AVAILABILTITY AND UTILIZATION OF ELECTRONIC INFORMATION RESOURCES FOR UNDERGRADUATE STUDENTS' SATISFACTION IN UNIVERSITY OF JOS

Josephine Dekom PANYIL[*1]

University of Jos Library, University of Jos P.M.B. 2084 Jos Plateau State, Nigeria
&
Hungwa SHIDI, Ph.D. [*2]

Department of Library and Information Science, Benue State University Makurdi P.M.B. 102119 Benue State, Nigeria

*Corresponding author: e-mail: josephinepanyil@gmail.com

Abstract

The study investigated the available electronic information resources for utilization by undergraduate students' satisfaction in University of Jos, Plateau State, Nigeria. Two objectives and research questions guided the study. Descriptive survey design was adopted. 10,195 students that made up the Six Departments of Faculty of Education in University of Jos constituted the population of the study. A sample size of 510 registered undergraduate students was selected using proportionate stratified random sampling. Data was collected through the administration of a well-structured questionnaire. Reliability was established using Chronbach Alpha statistics with an alpha coefficient 97.0. Descriptive statistics (mean and standard deviation) was used for data analysis. Major findings of the study revealed that, electronic information resources are available for use by the undergraduate students. Findings also indicate that, E-Books (2.73), E-Journals (3.25), Internet Resources like E-Mail (2.78), E-Magazines (3.07), Institutional Repository resources (e.g. E-Thesis/Dissertation like B.Sc. Ed/Masters Projects, Seminar papers, journals etc., 2.69), EBSCOHOST (3.44), AGORA (3.01), JSTOR (3.22), HINARI (3.01), OARE (2.79), TEEAL (3.01) and SCIENCE DIRECT (3.22) are utilised by the students. Based on the findings, the study concluded that, electronic resources are available in University of Jos Library and undergraduate students used electronic resources to obtain satisfaction and that, the students use most of the electronic resources. It was recommended that the University of Jos management subscribe to relevant educational databases and carry out retrospective conversion of the library's print materials to digital format in order to increase online content for the students. Also, the University Library should ensure that sufficient networked computers and other facilities are provided for use by the undergraduate students.

Keywords: Electronic Information Resources, Utilization, Undergraduate and Satisfaction

Introduction

The traditional information delivery method has been changed to a faster and more convenient modern way as information resources are now stored, accessed, retrieved and utilized by library clients via electronic gadgets. These electronic resources are accessible through the use of Information Communication Technology (ICT) gadgets such as computers with the help of internet in an online environment. Developments in Information Communication Technologies (ICTs), according to Chauhan and Jaiswal (2016) are presenting rapid growth in the availability of digital resources, subject repositories and digital contents. These resources have characteristics of being portable, flexible; can be downloaded, saved for later use; they are updated more often than printed tools

and open up to other important resources links among others.

Electronic Resources (ERs) are also referred to by many scholars as Electronic Information Resources (EIRs) and are also used interchangeably by several authors to refer to information bearing materials stored, accessed and retrieved electronically. Ani, Ngulube and Onyancha (2014) referred to electronic resources as information stored in electronic format in a computer or computer related facilities (CD-ROMs, digital libraries or the Internet). Omoike (2012) considered electronic resources as the resources that entail the use of sets of instructional materials such as audio and video cassettes, CD-ROM, television and radio broadcast as well as multimedia system such as the computer and satellites. While, Adeleke and Nwalo (2017) defined electronic information resources as resources in which information is stored electronically and are accessible through electronic systems and networks.

Electronic information resources play vital roles in helping libraries in their quest to support the teaching and learning process at university level and to provide quality assistance to its users. Edem and Afebende (2011), submit that electronic library makes available to a single user lot of current information from various resources including networked resources of other libraries. Similarly, Bender (2012) posits that one of the reasons why students prefer digital technology is because it provides instant access to information from a multiplicity of choices, and this motivates the students to learn. In the 21st century, almost all university libraries in the developed and developing countries of the world have electronic libraries due to the crucial roles they play in education goals and library relevance.

Zhang and Liu (2011) revealed that electronic resources in most universities are integral part of the electronic library and stand as vital academic resources that support teaching, learning and research activities. A known fact that is not hidden is that electronic resources, which provide information speedily are now used to supplement the slow information delivery method of printed resources in the university libraries. In university of Jos, these are accessible 24/7 to registered library patrons such as undergraduate students through online public access catalogue (OPAC) and library portal/website in their homes/hostels/anywhere.

Electronic resources are provided in electronic form, and these include CD-ROM database, online databases, online journals, OPACs, Internet and other computer-based electronic networks (Quadri, Adetimirin & Idowu, 2014). There are two types of electronic resources: data such as information in the form of numbers, letters, graphics, images, and sound, or a combination thereof, and programs such as instructions or routines for performing certain tasks including the processing of data and programs such as online services, interactive multimedia (Parthasarathy, 2018).

The various types and forms of electronic resources in academic libraries are; electronic-databases, electronic-journals, electronic-data archives, electronic-manuscript, electronic-maps, electronic-books, electronic-magazines, electronic-thesis, World Wide Web, electronic-newspapers, electronic-research reports, and electronic-bibliographic databases. They play key roles in supporting meaningful academic activities like teaching, learning and research, especially when they are utilized. The extent of utilization of ERs is dependent on several variables such as relevance of the available electronic resources to meet users' information needs, ease of retrieval, prompt internet network, users' awareness on electronic resources, ability of user to independently search the internet, conduciveness of the library atmosphere etc. When the above-mentioned factors are met, library users tend to spend longer time in browsing the electronic resources to satisfy their information quests but on the contrary, they will spend fewer times. Poor utilization of e-resources by undergraduate students may be evident by low patronage of library users. Thus, availability and utilization of e-resources is crucial to the existence and relevance of university libraries.

Bankole, Ajiboye and Otunla (2015) carried out a study on use of electronic information resources by undergraduates of Federal University of Agriculture, Abeokuta, Ogun State, Nigeria. The study adopted a descriptive survey research method to sample undergraduate students from 200 level and above of Federal University of Agriculture, Abeokuta (FUNAAB) that used the library. The simple random sampling was adopted in selecting the undergraduates as they come to make use of the Nimbe-Adedipe Library. The research instrument used was a structured questionnaire administered to 200 undergraduates. Data collected were analyzed using frequencies and percentages. Their findings revealed that 92.4% of students used internet search engines, followed by e-lecture notes (73.5%), e books (41.8%) and electronic databases (20.0%). The electronic resources least utilized were conference proceedings (3.0%) and NUC Virtual Library of Nigeria (2.4%). The researchers recommended that, adequate number of computers should be provided and the computers provided should be enough to, at least, serve 25% of the students' population at a given period of time in the library.

Availability and utilization of electronic resources can improve can improve service delivery to students and lead to better satisfaction with information resources of the library. It is in this regard that, the study investigated availability and utilsation of electronic information resources for undergraduate satisfaction by students of university of Jos.

Statement of the Problem

Electronic information resources are important to university libraries as they facilitate service delivery both within the library and in the virtual space. Despite the numerous benefits and heavy investment in electronic resources, this does not guarantee its utilization by students. Preliminary investigation of this study and findings by other researchers reveals that some factors such as inadequate basic ICT skills, lack of awareness, epileptic power supply, poor funding, subscription on some fee-based electronic resources by library management, and many others have inhibited the effective utilization of the available electronic resources in University of Jos library. If this problem is not addressed, it will lead to poor academic performance as undergraduate students will not be able to do assignment, prepare for examinations, carry out research and other academic activities properly since they are not able to access information resources much of which are domicile in electronic resources. It is in this regard that, this study investigates electronic information resources available for utilization by undergraduate students' in University of Jos, Nigeria.

Research Questions

1. What are the types of electronic information resources available for utilization by undergraduate students' in University of Jos, Nigeria?

2. What is the extent of utilization of available electronic resources by undergraduate students' in University of Jos, Nigeria?

Methodology

The study adopted a descriptive survey research design and expost facto design. The descriptive survey design is suitable for this study because, it helps in collecting data on availability and utilization of electronic resources on University of Jos undergraduate students' satisfaction in Plateau State, Nigeria. The target population for the study comprised of 10,195 registered students from Faculty of Education, which has Six (6) departments. Thus, the data obtained from the office of Academic Planning of University of Jos for the 2019/2020 academic session shows that department of Arts Education, has a total of 1475; Educational Foundation has 2029; Science and Technology Education has 3440; Social Science Education has 2083; Special Education has 657 and Physical and Health Education has 511. The sample size for this study was 510 registered undergraduate students of Faculty of Education, University of Jos. It was determined using proportionate stratified random sampling technique. The sample size (510 undergraduate students) represents 5% of each of the stratum (Departments). Thus, sample size for

Department of Arts Education was 74; Educational Foundation was 101; Science and Technology Education 172; Social Science Education 104; Special Education 33and Physical Health Education 26. These were selected according to the population of the strata using a sampling fraction of 0.05, which was calculated using the formula n/N, where n =sample, N= population. Sampling frame is thus; multiplied by strata population to arrive at sample from strata as recommended by (Nworgu, 2015).

The researcher met all research assistants representing each department in the Faculty of Education. In meeting, both the researcher and research assistants introduced themselves, give purpose of coming and exchanged phone contacts. This was followed by clear instruction to all six (6) research assistants on the number of respondents to be given questionnaire to duly fill and collected during students break time in their class room within the time frame of five (5) working days. The researcher was there each day with the research assistants for the stipulated time frame. This helps provide clarity where necessary to students who find it.

Data collected from the undergraduate students of Faculty of Education were subjected to statistical analysis using mean and standard deviation to answer the two research questions. The two research questions comprise of four points rating scale, where a mean of 2.5 was used as a benchmark for decision. Any mean value below 2.5 was rejected while mean values of 2.5 and above were accepted.

Research Findings

Research Question One: What are the types of electronic resources available for utilization by undergraduate students in University of Jos, Nigeria?

Table 1: Available Electronic Information Resources for Utilization

S/No	Item	Remarks
1	E-Books	Available
2	E-Journals	Available
3	Internet Resources (Like E-Mails)	Available
4	E-Magazines	Available
5	E-Newspapers	Available
6	Institutional Repository (e.g. E-Thesis/Dissertations like B.Sc. Ed/ Masters Projects, Seminar papers, journals etc.)	Available
7	EBSCOHOST	Available
8	AGORA	Available
9	JSTOR	Available
10	HINARI	Available
11	OARE	Available
12	TEEAL	Available
13	SCIENCE DIRECT	Not Available

Source: Researcher's Field Survey, 2023

Table 1 shows that, e-books, e-journals, internet resources, e-magazines, e-newspapers, institutional repository, EBSCOHOST, AGORA, JSTOR, HINARI, OARE and TEEAL are available electronic resources in University of Jos Library, Nigeria. However, item (13) of table 1 showed that, SCIENCE DIRECT is not available in University of Jos

Library, Nigeria. The absence of SCIENCE DIRECT electronic resources in University of Jos Library, Nigeria is due to high cost of subscription.

Research Question Two: What is the extent of utilization of available electronic resources by undergraduate students' in University of Jos, Nigeria?

Extent of Utilization of available Electronic Resources by undergraduate students in University of Jos, Nigeria

Table 2: Mean/Standard Deviation of the Extent of utilization of available Electronic Resources by undergraduate students in University of   Jos, Nigeria.

S/No	Item	N	Mean	Std. Deviation	Remarks
1	E-Books	498	2.73	0.93	High Extent
2	E-Journals	498	3.25	1.06	High Extent
3	Internet Resources like (E-Mail)	498	2.78	1.01	High Extent
4	E-Magazines	498	3.07	0.88	High Extent
5	E-Newspapers	498	2.17	0.81	Low Extent
6	Institutional Repository (e.g. E-Thesis/Dissertation like B.Sc. Ed/Masters Projects, Seminar papers, journals etc.)	498	2.69	1.07	High Extent
7	EBSCOHOST	498	3.44	0.95	High Extent
8	AGORA	498	3.01	0.48	High Extent
9	JSTOR	498	3.22	0.63	High Extent
10	HINARI	498	3.01	0.48	High Extent
11	OARE	498	2.79	0.64	High Extent
12	TEEAL	498	3.01	0.48	High Extent
13	SCIENCE DIRECT	498	3.22	0.63	High Extent
	Clustered Mean/Standard Deviation	**498**	**2.95**	**0.77**	**Accepted**

Source: Researcher's Field Survey, 2023

Table 2 showed that the following electronic resources are utilized for undergraduate students' satisfaction. They include: E-Books (2.73), E-Journals (3.25), Internet Resources like E-Mail (2.78), E-Magazines (3.07), Institutional Repository resources (e.g. E-Thesis/Dissertation like B.Sc. Ed/Masters Projects, Seminar papers, journals etc., 2.69), EBSCOHOST (3.44), AGORA (3.01), JSTOR (3.22), HINARI (3.01), OARE (2.79), TEEAL (3.01) and SCIENCE DIRECT (3.22). E-journals (with mean score of 3.25) is considered not utilized as it falls below mid-point of 2.50. Cluster mean of 2.95 is an indication that, means respondents agreed

with the opinion that the extent of utilization of available Electronic Resources was high.

Discussion of Findings

Findings of the study shows that, electronic resources are available for use by the undergraduate students as the result shows that, apart from SCIENCE DIRECT, e-books, e-journals, internet resources, e-magazines, e-newspapers, institutional repository, AGORA, EBSCOHOST, JSTOR, HINARI, OARE and TEEAL electronic resources are available. The result agreed with Nwagwu, Akindele and Adeyinka (2021) whose findings showed that the internet and e-books dominate the electronic resources the students

patronize in libraries. This finding also corroborates Ajayi, Shorunke and Aboyade(2014) who revealed that e-books, e-journals, and e-news were the most commonly used electronic resources among the students in the library.

In addition, the availablee-resources improves reading habit, saves time, makes accessibility available at all times through ICT gadgets, facilitates easy and wider access to all kinds of e-information resources subject area, and provides materials that are free and cost effective in University of Jos Library, Nigeria. The finding is in line with Ferdinand, Eghworo and Paul (2015), who revealed that the use of electronic resources has tremendous impact on the academic performances of the undergraduate students. The finding is also in congruence with Biokuromoye, Victor and Ebhomey (2014) and Bankole, Ajiboye and Otunla (2015).

Findings on the extent of utilization of electronic resources by undergraduate students for effective utilization of available electronic resources, revealed that, all respondents agreed that there is high extent of utilization of e-books, e-journals, internet resources, e-magazines, institutional repository, AGORA, JSTOR, HINARI, OARE,TEEAL, and SCIENCE DIRECTin University of Jos Library, Nigeria. The result is in consonance with Stephen (2020) and equally support Oyewumi (2013), who revealed that when a library is provided in a school, the extent to which it is utilized is very important, because the more library users visit the library and spend time, search, retrieve to utilize the available electronic resources, the more experienced they become and the more satisfied thereby visiting the library more; as equally affirmed by Emwanta and Nwalo (2013) that, the more people get experience in using the university library the more they are likely to use online resources.

Conclusion

Electronic information resources form an integral part of library's collection and is becoming essential information requirement for learning, teaching and research activities in the digital era, as it is increasingly being embraced in academic libraries worldwide and adding value to learning as well as providing revolutionary library services. The study investigated electronic information resources available for utilization by undergraduate students' in University of Jos, Nigeria and concluded based on the analyses that, electronic resources are available and undergraduate students in the university under study used electronic resources to get faster and wider access to information. The study also revealed that some students were satisfied while others were not satisfied with the use of electronic resources such as institutional repository, AGORA, TEEAL and SCIENCE DIRECT. Improvement of the existing infrastructure is necessary for optimal use of these electronic resources in Faculty of Education University of Jos, Nigeria. For effective use and management of electronic resources academic libraries should give priority to the development of Information and Communication Technology in their libraries by installing internet/online facilities, subscribing to relevant educational database and speed up computerization of their libraries/retrospective conversion of the library's print materials to digital formats.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The University should give priority to the development of information and communication technologies in the library by subscribing to relevant educational databases and carrying out a retrospective conversion of the library's print materials to digital format in order to make the online searching easy for the students.

2. The University Library should ensure sufficient networked computers and other facilities for the use of the undergraduate students in the library.

3. The government should ensure that, 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.

References

Adeleke, A.&Nwalo, K. I. N. (2017). Imposition of order on chaos: Cataloguing as a soul of librarianship. A Faculty lecture delivered at the University of Ibadan. University of Ibadan: Faculty of education. . . 26.

Ajayi, S. A., Shorunke, O.A.&Aboyade, M.A. (2014). The influence of electronic resources uses on students' reading culture in Nigerian universities: a case study of Adeleke University Ede, Osun State. *International Journal of Creative Research Thoughts (IJCRT), 9(3),*2683-2703. IJCRT2103330. Retrieved from www.ijcrt.org.

Ani, O.E., Ngulube, P.&Onyancha, B. (2014).Effect of accessibility and utilization of electronic information resources on productivity of academic staff in selected Nigerian Universities. *Science Research, 2(6),*166-171.

Bankole, O.E., Ajiboye, M. & Otunla, E. (2015). Analysis of internet access and use by academic staff in the University of Calabar, Calabar, Nigeria. *Library Management 31 (7),* 535- 545.

Bender, T. (2012). *Discussion-based online teaching to enhance student learning: theory, practice and assessment.* New York: Stylus Publishing, LLC.

Biokuromoye, F., Victor, O.I. &Ebhomey, L. (2014).Use of electronic resources by undergraduates in two selected universities in the Niger Delta Region of Nigeria. *Journal of Information and Knowledge Management, 5*(2), 170-185.

Chauhan, S.&Jaiswal, M. (2016). Determinants of acceptance of ERP software training in business schools: Empirical investigation using UTAUT model. *The International Journal of Management Education*, 143, 248-262.

Edem, M. B.& Afebende, G. (2011). Developing digital libraries for improved academic information provision in Nigeria. *Library and Information Science Practitioner*, *4(1&2),* 121-133.

Emwata, M.&Nwalo, K. I. N. (2013). Influence of computer literacy and subject background on use of electronic resources by undergraduate students in universities in South-western Nigeria. *International Journal of Library and Information Science, 5(2),*29-42.

Ferdinand, O.A., Eghworo, O.R. & Paul, O.E. (2015). Usage of electronic information resources (EIRs) by undergraduate students of Federal University of Petroleum Resources Effurun. *Information and Knowledge Management, 5(4),* 94-103.

Nwagwu, W., Akindele, O.J. & Adeyinka, F. (2021). Factors influencing use of electronic resources by undergraduate students' in academic libraries in selected universities in Oyo State, Nigeria. *Library Philosophy and Practice, 2,* 61-65.

Nworgu, B. G. (2015). *Educational research: Basic issues and methodology* (3rd ed.). Nsukka, Nigeria: University Trust Publishers.

Omoike, A. D. (2013). Use of electronic resources by distance students in Nigeria: The case of the National Open University, Lagos and Ibadan Study Centers. *Information and Knowledge Management*, *5(4)*, 102-115.

Oyewumi, O. O. (2013). Effective utilization of school libraries in some selected secondary schools in Ogbomoso north local government, Oyo State. *Language and Librarianship Journal, 2(1),* 66-75.

Parthasarathy, R. (2018). Impact of electronic resources on academic program in arts and science colleges Tiruchirappalli: A study (Unpublished PhD thesis). Annamalai University.

Quadri, G. O., Adetimirin, A. E.&Idowu, O. A. (2014). A study of availability and utilization of library electronic resources by undergraduate students in private universities in Ogun state, Nigeria. *International Journal of Library and Information Science*, *6(3),* 28-34.

Zhang, L., Ye, P.& Liu, Q. (2011). A survey of the use of e-resources at seven universities in Wuhan, China. *Electronic Library and Information Systems,45(1),* 67-87