Availability and Utilization of Electronic Resources by University Students in Niger State, Nigeria

Jibril A. Alhassan and Sharon O. Macaulay
Federal University of Technology,
Department of Library and Information Technology
Minna, Nigeria

Abstract

This study was carried out to determine the types of e-resources available, the awareness about them and their use by university students in Niger State of Nigeria. Descriptive survey design was used for the study. The population of the study comprised the 20,000 undergraduate students of two universities in Niger, namely Federal University of Technology, Minna and Ibrahim Badamasi Babangida University Lapai. A simple random sampling technique was used to select 200 respondents from the two universities. Collected data were analysed using a frequency count and simple percentages. Findings revealed that the Internet services, e-mail services, online databases, and electronic databases were the available electronic information resources often used by the undergraduate students in both universities. The use of the e-resources enables the undergraduates to have access to current and up-to-date information, faster and easier access to information, and access to a wider range of information. The students used the resources for academic purposes, online application/registration, research, communication with friends and colleagues, sourcing of materials for project writing, completing assignments, and for other personal purposes. However, inadequate power supplies, and poor network/internet connectivity, were major constraints. The study recommends that universities should give priority to the development of Information and Communication Technologies in the library by subscribing to relevant educational databases. Information retrieval skills, using information technology, should be included in the curriculum for undergraduate students so that they can make use of these electronic resources effectively. Hands-on training on the use of these resources should be actively promoted.

Keywords: Electronic Resources; Utilization; University Students; Nigeria

Introduction

Libraries have been part and parcel of human civilization because the art of writing and preservation of knowledge is an integral part of human culture and civilization. Libraries have thus gone through tremendous developments and transformation over the years. One of the major aspects of human civilization is that humans adopt technology to develop libraries, all in an effort to preserve human experience. Thus librarianship helps to preserve and make widely accessible the records of human experience. Information Technology is the technology of the 21st century which started to manifest and transform in the later part of the 20th century. The emergence of Information Technology (IT) has re-directed the practice of librarianship.

The advent of Information and Communication Technology (ICT) has accelerated the availability and use of electronic resources in academic libraries because of high demand for relevant information by faculty members and students. In order to meet such demand, libraries and librarians have to address their role and position in relation to this global development. Thus, academic libraries now invest heavily in electronic resources.

In academic libraries, the electronic resources that are of critical importance for use are e-journals and e-books, because they are the e-version of the conventional books and journals found in the library. These e-resources are stored and organized in various databases to permit easy retrieval. Some of these databases are subject-based while others cover a wide range of subject areas. Publishers often have their own databases with all their publications while other agents collate publications from various databases to provide robust access to e-resources.

Students constitute the largest percentage of library users in universities. The advent of electronic resources, accessible by remote means using various facilities, has created a level of convenience for students in using library facilities that are e-based. However, it has been observed that the patronage of e-resources by students especially in the Federal University of Technology, Minna is still low. Similarly, Adeniran (2013) found that students of Redeemers University, Nigeria were aware of the different types of electronic information resources available in the university library; their use rate of these resources is low. It is against this backdrop that this study investigates the utilization of e-resources by university students in Niger State.

The present dispensation of library and information services has put every librarian on alert to be able to meet the demands of the varied clientele. This is as a result of a shift from traditional printed material provision to a hybrid service where both the print materials and the electronic sources are provided concurrently, especially in university libraries. In fact, the growth and diversity of electronic resources, especially e-journals, has led many to predict the extinction of printed journals. According to Shuling (2007), electronic information has gradually become a major resource in every university library in recent years. Kinengyere (2007, P.328) has stated that "the impact of moving from text-based to resource-based learning has involved heavier use of library materials and a demand for more and varied media sources" This makes the provision and use of electronic information systems in academic libraries a critical issue for those working in information and library services (Armstrong et al., 2001).

Literature Review

Tella et al. (2007) has noted that students' ability to find and retrieve information effectively is a transferable skill useful for their future lives as well as enabling the positive and successful use of academic electronic resources. The ability to explore the digital environment is a requirement for academic success today. Students are increasingly expected to use electronic information resources at the university. In order to make use of the growing range of electronic resources, students must acquire and practice the skills necessary to

exploit them. Learning such skills is essential in a technology driven environment, and this can be enhanced through the use of innovative learning strategies (Lawson, 2005).

Okello-Obura and Magara (2008) investigated electronic information access and utilization at the East African School of Library and Information Science, Makerere University, Uganda. The study revealed that users derived many benefits from electronic resources as they gained access to a wider range of information, and their academic performance improved as a result of access to quality information.

Madhusudhan (2007) conducted a study on internet usage by research scholars in the University of Delhi and the results indicated that the problems encountered included an inadequate number of computers with internet facilities, slow internet connections, and lack of skills and training. Watts and Ibegbulam (2006) examined some of the barriers to the usage of electronic information resources available at the medical library of College of Medicine, University of Nigeria, Nsukka. Their findings revealed that lack of inadequate ICT infrastructure and affordable online access, absence of in-depth ICT skills and information searching skills among library staff, and cost of using the cybercafé were barriers to the use of electronic resources.

Oduwole and Akpati (2003) investigated the accessibility and retrieval of electronic information at the University of Agriculture Library, Abeokuta, Nigeria, and they reported that electronic information is relevant to all members of the University community, that it was increasingly easy to use, and that most staff members were satisfied with their search outputs. The constraints identified included insufficient number of terminals available for use, despite high demand, and inadequate electricity supply.

Ojo and Akande (2005) reported a low level of usage of electronic information resources by students in their study of access, usage and awareness of electronic information resources at the University College Hospital (UCH) Ibadan, Nigeria. The major problem identified was a lack of information retrieval skills for exploiting electronic resources, thus making the level of usage of resources by medical students very low.

Based on the findings in this prior research, it is considered imperative to study the availability and utilization of electronic resources by undergraduate students in the two universities located in Niger state in the North central part of Nigeria.

Objectives of the study

The objectives of the study were to:
1 Determine the types of e-resources available in university libraries in Niger State.
2 Determine the level of awareness of e-resources and how often they are being used by students
3 Determine the overall rate of use of the e-resources.
4 Explore the impact of e-resources on students' academic achievement in universities in Niger State.
5. Explore the challenges of using e-resources by university students in Niger State.

Research methodology

A survey research design was used in this study. The population of the study comprised 20,000 undergraduate students of Federal University of Technology (FUT), Minna and Ibrahim Badamasi Babangida University (IBBU), Lapai, both in Niger state, Nigeria. Two hundred (200) students, that is, 100 from each of the two universities, were sampled for the study using a simple random sampling technique. Structured questionnaires were used for data collection and then analysed using a frequency count and simple percentages.

Data analysis and interpretation

Distribution and return of questionnaire

Out of the total of 200 copies of the questionnaire distributed, 130 were completed, returned and found useful, representing a 65% return rate.

Table 1: Distribution of respondents by Institution and gender

Item	Frequency	Male	Female
F.U.T Minna	66 (51%)	46 (70%)	20 (30%)
IBBU Lapai	64 (49%)	36 (56%)	28 (44%)
Total	130 (100%)	82 (63%)	48 (37%)

Table 1 reveals that 66(50.77%) of the respondents were from FUT Minna while 64 (49.23%) were students from IBBU Lapai. The table also shows that 82 (63%) of the respondents were male while 48 (37%) were female. The high number of male respondents over females can be attributed to the lackadaisical attitude to girl child education in northern Nigeria, which are in turn due to cultural and religious inclinations.

Table 2: Computer literacy of respondents

OPTION	FUT MINNA	IBBU LAPAI	TOTAL	PERCENTAGE
YES	60	53	113	87
NO	6	11	17	13
Total	66	64	130	100

Table 2 shows that a large number of respondents were computer literate, that is, 113 respondents, representing (87%), while 17 (13%) of the respondents were not computer literate. The high rate of computer literacy can be attributed to the fact that the Nigerian labour market requires graduates to be computer literate.

Table3: Awareness of the electronic resources in your institution's library

OPTION	FUT MINNA	IBBU LAPAI	TOTAL	PERCENTAGE
YES	60	56	116	89
NO	6	8	14	11
Total	66	64	130	100

In Table 3, it is shown that 116 respondents, representing 89%, were aware of the electronic resources in their institution's library while 14 (11%) respondents were not. This implies that the majority of the respondents were aware of the electronic resources in their institution's library.

Table 4: The electronic resources available in your institution's library

OPTION	FUT YES	IBBU YES	Overall count & Percent for Yes	FUT NO	IBBU N0	Overall count & Total Percent for No
CD-ROM Databases	13(10%)	25 (19.23%)	**29.23%**	53 (40.77%)	39 (30%)	**70.77%** **130(100%)**
Internet services	66 (50.77%)	64 (49.23%)	**100%**	-	-	- **130(100%)**
E-mail services	59 (45.38%)	58 (44.62%)	**90%**	7 (5.38%)	6 (4.62%)	**10%** **130(100%)**
Electronic journals	49 (37.69%)	39 (30%)	**67.69%**	17 (13.08%)	25 (19.23)	**32.21%** **130(100%)**
Online Public Access Catalogue (OPAC)	21 (16.15%)	23 (17.69%)	**33.84%**	45(34.62%)	41(31.54%)	**66.16%** **130(100%)**

Online databases	51 (39.23%)	41(31.54%)	**70.77%**	15 (11.54%)	23(17.69%)	**29.23% 130(100%)**
Electronic books	11 (8.46%)	20 (15.38%)	**23.84%**	55 (42.31%)	44(33.85%)	**76.16% 130(100%)**

Table 4 shows that eBooks (23.84%), CD-ROMs (29.23%) and OPAC (33.84%) are perceived to be unavailable to respondents in their university libraries, based on the low percentage of respondents that answered yes to their availability. Over 60% of the respondents affirmed that the resources were not available. All the other resources, namely internet services, email services, e-journals, and online database were attested to be available by respondents with an affirmative response of over 65%.

Table 5 : You make use of electronic resources

OPTION	FUT MINNA	IBBU LAPAI	TOTAL	PERCENTAGE
YES	63	59	122	93.85
NO	3	5	8	6.15
Total	66	64	130	100

Table 5 shows that 93.85% (122 respondents) from both universities indicated that they used the electronic information resources, while only 8 (6.15%) respondents indicated that they did not use electronic resources. This implies that electronic resources are used by most respondents.

Table 6: You prefer the printed resources over the electronic resources

OPTION	FUT MINNA	IBBU LAPAI	TOTAL	PERCENTAGE
YES	30	20	50	38.46
NO	36	44	80	61.54
Total	66	64	130	100

In Table 6, 38.46% (50) respondents indicated a preference for using printed materials over electronic resources, while a majority of the respondents (80, or 61.54%) preferred printed resources over electronic resources. This implies that both printed and e-resources were used by respondents, with e-resources enjoying a preference over printed sources.

Table 7: You use the following electronic resources

S/N	OPTION	FUT YES	IBBU YES	Total	FUT NO	IBBU N0	Total
1	CD-ROM Databases	21 (16.15%)	20 (15.38%)	**31.53%**	45 (34.62%)	44(33.85%)	**68.47%**
2	Internet services	66 (50.77%)	61 (46.92%)	**97.69%**	-	3 (2.31%)	**2.31%**
3	E-mail services	57 (43.85%)	54 (41.54%)	**85.39%**	9 (6.92%)	10 (7.69%)	**14.61%**
4	Electronic journals	38 (29.23%)	35 (26.92%)	**56.15%**	28 (21.54%)	29 (22.31%)	**43.85**
5	Online Public Access Catalogue (OPAC)	32 (24.62%)	26 (20%)	**44.62%**	34(26.15%)	38 (29.23%)	**55.38%**
6	Online databases	40 (30.77%)	39 (30%)	**60.77%**	26 (20%)	25 (19.23%)	**39.23%**
7	Electronic books	50 (38.46%)	45 (34.62%)	**73.08**	16 (12.31%)	21 (16.15%)	**28.46%**

Table 7 indicated that internet services (97.69%), e-mail services (85.39%), and electronic books (73.08%), are used by over 70% of the respondents. Online databases (60.77%) and electronic journals (56.15%) are used by 55-65% of the respondents, while Online Public Access Catalogues (44.62%) and CD-ROM databases (31.53%) were used by less than 50% of the respondents. This implies that all the resources are used to some extent, but the most used are internet services, email services, e-books, and online databases with 60% and above.

Table 8: Frequency of using the electronic resources

Option	FUT	IBBU	Total	Percentage
Daily	18	24	42	32.31%
Weekly	22	17	39	30%
twice a week	6	9	15	11.54%
Monthly	20	14	34	26.15%
Total	64	64	130	100%

Table 8 revealed that 42 (32.31%) of the respondents made use of electronic resources daily, 39 (30%) of the respondents used the electronic resources weekly, 15 (11.54%) made use of electronic resources twice a week, while 34 (26.15%) respondents made use of electronic resources monthly. This implies that the frequency of use is high with 62.31% of the respondents using it either daily or weekly.

Table 9: Frequency of the use of electronic resources

Option	Very often	Often	Occasionally	Rarely
CD-ROM Databases	-	26(20%)	48(36.92%)	56(43.07%)
Internet services	62(47.69%)	47(36.15%)	21(16.15)	-
E-mail services	54(41.53%)	39(30%)	30(23.07%)	7(5.38%)
Electronic journals	31(23.84%)	16(12.30%)	52(40%)	32(24.61%)
OPAC	-	-	57(43.84%)	73(56.15%)
Online databases	27(20.76%)	39(30%)	35(26.92%)	29(22.30%)
Electronic books	57(43.84%)	48(36.92%)	17(13.07%)	8(6.15%)

Table 9 showed that internet services were the most frequently used as 62 (47.69%) respondents very often used it. This was followed by electronic books 57 (43.84%) and email services as affirmed by 54 (41.53%). Others were electronic journals 31(23.84%) and online databases 27 (20.76%). CD-ROM and OPAC were not frequently used by respondents. The table further revealed that electronic books were often used by 48 (36.92%), while 47 (36.15%) often used internet services, 39 (30%) often used email services and online databases, 26 (20%) often used CD-ROM databases and 16 (12.30%) often used electronic journals. OPAC was not often, but occasionally used by 57 (43.84%) respondents. Electronic journals were occasionally used by 52 (40%) respondents and CD-ROM by 48 (36.9%) respondents. The other four resources were online databases 35 (26.92%), email services 30 (23.07%), internet services 21 (16.15%), and electronic books 17 (13.07%). In the rarely used column, OPAC showed 73 (56.15%), CD-ROM 56 (43.07%), electronic journals 32 (24.61%), and online databases 29 (22.30%). However, while no respondents rarely used the internet services, only 8 (6.15%) and 7 (5.38%) rarely used electronic books and email services respectively.

The analyses of the table imply that internet services, eBooks and email services were the most frequently used electronic resources while OPAC and CD-ROM were the least frequently used. Furthermore, the fact that respondents were undergraduates could account for the more frequent use of electronic books when compared to electronic journals.

Table 10: Benefits from the use of e-resources

	Electronic Resources	YES	Percentage	NO	Percentage
a.	Access to a wider range of information	130	100%	-	-
b.	Faster access to information	127	97.69%	3	2.31%
c.	Access to current up-to-date information	120	92.31	10	7.69%
d.	Easier access to information	98	75.38%	32	24.62%
e.	Improved academic performance as a result of access to quality information.	122	93.85%	8	6.15%

Table 10 showed that all the respondents 130 (100%) confirmed that they had access to a wider range of information, 127 (97.69%) respondents indicated faster access to information, and 120 (92.31%) respondents indicated current and up-to-date information. Meanwhile, 98 (75.38%) indicated that they had easier access to information as a result of the use of electronic information resources while the majority of respondents (122, or 93.85%) reported that the use of the electronic resources improved their academic performance as a result of access to quality information.

This result implies that the benefits derived from the use of the electronic information resources by the undergraduate students in both FUT Minna and IBBU Lapai were significant and they included: access to current and up-to-date information, faster access to information, access to a wider range of information, and easier access to information.

Table 11: Purpose of using e-resources

OPTION	YES			NO		
	FUT	IBBU	Total	FUT	IBBU	Total
Academic purposes/ course works	59	55	**114 (87.69%)**	7	9	**16 (12.31%)**
Complete assignment	46	50	**96 (73.85%)**	20	14	**34 (26.15%)**
For research purposes	50	48	**98 (75.38%)**	16	16	**32 (24.62%)**
Communication with friends and colleagues	61	54	**115 (88.46%)**	5	10	**15 (11.54%)**
Online application/ registration	37	46	**83 (63.85%)**	29	18	**47 (36.15%)**
Sources for materials for project writing	65	58	**123 (94.62%)**	1	6	**7 (5.38%)**
Personal	48	50	**98 (75.38%)**	18	14	**32 (24.62%)**

Table 11 shows various purposes for which the respondents used the electronic information resources. The Table shows that most of the respondents 114 (87.69%) used the electronic resources for academic purposes/course work, 96 (73.85%) of respondents used the electronic resources for assignments, 98 (75.38%) of respondents used it for research purposes, 115 (88.46%) of respondents used it to communicate with friends and colleagues, and 83 (63.85%) of respondents used electronic resources for online application/registration. Almost all the respondents 123 (94.62%) used the electronic resources as sources of information for project writing and 98 (75.38%) of the respondents used the electronic resources for other personal purposes.

Table 12: factors that hinder the use of electronic resources

Factors that Hinder Electronic Resources Use	Yes FUT	IBBU	Total	NO FUT	IBBU	Total
Too much information retrieved	23(17.69%)	18(13.85%)	**41(31.54 %)**	43(33.08 %)	46(35.38%)	**89(68.46 %)**
It is time consuming	18(13.86%)	28(21.54%)	**46(35.4 %)**	48(36.92 %)	36(27.69%)	**94(64.61 %)**
Access to computer terminal is Limited	46(35.38%)	39(30%)	**85(65.38 %)**	20(15.38 %)	25(19.23%)	**45(34.61 %)**
No IT knowledge to effectively utilize the services	50(38.46%)	42(32.31%)	**92(70.77 %)**	16(12.31 %)	22(16.92%)	**38(29.23 %)**
Using electronic resources often distracts me from doing my other work	33(25.38%)	38(29.23%)	**81(54.61 %)**	33(25.38 %)	26(20%)	**59(45.38 %)**
Library staff don't assist to use	48(36.92%)	40(30.77%)	**88(67.69 %)**	18(13.86 %)	24(18.46%)	**42(32.32 %)**
The system is sometime slow	66(50.77%)	64(49.23)	**130(100 %)**	-	-	**0(0%)**
Sometime there is network failure	59(45.38%)	59(45.38%)	**118(90.7 6%)**	7(5.38)	5(3.85%)	**12(9.23 %)**
Power failure	38(29.23%)	45(34.62%)	**83(63.85 %)**	28(21.54 %)	19(14.62%)	**47(36.16 %)**

Table12 shows that 41 (31.54%) of respondents indicated that too much information retrieved hindered electronic resources use, while 89 (68.46%) of respondents indicated that too much information retrieved did not hinder use of electronic resources. 46 (35.4%) of respondents were of the opinion that time consumption hindered electronic resources use while 94 (64.61%) of the respondents had the opposite opinion. As for limited access to computer terminals being a hindrance to electronic resources use, 85 (65.38%) of respondents stated yes, while 45 (34.61%) of respondents stated no. 92 (70.77%) of respondents responded that a lack of IT knowledge to effectively utilize the services hindered usage of electronic resources use, while 38 (29.23%) indicated it did not. Also, 81 (54.61%) of respondents responded that using electronic resources often distracted them from doing their work, while 59 (45.38%) of respondents disagreed with this. 88 (67.69%) of respondents agreed that non-assistance from library staff to facilitate easy access hindered electronic resources, while 42 (32.32%) of respondents responded that non-assistance from library staff did not hinder their use of electronic resources. All the respondents (130, or 100%) agreed that the slow system sometimes hindered use of electronic resources. Almost all the respondents, representing 118 (90.76%), agreed that sometimes there was network failure, which hindered use of electronic resources. However, 83 (63.85%) of respondents agreed that power failure hindered use of electronic resources, while only a few respondents (47, or 36.16%) said that power failure did not hinder usage of electronic resources.

Discussion of results

It was revealed by the findings of this study that Internet services, e-mail services, online databases, electronic databases, and electronic journals were available for the use of respondents in both Federal University of Technology Minna and Ibrahim Badamasi Babangida Lapai. However, other electronic resources like CD-ROM databases, Online Public Access Catalogue (OPAC), as well as electronic books, were not readily available for their use.

The results also show that some of the available electronic resources like the internet, e-mail, online databases, electronic databases and electronic journals were highly used by the

respondents in the two universities, while others like CD-ROM databases, electronic journals, Online Public Access Catalogue (OPAC) and electronic books were rarely used.

The findings suggest that the benefits of using the electronic resources by the respondents were enormous and included access to current and up-to-date information, faster and easier access to information, improved academic performance as a result of access to quality information, and access to a wider range of information. This corroborates findings by Okello-Obura and Magara (2008) who investigated electronic information access and utilization at the East African School of Library and Information Science, Makerere University, Uganda. Their study suggested that users derived many benefits from electronic resources by gaining access to a wider range of information, and this improved academic performance as a result of access to quality information. Furthermore, the study also revealed that the undergraduate students used the electronic resources for various purposes, such as online application/registration, research, communication with friends and colleagues, sourcing materials for project writing, completing assignments, and for other personal purposes.

The major constraints, as found by this study, were limited access to computer terminals, lack of IT knowledge to effectively utilize the services, poor internet connectivity, and power failure.

Conclusion

Based on the findings of the study, the following conclusions are drawn:

- Electronic information resources like internet, e-mail services, online databases, electronic databases, and electronic journals were available for use in both Federal University of Technology Minna and Ibrahim Badamasi Babangida University Lapai.

- The resources were often used by undergraduates to support their academic course work, online application/registration, research, communication with friends and colleagues, sourcing materials for project writing, completing assignments, and for other personal purposes.

- The use of these resources by the students resulted in a number of benefits such as access to current and up-to-date information, faster and easier access to information, and access to a wider range of information.

- The study also established that the use of electronic information resources by undergraduate students in the two universities was very encouraging. Inadequate power supply, inadequate provision of key electronic resources and facilities in the library were identified as key factors militating against the effective use of the electronic information resources.

Recommendations

The following recommendations are made, based on the findings of this study.

1. Universities should give priority to the development of Information and Communication Technologies in the library by subscribing to relevant educational databases.
2. Information retrieval skills using information technology should be included in the curriculum for the undergraduate students to be able to make use of these electronic resources effectively. Hands-on training on the use of these resources should be actively promoted.

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