



**SIGNIFICANCE AND CHALLENGES OF ELECTRONIC INFORMATION RESOURCES
MANAGEMENT IN UNIVERSITY LIBRARIES: A SYSTEMATIC LITERATURE REVIEW**

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ABSTRACT

This paper provides a review on the significance and challenges of electronic information resources management (EIRs) in university libraries. The objectives of the study therefore are to identify the types of (EIRs) available in university libraries, the significance of (EIRs) in university libraries as well as the challenges affecting the management of (EIRs) in university libraries especially in developing countries. The review examines the concept and types of (EIRs). It also examines the significance of (EIRs) in university libraries as well as the challenges associated with the management of such resources. The paper concludes by stressing that low level of (EIRs) management in university libraries especially in developing countries are as result of the following: instability of power supply and slow speed network as a result of low bandwidth which affects the internet connectivity, inadequate well trained personnel with adequate knowledge of (EIRs) management, inadequate technological equipment, poor funding, absent of policy guidelines and lack of user education.

Keywords: E-resources, Significance, Management, Challenges, University libraries

Introduction

A university library inevitably serves as an intellectual arena and a place for the generation, acquisition and dissemination of vast ocean of knowledge in its custody or storage. It provides an array of resources in both print and non-print formats as well as variety of services to its users. Previously, the quality of a university library was judged on the basis of the size of its collections of books, journals and other materials. However, nowadays, the emphasis has shifted to the networked information services provided through modern technologies like CD-ROM networks, Internet and consortia. University libraries are libraries attached or associated with universities, and mostly used by students, teachers, researchers, and other categories of staff of the universities, as well as alumni members of the institutions. Abubakar (2011) notes that academic libraries are at the forefront of providing information services to their respective communities that comprises students, lecturers and researchers in order to support their teaching, learning and research needs.



It must be recognized that most university libraries provide absolute and fundamental services that affect the whole university community in order to play their roles and functions of supporting teaching, learning and research activities of their parent institutions. University libraries therefore, provide all the necessary support in order to enhance the cardinal educational objectives of their parent bodies; namely teaching, learning and research. In order to fulfill their role as center of academic research in this era of information technology, university libraries must ensure that appropriate and relevant electronic information resources (EIRs) are selected and acquired. International Coalition of Library Consortia (1998) defines electronic resources (e-resources) as a broad term that encompasses abstracting and indexing services, electronic journals and other full text materials, the offering of information aggregators, article delivery services. These resources can be accessed through remote networks from information providers or locally mounted by a consortium or one of its member libraries.

Unlike the print versions, which are static, EIRs are dynamic in nature and require more maintenance i.e. efficient management in order to ensure effective and efficient accessibility and utilization. Management of EIRs therefore involved coordinated effort of selecting, acquiring, organizing, maintaining and providing access to information resources via electronic format.

This paper attempts a review of relevant literature on the significance and challenges of electronic information resources management in university libraries from the diverse viewpoints. The review started with the concept of e-resources, as well as the significance and challenges of e-resources management in university libraries.

Concept, Types and Management of Electronic Information Resources

Evolution and growth of e-publishing industry in the field of ICT has given birth to e-resources, denoting an umbrella term for all digital resources. Digital information exists in a format that a computer can store, organize, transmit and display without any intervening conversion process. It is described as 'born digital'. EIRs refer to the use of information technology in the production of publication and the electronic distribution of text through computer terminals. These resources play an important role in the creation, transmission and storage of information. Electronic resources encompass many genre, formats, storage, and delivery mediums. It is a combination of those resources that are 'born digital' and 'made digital'. The storage refers to the medium used to store and deliver contents to the users, which may be a CD-ROM, a magnetic tape or a server that is accessed through the Internet (Johnson, 2004). Thus, electronic information encompasses resources covering a wide variety of materials, including indexing and abstracting services, electronic books and serials, electronic databases offered by information aggregators, document delivery services and web sites. Many of these resources may be locally mounted on a library's server or may be accessed remotely by modem or through direct Internet connections maintained by the library.

However, various authors and organizations have defined EIRs. AACR-2 defined EIRs as "a material (data/ program) encoded for manipulation by computerized devices, which may require the use of a peripheral directly connected to a computerized device, like (CD-ROM-) or a connection to a computer network like (the Internet)." Similarly, International Coalition of Library Consortia (1998) defines it as a broad term that encompasses abstracting and indexing services, electronic journals and other full text materials, the offering of information aggregators, article delivery services. To Okore (2009), it includes electronic books (e-books), electronic journals (e-journal), and indexes, collections of journal articles, reference works, digital collections, databases and websites. There are many approaches to categorization of EIRs such as by distribution medium (online, CD ROM, Web) or by content (bibliographic, full text) or by type of format (e-book, e-journal, database). For this article, the approach its categorization is based on type of classification used for print media, which is a most established and popular method of categorization, i.e. primary and secondary sources. Primary sources include e-books, e-journals, electronic thesis and dissertations; while for the secondary sources, there are e-course materials, indexing and abstracting databases, and e-reference databases.



There is a great deal of literature devoted to these resources in libraries, even though very little is written about the significance and challenges of electronic information resource management in university libraries, particularly in Nigeria. Management of these resources is the practices used by librarians to keep track of important information about e-resources, especially the Internet- based resources such as e-journals, databases, and e- books. This is supported by Breeding (2004) who stressed that “as libraries build ever-larger collections of e-resources, finding ways to manage them efficiently becomes a major challenge. The number of e- journals, citation databases, and full-text aggregations held by most libraries has grown rapidly. It was further stressed that “managing the resources requires the provision of the library's user with convenient ways of finding and accessing them as well as providing library staff with the tools to keep track of them”. Nisonger (2001) stated that collection management is the systematic, efficient, and economic stewardship of library resources, due to its analytic and programmatic nature. It deals with the functional programmes that follow institutional and library goals and objectives. It is economical as the resources are accountable to the library management, its user groups and to the parent institution. Mosher (2011) described management of EIRs as “pre positional science of librarianship; involving the selection, ordering, acquisition, budgeting, fund allocation, technical processing, storage accessing, and maintenance; as well as the management of human resources in performing the operations”.

Breeding (2004) stressed that “the number of electronic journals, citation databases, and full-text aggregations held by most libraries has grown rapidly. Managing them involves providing the library’s users with convenient ways to have access to them as well as providing library staff with the tools to keep track of them”. This indicates that there are two fundamental aspects to managing these resources, namely front-end details of delivering the content to library users and managing the business details of back-end staff functions related to acquisition, payment, and licensing. Emojorho (2011) posited that management of e-collection includes selection, acquisition, organization, storage and dissemination of relevant information for users. Similarly, Ugwu and Onyegiri (2012) stressed that it is a fact that these resources do not fly into the library or find themselves in the library by accident, coordinated efforts should be made to select, acquire, catalogue and maintain them; which is what their management in libraries entails.

Significance of Electronic Information Resources in University Libraries

Library, as a repository of knowledge, is home to all formats of information resources. The advancements in the field of ICTs have brought a paradigm shift on how library and information services are provided globally. The new trend in librarianship today is concerned with effective and efficient application and utilization of these technologies to library operations and services so as to re-position the profession to meet the requirements of the globalized world. Electronic resources are one of the emerging resources in the changing library environment. EIRs usually consist of e-books, e-journals, articles, newspapers, theses, dissertations, databases and CD-ROMs, which usually complement the print media resources. Emerald, Ebscohost, Scopus are some of the examples of online databases. All updated information is usually published in these e-resources. The familiarity and use of EIRs in the libraries for rapid development is necessary and important.

Existing literature has shown that many libraries have embraced the use of EIRs including CD-ROM, the Internet, and the World Wide Web (www) for provision of information services. A number of reasons have been advanced for preference of e- resources by libraries and information centers. On the advantages of e- resources, Dadzie (2007) observes that they are invaluable research tools that complement the print -based resources in a traditional library setting; including access to information that might be restricted to the user due to geographical location or finances, access to more current information, and provision of extensive links to additional resources related contents. According to Iwehabura (2009), e-resources have the ability to provide faster and easier access to current information to users in various places such as homes, offices and other workplaces, as well as hostels and dormitories. They also provide easy storage and the possibility of sharing the same information resources among many

users at a time thereby saving space with relatively easy maintenance and easy linkage to indexing and abstracting databases. Moreover, Nazir and Ashraf Wani (2015) noted that these resources are now of great significance to the academic and public libraries. Furthermore, CD-ROMs, local area networks, computer equipment, online resources, the Internet and other remote databases all provide libraries with vast resources for their users.

Similarly, Jones and Madden (2002) submitted that the internet for example, provides the opportunity to access a wide range of topics on different subjects. It also allows students, scholars and other researchers to retrieve information from diverse sources such as e-journals, e-books, databases, newspapers and other sources. Furthermore, it offers the students opportunity to control their learning and helps them to have interactions with information pertaining to their needs. Thus, Sweeney (1997) observed that e- journals offer solutions to some of the problems facing the management of academic journals as they provide opportunity for space saving, enhancing speed of communication, providing powerful searching tools. Also, they can provide immediate access to your desk; and, as well provide facilities such as integrated text, hypertext links and multi-media that the printed journal cannot offer. Ellis and Oldman (2005) also noted that “through the use of e- resources, researchers and students now have access to global information resources, particularly the Internet for their scholarly activities”.

Challenges facing Management of Electronic Information Resources

According to Saeid (2012), the introduction of digital technologies into the processes of production, distribution and storage of information otherwise referred to as EIRs presents a new challenge to the capacity of libraries to carry out their responsibilities of organizing and preserving their resources. This, Isa and Chuma-Ibe (2003) identified as the preservation of both printed and electronic materials. Ubogu (2003) also underscored inadequate funding of libraries as another; even where librarians have laudable programme, funds remains the stumbling block; even as many who rely on foreign grants get disappointed when these are suddenly withdrawn. Therefore, Adamu (2003) concluded that “with growing quantity and diversity of resources, information professionals face a major challenge of developing strategies, standards and process to ensure their accessibility for as long as they are needed”.

Hence, Bothmann and Holmberg (2006) identified the challenges associated with e- resources management in libraries as consisting of planning, policies and workflow; where the planning challenges include staffing, budgeting, change, communication and management tools, while the barriers to policy development identified by them include change, decision making and communication. Chandel and Saikia (2012) also identified three major challenges of these resources affecting their availability to include: pricing of e-resources, management issues and archival problem. Okoye and Ugwuanyi (2012) identified skills, acquisition, budgeting and communication as major challenges in the management of e-resources in university libraries. Similarly, Adebayo (2013) examined the challenges associated with cataloguing e-resources in six randomly selected university libraries in Southwest Nigeria; highlighting such challenges as lack of adequate physical description of some e-resources, inadequate workflow in cataloguing sections, and copyright issues.

Conclusion

This review has established a step-by-step maintenance approach or activity carried out from the moment a resource is selected and acquired to its usage by the intended users. The activities involved in the management of electronic resources include: selection, acquisition, organization (cataloging), preservation (maintenance), access and use. Conclusively, university libraries, especially in a developing country like Nigeria, need to manage their EIRs effectively in order to meet up with the global best practices. Also, the review identified challenges to EIRs management in university libraries, especially in developing countries, to include unstable power supply, slow speed network as a result of low bandwidth which affect the internet connectivity, lack of well trained personnel with knowledge in the science of



managing technological equipment, poor funding, lack of policy guideline, lack of user education and of continuous training.

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