

Adoption and Use of Electronic Information Resources by Users of Academic Libraries: Prospects and Challenges

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ABSTRACT

The paper examined adoption and use of electronic resources in academic libraries by staff and students in Northeast, Nigeria. The paper adopts a literature-based approach to examine the level of adoption and use of e-resources among users in the context of academic libraries in Nigeria. The paper also explores the support and training given to the users to acquire skills to use e-resources and identifies the challenges users encounter when using e-resources. Literature reviewed under adoption and use of electronic resources in academic libraries indicates that e-resources are currently playing key role in information service delivery to bridge the prevailing information provision gaps in meeting the information needs of users. The paper concludes that electronic resources are one of the important catalyst in the process of human development and recommends that there is need for more adequate e resources facilities and services to improve and enhance quality information service delivery among staff and students in academic libraries in Northeast, Nigeria.

Keywords: Adoption, Awareness, Electronic Resources, Electronic Use, Academic Institution, Staff

Introduction

Academic libraries are established to provide information resources that support the intellectual, recreational and research needs of the users. Academic libraries exist to support the parent institutions (Singh, 2019). Reitz (2014) defined academic libraries as an integral part of colleges, universities, or other institutions of post-secondary education and are administered to meet the information and research needs of its students and staff. To keep the library services relevant, librarians identify the needs of faculty members and students and the requirements for academic programs of their institutions so that they can align their activities accordingly (Curzon et al., 2009) Since the major aim of the library is to promote teaching, learning and research activities of its parent institution, they engage in acquiring, organizing, preserving, storing and disseminating information resources in different formats. They also engage in content

development, as well as institutional repositories. Among these information resources is electronic resources popularly known as e-resources.

E-resources have been defined in many ways by different researchers. Dhanavandan and Tamizhehelvan (2012) defined resources which require computer access or any electronic product that delivers a collection of data, be in text or other multi-media and or databases, electronic journals, collection of images, numerical, graphical and other multimedia products. E-resources can also be viewed as systems in which information is stored electronically and made accessible through electronic systems and computer network (Adeniran, 2013). From the definitions given, e-resources can be described as any information that can be stored electronically using computer or any medium and accessible in an electronic format. In other words, the term e-resources can also be described as all electronic devices that can be

used in collecting, processing, organizing, storing and disseminating information either online or offline.

Adoption and use of electronic resources by the users enhances learning process; research and reorienting the thinking capacity and imagination as the main processes necessary for successful learning (Ajayi, Shorunke and Aboyade, 2014). The ability to use the electronic resources enhances users' cognitive activity (Singh, 2019). Electronic resources (e-resources) are important components of information services provision in the digital era (Gakibayo, Odonga & Okello-Obura, 2013). They provide opportunities for modern libraries to share electronic content seamlessly through various digital technology platforms, thereby enhancing access to information, and services tailored to the needs of the users. Globally, libraries are changing from the traditional way of providing service(s), which was dominated by print resources and manual processes to current ones which are driven by digital technologies (Singh, 2019). With regards to academic libraries, the adoption of e-resources has potential to enhance learning, teaching and research among students and the staff (Ani, 2018). Consequently, as Gakibayo et al. (2013) observed that e-resources have gradually become a major part of academic work. Adoption and use of electronic resources by the users enhances learning process; research and reorienting the thinking capacity and imagination as the main processes necessary for successful learning (Ajayi, Shorunke and Aboyade, 2014).

The e-resources libraries' procure for their users include CD-ROMs, the Internet, e-journals, e-newspapers and e-magazines, e-books, digital images, online databases and other digital networks (Digital libraries) (Deborah & Goodluck, 2012). In addition, libraries make use of technologies such as e-discussion, e-news, data archives, e-mails, online chatting and social media to enhance their service(s), thus giving users enhanced library experience (Thanuskodi, 2012). In all, e-resources and technologies have a great potential in improving the provision of library service(s) to users at a lesser cost (Sharma, 2009). This is particularly so even for distance

learners who may have limited time and resources to physically access the libraries because of geographical distance.

E-resources and the accompanying digital platforms provide several benefits to libraries and its users. Among these benefits are enhanced information searching, retrieval and sharing, better access to information and speedy delivery of information to users. Further, e-resources make library usage more interactive. Users through various platforms can collaborate with librarians, ask questions and receive responses and or be directed to additional content through hyperlinks embedded in the resources (Upkebor, 2011). E-resources are virtually used in all kinds of libraries, public, private and academic libraries in particular.

While the mandate of academic libraries have remained the same, today's technological developments have dramatically changed the way service is delivered (Chutia, 2015). For instance, library functions, such as e-cataloguing and classification, e-acquisition, e-reference services, e-display/exhibition, e-circulation services, online inter-library loan and other electronic information services have become a common feature in today's' academic libraries

This study was conducted in North-Eastern part of the country which comprises of Adamawa, Bauchi, Borno, Gombe Taraba and Yobe. There are over 34 higher institutions which include universities, polytechnics, colleges of education and monotechnics (National Universities Commission, 2023).

The study focuses on adoption, and use of electronic information resources by users of academic libraries in north-east, Nigeria: prospects and challenges. These institutions are beneficiaries of the virtual library project and Internet initiative funded by both the government and non-governmental organizations (National Universities Commission, 2023). The Tertiary Institution Trust Fund (TETFUND) as part of the intervention for library development in 2017/2018 academic session, allocated N70 million about (\$194,444.40) for the purchase of computers, Internet services, e-books, e-

journals to the university libraries (TETFUND, 2017). As part of meeting the regulation of Librarian Registration Council of Nigeria (LRCN), academic institutions set aside 10% of overhead financial allocation of institutions for the purchase of computers for academic staff in the library. However, studies have shown that the challenges of adopting and use of these electronic resources among the students are still low. This prompted the needs for this study.

Statement of the Problem

Electronic resources have become an important component of academic library collections. In addition, the adoption and use of e-resources has brought significant transformation in the operations and services in the library; be it collection development, reference services, circulation, serial collection, cataloguing and classification and statistical record. Many university libraries have made significant investment in providing e-resources. However, the situation on the ground seems to show that usage of e-resources in Northeast in general is low. For example, a study by Liman, (2021) at Federal Polytechnic, Bauchi shows that the frequency of use of electronic information resources by staff and students is low and the reasons are lack of awareness of electronic information resources provided by the library; power outage and inadequate searching skills among others. To utilize the growing range of e-resources, students must be trained to acquire the necessary skills.

Therefore, the purpose of this study was to explore adoption, and use of electronic information resources by users of academic libraries in North-East, Nigeria: prospects and challenges. In addition, the study will seek to find out whether library users have opportunities to observe usage as well as try for themselves as they learn to use e-resources. The study will also identify the challenges associated with the use of e-resources.

Objectives of the Study

The objectives of the paper include:

1. To determine the level of awareness of e-resources among users of academic libraries in North-east Nigeria
2. To examine the extent of adoption of e-resources by academic libraries in North-east Nigeria.
3. To identify the challenges encountered by users of academic libraries in North-east Nigeria when using e-resources.

Research Question

This research intends to answer the following questions

1. What is the level of awareness of e-resources among users of academic libraries in North-east Nigeria?
2. To what extent of adoption of e-resources by academic libraries in North-east Nigeria?
3. What are the challenges encountered by users of academic libraries in North-east Nigeria when using e-resources?

Literature Review

Electronic Resources in Libraries

Electronic resources play a key role in transformation of modern libraries. Electronic resources are contents of information accessed through a computer or machine which requires internet connections. E-resources have been defined by Deshpande (2015) as the information (usually a file) which can be stored in the form of electrical signal, but not necessarily on a computer. Deshpande further views e-resources as any information source that the library provides access to in an electronic format. Aina (2014) defines e-resources as information medium in electronic formats. According to International Federation of Library Association (IFLA), (2012), e-resources refer to those materials that require computer to access, whether through a personal

computer, mainframe, or handheld mobile device. They may either be accessed directly or via the Internet, locally or globally. Examples of e-resources include Online Public Access Catalogue (OPAC), C-ROMs, online databases, e-journals, e-books, e-thesis/e-dissertations, e-newspapers/e-magazines, Internet resources, e-reference sources, digital images, e-company information, e-data archives, e-manuscripts, e-maps and e-bibliographic databases (Adeniran, 2013; Ani, Ngulube & Onyancha, 2015; Deshpande, 2015). In addition, reference materials like encyclopedias, dictionaries and handbooks as well as abstracting and indexing services are also available online. These resources have increased global dissemination of information to individuals. E-resources can now easily be made available and accessible even in the remote areas. E-resources contribute to solving storage problems and control of information (Abubakar & Adetimirin, 2015 Elizabeth & Ronke, 2015 and Ukachiet al., 2014). E-resources can be bibliographic or full text databases that allows for search of relevant articles in different subject areas (Ajayi, Shorunke & Aboyade, 2014).

Chimni (2018).opined that e-resources may be delivered on Compact Disc Read-Only Memory (CDROM), on tape, via the internet. E-resources are one of the emerging technologies in libraries (Dhanavandan, 2012). They complement the print based resources in a traditional library setting. According to Kumar (2018), e-resources can be seen as recent and powerful tools ever invented in human history. They enable library users to have access to information in a more efficient and effective manner. E-resources enable users to accomplish desired information more easily than when using printed materials. The resources enable multiple accesses, timeliness, and reuse anywhere access (Prangya & Rabinda, 2013 and Ukachi, et al., 2014). With e-resources libraries can offer quality information services to users (Masese, George, Makwae & Moenga, 2016).

Electronic resources are those information sources which are accessible only via computer access, and may include the use of a microcomputer, a mainframe, or other types of computers. They can be locally

mounted or accessed remotely via the internet (Chimni, 2018).

The importance of e-resources in libraries can never be over emphasized. According to Egberongbe (2011), e-resources enable access to information that might be restricted to users on time at a lower cost irrespective of the geographical locations of users. Academic libraries are now benefiting and have begun to finance subscription to e-resources in their services (Akussah, Asante & Adu-Sarkodee, 2015). E-resources and services available in academic libraries are provided to support teaching and research activities of the parent institutions. Libraries are now using new technologies to improve their services by strengthening and speeding up access to scholarly information held across the globe (Thangam & Padma, 2016). These efforts support teaching, learning and research activities worldwide (Egberongbe, 2011). E-resources have the potential for enhancing students' learning as the resources provide students with vast amount of information in an easily accessible and non-sequential format (Abubakar & Adetimirin, 2015).

Adoption and Use of Electronic Resources

Adoption and use of e-resources in academic libraries has reshaped how collection development, practices and services are provided in libraries (Akusah, et al., 2015). Academic libraries embrace electronic collections to meet up with recent trends in information service provision, and thus most libraries are now concentrating on procuring electronic contents to overcome the diverse information needs of their users. Students' adoption of e-resources is about how they embrace or show their acceptance toward them. Gbaje and Camble (2008) noted that online electronic journals are mostly used for literature searches during project, dissertation and thesis writing as well as personal research by students.

A research conducted in the Institute of Technology Delhi indicated that undergraduate students use e-resources mostly to support their academic, research and development activities. In Africa, Makondo and Katuu (2004) affirm that as at 2000, the University of Zambia had

acquired 29 CD-ROM database titles. Masese, George, Makwae and Moenga, (2016) confirmed that 76.99% of the university libraries in Nigeria have adopted CD-ROM database for information retrieval.

An empirical study conducted by Okello-Obura and Magara (2008) on access and utilization of electronic information resources at the East African School of Library and Information Science, Makerere University Uganda, revealed that out of the 250 respondents (students), 76% users derived a lot of benefits from e-resources. Another study conducted by Egberongbe (2011) found that a number of initiatives had been put in place to assist in the development of e-resources in the libraries. Sani and Tihamiyu (2015) in their study reported that the adoption and use of Online Public Access Catalogues in Federal University of Agriculture Library, Abeokuta, Nigeria enhanced academic research productivity..

Awareness of Electronic Resources by Users in Academic Libraries

Literature shows that, in a study conducted by Gakibayo (2013) on electronic information resources utilization by students in Mbarara University Library found that students are fully aware of the availability of e-resources. A study conducted by Nwosu and Anyira (2012) cited in Priyadharshniet. al. (2015) on the use of Google and Yahoo by Internet users in Nigeria found that most of the PhD scholars were aware and used digital resources available through Internet search engines such as Yahoo and Google. Similarly, the availability of e-resources is an act of making resources available and creating awareness of their existence to the users for use (Ternenge and Kashimana, 2019).

Thanuskodi (2012) also investigated the use of e-resources by students and researchers of faculty of Arts, Annamalai University, Nagar, India. The study adopted a quantitative survey research approach using structured questionnaire. The study found that majority of users was aware about the availability of e-resources. The author further reported that 47.78% of the respondents want to access only electronic version while only

32.78% users want to read the printed journals. Raja, Suresh and Kumar et...al (2018) conducted a study on use of N-List electronic information resources by faculty members. The study observed that majority of the faculty and students are aware about N-List e resources. In addition, Ajibili and Gana (2013) conducted a study on utilization of e-library by undergraduate students in private universities libraries in Bingham University and established that 82.4% of the respondents were aware of its presence. Similarly, Salau (2014) undertook a study titled "An evaluation of undergraduates' use of e-books". The study used a survey method and questionnaires among 500 respondents. In the study, the researcher established that most of the undergraduate students of Federal University of Technology, Minna, Nigeria were aware of e-books and preferred them than print books. A study by Swain and Panda (2009) on students' keenness on the use of e-resources in the Business School of Orissa, India, found that 62.5% of students were aware of EBSCO, 52.6% aware of Emerald and below 40% were aware of other databases. However, Ogbuiyi, Oriogu, Momoh&Ogbuiyi (2014) in their study on information literacy skills and awareness of electronic information resources of library users in Oyo State Public Library, Nigeria found that 70.7% of the respondents were aware of available e-resources comprising of e-books, e-journals, CR-ROMs, online database, e-theses/e-dictionaries, and e-encyclopedia but usage of the resources was low. On the contrary, Islam et al. (2011) conducted a study on access and usage of e-journals subscribed by Dhaka University Library in Bangladesh. Using survey method and a structured questionnaire to obtain students' opinion on e-resources, the study revealed that most of the students were unaware of the existence of e-journals.

Namugera (2014) confirmed in a study conducted on users' awareness perceptions and usage of Makerere library services in main selected branch libraries, Uganda that the rate of awareness of some library services was rated low. Baro, Endouware and Ubogu (2011) argued that though awareness may lead to usage of a database, this is not always the case. It could happen that users' awareness level may be higher than usage. They reported that

awareness level of their respondents about online resources was more than usage. Their study on the use of electronic resources among the students found that although 23.2% were aware of Medline database only 17% used it. This implies that students might be fully aware of e-resources in libraries but the level of usage might not likely to be in the same rate with the awareness of the resources available in libraries. It is when users are aware and access e-resources that their subscription will increase in academic libraries (Aina, 2014). Swain (2010) argued that awareness could be influenced by the interest and exposure that a student has in the database

Challenges faced by Students on the Use of Electronic Resources

Challenges of electronic resources by students are enormous which have led to a wide gap in the way information is delivered with electronic resources. A study in India by Ali (2015) investigated the search behavior of students using e-resources in the Indian Institute of Technology (IIT) Delhi Library. The study revealed that 60% of the students were facing numerous problems while browsing e-information. These problems include lack of knowledge about the resources, lack of trained staff and inadequate terminals. Studies have shown that lack of awareness can hinder library users from using available e-resources (Agba, Kigongo-Bukenya & Nyumba, 2004 and Ajibili & Gana, 2013). Postgraduate students from Bangabandhu Sheikh Mujib Medical University (BSMMU) and undergraduate students from Bangladesh University of Engineering and Technology use free e-resources on the Internet more than university subscribed resources because of lack of awareness. Lack of awareness of available e-resources can make library users especially students to use alternative resources instead of the one subscribed to by the library (Ahmed, 2013).

A study by Igbo & Imo (2014) examined the use of electronic information resources sharing and networking among university libraries in Nigeria and found that a major challenge of non-use of e-resources is due to lack of awareness of the availability of e-resources in libraries. Similarly, Omeluzoret al. (2016) investigated students' perception,

use and challenges of e-resources at the Federal University of Petroleum Resources Effurun Library, Nigeria. The study revealed that 29.6% and 3.9% of the respondents strongly agreed and agreed respectively that lack of awareness constitute a hindrance to the use of e-resources in academic libraries. These challenges according to Goodluck & George (2014) and Nazir (2015) include lack of awareness regarding different types of e-resources, lack of computer literacy, difficulty in accessing full-text database, and insufficient support from library staff. Also, Anaraki and Babalhavaeji (2013) identified that where students are not aware of the existence of e-databases they tend to use general search engines to meet their information needs.

Ani et al. (2016) observed the problems that hinder the utilization of ICT-based library resources for postgraduate research in Nigerian universities (Federal, State and Private). The study identified that students' lack of fund, high cost of Internet use, the incompetence of library staff, and lack of awareness of ICT-based library resources are some of the challenges affecting the use of ICT-based library resources. This may be associated to the findings of the study conducted by Ternenge and Kashimana (2019) that certified underutilization of e-resources to inadequate computers; poor internet connectivity, limited subscribed titles, power outages, difficulty to access and use, lack of relevant e-resources and lack of adequate assistance from the library.

As revealed from previous studies, lack of Information and Communication Technologies' infrastructure, inadequate power supply or low electric current to power e-resources are among the threats to effective use of e-resources in Nigeria (Uzoagba, 2019). Samel and Nkechi (2016) examined the relationship between information literacy and use of e-resources by postgraduate students of the University of Ibadan, Nigeria. The study revealed that low level of usage of e-resources in particular full-text databases is linked to lack of search techniques skills by many students of the university to access e-resources. In addition, Omeluzoret al. (2016) in their study observed that 9.7% and 46.3% of the respondents strongly agreed and agreed that

lack of training on how to use e-resources is a hindrance faced by students from using e-resources in libraries (Opeke&Onuoha, 2013). Similarly, Ndungu (2016) conducted a study on the promotion of e-resources in academic libraries revealed that students are having challenges on how to use e-resources as a result of lack of training to acquire the skills to search for information. Ani et al. (2016) stress that lack of ICT skills by students is another challenge associated with the use of e-resources in libraries.

Conclusion

Awareness, adoption and use of electronic resources in academic libraries have assisted staff and students in recent time to embrace electronic collections to meet up with recent trends in information service provision, and thus libraries are now concentrating on procuring electronic contents for their users. The paper concludes that electronic resources enable access to information that might be restricted to users on time at a lower cost irrespective of the geographical locations of users. Academic libraries are now benefiting and have begun to finance subscription to e-resources in their services. However, the paper establishes that although e resources are available in most academic libraries, but gaps still exist as not all staff and students use e resources to improve their learning and research needs due to some identified challenges. The paper therefore advocates for support and training for staff and students through education to ensure access to information in digital format for effective information service delivery.

Way Forward

- a) There is a need for massive information literacy on the use of electronic resources to enhance quality information service delivery in academic libraries in Northeast, Nigeria.
- b) There is the need to provide adequate training on the adoption of electronic resources by students for effective information service delivery.
- c) There is need to educate, sensitize the students on innovations brought by

various electronic resources to improve information service delivery

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