Summer 1-8-2010

EVALUATING STUDENTS' USE OF CAMPUS WIDE NETWORK IN ACCESSING LIBRARY RESOURCES AND SERVICES IN NNAMDI AZIKIWE LIBRARY, UNIVERSITY OF NIGERIA, NSUKKA

DELIGHT UDOCHUKWU
University of Nigeria, Nsukka, delight.udochukwu@unn.edu.ng

H C. Chukwuemeka
University of Nigeria, Nsukka, chukwuemekacornelius@gmail.com

EVALUATING STUDENTS' USE OF THE CAMPUS WIDE NETWORK IN ACCESSNG LIBRARY RESOURCES AND SERVICES IN NNAMDI AZIKIWE LIBRARY, UNIVERSITY OF NIGERIA, NSUKKA

***Udochukwu, D. P. and Chukwuemeka H.C.**
University of Nigeria, Nsukka.
Corresponding E-mail: *delight.udochukwu@unn.edu.ng*

ABSTRACT

This paper investigated *students' use of the campus wide network in accessing library resources and services in Nnamdi Azikiwe Library, University of Nigeria, Nsukka.* Nnamdi Azikiwe Library was selected because it is a University Library that has adopted wireless connectivity services so as to satisfy the needs of its community. Questionnaire was adopted as an instrument for data collection and was randomly distributed to the students. 1000 students selected using stratified random sampling, constituted the sample size out of a population of 39,000 students. Results revealed that laptop; smart phone and tablet phones were the mostly used wireless connectivity devices. Research, browsing and class assignments accounted for the larger percentage of wireless connectivity usage. Wireless connectivity greatly reduced the number of books borrowed from the library, extent to which students borrow library books and prevents students from consulting library access tools like catalogue cards. Provision of digital library was the most rated strategy for upgrading library resources and services. Poor signal strength and unstable power supply were the most rated problem affecting wireless connectivity while improved service network was the most rated means to enhance wireless connectivity, services and operations in the University.

Keywords: ***wireless connectivity, library resources, library services, local area network, telecommunication.***

INTRODUCTION

Over the last several years, wireless technologies have progressed and achieved success in various fields like healthcare, education, manufacturing, etc. Wireless technology has been around libraries for some years. But it's only recently that libraries realized its benefits for information services and library management activities. A number of libraries in western countries are using this technology. Wireless technology is very fast, reliable and highly flexible. Its major benefit is the immediate access to digital resources. It enables users to simply and easily connect a wide range of computing and telecommunications devices without the need to buy, carry, or connect cables. It uses a variety of devices such as laptop and notebook computers, tablets, personal digital assistants (PDAs), email-only devices, handheld computers, etc

A library stock is made up of both books and non-book materials. Books include core textbooks, reference materials, and other monographic series, while periodicals consist of newspapers, magazines, professional journals, proceedings, among others. The non-book materials include audio-visual materials such as films, tapes, microfilms, CD-ROMs, maps, diskettes, flash drives and others. These are often termed digital resources. Libraries of all sizes and types are embracing digital collections, although most libraries will continue to offer both print and digital collections for many years to come. New purchases and purchases of journals, magazines, and abstracting and indexing services are heavily weighted toward digital, while digital books (e-books) are only beginning to become a presence in library collections. Libraries prefer digital collections for many reasons, including, but not limited to, the following: digital journals can be linked from and to indexing and abstracting databases; access can be from the user's home, office, or dormitory whether or not the physical library is open; the library can get usage statistics that are not available for print collections; and digital collections save space and are relatively easy to maintain. When total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs (Montgomery and King 2002).

Accessibility of library materials may be conceptual, bibliographic and physical. Conceptually, books are said to be accessible if they are of relevance to the student's need and can easily be understood. . Bibliographically, accessibility pertains to the provision of effective means of identifying the needed materials and locating them whether in Nigeria or abroad. Physically, accessibility connotes the ability to lay ones hands physically on the materials once bibliographically identified and located (Aluju, 2006).

Students' constitutes the bulk of University Library users. However, some students seldom visit the library, but prefer to sit or stand for hours in uncomfortable situations, at various locations where they can access the Lionet wireless internet services available in the university campus to obtain necessary information. When they do visit the library, it is for special reasons such as the desire to get strong internet connection or for occasions when they have to prepare for examinations or carry out serious research projects. The aim of this study therefore, was to find out how the availability of wireless internet connectivity has contributed to making library resources and services available to students.

The convenience of wireless connectivity may be taking some of the trouble out of working on class projects for university students, but some educators and librarians are concerned it may also be creating poor research habits. Data from the Association of Research Libraries shows that reference queries at university libraries have greatly decreased during and since the late 1990s.

LITERATURE REVIEW

Information availability does not mean accessibility and utilization; therefore, university libraries have to market their resources and services to attract users. Ozoemelem (2009) is of the opinion

that informed library users know that libraries have resources that are more comprehensive and scholarly than most web sites provide but the problem is that these resources are not as straightforward like those on the webs. Though users use the library for different purposes, Bassey (2006) posited that satisfying the request of users implies providing the actual information or services that will meet their needs. Many traditional university campuses in developed world provide at least partial wireless connectivity coverage. The first campus-wide wireless Internet network ever built was the "Wireless Andrew" by the Carnegie Mellon University (CMU) at its Pittsburgh campus in 1993, before Wireless connectivity branding originated. By February 1997 the CMU Wireless connectivity zone was fully operational.

In recent times, many universities around the world, even in developing countries like Nigeria have come to see how fundamental it is to take this huge step in providing wireless connectivity access to students and staff of their institutions. The University of Nigeria, Nsukka, where this research focuses on is not left out in this quest.

The following types of wireless networks *vis-a vi* wireless personal area network (WPAN), wireless local area network (WLAN), wireless mesh network (WMN), metropolitan area network (MAN), global area network (GAN), space network (SN) and wireless wide area network (WWAN) are in use in most University Libraries.

RESOURCES PROVIDED BY UNIVERSITY LIBRARIES

Collections of information materials in the Nnamdi Azikiwe Library, where this work is based, are divided into books and non-books. The book materials include journals, newspapers, magazines, research monographs, reports, textbooks, indexes, abstracts, reviews, bibliographies, atlases, maps, handbooks, projects, dissertations, etc., while the electronic copies are made up of e-journals, e-books, audiovisual materials such as films, tapes, microfilms, CD-ROMs, maps, diskettes, flash drives and so on. Additionally, the Library has online databases where users can search for journal articles and materials on a particular topic. Some of these databases provide access to the full text. Examples of online databases operated by Nnamdi Azikiwe Library include; EBSCOHOST, SCIENCE DIRECT AND RESEARCH FOR LIFE (AGORA (Access to Global Online Research in Agriculture), HINARI (Health Internetwork Access to Research), OARE (Online Access to Research in the Environment), ARDI, GOALI), JSTOR (journal storage), TEEAL, DOAJ, DOAB, etc. Each of these databases holds thousands of academic journals online with millions of articles accessible to the users, free of charge. Some of these databases can be accessed by logging in with a password, whereas access to others is open.

SERVICES OFFERED BY UNIVERSITY LIBRARIES

The library is saddled with the responsibility of ensuring that these resources and services are put to good use. Indeed, libraries in modern times anticipate the expectations of its users and

positively provide resources and services to fulfill them. It is therefore necessary to highlight specific services available to users of a library:

Acquisition: Receiving requests for purchase, bibliographic checking, selecting material, ordering & renewal, purchasing material, claiming or cancellation, status reports (e.g. status of publication, printing delays).

Circulation: reservation**,** renewal**,** overdue lists & notices**,** lending

Cataloguing/Classification: information on cataloguing rules, checking MARC records, copy cataloguing, authority control, checking classification numbers

Reference & other services: receiving and answering queries, accessing reference sources, Selective Dissemination of Information (SDI), Current Awareness Service (CAS), interlibrary loan, document delivery, professional communication, library publications seating, and extension user education.

ACCESSIBILITY OF LIBRARY RESOURCES AND SERVICES

The Internet is very useful by allowing users to access vast quantities of information and communication with everyone around the world (Eyitayo, 2008). She adds that this has become the most popular way of locating and retrieving information. Because of its connection with information communication retrieval and conservation, the Internet became a very useful tool in libraries. Commenting on the importance of the Internet facility Ojo-Igbinoba (1997) as cited by Owolabi (2007) stated that Internet has become the market place for learning and online education. In a bid to ascertain how much university or college students use the internet, and what this might imply for the future, research specialist Mary Madden of the Pew Internet and American Life Project, together with her research assistants carried out a research on internet use by college students in America and reported these findings:

One-fifth (20%) of today's college students began using computers between the ages of 5 and 8. By the time they were 16 to 18 years old all of today's current college students had begun using computers – and the Internet was a commonplace in the world in which they lived.

Eighty-six percent of college students have gone online, compared with 59% of the general population.

College students are frequently looking for email, with 72% checking email at least once a day.

About half (49%) first began using the Internet in college; half (47%) first began using it at home before they arrived at college.

The great majority (85%) of college students own their own computer, and two-thirds (66%) use at least two email addresses.

Seventy-eight percent of college Internet users say that at one time or another they have gone online just to browse for fun, compared to 64% of all Internet users.

College Internet users are twice as likely to have ever downloaded music files when compared to all Internet users: 60% of college Internet users have done so compared to 28% of the overall population.

College Internet users are twice as likely to use instant messaging on any given day compared to the average Internet user. On a typical day, 26% of college students use IM; 12% of other Internet users are using IM on an average day.

STUDENTS' UTILIZATION OF UNIVERSITY'S INTERNET RESOURCES AND SERVICES

Hutchinson and Sawyer (2000) defined the Internet as the "worldwide publicly accessible network of interconnected computer networks that transmit data by packed switching using the standard Internet protocol (IP)".

Igun (2005) has observed that academic institutions cannot do without Internet services especially in this era of information globalization, explosion and superhighway. Internet connectivity enhances teaching, studying, research, publishing and communication (Adomi, Omodeko and Otolo, 2004). University students are a unique population. They are heavy users of the internet and associated tools. Hence, studying university students' Internet habits can yield insight into future online trends. The goal of this study is to determine how the availability of Internet services influences the students' use of library resources and services.

University students say the Internet has enhanced their education: Internet use is a staple of university students' educational experience. They use the Internet to communicate with lecturers and classmates, to do research, and to access library materials. For most university students the Internet is a functional tool, one that has greatly changed the way they interact with others and with information as they go about their studies.

University social life has been changed by the Internet: the university experience is not only about learning in the classroom, it is also about encountering new social situations and gaining new social skills. University students use the Internet nearly as much for social communication as they do for their education. But just as they use the Internet to supplement the formal parts of their education, they go online to enhance their social lives.

One characteristic that sets them apart from past generations of college students is their degree of familiarity with the Internet. Today's typical university student was often introduced to the Internet at a relatively early age. Many freshmen in their teens on campus today were not even born at the time the PC was introduced to the public, and they are less aware of a "pre-Internet" world as they are of one in which the Net is central to their communication.

CHALLENGES ASSOCIATED WITH THE USE OF WIRELESS CONNECTIVITY IN ACADEMIC ACTIVITIES

The wireless connectivity service available in the University of Nigeria Nsukka affords students a lot of benefits. However, this is not without challenges, some of which are as follows:

Slow speed internet service delivery, Instability of electric power supply, Internet connection disconnection, Shortage of funds for internet services, Staff is unaware of internet benefits, Some users are unaware of internet benefits, Poor internet navigation skills on the part of some students, Copyright and access restrictions, Inadequate hardware support, Unavailability of support for maintaining internet facilities and the presence of many ornamental trees and large buildings constitute major physical obstruction of strong Wi-Fi connection. They have significant effects on the received signal strength etc.

STRATEGIES FOR IMPROVING WIRELESS CONNECTIVITY PERFORMANCE TO ENSURE ITS EFFECTIVE USAGE IN ACADEMIC ACTIVITIES

To ensure efficient service delivery of wireless internet connectivity, the following measures must be put in place:

Educate Users about the Risks of Wireless Technology: user awareness is always a critical success factor in effective information security. A good policy is not enough. It is also important to educate all users in following the policy. Best practices or security guidelines should be developed that end-users understand and adhere to.

Keep an Accurate Inventory of All Wireless Devices: an accurate inventory of all authorised wireless devices helps identify rogue access points during security audits. This inventory will also be helpful for a variety of support tasks.

Publish a Coverage Map of the Wireless Network: network administrators should develop a coverage map of the wireless network, including locations of respective access points. This map is a valuable asset for troubleshooting, or handling a security incident.

Develop Security Configuration Standards for Access Point: to simplify daily operations and ensure all access points are protected with appropriate measures, it is recommended a baseline security configuration standard for access points be developed. It is not uncommon to see security settings restored to their default factory settings after an access point is reset, which usually occurs when the access point experiences an operational failure. If a baseline security configuration standard is available, appropriate personnel can simply follow the standard settings to re-configure the access point.

Review Audit Logs regularly: regular checking of log records must be performed, to ensure the completeness and integrity of all logs. Any irregularities spotted must be reported and a detailed investigation should be carried out if necessary.

METHODOLOGY

Research Design

The research was carried out at the Nnamdi Azikiwe Library, University of Nigeria, Nsukka. Nnamdi Azikiwe Library was selected because is an academic and a University Library that has adopted wireless connectivity services so as to satisfy the needs of its community and meet up with this new trend. Questionnaire was used per the research question and was administered to students. 1000 students selected using stratified random sampling, constituted the sample size out of a population of 39,000 students (*Through the years | University of Nigeria"*).

RESULTS

Research Question 1: What kinds of wireless connectivity devices do students use to connect to the wireless networks (Lionet) on campus?

Table 1: Mean rating of students' response on the kind of devices used to connect to wireless networks (Wireless connectivity) on campus

S/N	ITEMS	VMU_4	MU_3	LU_2	NU_1	X	RANK	DECISION
1.	Smart phone	800	80	40	80	3.60	2nd	Accepted
2.	I pad	320	160	40	480	2.32	4th	Rejected
3.	Tablet phone	240	400	120	240	2.64	3rd	Accepted
4.	Laptop computer	920	40	0	40	3.84	1st	Accepted
5.	Notebook computer	160	120	120	600	1.36	8th	Rejected
6.	Desktop computer	200	80	320	400	2.08	5th	Rejected
7.	Digital camera	80	40	200	680	1.52	7th	Rejected
8.	Wireless infrared	40	120	160	680	1.52	7th	Rejected
9.	Digital audio player	80	80	160	680	1.56	6th	Rejected
10.	Wireless Bluetooth	200	200	80	520	2.08	5th	Rejected

From the results presented in table 1 above, laptop computers are mostly used by undergraduate students to connect to the wireless networks provided for them by the institution. The laptop computer has a mean weight of 3.84, making it the most used device for internet connectivity. It was closely followed by the smart phone and tablet phone, which have mean weights of 3.60 and 2.64 respectively.

Research Question 2: What do wireless connectivity subscribers in University of Nigeria, Nsukka do with it?

Table 2: Mean rating of students' opinions on what they use wireless connectivity for

S/N	ITEMS	SA_4	A_3	D_2	SD_1	X	RANK	DECISION
1.	Class assignments	840	160	0	0	3.84	2nd	Accepted

2.	Research	880	120	0	0	3.88	1st	Accepted
3.	Browsing	880	120	0	0	3.88	1st	Accepted
4.	Sharing lecture notes	360	120	240	320	2.60	10th	Accepted
5.	Surfing for e- journals	320	400	160	120	2.92	7th	Accepted
6.	Getting news updates	480	280	160	80	3.20	5th	Accepted
7.	Class group discussion	200	240	280	280	2.36	11th	Rejected
8.	Getting information from classmates & colleagues	520	200	200	80	3.16	6th	Accepted
9.	Chatting	640	200	120	0	3.40	3rd	Accepted
10.	Video streaming	440	160	280	120	2.92	7th	Accepted
11.	Electronic games	480	80	200	240	2.80	8th	Accepted
12.	Downloading and sharing of pictures, music and videos	680	120	40	160	3.32	4th	Accepted
13.	Downloading of applications, games etc	640	160	160	40	3.40	3rd	Accepted
14.	Referral information concerning academic programmes	400	280	160	160	2.92	7th	Accepted
15.	Trading/marketing of products and services	320	280	120	280	2.64	9th	Accepted

The results from table 2 above show that students use wireless connectivity networks mainly for researches and browsing. These were accepted with mean weights of 3.88 each. Other activities they use the university's Wireless connectivity for are class assignments, downloading and sharing of pictures, music, videos, and downloading of applications, games etc, which have mean weights of 3.84, 3.40 and 3.32 respectively.

Research Question 3: How does wireless connectivity influence students' use of library resources and services?

Table 3: Mean rating of respondents' opinions on how wireless connectivity influence the use of library resources and services.

S/N	ITEMS	SA_4	A_3	D_2	SD_1	X	RANK	DECISION
1.	Reduces the extent to which students borrow books from the library	760	200	0	40	3.68	2nd	Accepted
2.	Reduces the amount of books borrowed from the library	800	160	40	0	3.76	1st	Accepted
3.	Prevents students from consulting library access tools e.g. catalogue boxes, catalogue cards etc	680	200	80	40	3.52	3rd	Accepted
4.	Prevents students from obtaining a library card	360	240	160	240	2.72	9th	Accepted

5.	Hinders students from consulting library reference tools e.g. indexes, abstracts, bibliographies, encyclopedias, maps etc	520	280	120	80	3.24	5th	Accepted
6.	Students do not learn practically how to use the library resources and services	480	200	200	120	3.04	7th	Accepted
7.	Students do not get the chance to learn library rules and regulations and to abide by them	440	360	120	80	3.16	6th	Accepted
8.	It makes students unfamiliar with the various functions carried out in the library e.g. digital library operations, bindery, acquisition, circulation, reprography etc.	600	200	160	40	3.36	4th	Accepted
9.	Leads to mishandling and misuse of library materials	400	160	240	200	2.76	8th	Accepted

From the findings above, it was accepted that wireless connectivity networks greatly reduce the amount of books and information materials that undergraduate students borrow from the library. It was accepted with a mean weight of 3.76. Also accepted was that wireless connectivity reduces the extent to which students borrow these information materials from the library, prevents students from consulting library access tools, and makes them unacquainted with library functions. All of these responses were accepted with mean weights of 3.68, 3.52 and 3.36 respectively.

Research Question 4: What ICT strategies have the library adopted to upgrade its resources and services to users?

Table 5: Mean rating of respondents' opinions on strategies the library has adopted to improve library resources and services

S/N	ITEMS	SA_4	A_3	D_2	SD_1	X	RANK	DECISION
1.	Provision of a digital library to enhance library services	720	20	4	4	3.60	1st	Accepted
2.	Has adopted and incorporated wireless connectivity into its operations	600	360	0	40	3.52	2nd	Accepted
3.	Installation of Wireless connectivity and Wireless connectivity equipments in various sections of the library	560	200	120	120	3.20	5th	Accepted
4.	Provision of personal computers or laptops in both the digital library and the computer							

	laboratory	560	240	80	120	3.24	4th	Accepted
5.	Recruitment of competent staff to handle wireless connectivity networks	480	240	80	200	3.00	7th	Accepted
6.	Training of staff on the operation of wireless networks and related equipments	560	200	80	160	3.16	6th	Accepted
7.	Provision of electronic databases containing library materials in electronic formats e.g. Ebscohost, Hinari, Doaj, Teeal, Jstor etc.	680	160	80	80	3.44	3rd	Accepted

Result from table 4 above on the strategies adopted by the library to upgrade its resources and services, show that the provision of a digital library ranks first with a mean weight of 3.60. Closely following it are the adoptions of wireless connectivity networks by the library, provision of electronic databases containing library materials in electronic formats, and provision of laptops in selected sections of the library, with mean weights of 3.52, 3.44 and 3.24 respectively.

Research Question 5: What problems affect the capability of wireless connectivity towards enhancing students' academic activities?

Table 6: Mean rating of respondents' opinions on the problems affecting the capability of wireless connectivity towards enhancing students' academic activities

S/N	ITEMS	VHE_4	HE_3	LE_2	NA_1	X	RANK	DECISION
1.	Poor network service (signal strength)	880	120	0	0	3.88	1st	Accepted
2.	Instability of electric power supply	760	200	40	0	3.72	2nd	Accepted
3.	Outdated network drivers	440	320	160	80	3.12	7th	Accepted
4.	Poor maintenance of wireless routers that provide internet access	600	240	160	0	3.44	5th	Accepted
5.	Poor/inadequate network coverage in some areas	680	320	0	0	3.68	3rd	Accepted
6.	Insufficient network bandwidth available on campus	600	320	80	0	3.52	4th	Accepted
7.	Poor technical know-how on how to operate wireless connectivity networks	480	280	240	0	3.24	6th	Accepted

8.	Poor understanding on how to connect to Wireless connectivity by students	360	160	240	240	2.28	9th	Rejected
9.	Inadequate provision of proper seating arrangements for Lionet users	520	160	160	160	2.52	8th	Accepted

Results from table 5 show that poor network service or signal of the Lionet (Wireless connectivity) ranks highest with a mean weight of 3.88 among the factors responsible for poor wireless connectivity. Also accepted are instability of electric power supply, poor/inadequate network coverage in some areas, insufficient network bandwidth available on campus, with mean weights of 3.72, 3.68 and 3.52 respectively. However, poor understanding of how to connect to Wireless connectivity ranks the lowest (9^{th}) with a mean weight of 2.28. It was thus rejected.

Research Question 6: What measures should be adopted to enhance wireless connectivity services for students and in turn improve library services?

Table 6: Mean rating of respondents' opinions on ways of improving wireless connectivity services and in turn enhance library operations

S/N	ITEMS	SA_4	A_3	D_2	SD_1	X	RANK	DECISION
1.	Consistent maintenance of the wireless routers	840	160	0	0	3.84	2nd	Accepted
2.	Consistent provision of electric power supply	800	160	40	0	3.76	3rd	Accepted
3.	Installation of more wireless routers within the university community	720	280	0	0	3.72	4th	Accepted
4.	Improved service network	880	120	0	0	3.88	1st	Accepted
5.	Increasing the amount of network bandwidth available on campus	880	80	40	0	3.84	2nd	Accepted
6.	Updating of network adapter drivers through the windows	680	320	0	0	3.68	5th	Accepted
7.	Changing the wireless routers channels to increase the strength of its signal	760	200	40	0	3.72	4th	Accepted
8.	Improved/wider coverage of wireless networks	800	160	40	0	3.76	3rd	Accepted
9.	Training of students on how to troubleshoot problems of wireless internet access	680	280	40	0	3.64	6th	Accepted

The table above show that improved wireless network service ranks first with a mean weight of 3.88. Consistent maintenance of wireless routers ranks second with a mean weight of 3.84. Also accepted are the provisions of electric power supply, improved/wider coverage of wireless networks, both ranking 3rd with the same mean weights of 3.76.

Discussion of Finding

Kinds of wireless connectivity devices students use to connect to wireless networks or Wireless connectivity on campus

Laptops, smart phones and tablet phones were the most widely used electronic devices for wireless internet connection by students of the University of Nigeria, Nsukka and this could be attributed to the ease and speed of accessing information from the library websites, OPAC and other sites with these tools.

What wireless connectivity subscribers in University of Nigeria, Nsukka do with it?

It was shown that wireless connectivity subscribers use it mostly for academic activities more than they do for recreation and leisure. This could be linked to the challenging academic curricula of the University of Nigeria, Nsukka which often culminates to tasking assignments; term paper report writing and students research projects which partly explain why graduates of the Institution usually stand out across the globe. This findings agrees with the reports of Owolabi (2007) who reported that Internet has become the market place for learning and online education.

How wireless connectivity influence students' use of library resources and services

It was determined that the use of wireless connectivity reduces the amount of books students borrow from the library, the extent to which students borrow books from the library and prevents students from consulting library access tools which is as a result of a functional library OPAC and automated Circulation services.

Strategies which the library has adopted to upgrade its resources and services to users

With regards to resource upgrade, Nnamdi Azikiwe Library has provided a well-equipped digital library to enhance library services, which has incorporated wireless connectivity services into its operations, and provided electronic databases which contain thousands of electronic information materials, provision for academic research, career development and good academic performance for students.

Problems that affect the capability of wireless connectivity towards enhancing students' academic activities

It was revealed that poor network service (signal strength), instability of electric power supply, inadequate network coverage in some areas, insufficient network bandwidth available on campus, low maintenance of wireless routers (which provide internet access) were the major

factors limiting the capability of wireless connectivity in enhancing students' academic activities which could have been as a result of improper planning, lack of subscription, and inadequate funds.

What measures should be adopted to enhance wireless connectivity services for students and in turn improve library services?

The challenges libraries encounter in the usage of campus wide network are not left without remedying strategies and these include improved network service, consistent maintenance of the wireless routers, increasing the amount of network bandwidth available on campus, consistent provision of electric power supply, improved/wider coverage of wireless networks and installation of more wireless routers within the university community.

CONCLUSION

The use of campus wide network should enhance the accessibility of library resources and services and should be considered important in the library for easy access and usage. This study was carried out with the sole aim of evaluating the student's use of campus wide network in the accessibility of library resources and services. The scope was limited to the students of the University of Nigeria, Nsukka. The findings of the study suggest that there is a high level of ICT awareness among students. Eighty eight (88) percent of the respondents admitted that academic activities are top on the list. Interestingly, almost all the respondents agreed that the use of wireless connectivity greatly influenced their attitude towards the library, its resources and services. It was also discovered that the university libraries were aware of this growing trend on the part of students. Hence, they have put in place arrangements so as to harness wireless connectivity. Instability of electric power supply, inadequate network coverage in some areas, were some the challenges facing the effectiveness of wireless connectivity for enhancing learning activity. In spite of this, Wide campus network remains an effective way to access the library's resources and services. Strategies for improvement were also pointed out.

REFERENCES

Aina, L. O. (2004). *Library and Information Science Text for Africa*. Third World Information Services Limited, Ibadan, Nigeria. Pp. 70 - 85

Bassey, B. A. (2006). User-satisfaction with services in three academic libraries in cross River State: a comparative study. *Gateway Lib. J.* 9:21-29.

Chiemeke, S., Longe, O. B., Umar S. S., Shaib I. O. (2007). Users' perception of the use of academic libraries and online facilities for research purpose in Nigeria. *Library Philosophy and Practice.* Retrieved from *http://www.wedpages.uidaho.edu/~mbolin/chiemeke-longe.htms*.

Hutchinson, S., & Sawyer, S. (2000). *Computers, communication information, core version.* Boston: McGraw-Hill.

Igun, S. (2005). Users and Internet skills: A report from Delta State University Abraka, Nigeria:
Electronic Journal of Academic and Special Librarianship 6(3)

Igun, S. E., Adogbeji, O. B. (2007). Study habits of postgraduate students in selected Nigerian Universities, *Library Philosophy and Practice*. Retrieved from http://digitalcommons.uni.edu/libphi/prac/153.

Montgomery, C. H. and D. W. King. 2002. Comparing Library and User Related Costs of Print and Electronic Journal Collections. A First Step towards a Comprehensive Analysis. *D-Lib Magazine* 8(10):2-4.

Owolabi, K.A. (2007). Internet access and usage by the students of Akanu-Ibiam Federal Polytechnic Uwana, Afikpo. Nigerian Library Link. A Journal of Library and Information Science 5(1): 12-16

Ozoemelem, O. A. (2009). *Use of electronic resources by post graduate students of the departmentof Library and Information Science of Delta state university, Abraka, Nigeria.*Retrieved from http://www.wepages.uidaho.edu/~mbolin/obuh-alex.htm.
Through the years | University of Nigeria. Unn.edu.ng. Retrieved 24 January, 2014.

Wireless Networking Security (2010). Retrieved from *http://compnetworking.about.com/od/wirelesssecurity/*