

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

Abba Tukur

Modibbo Adama University of Technology, Yola, Nigeria

Lamido G. A. Adamu

Modibbo Adama University of Technology, Yola, Nigeria

Information Impact:

Journal of Information and Knowledge Management
2017, Vol. 8 (3) Pg 1 - 15
ISSN: 2141 – 4297 (print)
ISSN: 2360 – 994X (e-version)
www.informationimpact.org

Abstract

This study investigated the type of internet services and resources available to academics in Adamawa State, Nigeria. The survey research method was employed for this study. The population for this study consists of all the lecturers in Adamawa State University (ADSU) Mubi, American University of Nigeria (AUN) Yola and Modibbo Adama University of Technology (MAUTech) Yola. Krejcie and Morgan table for determining sampling was used to arrive at a sample size of 265 lecturers from a population of 847. The research instrument used for collecting data for this study was a self-designed questionnaire. Descriptive statistics was used in analyzing the data collected. Findings revealed e-mail, file/document transfer, newsgroup, discussion groups among other types of internet services and resources available to academics in Adamawa state. It was also revealed that cyber café is mostly used by academics to access internet services and resources while, the purposes for accessing Internet services and resources were teaching, research, communication, collaboration and publication. The study recommended that effective wireless connection should be provided both in libraries and the entire campus environment so that academics can have unhindered access to internet services and resources for their academic activities.

Key words: internet services, internet resources, adamawa, academics, use

Introduction

The need to access information services and resources for the purpose of teaching, learning, research, and collaboration activities among lecturers in the Nigerian University system can be seen from the efforts and initiatives put in place by the Nigerian government through the National Universities Commission (NUC). The creation of Nigerian Universities Network (NUNet) and subsequently the National Virtual Library Project (NVLP) is a step towards the proper access to Internet services and resources by university lecturers for the enhancement of their academic activities. The role of academics, otherwise known as lecturers in the Nigerian university system is to teach and conduct research in their various fields of specialization and engage in community services. Consequently, with time they were also involved in other

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

academic activities which include publication, communication and collaboration with colleagues in order to expand the frontiers of scholarship and knowledge. With the emergence of Internet services and resources such as e-mail, chatting, online databases, e-books and e-journals among others, lecturers' academic activities can be effectively carried out to enhance their performance. Nwokedi and Sani (2009) asserted that the internet has removed communication and access barriers from anywhere in the globe making it fast and reliable, without restrictions on content or format; with its limitless range of services and resources

The need for university lecturers to perform their myriad functions of teaching, learning and research requires the availability of Internet services and resources. This is because up-to-date information is required by the lecturers so as to be in tune with modern realities in their various subject/ disciplines. Preliminary investigation revealed that the universities understudy have allocated a lot of funds in their efforts to make Internet services and resources available and accessible so as to enhance academic activities within their campuses. However, availability and accessibility of the Internet services and resources is still at its lowest ebb. It is against this background that this study seeks to determine type of internet services and resources available as well as the source of access to these resources by academics in Adamawa State, Nigeria.

Objectives of the study

The objectives of the study were to determine the:-

1. Type of Internet services and resources available and mostly accessed by academics in Adamawa State
2. Source of access to Internet services and resources mostly used by academics in Adamawa State
3. Purposes of Internet services and resources to academics in Adamawa state

Research questions

The study answered the following research questions:-

1. Which type of Internet services and resources is available and mostly accessed by academics in Adamawa State?
2. Which source of access to Internet services and resources is mostly used by academics in Adamawa State?
3. What is the purpose of Internet services and resources to academics in Adamawa State?

The findings of this study will be useful to authorities and researchers of the universities understudy. The university authorities will use the findings of this study in providing additional infrastructure to improve on availability, accessibility and purposes of the various forms of

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

Internet services and resources. Researchers however, can use this study to develop their knowledge base. It is also hoped that this study will be an addition to the existing literature in the field of library and information science.

Literature review

The Internet is a very useful tool that allows users access vast quantities of information and also enable them communicate with everyone around the world. Similarly, 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 mechanism for information dissemination. Furthermore, it provides facilities and capabilities to browse through a list of subject headings to get an idea of what is available in other places through the network connectivity (Eyitayo, 2008). Research has shown that university libraries have put efforts in making Internet services and resources available. A study conducted by Chigbu and Dim (2012) on connectivity and accessibility in Nigerian University Libraries showed the existence of Internet connectivity in and around the University of Nigeria Nsukka and Enugu campuses. At various places elsewhere on campus there were computer facilities with Internet connections where 91% of respondents asserted. Outside the University campus, there is availability of Internet services that 74% of respondents agreed. There were also 55% connectivity in the various departments and faculties of the university. As much as 53% of the respondents were given free access to this connectivity. Only 31% of the University staff had personal wireless laptop computer systems that allowed access to the Internet made up of 81% respondents.

Another study conducted by Lawal (2013) at Covenant University library on the use of ICT in Nigerian libraries showed that Covenant University library has an abundance of computers connected to the internet with web based Millennium software. Krubu and Osawaru (2011) identified ICT resources and the use of the resources available at John Harris and Benson Idahosa University libraries as search engine, Internet, CD-ROM, Online database, and World Wide Web. These resources are used to acquire, store, process, retrieve, and disseminate information. Abubakar (2011) in a study on availability and use of ICT in six Nigerian university library schools notably identified availability of computers, Internet, CD-ROMs, e-mail. In a study conducted by Bassi and Camble (2011) in Adamawa State University, Mubi, Nigeria, online databases, e-journals, e-books, CD-ROMs, e-theses and dissertations, OPAC and Internet were identified as some of the electronic information resources available in the university library. However, this includes some of the Internet services and resources accessible to lecturers for the purposes of academic activities. Salaam and Adegboro (2010) studied the use and access of Internet by students of private universities in Ogun State, Nigeria. The Survey established the availability of Internet

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

facilities (services and resources) in all the universities investigated. Olatokun (2007) confirmed in study of Nigerian women academics use of Internet, Information and Communication Technologies (ICTs) that made them reap some benefits. Due to the availability of such services, the study established that 100% of respondents were found to be computer literate. The impact of this on the study population enables them operate computer to perform various tasks. Furthermore, Unagha (2006) maintained that the availability of Internet services and resources eases accessibility, enhances the quality of research works and results of academics, introduces new ideas and thoughts, and widens the horizon of lecturers as well as reduces the tendency for blind copying and plagiarism.

Internet services and resources can be accessed at various points by lecturers for the purpose of academic activities. Aqil and Ahmad (2011) observed that Internet is the transport vehicle for the information stored in files or document on other computers. The Internet carries together various services and information such as electronic mail, online chat, file transfer and the interlinked web pages and other documents of the World Wide Web (WWW). Kaur and Manhas (2008) found in a study of use of Internet services and resources in the engineering collages of Punjab and Haryana, 65.6% of respondents had Internet access either at the collages or in their offices. According to Ani (2012) recent studies in Nigeria had shown that commercial Internet cybercafé of university campuses were major sources of Internet access by students and academic staff, as most university libraries were not connected or if connected, access was not reliable and sustained.

Furthermore, Fasae and Aladeniyi (2012) established that ninety-nine percent (99%) and nineteen percent (19%) of respondents had access to Internet services and resources from the cybercafé and the university library respectively. A study conducted by Tahir, Mahmood and Shafique (2010) examined that most of the respondents were found to had access to computers and Internet in offices and homes. Similarly, a study conducted by Chigbu and Dim (2012) on connectivity and accessibility in Nigerian university libraries established that majority of the respondents access the Internet through private cyber cafes on campus (68%); mobile Internet providers (such as Zain and MTN) 66%; campus residential connection (66%); and University's Management Information System (MIS) cyber café (57%) and MIS wireless connections (52%). Okiki and Asiru (2011) asserted that Internet had made it possible for scholars and researchers to access e-books, e-journals, databases, search engines and full text digital contents of local and distant libraries using computers with connectivity from their offices.

Similarly, Salaam and Adegboro (2010) reported in a study that private universities in Ogun State, Nigeria have Internet access available to both staff and students. Fasae and Aladeniyi (2012) indicated that respondents visited cybercafés outside the university to access information on the Internet because of its reliability and functionality. Nicholas, et al. (as cited in

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

Dhanavandan, Esmail & Nagarajan, 2012) reported that 66% of the research respondents accessed the Internet at home, 28% at work place, while the remaining 6% used a combination of both. In the same vein, Owolabi, et al. (2012) observed that offices were the major access point for Internet services and resources. This was due to the fact that faculty members were connected and spent more time in their offices than their homes. Parameshware and Patil (2010) established from the study of Internet use by faculty members and researchers at Gulbarga University Library, India, that personal computers both at home and offices, androids, palmtops, blackberries, university e-library and departmental computer laboratory were the access points for Internet services and resources. Onwubiko (2012) found in the study of the impact of Internet on research efforts of academics in Abia State University, Uturu, Nigeria, that lecturers had no access to cafes and computer laboratories within and outside the University campus for academic information needs. The implication of these findings is that lecturers will be relegated to the background if they could not have access to a variety of services and resources provided on the Internet.

Methodology

This study adopted survey research method to obtain data on availability, accessibility and purposes of Internet services and resources on university lecturers' academic activities of teaching, research, communication, collaboration and publication from Adamawa State University (ADSU) Mubi, American University of Nigeria (AUN) Yola and Modibbo Adama University of Technology (MAUTECH) Yola. Sample size was determined using Krejcie and Morgan table for determining sample size of 265 lectures from a population of 847, while random sampling technique was used to select respondents. A self-designed questionnaire was used as the main instrument for data collection. Descriptive statistics was used to analyze the data collected. The descriptive statistics showed the demographic data of respondents (gender, age range, marital status, rank, highest educational qualification). Mean and percentages were used to answer the level of availability, extent of accessibility and the purposes of Internet services and resources on the activities of teaching, research, communication, collaboration and publication output among university lecturers in Adamawa State, Nigeria.

Findings and discussion

Table 1: Response rate

Universities	Questionnaires Administered		Questionnaires Returned	
	F	%	F	%
	ADSU, Mubi	47	17.7	39

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

AUN, Yola	29	11.1	26	9.8
MAUTech, Yola	189	71.2	170	64.2
Total	265	100.0	235	88.7

A total of 265 questionnaires were administered and 235 (88.7%) were filled, returned and found usable for this study, with 39(14.7%) from Adamawa State University, Mubi, while, American University of Nigeria and Modibbo Adama University of Technology, Yola were 26 (9.8%) and 170 (64.2%) respectively.

Table 2: Demographic data of respondents

Variables	Frequency	Percentage (%)
Gender		
Male	155	66.0
Female	80	34.0
Age range		
30-40years	30	12.8
41-49years	97	41.3
50-59years	80	34.0
60 years and above	28	11.9
Marital status		
Single	85	36.2
Married	150	63.8
Rank		
Professors	20	8.5
Associate Professors	22	9.4
Senior Lecturers	40	17.0
Lecturers I	32	13.6
Lecturers II	71	30.2
Asst. Lecturers	50	21.3
Total	235	100.0

Out of 235 respondents, 155 (66.0%) were male while 80 (34.0%) were female. This implied that, male lecturers were more in terms of number than the female. Also, respondents

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

who were between 30-40 were 30(12.8%), 41 and 49 years were 97 (41.3%), while, 80 (34.0%) of the lecturers were between 50 and 59 years. Only 28 (11.9%) of the respondents were above 60 years. The selection could therefore be said to include all ages of the lecturers in the three universities. Also, majority of the respondents had their age range between 41 and 49 years which means that young men and women formed the bulk of lecturers in the three universities. The lowest respondents were 28 (11.9%) with age range of 60 years and above respectively. Out of 235 Lecturers, 85 (36.2%) were single, while, 150 (63.8%) were married. This shows that majority of the lecturers were married. Also, majority 71(30.2%) of respondents were lecturers II, 50(21.3%) were Assistant Lecturers, 32(13.6%) were Lecturers I, 40(17.0%) were Senior Lecturers, while, 22(9.4%) were Associate professors and 20(8.5%) were Professors.

Research question 1: Which type of Internet services and resources is available and mostly accessed by academics in Adamawa State?

Answer to this question is presented in table 3 below.

Table 3: Type of Internet services and resources available to academics

Internet services and resources available										Remark
		High		Moderate		Low		Not Available		
S/ no	Internet Services and Resources available	FQ	%	FQ	%	FQ	%	FQ	%	
1	E-mail services	176	74.9	43	18.3	9	3.8	7	3.0	High
2	File/document exchange	20	8.5	144	61.3	15	6.4	56	23.8	Moderate
3	File Transfer Protocol (FTP)	20	8.5	8	3.4	29	12.4	178	75.7	Not Available
4	Newsgroup	14	6.0	16	6.7	10	4.3	195	83.0	Not Available
5	Mailing lists	16	6.8	24	10.2	138	58.7	57	24.3	Low
6	World Wide Web (WWW)	5	2.1	200	85.1	16	6.8	14	6.0	Moderate
7	Discussion group	20	8.5	16	6.8	178	75.7	21	9.0	Low

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

8	Frequently Asked Questions (FAQ)	10	4.3	8	3.4	57	24.2	160	68.1	Not Available
9	Search engines	29	12.3	179	76.2	7	3.0	20	8.5	Moderate
10	List Services	12	5.1	31	13.2	17	7.2	175	74.5	Not Available
11	Chatting	10	4.3	29	12.3	155	66.0	41	17.4	Low
12	Bulletin Board	17	7.2	21	8.9	6	2.6	191	81.3	Not Available
13	E-books	156	66.4	43	18.3	16	6.8	20	8.5	High
14	Online Databases	42	17.8	148	63.0	15	6.4	30	12.8	Moderate
15	OPAC	32	13.6	184	78.3	14	6.0	5	2.1	Moderate
16	E-journals	163	69.4	45	19.1	17	7.2	10	4.3	High
17	Conference Proceedings	4	1.7	180	76.6	25	10.6	26	11.1	Moderate
18	E-Theses	5	2.1	165	70.2	29	12.3	36	15.3	Moderate

Table 3 shows the opinions of the 235 lecturers on the type of internet services and resources available with email (74.9%), e-book (66.4%) and e-journals (69.4%) recorded high. File / Document Exchange (FDE) (61.3%), World Wide Web (WWW) (85.1%), search engines (76.2%), online databases (63.0%), OPAC (78.3%), conference proceedings (76.6%) and e-theses (70.2%) recorded moderate. Mailing list (58.7%), discussion group (75.7%) and Chatting (66.0%) recorded low, while, File Transfer Protocol (FTP) (75.7%), Newsgroup (83.0%), Frequently Asked Question (FAQ) (68.1%), List Service (74.5%) and bulletin board (81.3%) were not available.

Research question 2: which source of access to Internet services and resources is mostly used by academics in Adamawa State?

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

Answer to this question is presented in table 4 below.

Table 4: sources of access of internet services and resources by academics in Adamawa State

Internet Services and Resources										Remark
		High		Moderate		Low		Not accessible		
S/no	Sources of access to Internet Services and Resources available	FQ	%	FQ	%	FQ	%	FQ	%	
1	Cyber Café on the Campus	175	74.5	43	18.3	13	5.5	4	1.7	High
2	The University Library	71	30.2	14	6.0	130	55.3	20	8.5	Low
3	Offices within the University	9	3.8	167	71.1	28	11.9	31	13.2	Moderate
4	Campus Quarters	12	5.1	8	3.4	36	15.3	179	76.2	Not accessible
5	Computer Centre	23	9.8	183	77.9	21	8.9	8	3.4	Moderate
6	University Environment (Campus area Internet)	10	4.3	127	54.0	89	37.9	9	3.8	Moderate
7	Mobile Internet Service providers	40	17.0	181	77.0	13	5.5	1	0.4	Moderate

Table 4 shows the opinions of the 235 Lecturers on the source of access of Internet Services and Resources. Cyber café on campus (74.5%) recorded high, while, offices within the university (71.1%), computer centre (77.9%), University Environment (Campus area Internet) (54.0%) and Mobile Internet Service providers (77.0%) recorded moderate. The university library (55.3%) recorded low and campus quarters (76.2%) recorded not accessible.

4. **Research Question 3:** What is the purpose of Internet services and resources to academics in Adamawa State?

Analysis to this question is presented in table 5 below.

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

Table 5: Purposes of internet services and resources to academics

Purposes	High		Moderate		Low		Remark
	F	%	F	%	F	%	
Teaching	125	53.2	76	32.3	34	14.5	High
Research	151	64.3	53	22.6	50	13.1	High
Communication	129	55.0	71	30.2	35	14.8	High
Collaboration	89	37.9	117	49.8	29	87.7	Moderate
Publication	83	35.3	121	51.5	31	13.22	Moderate

Table 5 shows the purpose of internet services and resources to academics in Adamawa state. The result revealed that teaching (53.2%), research (64.3%) and communication (55.0%) were rated high, while, collaboration (49.8%) and publication (51.5%) were rated moderate. On the overall analysis, the purpose of accessing Internet services and resources for lecturers' academic activities were rated high.

Discussion

Findings of this research revealed that the level of availability of Internet services and resources for academic activities were generally moderate. However, the level of availability of e-mail, e-books and e-journals were very high; while, the level of availability of File / Document Exchange (FDE), World Wide Web (WWW), search engines, online databases, OPAC, conference proceedings and e-theses were moderate. This finding agrees with the study conducted by Krubu and Osawaru (2011) which identified ICT resources and the use of the resources available at John Harris and Benson Idahosa University libraries as search engine, internet, CD-ROM, Online database, and World Wide Web, s well as the study of Abubakar (2011) in a study on availability and use of ICT in six Nigerian university library schools which notably identified availability of computers, Internet, CD-ROMS, e-mail.

Findings of this study also revealed that access to internet services and resources through cyber café was rated high while access in offices within the university, computer centre, University Environment (Campus area Internet) and Mobile Internet Service providers recorded moderate, access in university libraries recorded low and campus quarters recorded not accessible. This could be attributed to the facts that most of the lecturers' access these Internet services and resources from personal facilities at cyber cafes, homes or in offices. The finding agrees with the study conducted by Chigbu and Dim (2012) on connectivity and accessibility in Nigerian University Libraries. The authors established that majority of the respondents access the Internet through private cyber cafes on campus (68%); mobile Internet providers (such as Zain and MTN) 66%; campus residential connection (66%); and University's MIS cyber café (57%) and MIS wireless connections (52%). Other respondents accessed the Internet through private cyber cafes in the university campus (36%). GSM phone services (34%); departmental

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

connections (26%) and from dial up modem (15%). Also this study is in line with the findings of Kaur and Manhas (2008) on use of Internet services and resources in the engineering colleges of Punjab and Haryana where 65.6% of respondents had Internet access either at the colleges or in their offices. In the same vein, the finding agrees with Ozoemelem's (2009) study which reported that cybercafés served as the major access points for electronic resources usage in Delta State University, Abraka. Furthermore, the research also agrees with the study of Fasae and Aladeniyi (2012), which established that ninety-nine percent (99%) and nineteen percent (19%) of respondents had access to Internet services and resources from the cybercafé and the university library respectively. The finding agrees with that of Tahir, Mahmood and Shafique (2010), which found that most of the respondents had access to computers and Internet in their offices and homes.

Similarly, the study agreed with Parameshware and Patil (2010) study of Internet use by faculty members and researchers at Gulbarga University Library, India where personal computers were accessed both at home and offices, university e-library and departmental computer laboratory were the access points for Internet services and resources. The finding of this study corroborate Ani (2012) which showed that commercial Internet cybercafé off University campuses were major sources of Internet access by students and academic staff in Nigeria, as most university libraries were not connected or if connected, access was not reliable and sustainable.. However, the study is contrary to Onwubiko (2012) which studied the impact of the Internet on research efforts of academics in Abia State University, Uturu, Nigeria which found that lecturers had no access to cafes and computer laboratories within and outside the university campus for academic information needs.

This study revealed that the purpose of accessing Internet services and resources were teaching, research, communication, collaboration and publication. In support of this finding, Eiriemiokhale (2012) established from a study of 380 respondents representing lecturers' from four universities in Edo State, Nigeria. The survey confirmed lecturer's use of Internet resources for research, acquisition of subject knowledge and lectures preparation. Also, Ogunjobi and Fagbami (2012) confirmed that Internet services and resources are capable of providing Nigerian researchers and scholars the enabling environment to overcome the barriers of communication and collaboration and also providing scholars, researchers, individuals and their organisations the advantages of presenting their research finding and ideas across the globe. Onwubiko (2012) opined that the Internet serves as an essential ingredient for enhancing both the research efforts of academics and indeed their level of intellectual development in the global village of knowledge management. Imhonopi and Urim (2011) explained that academics from tertiary institutions in developed nations depended on Internet services and resources for teaching and research activities.

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

Conclusion and Recommendations

The level of availability of Internet service and resources for lecturers' for academic activities in Adamawa State were generally moderate. However, the levels of availability of e-mail, e-books and e-journals were very high; while, the levels of availability of File / Document Exchange (FDE), World Wide Web (WWW), search engines, online databases, OPAC, conference proceedings and e-theses were moderate. The study also revealed that access in cyber café was rated high, access in offices within the university, computer centre, University Environment (Campus area Internet) and Mobile Internet Service providers was moderate, access in university libraries was low and in campus quarters internet services and resources were not accessible. The purpose of accessing Internet services and resources were teaching, research, communication, collaboration and publication. Therefore, there is need for Universities in Adamawa State to put more efforts and make available mailing lists, discussion groups, Chatting, File Transfer Protocol (FTP), Newsgroups, Frequently Asked Questions (FAQs), List Services and bulletin board as part of their Internet services and resources to boost academic activities. Also, Universities in Adamawa State should ensure that effective wireless connection is provided both in their libraries and the entire campuses so that lecturers can have efficient and effective access to Internet services and resources for their academic activities.

References

- Abubakar, B. M. (2011). Academic Libraries in Nigeria in the 21st Century. *Library Philosophy and Practice*, (1), 135.
- Ani, O. E. (2012). Access and usage of electronic resources in African universities: challenges and prospects. In Dillip K. Swain (Ed.) *Electronic age librarianship*. (pp. 262 - 274). New Delhi: Ane Books Pvt. Ltd.
- Aqil, M. & Ahmad, P. (2011). Use of the internet by research scholars and post-graduate student of the science faculty of Aligarh Muslim university. *Library Philosophy and Practice (e-journal)*, 538. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Bassi, M. D. & Camble, E. (2011). Gender difference in use of electronic resources in university libraries of Adamawa State, Nigeria. *Library philosophy and Practice (e-journal)*, 549. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Chigbu, E.D. & Dim, C .L. (2012). Connectivity and accessibility in Nigerian university libraries: a survey of access, usage and problems in the university of Nigeria, Nsukka. *Library Philosophy and Practice (e-journal)*, 767. Retrieved from <http://digitalcommons.unl.edu/libphilprac>

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

- Dhanavandan, S., Esmail, S. M. & Nagarajan, M. (2012). Access and awareness of ICT resources and services in medical collage libraries in Puducherry. *Library Philosophy and Practice (e-journal)*, 750. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Eiriemiokhale, K. A. (2012). Lecturers level of satisfaction with availability of electronic information resources in universities in Edo State, Nigeria. *Information Technologist* 9 (1), abstract.
- Eyitayo, O.T. (2008). Internet Facilities and the Status of Africa's connectivity. In In Aina, L.O., Mutula, S.M., & Tiamiyu, M.A. (Eds.), *Information and knowledge management in the digital age: Concepts, technologies and African perspectives*. Ibadan: Third World Information Service: 2- 41.
- Fasae, J. K., & Aladeniyi, F. R. (2012). Internet use by students in faculty of science in two Nigerian Universities *Library Philosophy and Practice (e-journal)*, 763. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Imhonopi, D. & Urim, U.M. (2011).The impact of internet services on the research output of academic staff of selected state universities in south-westernNigeria. *Information Technologist*, 8(1), 1-12. Retrieved from www.ajol.org
- Joel – Ikokoh, C. H. (2009). Internet access and usage by Nigerian Educational Research and Development Council staff at the headquarters in Abuja. *Information Technologist*, 6 (1), 61- 67.
- Kaur, A. & Manhas, R. (2008). Use of internet services and resources in the engineering collages of Punjab and Haryana (India): A study. *The International Information & Library Review*, 40, 10-20. doi:10.1016/j.iilr.2007.12.001
- Krejcie, R. V. & Morgan, D. W. (2006). Determining sample for research activities: Educational and Psychological measurement.
- Krubu, D. E & Osawaru, K. E (2011).The Impact of Information and Communication (ICT) in Nigerian University Libraries. Available at digitalcommons.unl.edu/cgi/viewcontent.cgi?article1614&context=libphilprac. (Accessed January 17, 2013).
- Lawal, E. O. S. (2013) The Use of Information and Communication Technology (ICT) in Academic Libraries in Nigeria: A Case Study of Covenant University Library Ota, Nigeria. *Journal of Library and Information Science (JOLIS)*, 10(1 & 2, PP.

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

- Luambano, I. & Nawe, J. (2004). Internet use by students of the university of Dar e Salaam. *Library Hi- Tech News*, 10, 13-17.
- Mutula, S. M. & Ahmadi, D. L. (2000). ICT information in Tanzania secondary schools: digital divide factor and implications for information literacy. *African Journal of Library Archives and Information Science*, 17 (2), 126-128.
- Nazim, M. (2008). Information searching behaviour in the internet ages a users` study of Aligarh Muslim University. *The International Information & Library Review*, 40, 73-81. doi:10.1016/j.iilr.2007.11.001
- Nwokedi, V. C. & Sani, A. U. (2009). Use of search engines for academic activities by the academic staff members of the faculty of natural sciences, university of Jos. *Information Technologist*, 6 (2), 1-10. Retrieved from www.ajol.org.
- Ogunjobi, T. E., & Fagbami, O. O. (2012). Use of the internet by researchers in agricultural research institute in Ibadan, Oyo state. *International Journal of Library and Information Science*, 4 (4), 52-56. doi:10.5897/IJLIS11.068
- Okiki, O.C, & Asiru, S.M. (2011). Use of electronic information sources by postgraduate students in Nigeria: influencing factors. *Library philosophy and Practice (e-journal)*, 500. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Onwubiko, C.P.C. (2012). Impact of the internet on research effort of academics at Abia State University, Uturu (ABSU). *Library philosophy and Practice (e-journal)*, 835. Retrieved from <http://digitalcommons.unl.edu/libphilprac> 1-17.
- Osinulu, L.F. & Okewale, O.S. (2012). A study of internet access and usage among students in the faculties of science, social and management sciences in a state university in Nigeria. *Information Technologist*, 9 (1), abstract.
- Owolabi, A. K, Ajiboye, B. A, Lawal, O. W. & Okpeh, S. C. (2012). Use of electronic information sources (EIS) by faculty members in Nigeria universities. *Library Philosophy and Practice (e-journal)*, 721. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Ozoemelem, O. A. (2009). Use of electronic resources by postgraduate students of the department of library and information science of Delta State, university, Abraka, Nigeria. *Library philosophy and Practice (e-journal)*, 301. Retrieved from <http://digitalcommons.unl.edu/libphilprac>

Use of Internet Services and Resources by Academics in Adamawa State, Nigeria

- Parameshwar, P. & Patil, D.B (2010). Use of the Internet by Faculty and research scholars at Gulbarga University Library. *Library philosophy and Practice (e-journal)*, 264 Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Salaam, M.O. & Adegbore. A. M.(2010).Internet access and use by students of private universities in Ogun State, Nigeria. *Library Philosophy and Practice (e-journal)*,331.Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Tahir, M. Mahmood, K. & Shafique, F. (2010) .Use of electronic information resources and facilities by humanities scholars. *Electronic Library*, 28 (1) 122-136 doi: 10.1108/026404710110223423
- Unagha, A.O. (2006). Towards an information and communication technology conscious Nigerian society. *The Research Librarian*, 1 (1), abstract.

About the authors

Tukur Abba holds a Bachelor , Master and Doctorate Degrees in Library & Information Science from the University of Maiduguri, Nigeria. He started his career at Ibrahim Babangida Library, Modibbo Adama University of Technology Yola, Nigeria, as a Library Assistant in 1985. Areas of research interest include Digital and Electronic Librarianship. He is presently lecturing at the Department of Library & Information Science, Modibbo Adama University of Technology, Yola. He is married with seven children. He can be reached at: tukurabba@mautech.edu.ng +234 8030899991

Adamu, Abbas Lamido Gora hails from Ardo Kola Local Government Area of Taraba State. He is a holder of B.Tech Library and Information Science from Modibbo Adama University of Technology, Yola and M.Tech (in view) from Federal University of Technology, Minna. He is a Chartered Librarian and presently a Graduate Assistant with the Department of Library and Information Science, Modibbo Adama University of Technology, Yola, Adamawa State.