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Implementation of Virtual Library in Nigeria: Issues and Way Forward

Daniel Samuel Ayele Mr.
Isa Mustapha Agwai Polytechnic Lafia, ayeledaniel9@gmail.com

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By

Ayele, Daniel Samuel
Department of Library and Information Science
Isa Mustapha Agwai I Polytechnic Lafia
ayeledaniel9@gmail.com

Abstract

The need for easy, seamless and always-available access to useful, relevant and up-to-date sources of information in recent time cannot be overstretched. It is in recognition of this and in line with the goal of ensuring the penetration of information technology (IT) and the empowerment of citizens with the latest developments in technology that National Information Technology Development Agency (NITDA) in 2013, rolled out the initiative of establishing Virtual Libraries as Information Resource Tools in schools, universities and communities in Nigeria to enable quick, remote and easy access to useful, relevant information. The Virtual Library provides access to tools such as databases, electronic journals, alerting services, online reference tools, and quality-selected web resources that improve the quality of teaching and research. Unfortunately various virtual library initiatives in Nigeria within the past few years have remained a mirage. On this note therefore, this article examines the implementation of virtual library in Nigeria with specific emphasis on national virtual library project - the blueprint and the current state of its implementation, the challenges inherent, and the way forward.

Key-words: Virtual, library, Technology, Resources

Introduction

The inability of the Nigerian government to provide libraries in the academic institutions with relevant information resources has great implications for teaching, learning, research and development. Realizing this, the Nigerian government has been making deliberate efforts through the National Universities Commission (NUC), National Virtual Library initiatives, and by formulating and implementing relevant information and communication technology policies to facilitate access to relevant and current information for teaching, learning research and development.

The terms "virtual library" refer to a library that provides access to a collection of distributed information in electronic format through pointers provided locally or a collection of digital objects housed in the same place (Kaliammal, 2004). A Virtual library provides value-added solutions for all higher education institutions and facilitates on-line access to an enormous current volume of academic information. Ya'u (2003) opined that, virtual library addresses the scarcity of teaching and research materials in Nigerian educational institutions. The concept of Virtual Library is that, any person who has a computer and connection to the Library networks can access not only the resources of that library but also variety of information available through National and International Networks like Internet and Intranet without being physically present in library. An indigenous virtual library would allow the institutions and indigenous researchers to share their own research outputs with the global community as well as ensuring the preservation of Nigerian cultural heritages. Okebukola in Russell and Dlamini (2002) stated that, a virtual 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.

Despite the importance of virtual library in teaching, learning, research and national development, the Nigerian Virtual Library project in is yet to be fully functional after ten (10) years of its initiation hence, the importance of this study to review the purpose of virtual library project, highlight the blueprint and current implementation state of the project, identify the challenges inherent in the implementation, and provide suggestions on way forward.

Purpose of Virtual Library Project

The NUC was shouldered with the task of building a National Virtual Library Project that will enhance access to locally-available resources and international library collections for sharing with university libraries all over Nigeria using digital technology. The major purpose of Virtual Library project as cited by NUC are:

i. To provide students, lecturers and researchers with easy access to a wide variety of information resources.

ii. To afford opportunities for learning that are not possible with physical libraries by providing remote, anytime, anywhere, always-available access to useful and relevant information.

iii. To improve real time collaborative learning and information exchange especially for students and research teams.

iv. To encourage more personalized informal learning by enabling citizens to learn at their pace and convenience, and

v. To ultimately create a more informed, better empowered citizenry fully prepared for the challenges of the 21st century and beyond.

Blueprint for Nigeria Virtual Library Project and the implementation status

To facilitate the development and implementation of the national virtual library, the NUC convened a stakeholder's workshop in Abuja in July 2001 where the blueprint for the project was developed and subsequently approved by the Federal Executive Council in January 2002. Eleven universities were selected as pilot centers for the first phase of the project, with the hub at NUC. A needs assessment for these eleven universities was also conducted. The necessary computer

systems and digitization equipment were procured for NUC, who reported that since January 2002 when the National Virtual Library project was initiated, they had achieved the following:

i. Recruitment of technical staff and consultants to meet manpower needs of the Project.

ii. Carried out a Rapid Needs Assessment in eleven (11) universities selected for the pilot scheme of the first phase of the project.

iii. Development and hosting of the Nigerian Virtual Library web site on the Internet with the URL: http://www.nigerianvirtuallibrary.com

iv. Digitization and uploading of journals published in Nigerian Universities.

v. Aggregation of free international e-journals into the Nigerian Virtual Library for easy access.

vi. Open Tender process for the procurement, installation and maintenance of information systems for the eleven pilot universities and the hub in NUC in progress.

vii. Training of university librarians and deans of faculties from Nigerian universities on the use and management of virtual library.

viii. Commencement of the process for electronic publishing of academic journals in Nigerian Universities.

ix. Indexing of over 5,000 journal articles from all disciplines and ongoing.

x. Training of ICT officers in Nigerian universities on Webometric ranking of universities.

xi. Online and help desk assistance to users of the Virtual Library project.

As part of its efforts to successfully implement the Virtual Library project, NUC in conjunction with Virtual Library Consultants organized a series of training workshops to prepare the institutions and individuals for the successful deployment and management of digital libraries. The training workshops covered, but were not limited to the following areas: Web Technologies,

Content Management, Access Management, Database Administration, Network Administration and Security.

Unfortunately, 10 years after the national Virtual Library Project was initiated and despite all the achievements enumerated by NUC and the series of training workshops, none of the eleven university pilot centers for the first phase of this project has begun operation and the National Virtual Library, which is now funded by the Educational Trust Fund (ETF) and is yet to be fully functional. In an effort to identify some of the problems that had hindered the development of the National Virtual Library, a critical review of the current National Virtual Library website http://www.nigerianvirtuallibrary.com/ reveals that there is a lack of understanding among the National Virtual Library team of what constitutes a virtual library and how to build it, which has contributed to the limited success of the project. This was the major factor that necessitated the transfer in February 2007 of the project to the Nigerian National Library which has not also made the project a reality.

Challenges of Virtual Library implementation

1. Nigeria Information Technology Policy: Information technology policy is the catalyst for information transfer. The Nigerian government approved a national information technology policy in March 2001. The implementation started in April 2001 with the establishment of the National Information Technology Development Agency (NITDA), whose mission is to "use Information Technology for Education, Creation of Wealth, Poverty Eradication, Job Creation and Global Competitiveness". Two years after the establishment of NITDA, Uhegbu (2003), cited the unstable nature of Nigeria's economic and political environment; government apathy towards information services; weak and uncoordinated information professional associations in the country; oral medium of communication and high illiteracy rate; and underdeveloped and

deficient information facilities in the country's information institutions as some of the problems hindering the implementation of the Information Technology Policy.

Similarly, Oyesanya (2004) noted that, there was a clear indication that NITDA had failed in the implementation of most of its core objectives and instead focused on holding a barrage of seminars on topics such E-Nigeria, E-judiciary and egovernment. Ukodie (2005) also asserted that, five years after the establishment of NITDA, the Nigerian government has acknowledged the failure of the NITDA to implement the national information policy and has put in place a mechanism to review the policy. The failure of NITDA has also contributed to unsuccessful implementation of the Virtual Library initiatives.

2. Technological Challenges: Building and sustaining a virtual 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 virtual 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 However, a lot still needs to be done. The lack of a national fiber network backbone infrastructure is a major issue in a successful implementation of the Virtual 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

Virtual Library as well as eliminating its advantages. The erratic nature of electric power supply in Nigeria is another major problem that needs to be addressed for the successful implementation of a virtual library. Most Internet cafes and computer networks are run using generators which significantly increase the cost of Internet services. 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. Dahl, Banerjee, and Spalti (2006) asserted that, developing, installing and configuring web applications in a network environment requires an understanding of howthe 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 libraries to install and manage technology networks (Ashcroft and 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.

Suggestions

The following suggestions are made as a way forward to the actualization of the National Virtual Library project in Nigeria:

i. The Federal government of Nigeria should as a matter of urgency improve the basic National Information Infrastructure, particularly electricity and telecommunication. The Government should also ensure the full implementation of the National Information Technology Policy. All virtual library initiatives must include librarians and information professionals, particularly subject specialists and collection development specialists who will be involved in selection and acquisition of electronic resources for the Virtual Library.

ii. Librarians and information professionals involved in building the Virtual Library should be trained in information and web technologies skills. With the dynamic nature of digital technology, they must constantly learn and retool in information and web development technologies through professional development, conferences and workshops.

iii. The Virtual Library should provide access to electronic resources, free web based resources, locally digitized resources, and open access resources.

iv. 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.

v. Each higher education institution should be provided with the enabling technology to access the Virtual Library.

vi. Libraries should seek more grants and other sources of funding to upgrade or establish the necessary information infrastructure.

vii. The shift in emphasis to access rather than ownership, the high cost of both hardware and software, and the lack of web technology skilled librarians make the formation of a library consortium very critical to building a successful virtual library project.

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