58(18.9%)	81(26.4%)	114(37.1%)	2.17	1.11	Rejected
8	I use the internet to collaborate with others/team to enhance my research work	79(25.7%)	94(30.6%)	99(32.2%)	35(11.4%)	2.71	0.98	Accepted
9	My GPA has improved remarkably via the use of ICT	93(30.3%)	129(42.0%)	42(13.7%)	43(14.0%)	2.89	1.00	Accepted

Table 6 showed the academic performance of undergraduate students through the use of ICT facilities. On computer usage majority of the respondents (71.4%) agreed that they use computer to complete their project report with a mean score and standard deviation of ($x=2.83$ and $STD=0.92$). On independent learning majority of the respondents (70.0%) agreed that ICT allows them to learn independently with a mean score and standard deviation of ($x=2.93$ and $STD=0.89$). On typing of course work and assignment majority of the respondents (69.4%) positively agreed that they use the computer to type their course work and assignments with a mean score and standard deviation of ($x=2.81$ and $STD=0.94$). On application of learning to real world situation majority of the respondents (68.8%) strongly agreed and agreed that ICT helps them apply what have been learnt to the real world situation with a mean score and standard deviation of ($x=2.91$ and $STD=0.89$). On organizational skills majority of the respondents (66.8%) positively agreed with a mean score and standard deviation of ($x=2.85$ and $STD=1.02$). On interest in learning most of the respondents (72.3%) positively agreed and that ICT makes them develop interest in learning with a mean score and standard deviation of ($x=2.90$ and $STD=0.85$). On decline of GPA majority of the respondents (63.5%) positively disagreed that their GPA has been on the decline through the use of ICT facilities with a mean score and standard deviation of ($x=2.17$ and $STD=1.11$). On collaborating with others majority of the respondents (56.3%) positively agreed they use the internet to collaborate with others with a mean score and standard deviation of ($x=2.71$ and $STD=0.98$). On improvement of GPA through the use of ICT facilities majority of the respondents (72.3%) positively agreed that their GPA has improved remarkably through the use of ICT facilities with a mean score and standard deviation of ($x=2.89$ and $STD=1.00$).

DISCUSSION OF FINDINGS

This study examined the influence of ICT facilities use in the university library on academic performance of undergraduate students in University of Abuja. The study revealed that in University of Abuja library, the following ICT facilities were available: computer, printer, scanner, photocopier, fax machine, compact disc/digital disc, flash drive, projector intercom, internet, external hardisk, institutional website, digital camera, telephone lines, television, library software, library e-mail, e- resources, cable satellite and web cam. However, their availability is in line with the current trend in information age. This is corroborated by Adenuga (2012) where he opined that ICT facilities and services available in libraries include computers, access to the internet and its 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.

In response to research question two, the study revealed a high level of accessibility to ICT facilities by undergraduate students in meeting their academic needs. This is supported by Moahi(2009) who found that ICTs have allowed information to be effectively managed and harnessed in universities and this has obviously led to enhanced access to information.

Response to research question three on the influence of the use of ICT on undergraduate students academic performance revealed that a reasonable number of respondents positively agreed that the use of ICT facilities aid their academic performance in the following areas: completion of 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 corroborating with others. A good number of respondents also indicated that their Grade Point Average (CGPA) have improved remarkably through the use of ICT facilities. This is in agreement with the findings of Khan and Sirajudin (2015) who found that many students considered ICT tools very helpful in that it help them to do assignment and also help to reduce social disparities between students, since they work in team in order to achieve a given task. The author also revealed from findings that students are more eager to learn due to the presence of ICT facilities.

SUMMARY OF MAJOR FINDINGS

Emanating from the research findings are the following;

1. The study revealed that in University of Abuja library, the followings are the available ICT facilities: computer, printer, scanner, photocopier, fax machine, compact disc/digital disc, flash drive, projector intercom, internet, external hardisk, institutional website, digital camera, telephone lines, television, library software, library e-mail, e-resources, cable satellite and web cam.
2. Majority of the respondents indicated a high level of access to ICT facilities in the university library.
3. Table 6 reveals that majority of the respondents agreed that ICT facilities aid their academic performance in the following areas: completion of 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. Majority of the respondents also disagreed that their GPA has been on the decline through the use of ICT facilities. They agreed that their GPA have improved remarkably through the use of ICT facilities.

CONCLUSION

This study examined the influence of Information and Communication Technology (ICT) facilities use in the university library on academic performance of undergraduate students using university of Abuja as a case study. The following conclusions were drawn based on the findings of this study: The results showed that university of Abuja have acquired and subscribed to various ICT infrastructures and electronic resources respectively. Undergraduate students in university of Abuja accessed ICT facilities in the library frequently to meet their academic needs. They also believed that ICT facilities aid their academic performance.

Although most of the undergraduate students in university of Abuja have come to appreciate the role Information and Communication Technology (ICT) facilities play on their academic performance as majority of the students 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 the university of Abuja 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 university managements 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.

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