

Utilization of electronic information resources by students of tertiary institutions in Taraba State, Nigeria

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Abstract

This study examined the utilization of electronic information resources by students of tertiary institutions in Taraba State, Nigeria. The specific objectives of the study were to find out the types of electronic information resources (EIRs) available in the tertiary institutions, to determine the extent of utilization of the available electronic information resources and the satisfaction derived from the utilization of electronic information resources in the institutions. Quantitative research method, with cross sectional survey design was adopted for the study. The population of the study comprised the three higher institutions with available and functional electronic information resources namely: Taraba State University, Federal University, Wukari and Taraba State College of Nursing and Midwifery with 10748 registered users who constituted the population and out of these, 370 users were randomly selected from the libraries. Research advisor table 2006 was used in determining the sample size of the study. Questionnaire was used as instrument for data collection. The data collected were analyzed using descriptive and inferential statistics, via Statistical Package for Social Sciences (SPSS) version 16.0. Findings revealed that various types of electronic information resources were available in the tertiary institutions under study, these include: e-books, e-journals, e-mails, online databases, CD-ROMs among others. It was also found that the extent of utilization of the available EIRs was moderate and majority of the users were satisfied with the EIRs provided in their institution libraries. The study also found a statistically significant relationship between accessibility and utilization of electronic information resources in the surveyed institutions $\chi^2 (10, N=327) = 12.447, P > 0.05$.

Keywords: Utilization, Electronic information resources, Students, Tertiary institutions, Taraba State, Nigeria

Introduction

Taraba State is geographically located in North Eastern part of Nigeria. The state occupies 54,473 square kilometers. It is bounded in the West by Plateau, Nassarawa and Benue states, on the eastern border by Adamawa State and the Republic of

Cameroon, and on the northern border by Gombe State (Nigeria Galleria, 2017). The state was created in 1991 from the southwestern half of former Gongola state (*Encyclopedia, Britannica*, 2020). The state has a number of tertiary institutions.

The advancement in information and communication technologies (ICTs) has led to the emergence of electronic information resources. Indeed, the 21st century has brought a remarkable proliferation of electronic information resources (EIRs), which greatly changed the information seeking attitude of students and researchers globally. Abubakar (2011) noted that the global trend is characterized by a fundamental shift from traditional information environment to an e-environment where emphasis is placed more on acquisition of e-resources such as e-books, e-journals as well as online databases. In recent times, electronic resources have been identified as the major sources of information dissemination in academic institutions. Generally speaking, electronic information resources play vital role in all areas of human endeavors in academic libraries and the academic world has increasingly become more dependent on them.

According to the Online dictionary of library and information science (ODLIS) (2004), electronic information resources can be defined as materials consisting of data or computer programs encoded for reading and manipulation by a computer or by the use of a peripheral devices directly connected to the computer, such as CD-ROM, flash drive, or remotely via a network, such as the internet category which includes software applications, electronic texts, bibliographic databases, institutional repositories, web sites, e-books, collections of e-journals, etc. Major examples of electronic information resources include electronic books (e-books); electronic newspapers (e-newspapers); electronic journals (e-journals) as well as internet resources. Electronic information resources also consist of databases, magazines, archives, theses, conference papers, government papers,

scripts and monographs in electronic form. These electronic information resources are available on the Internet, which can be accessed free of charge via open access or through institution's subscriptions to provide free online databases access to their customers to support academic activities especially in the area of teaching, learning and research. Generally, there are two (2) types of electronic information resources: (1) Data: information in the form of numbers, letters, graphics, images and sound or a combination thereof and, (2) programs: instructions or routines for performing certain tasks including the processing of data and programs for example, online services, interactive multimedia (Haridasan & Khan 2009).

The major benefits of electronic information resources in academic libraries, besides ease of access to the needed information, is that access can be obtained remotely by academic users in their offices/laboratories or at homes without physical visit to the library. Thus, electronic information resources promote efficiency in dissemination of information for research purposes in the academic institutions (Thanuskodi, 2012). Essentially, electronic information resources are more easily updated than the print resources. Utilization of electronic information resources refers to the act of making practical and effective use of the available electronic information resources. Electronic information resource "is more of a tool to assist in conducting research, a way of scanning a lot of materials quickly" (Ellis and Oldman 2005). Also, electronic information resources have provided excellent opportunities to access and utilize scholarly information which were previously beyond the reach of users due to geographical constraint. Through electronic information resources researchers can have access to global information resources for

their scholarly work. Therefore, it is based on this that this study was designed to examine the utilization of electronic information resources by students of tertiary institutions in Taraba State Nigeria, via quantitative approach with survey and cross sectional design as the methodology of the study.

Statement of the problem

Academic libraries are integral part of higher institutions and have a critical role to play in supporting the core mission of their parent institutions that is teaching, learning and research. However, according to Levy (2011), information access is not necessarily the problem but careful utilization. This is because students do not always understand which information resources are most appropriate for their needs. Therefore, library users need skills to make comparison between paper and electronic resources. Though accessing electronic information resources offer opportunities to obtain accurate and timely information, observation has shown that utilization of electronic information resources in Taraba State higher institution libraries appears to be very low. This could be attributed to poor Internet connectivity, lack of constant power supply, limited number of computer terminals, lack of information technology (IT) skills among the library users and budget cut. This situation has been reported by Ogunsola (2004), in a study entitled: "Nigerian university libraries and challenges of globalization".

Research questions

The study was guided by the following research questions:

1. What are the electronic information resources available in tertiary institution libraries in Taraba State, Nigeria?

2. To what extent are the available electronic information resources utilized by the students in the higher institutions under study?
3. What is the level of satisfaction derived from the utilization of electronic information resources?

Research objectives

The objectives of this study are to:

1. identify the electronic information resources available in tertiary institution libraries in Taraba state, Nigeria
2. determine the extent of utilization to the available electronic information resources in the higher institutions under study, and
3. determine the satisfaction students derived from utilization of electronic information resources in the libraries under study.

Research hypothesis

In this study, one hypothesis was tested for acceptance or rejection, as the case may be.

- (1) There is no statistically significant relationship between accessibility and utilization of electronic information resources.

Literature review

Utilization of electronic information resources has been an issue of concern from the time libraries changed from traditional monuments to knowledge acquisition and information centers. And in line with this development, librarians conceived the idea of educating the library users in finding and locating information needed to solve their day to day research problems. Utilization of electronic information resources in a simplest term refers to the action of making practical and effective use of the available electronic information resources.

A lot of studies have been conducted in order to determine the utilization of electronic information resources in different environments. For instance, in a study conducted by Edem and Ofre (2010) on reading and internet use activities by postgraduate students of the University of Calabar, Nigeria, which employed quantitative research methodology with random sampling techniques to administer 200 copies of questionnaires to undergraduate students who use the library in April (2009), out of 200 copies of questionnaires distributed, 133 were duly filled and returned. The findings of the study revealed that 57.1 percent of the students use the internet occasionally, 21.1 percent weekly and bi-weekly, 12 percent responses as against reading of printed materials and 63.2 percent of the respondent admitted that they do so on daily basis.

Aboluwarin (2001) reported an increase in library use when electronic information resources was introduced and has made staff more knowledgeable about a variety of operating systems, hardware configurations, software packages and interface designs. Also, Blandy cited by Amankwah (2014) posited that to utilize the growing range of electronic information resources, users must acquire and practice the skills necessary to exploit them using a variety of online databases.

Idayat and Olusola (2011) conducted a study on the use of electronic resources by agricultural science students in Nigerian universities and revealed that undergraduate students do not use most of the library and information resources including electronic resources due to lack of basic knowledge and awareness of the resources. In another study carried out by Ibrahim (2004), which measured the use of electronic resources, it was found that factors that determine its effective and frequent use, the study

discovered that frequency of use was significantly low for most type of electronic resources. However, the least frequently used electronic resources were e-books, the online catalogues and bibliographic databases. For comparison, online reference works, e-journals and full text articles were found to be more popular, even though they were below the anticipated frequency in the survey. Ellis and Oldman (2005) posited that the use of electronic resources has availed researchers and students access to global information resources, particularly the Internet for their scholarly activities. Tyagi (2011) asserted that access to and use of e-resources helps faculty members and researchers to collect current teaching and research materials as to very high extent that e-resources have become a substitute for printed materials.

A recent study carried out by Akuffo and Budu (2019) on the use of electronic information resources by students in a premier postgraduate theological university in Ghana revealed high usage of electronic resources for academic purpose and the constraints to electronic resources usage were access problems, search and retrieval problems and staff related problems. In a similar vein, Ankrah and Atuase (2018) conducted a study on the use of electronic resources by postgraduate students of the university of Cape Coast and it was found that e-resources were not fully utilized by postgraduate students because of low publicity, inadequate training, restrictions of access such as passwords and usernames, and other limitations such as poor internet connection, inadequate computers, as well as power outage and inadequate searching skills which constrained students to depend more on library professionals for their information searches. These problems have affected the accessibility and utilization of e-resources in the library. In order to alleviate

these challenges to ensure maximum use of e-resources, library management should put in place mechanisms to ensure that e-resources are fully accessed and utilized by users.

Gakibayo, Ikoja-Odongo, and Constant (2013) examined students' utilization of electronic information resources in Mbarara University Library, Uganda. The study found that the use of electronic resources was constrained by lack of computer and information literacy skills, inadequate number of computers and slow internet connectivity. The frequency of use of these resources indicated that the university would have to do a lot to improve on electronic resources use in the institution. According to Kumar (2016), the use of e-resources enhances communication, career development, teaching and research in addition to providing subject-specific and updated information. Similarly, Singh (2013) noted that access to e-resources raises awareness on the current research gaps, helps in the preparation of examinations and keeps the researcher and faculty up-to-date in their respective disciplines.

Tariq and Zia (2014) carried out a survey to find out the use of electronic information resources by the students of the Faculty of Science, University of Karachi, Pakistan. The findings revealed that students used electronic resources for class assignments and to get up to date information about their specialty. The main barriers to access and use were slow network connection, power failure, viruses, and subscription issues. In a similar vein, Uplaonkar and Keshva (2013) observed that faculty members at Nijalingappa Medical College in Begaluru, India were positive towards the use of e-resources for studying, research and teaching, specifically online databases such as Emerald, EBSCO HOST,

and PROQUEST were frequently utilized by faculty members and researchers generally. Waldman (2003) surveyed a class of students taking "Introduction to Psychology" course at Baruch College, City University of New York and found that their use was influenced by factors such as computing skills of academics, their age, and gender. There was a significant relationship between computing skills and use of electronic information resources in the library including online public access catalogues (OPAC). The most popular method for acquiring the necessary skills to use electronic resources was via individual trial and error, colleagues or peers and guidance from library staff. It is obvious from the review that not much research has been conducted on utilization of electronic information resources specifically in Taraba State. Therefore, there is need for more studies on utilization of electronic information resources. Thus, this study investigated utilization of electronic information resources by students of tertiary institutions in Taraba State.

Methods

Quantitative research methodology was employed with cross sectional survey design to elicit data from the library users. The population of the study comprised three higher institutions having available and functional electronic information resources namely: Taraba State University, Federal University Wukari and Taraba State College of Nursing and Midwifery with 10748 registered users who constituted the actual population of this study. Out of this, 370 users were randomly selected from the libraries. Research advisor table 2006 was used in determining the sample size for the students. Thus, the table greatly simplified sample size decision to ensure good decision making. Given that the total population of

the study was 10748 and taking the confidence interval of 95% with margin error 5.0% as suggested by the table, the sample size was 370 and was randomly selected for the study. The questionnaire which was self-developed by the researchers was used as the instrument for data collection. The data collected were analyzed

using descriptive and inferential statistics, via statistical package for social sciences SPSS version 16.0.

Results

The summary of the questionnaire responses is presented in Table 1.

Table 1: Response rate

Questionnaire administered	Frequency	Percentage
Number of questionnaire administered	370	100
Number of questionnaire returned	327	88
Number of questionnaire missing	43	12

N=327

Based on the information provided in the Table 1, it can be seen that out of 370 copies of the questionnaires administered to the users, 327 were successfully completed, returned and found usable for the analysis, representing (88%). This shows that there was high response rate which is significant enough for analysis in this study. The high response rate was attributed to the fact that the respondents were within the reach of the researchers and it was reported by Osuala (2005), that the higher the number of

response rate, the more credible the findings of the study could be. Hence, the response rate was adequate enough for the analysis in the study because it was appreciable. Therefore, the analysis for this study was based on the 327 returned copies of the questionnaire.

The respondents were asked to indicate the types of electronic information resources available in their institution libraries. The summary of their responses is presented in Table 2.

Table 2: Electronic information resources available

Electronic information resources available	Frequency	Percentage
CD ROM	207	63.3
E- books	242	74.1
E-journals	231	70.7
E-manuscripts	86	26.3
E-newspapers	85	26.0
E-mail	201	61.5
E-dissertations	46	14.1
E-conferences	24	7.3
E- magazines	71	21.7
Online databases	230	70.3
Others	1	.3

N=327

Table 2 reveals the results of data gathered and analyzed with the aim of determining the various electronic information resources available in the libraries studied. Based on the results, it can be observed that a significant number of the respondents had access to e-books 242 (74.1%), online databases 230 (70.3%), e-journals 231 (70.7%), CD-ROM 207 (63.3%), e-mail 201 (61.5%), e-manuscripts 85 (26.3%), e-newspapers 85 (26.0%), e-magazines 71 (21.7), e-dissertations 46 (14.1%) and e-conferences 24 (7.3%) respectively.

This findings imply that numerous types of electronic information resources

were available in the libraries studied ranging from e-books, e-journals, online databases, CD ROMs, e-mails, among others. This affirms the report of Oduwale and Akpati (2003) who identified available electronic resource that were commonly used in Nigerian universities which includes CD-ROM databases, electronic mail, online public catalogue (OPAC), and web resources among others.

The respondents were asked to indicate the extent to which they utilize electronic information resources in their institutions libraries. The summary of their responses is presented in Table 3

Table 3: Extent of utilization of electronic information resources

Extent of utilization	Frequency	Percentage
Highly	14	4.3
Very highly	56	17.1
Moderately	160	48.9
Not utilized	81	24.8
undecided	16	4.9
Total	327	100

N=327

Table 3 shows the result of the data collected and analyzed with the aim of identifying the extent to which the respondents utilize the available electronic information resources in their institutions. The table reveals that 14 (4.3%) indicated highly utilization of electronic information resources; while 56 (17.1%) indicated very high extent of utilization, the finding further indicate that 160 (48.9%) indicated moderately utilization of the resources 81 (24.8%) indicated not utilized rarely and 16 (4.9%) indicated undecided. This implies that the respondents were moderately utilizing electronic information resources in the tertiary institutions studied.

This finding corroborates the findings of Chifwepa (2003), on the extent of access and use of the Intranet and internet by academic staff in the University of Zambia. The findings of the study showed that, most of the respondents were using Internet in their research, although with low frequency. The study recommended the need for the university to tackle issues that affect access and use of e-resources by academic staff and students especially that of information literacy and connectivity for global competitiveness in research.

The respondents were asked to indicate the extent of their satisfaction with the utilization of electronic information resources provided in their institution

libraries. The summary of their responses is presented in Table 4.

Table 4: Extent of satisfaction with electronic information resources

Extent satisfaction	Frequency	Percentage
Not Satisfied	140	42.2
Rarely Satisfied	16	4.9
Moderately Satisfied	165	50.5
Highly Satisfied	6	1.8
Total	327	100

N=327

Respondents were asked to indicate the level of satisfaction they derived from the utilization of electronic information resources provided in their institution libraries. The findings indicate that 6 (1.8%) indicated that they were highly satisfied with the resources, 165 (50.5%) indicated moderately satisfied, 16 (4.9%) indicated

that they were rarely satisfied with the resources. Similarly, 140 (42.2%) indicated that they were not satisfied with the electronic information resources provided in their institution`s library. Based on the findings, it could be concluded that majority of the respondents were quite a bit satisfied with the electronic information resources provided in their institution`s libraries.

H01: There is no statistically significant relationship between accessibility and

utilization of electronic information resources

Table 5: Chi-Square test on relationship between accessibility and utilization of electronic information resources

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.447 ^a	10	.256
Likelihood Ratio	14.152	10	.166
Linear-by-Linear Association	.804	1	.370
N of Valid Cases	327		

a. 9 cells (40.9%) have expected count less than 5. The minimum expected count is .37.

From the top row of Pearson Chi-Square statistic $\chi^2 = 12.447$ on Table 5, the calculated P-value of .256 is greater than 0.05. This signifies that the relationship between the variables is significant, $\chi^2 (10, N=327) = 12.447, P > 0.05$. Hence, there is a strong evidence to reject the null hypothesis

and retain the alternative hypothesis. Thus, there is a statistically significant relationship between accessibility and utilization of electronic information resources. The analysis shows that the level of utilization of electronic information resources for learning

and research largely depends on the students' level of access to the resources.

Discussion

In an attempt to investigate the types of electronic information resources available in the libraries in tertiary institutions in Taraba State, the study found that there were numerous types of electronic information resources such as CD ROMs, e-books, e-journals, e-mails, e-magazines, e-newspapers, e-dissertations, online databases among others. Thus, the types of electronic information resources that were mostly available and accessible in the libraries under study includes: CD ROMs, e-books, e-journals, e-mails and online databases. This finding is in support of that of Edem and Egbe (2016) who revealed that electronic resources were available in University of Calabar library. They further indicates that virtual library online, e-journals, Ebscohost reference databases, and also online databases that were accessible were science direct, Nigerian virtual library, OARE, AJOL, SAGE-OPEN and TEEAL. Also, the findings of this study is in agreement with Amankwah (2014) who revealed that electronic resources such as CD-ROM's, resources on the internet such as e-journals, OPAC, e-research reports, online databases, e-books, as well as other computer based electronic networks are available in academic libraries for research. Similarly, the finding of this study is in line with the studies of Jonathan and Udo (2015), and Bassi and Camble (2011) who found out e-books had the highest percentage of the respondents in the north east of Nigerian federal universities and university libraries of Adamawa State respectively.

Additionally, among major challenges encountered by students in using e-resources was power outage. This finding is similar to that of Ankrah and Atuase (2018), on the use of e-resources by

postgraduate students of the University of Cape Coast, who reported that most of the respondents were of the view that power outages was the major challenge faced in using e-resources.

It was also found that the extent of utilization of the available electronic information resources in the surveyed institution was moderate. This finding is almost similar to that of Chifwepa (2003), on the extent of access and use of the intranet and internet by academic staff in the University of Zambia. The findings of the study showed that most of the respondents used internet in their research, although with low frequency. The study recommended the need for the university to tackle issues that affect access and use of e-resources by academic staff and students especially that of information literacy and connectivity for global competitiveness in research.

Additionally, the study found that majority of the respondents were satisfactorily utilizing the available electronic information resources provided in Taraba State higher institution libraries. This corroborates the findings of Santhi and Jayaprakash (2017) who conducted a study on the use of information and communication technology among the post graduate and research scholars of Periya University, India. Their findings revealed that research scholars and postgraduate students were using the available Information Communication Technologies (ICTs) satisfactorily

Conclusion

The available electronic information resources in the surveyed institutions were not maximally utilized due to various constraints such as poor infrastructural facilities, poor internet connectivity, power outage, budget cuts and lack of competent/qualified personnel to facilitate easy utilization of the resources. Based on

the findings, the following recommendations are made:

1. The libraries in the surveyed institutions should embark on drastic development of electronic libraries in line with global trends in order to promote easy access and utilization of electronic information resources by students in their learning and research activities.
2. Adequate information and communication technologies (ICTs) and infrastructural facilities should be provided. Also, provision of skilled manpower to facilitate easy access to the resources and students on their own need to be active on access and use of electronic information resources in view of paradigm shift from print to non-print resources.
3. Adequate funding of electronic library should be ensured to solve the urgent and immediate problems of data subscription fees and renewals of up to date license agreement with the vendors.

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