

The Evolution of E-Library in Nigerian Academic Libraries: Challenges and Way Forward

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ABSTRACT---- *This study examines the evolution of electronic libraries in Nigerian academic library, It elaborates on what an academic library is and the basic functions of an academic library for academic excellence. The study also discusses e-library initiative in Nigeria, advantages of e-library and problems militating against e-libraries in Nigeria, also the paper expatiates on the roles of librarians in building a standardised electronic library, and the way forward to the establishment of e-library in Nigeria.*

Keywords--- Evolution, Electronic, Academic, Library

1. INTRODUCTION

The advent of information and communication technology has accelerated availability and usage of electronic resources in the modern time. This global development has posed challenges to libraries and information institutions in their attempt to meet information needs of user in the digital era. Libraries are now investing heavily on electronic resources especially academic libraries where users are exposed to various electronic resources to enhance their academic performance. This development is noticeable in the developed nations of the world as African countries and other developing nations are still struggling to bridge the digital gap that is preventing them from the full benefits of electronic era. However, different efforts have been made to lurch African Universities into the digital society with different initiatives by both National and International bodies toward providing the required networked infrastructure that would enable them have access to free or heavily discounted Journals and databases through programmes like AGORA, eIFL, HINARI and PERI [14]

A well established library is essential to any academic institution, which is a central point for teaching, learning, and research, an academic library is expected to provide standard information resources. This day, academic libraries are striving to keep their place as the major source of information enquiry in the face of emerging computer technology. Technology has revolutionized as a major the way information is packaged, processed, stored, and disseminated. Academic libraries no longer restrict themselves to print services such as collection development, cataloguing and classification, circulation and reference services, current awareness, selective dissemination, and other bibliographic services, but have extended their efforts to interdisciplinary concepts and computer software and hardware and telecommunication engineering and technology.

As observed by Campbell [7], numerous creative and useful services have evolved within academic libraries in the digital age: providing quality learning spaces, creating metadata, offering virtual reference services, teaching, information literacy, choosing resources and managing resource licenses, collecting and digitizing archival materials, and maintaining digital repositories". Academic libraries presently are faced with not only the decision on what books and journals to acquire to satisfy faculty and students but also on how to remain relevant in the digital era, mindful of low budgets and resentment on the part of institutional administrators.

The use of technology is increasing, and it is now possible to deliver training to a widely dispersed audience by means of on-demand two way video over terrestrial broadband networks. Many students and lecturers can gain experience of communications through e-mail and electronic conferencing systems that run over the telephone network. College and university libraries should continue to make increasing use of the electronic resources and Internet sources. They should be using the Internet both to access materials, people and resources, and to display their own Web pages created by teachers and students.

2. ACADEMIC LIBRARY

An academic library is a library that is attached to academic institutions above the secondary level, serving the teaching and research needs of students and staff. These libraries serve two complementary purposes, to support the institution's curriculum, and to support the research of the university faculty and students. The support of teaching requires material for class readings and for student papers. In the past, the material for class readings, intended to supplement lectures as prescribed by the instructor. In the period before electronic resources became available, the reserves were supplied as actual books or as photocopies of appropriate journal articles.

Academic library as libraries attached to post-secondary institutions [3]. These libraries vary and are distinctive as the institutions they serve. Academic institutions can be classified into two main categories; University and non university institutions. The non university includes, polytechnics, technical colleges, colleges of education, school of nursing, etc. Academic libraries perform functions directly related to the mission of each institution.

Academic libraries must decide what focus they take in collecting materials since no single library can supply everything. When there are particular areas of specialization in academic libraries these are often referred to as niche collections. These collections are often the basis of a special collection department and may include original papers, artwork, and artifacts written or created by a single author or about a specific subject.

2.1 BASIC FUNCTION OF AN ACADEMIC LIBRARY

[11] stated that the basic role of a library should include; provision of information, educational roles, research function, recreational/entertainment functions and promotion and preservation of culture, this is done through selective, acquisition, organisation, preservation and decimation of informative materials stocked in the library.

He went further to stipulate some of the basic functions of an academic library, which includes;

- Provision of information materials required for the academic programme of the parent institutions.
- Provision of materials that is needed for learning.
- Provision of all resources for recreation and for personal self development of users
- Provision of all information sources needed for carrying out effective learning and research activities.
- Provision of material which will aid teaching, learning and research activities in these institutions.
- Also provision of material that will improve the workforce that is the supportive and academic staff to improve productivity.

The functional roles of academic libraries according to [12] includes;

- Acquisition of materials for teaching and research.
- Providing attractive and comfortable reading facilities that encourage student to spend the proportion of their free time in study.
- It circulates materials from the general collection and the reserve/reference collection.
- It encourages student to develop life long habits to good reading habit.

According to [4], the role of an academic library is as wide as the subject interest covered by the institutions which serve as the parent body. The library maintains a balance stock in all fields and especially those in which the institution is interested. The primary role of an academic library is to serve the reading, reference and research needs of the academic community, which made up of undergraduate, graduate students, faculty members and visiting scholars. They went further to highlight additional roles which includes;

- It provides attractive and comfortable reading facilities that encourage the student to spend the proportion of his free time in study.
- It provides reprographic services.
- It selects books and other materials and organises them for easy retrieval by users.
- It makes provision for user education.
- It entertains requests from the user.

The academic library serve as the repository of insitution publications [4]. He also wnet further that for an academic library tyo perform it myriad for functions,its collection must not only include books and journals but also other materials like audo-visuals, eletronic resources and etc. The libray must has full access to the internet.

3. ELECTRONIC LIBRARY (E-LIBRARY)

An electronic library is a library in which collections are stored in digital formats and accessible by the use of computers. The electronic content may be stored locally, or accessed remotely via computer networks. An eletronic library is a type library whose collection are stored in eletronic formateand accessble through the use of computer network of information retrieval system. With the arrival of computers, the concept centered on large bibliographic databases, the now familiar online retrieval and public access systems that are part of any contemporary library. When computers were connected into large networks forming the Internet, the concept evolved again, and research turned to creating libraries of digital information that could be accessed by anyone from anywhere in the world. Phrases like "virtual library," "electronic library," "library without walls" and, most recently, "digital library," all have been used interchangeably to describe this broad concept. Materials in e-library are basically eletronic materials, these materials are also refered to as digital materials.

3.1 E-LIBRARY INITIATIVE IN NIGERIA

The Federal Government of Nigeria through the National Universities Commission (NUC) initiated various programmes designed to lunch Nigerian Universities into information global society. Among the projects according to [13] include automation of university libraries using Management Information Systems (MIS) and Nigerian Universities Network (NUNET). NUNET was aimed at developing a viable local and wide area network in each institution. However, despite the aforementioned effort, [10] observed that the National Universities Commission Virtual Library Project initiated in early 2002, the National Board for Colleges of Education Virtual Library, the National Open University Library Project and the UNESCO Virtual Library Pilot Project initiated in 2003 were some of the various initiatives by the Nigerian Ministry of Education regarding Virtual (eletronic) libraries for higher institutions in Nigeria, but yet none of the efforts had yielded any functional virtual (eletronic) library at that time.

In recent years there has been a tremendous progress in the area of telecommunications industry in Nigeria, Nigerian ICT industry had been boosted with millions of telephone lines that were connected. Also Internet service has grown steadily as Internet Service Providers (ISPs) and cyber café operators continue to expand [9]. Besides, this another recent success story in digital library development in the country was reported by IT News Africareported by [5] stated that the Mobile Telephone Networks (MTN) Nigeria had successfully deployed and commissioned digital libraries in three (3) Universities in Nigeria. The three universities are the Ahmadu Bello University, Zaria, the University of Lagos and the University of Nigeria, Nsukka. The fourth one which has been billed for commissioning early 2011 is established at the University of Benin.[2] also indicated the operation of e-library in University of Ilorin.

3.2 ADVANTAGES OF E-LIBRARY

Electronic library also refered to as digital library is a means of easily and rapidly accessing books, archives and images of various types are now widely recognized by commercial interests and public bodies alike.Traditional libraries are limited by storage space, Digital library have the potential to store much more information, simply because digital information requires very little physical space to contain it. As such, the cost of maintaining a digital library can be much lower than that of a traditional library. A physical library must spend large sums of money paying for staff, book maintenance, rent, and additional books. Digital library may reduce or, in some instances, do away with these fees.

Both types of library require cataloguing input to allow users locate and retrieve material. Digital libraries may be more willing to adopt innovations in technology providing users with improvements in electronic and audio book technology as well as presenting new forms of communication such as wikis and blogs; conventional libraries may consider that providing online access to their OPAC catalogue is sufficient. An important advantage to digital conversion is increased accessibility to users. They also increase availability to individuals who may not be traditional patrons of a library, due to geographic location or organizational affiliation.

[17] asserts that the virtual library has an oppportunity to address the scarcity of teaching and research materials in the libraries of institutions of higher education in Nigeria. Okebukola, in [15] argued that a digital library would improve the quality of teaching and research through the provision of current e-books, journals, and other library resources. It will

also enhance scholarship, research and lifelong learning through the establishment of access to shared global virtual archival collections.

[16] stipulated that digital library; compared to the traditional library is more of blessing to development of the profession due to thec underlisted;

- **No Physical Boundary.** The user of a digital library need not to go to the library physically; people from all over the world can gain access to the same information, as long as an Internet connection is available.
- **Round the Clock Availability** A major advantage of digital libraries is that people can gain access 24/7 to the information.
- **Multiple Access.** The same resources can be used simultaneously by a number of institutions and patrons. This may not be the case for copyrighted material: a library may have a license for "lending out" only one copy at a time; this is achieved with a system of digital rights management where a resource can become inaccessible after expiration of the lending period or after the lender chooses to make it inaccessible (equivalent to returning the resource).
- **Information Retrieval.** The user is able to use any search term (word, phrase, title, name, and subject) to search the entire collection. Digital libraries can provide very user-friendly interfaces, giving clickable access to its resources.
- **Preservation and Conservation.** Digitization is not a long-term preservation solution for physical collections, but does succeed in providing access copies for materials that would otherwise fall to degradation from repeated use. Digitized collections and born-digital objects pose many preservation and conservation concerns that analog materials do not. Please see the following "Problems" section of this page for examples.
- **Space.** Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain them and media storage technologies are more affordable than ever before.
- **Added Value.** Certain characteristics of objects, primarily the quality of images, may be improved. Digitization can enhance legibility and remove visible flaws such as stains and discoloration.

4. CHALLENGES OF E-LIBRARY IN NIGERIAN ACADEMIC LIBRARIES

Building and sustaining a electronic library requires the proper technological infrastructure. This infrastructure includes telecommunication, servers, application platforms and software applications. Telecommunication infrastructure is a major factor in the deployment of Information and Communication Technology (ICT), particularly for the implementation of a electronic library. Nigeria has recorded a massive improvement in the telecommunication industry over the past few years. The Nigerian Communications Commission's regulatory efforts have led to increased competition and availability of a wide range of voice, data, and Internet applications and services. The improvement has led to the proliferation of Internet cafes in all parts of the country and this has also made a significant impact in all sectors; commerce, social and educational.

Despite the improvement in technology there are a lot yet to be done. The lack of a national fiber network backbone infrastructure is a major issue in a successful implementation of the electronic library. Bandwidth and connectivity for higher education institutions and their Internet service providers are deployed using expensive technology like the VSATs, thereby reducing the number of higher education institutions that can benefit from the eletronic Library resources sharing as well as eliminating its advantages.

The erratic nature of electric power supply in Nigeria is another major set back that needs to be addressed for the successful implementation of a electronic library. Most Internet cafes and computer networks are run using generators which significantly increase the cost of Internet access. Providing a reliable electric power supply has to be part of the planning and deployment of a network infrastructure.

Maintaining web servers that host locally digitized materials and other digital resources hosted remotely as well as maintaining proxy access to restricted resources requires web technology skills. [8] stipulated that developing, installing and configuring web applications in a network environment requires an understanding of how the chosen network operating system handles the different levels of access privileges among users. Unfortunately, Nigeria has an acute shortage of digital/systems librarians and experienced web technology staff in academic libraries to install and manage technology networks (Ashcroftand Watts, 2004). In addition to the difficulties arising from the scarce technological skills to maintain the service, a web/proxy server needs to be up and running 24/7 and this is almost impossible with the erratic power supply.

4.1 ROLES OF NIGERIAN ACADEMIC LIBRARIANS IN BUILDING A ELECTRONIC LIBRARY

Electronic library is the future of academic libraries in any nation of the world. They have brought about a complete different way of information retrieval, whereby redefining the role of the academic libraries and librarians. Academic librarians with web technology skills will be required to facilitate skilled information retrieval, and to arbitrate between the user and the information to help users evaluate what they retrieve. Nigerian academic librarians, are now faced with the challenges of acquiring web technology skills to augment what they traditionally learnt, in order to be able to contribute to the success of the Virtual Library.

The selection of materials for the electronic library is the responsibility of the librarian, hence the need for skills to locate and evaluate electronic resources. Managing subscriptions to electronic resources and negotiation of licences is another responsibility the acquisition librarians would need to acquire. Apart from subscribing for electronic resources, librarians will need to also identify open access and free web-based materials that can also be included in the electronic library. They will also have to provide their patrons with help and assistance in finding, evaluating, and understanding the universe of information that the digital world provides. The implementation of a electronic library also implies that libraries will spend more money on hardware, software, licensing, training, and experts with web technologies skills to support and manage the library. Money will also be spent on translating content into digital form and facilitating access to the resources.

5. WAY FORWARD

The following examined problems and challenges of the actualisation of effective and efficient electronic library in Nigerian academic libraries, the underlisted are suggested way forward for the actualization of functional electronic library in Nigeria academic libraries:

The Federal government of Nigeria must as a matter of urgency improve the basic National Information Infrastructure, particularly electricity and telecommunication and ensure the full implementation of the National Information Technology Policy. Electronic library initiatives must include librarians and information professionals, who will be involved in selection and acquisition of electronic resources for the Library.

Librarians and information professionals involved in building the electronic library should be trained in information and web technologies skills. With the dynamic nature of digital technology, they must constantly trained and retrained in information and web development technologies through conferences and workshops.

Academic Libraries should provide access to electronic resources, free web based resources, locally digitized resources, and open access resources. To help address the cost of electronic resources and proprietary software, the government of Nigeria should encourage the use of open source software and open access electronic resources. The tertiary institution should equip their libraries with the enabling technology to access the electronic resources. Also academic libraries should seek more grants and other sources of funding to establish and upgrade the necessary information infrastructure.

In conclusion, The growing number of higher institutions and poor funding by the government of have implications for research and development, as research depends on having access to the current and relevant literatures. Having recognized the advantages associated with a electronic library, the Government has put in place policies and various.

The government through the ministry of Education and Academic institutions must make a deliberate effort to provide funds for policy implementation, provide necessary technology training for librarians, staff and develop national information infrastructure. The enabling technology infrastructure for building a virtual library must include stable electricity, and upgrading or installing a high speed Internet connection to support a variety of servers, such as web servers, proxy servers for remote access, FTP servers for uploading and downloading large files, with appropriate digital library software in each higher institution. Perhaps most important, systems/digital librarians with the required skills to manage and maintain this technology infrastructure need to be trained or employed.

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