Review

The Challenges of Successful Implementation of virtual Libraries in Academic Libraries in Nigeria

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The focus of this paper is on the challenges of successful implementation of virtual libraries in academic environment in Nigeria. The inability of the Nigerian government to stock libraries in the academic institutions with relevant information resources has great implications for learning, teaching, research and development. As a result most university libraries in Nigeria are in deplorable conditions. This is evident in libraries having few current books, journals, and other information resources; inadequate staffing; deterioration of facilities; inadequate equipment and even library buildings in some cases. Such situations does not provide conducive environment for learning. The virtual library if implemented has the capability of solving this problem. In this period of information explosion, there is the need for university libraries in Nigeria to use appropriate technology to access the world information in order to enable Universities carry out their traditional functions of teaching, research and public service and efficiently.

Key Words: Challenges, Virtual Libraries, academic libraries, Nigeria

INTRODUCTION

Academic libraries are libraries that are attached to higher education institutions which serve two complementary purposes to support the school's curriculum and research of faculty and students. Universities now have additional functions to include (Ifidon and Okoli, 2002):
• pursuit, promotion, and dissemination of knowledge;
• provision of intellectual leadership;
• manpower development;
• promotion of social and economic modernization;
• promotion of intra- and inter-continental and international understanding.
From these functions, university libraries have derived their objectives to include:
• provision of materials for undergraduate instruction, term papers, and projects, as well as for
  supplementary reading;

• provision of materials in support of faculty, external and collaborative research;
• provision of expensive standard works, especially in the professional disciplines;
• provision of materials for personal development;
• provision of specialized information on the region within which the university is situated;
• cooperation with other academic libraries with a view to developing a network of academic
library resources that are at the disposal of all scholars (Nok, 2006).).

The world is today experiencing a change as a result of the introduction of information and communication technology (ICT) which is drastically affecting all facets of the world system the library inclusive. Libraries worldwide have witnessed a great metamorphosis in recent years

both in their collection development and in their service structure (Ogunsola, 2011). Over the last several years, a significant transformation has been noticed in collection development policies and practices (Mulla, 2006). Libraries have undergone a metamorphosis from a manual system to a technologically-driven system (Ogunsola, 2011). As noted by Akintunde (2004) this change has become more manifest in Nigeria in the new millennium and like a cyclone, the technology driven environment has enveloped the library and is taking it to unprecedented heights in knowledge acquisition, management, and communication. The vocabulary of librarianship is changing: 'dissemination' is being replaced by 'communication' 'repository' by 'data', 'literature' by 'knowledge', 'search' by 'navigation' (Akintunde, 2004). This reflects the current approach to packaging and the tools used for managing knowledge. Knowledge itself has become more ubiquitous than was ever imagined twenty years ago. More significantly, the library has become globalized (Akintunde, 2004). The library today is a technologically driven one that uses the principles of traditional library services to organize knowledge and communicate it to clients in the global community (Ogunsola, 2011). The question now is can the traditional library survive in the digital age? This paper is on the challenges of successful implementation of virtual libraries in academic libraries in Nigeria.

Nigerian Universities And The Need For Virtual Libraries

The history of universities libraries development in Nigeria dates back to pre-independence time when the university of Ibadan and its library were established in 1948 (Ogunsola and Okusaga, 2008). Since independence in 1960, there has been unrelenting upsurge in the establishment of educational institutions at all levels especially university education (Aguolu, 1996). Nigerian governments past and present have continued to invest strongly in education. It must be noted that University libraries, being integral academic parts of the universities generally emerged simultaneously with their parent institutions. Hence, there are as many university libraries as there are universities. The proliferation of universities, despite the economic recession in the country since the 1980s, has increased the problems of the universities and their libraries so much that now their future seems uncertain. Added to these problems are the problems of ICTs in Nigerian universities as related to library development.

Ever since the problem of literature explosion became noticeable in the 70s, the developed world has devised various systems to facilitate the flow of information both within and across the countries, and developing countries are invited to take advantage of these devices. However,

this invitation is not often readily accepted by the developing nations like Nigeria because of some militating factors. These include the human factors, fear, and the level of development-cum infrastructure of the nation and so on.

With virtual libraries, the quality of academic library collection will be enhanced; staff and students will have access to databases for teaching and research. Virtual libraries will improve the quality of teaching and research in higher institutions through the provision of current electronic books, journals and other library resources (Ogunsola, 2011). This enhances scholarship, research and lifelong learning through the establishment of permanent access to shared virtual collections (Okebukola, 2002). The virtual library has the opportunity to address the paucity of teaching and research materials in the libraries of higher institutions in Nigeria as well as giving room for sharing research outputs with global community among the institutions and the local researchers (Ya'u, 2003).

Challenges of establishing Virtual Libraries in Academics Libraries in Nigeria

Building sustainable virtual libraries requires appropriate technological infrastructure. This infrastructure includes telecommunication, servers, application systems and software applications. Telecommunication infrastructure is a major factor in the deployment of information and communication technology, particularly for the implementation of a virtual library. Computerization involves a huge amount of money but it is a necessary project. The implementation of a virtual library implies that libraries will spend more money on computer hardware and software, licensing, training of librarians in new technologies especially in the area of texts selection, scanning, verification and indexing of the materials to be digitized as well as employment of experts with web technologies skills to support and manage them. Copyright holders have to be contacted and rights obtained.

Money is needed to translate content into digital form and to access the resources. A powerful server is required, supported by specialized software and personnel. The server must operate all day, and new materials should constantly be added. Web technology skills are needed to maintain web servers that host locally digitized materials and other digital resources hosted remotely as well as maintaining proxy access to restricted resources. Nigeria has an acute shortage of digital systems librarians, information and web technology literate staff in libraries to install and manage technology networks (Ashcroft and Watts, 2004).

Inconsistent electric power supply in Nigeria is a major problem. Virtual library cannot exist in this situation because web servers that host locally digitized contents

and proxy server that provide authentication and remote access to subscribed electronic resources need to be on for twenty-four hours a day. There should be no power outage. Another challenge is the lack of purpose-built library buildings. The first and second generation universities established between 1948 and 1970; and 1971 and 1979 respectively have completed their library buildings while the situation of the third generation universities i.e. those established between 1980 and 1983 is very bad (Ifidon and Okoli, 2002). Much provisions were not initially made for information technological devices. But with the advent of information technology, renovation of the existing library buildings will need to be done to accommodate new trends, facilities and services. Again, distinct user interface of every product is another challenge; users therefore, need to remember different passwords for different products (Ifidon and Okoli, 2002).

The scope of coverage and available archives are often limited. At times, difficulties are encountered while downloading or printing; there is no cost savings, especially when both the virtual and print products are maintained. Everything is not available in digital format. There are restrictions, which vary from vendor to vendor, on how the product can be used. The virtual library relies on power and computer networks in order to be available for use.

Users are most comfortable using books. Before transformation to the reality of virtual library can take place, there is much to be done; we need to create electronic information systems that match individual patterns of thinking and learning in order to produce the kind of productivity expected. In addition, before the attainment of user self-sufficiency and enhanced productivity can be achieved, several problems associated with information creation and delivery must be addressed (Ogunsola and Okusaga, 2006). Taking Nigeria as a model again, Nigerian telecommunication networks have been found to be inefficient and less reliable than networks in other regions of the world as a result of power cuts, inadequate telecommunication gadgets as well as poor value system. It must also be noted that there are inadequate management and technical experts in developing countries like Nigeria compared with advanced countries of the world. The level of computer literacy and education is at a very low ebb in developing countries leading to the problem of how to improve and/or impact information literacy. Furthermore, there are problems relating to how to enhance"ease of use" as well as the use of expertise in locating appropriate information and conversion of all paper materials in to virtual documents,
- how to revise the concept of virtual library from that of a science fiction to a result-oriented and professional discipline,
- the role of the librarian in a virtual library environment,

that is, transition of a keeper of information to information expert, and
- the management of library from shelf access to electronic access of information.

The Way Forward

For Nigerian university libraries to overcome the above-enumerated problems, they need huge amount of money and management skill especially in computer education. For instance, there is the need for several phases of reorganization and restructuring of workflow and responsibilities in the transition between traditional library functions and technology-driven functions. There is the need to address the increasing demand on the flexibility of the skills, capacity, and continuing education of library staff. The requirement of more technology and communication skill will necessitate constant training and development of library staff. It must be realized that long-range planning by African universities will become more flexible and technology-depended. The constant change in technology will require constant reviews of the balance of budget items; more of the budget will be used to support access than acquisition of technological power to produce hardware. The problems of copyright issues as related to authorship and publishing rights have to be overcome before meaningful virtual (digital) library project is finally achieved. In several advanced countries, virtual library is already a reality but in Nigeria only a few universities can boast of a substantial achievement in virtual library. However, more Nigerian universities are beginning to rise up to the emerging trend in information communication technology.

In Nigeria like many other African countries, for instance, to facilitate the virtual library system or process, it requires that the technological, Infrastructural and communication patterns we create are aligned with thought processes and with the pattern of organization of knowledge. This may require some collaboration of computer scientists to design the hardware and software, neuroscientists to give input in to mental mapping of users, and library scientists to give inputs in to the organization of knowledge. In many advanced countries, there have been experimentations, moving from venturing to processing and then to positioning. Nigeria and other African countries must also make experimentations too. This is only achievable through the collaboration of all stakeholders. One expects that a formulation for that implementation will evolve from various efforts being made.

It must be realized that the management of the virtual library takes its root from its operation, and it cannot be operated effectively if the challenges are not tackled, especially if solutions are not found to irregular electricity supply, inadequate telecommunication gadgets, poor

maintenance culture and high cost of computer hardware. Many of the components of a digital library can be bought or produced in-house. This applies to the creation of the digital materials from the originals as much as to the system software. In both cases, it is important to consider the economics of producing in-house versus buying a solution. It is very important to consider the issue of "proprietary solutions". Essentially a proprietary solution is one where the organization does the work itself, either using its own staff or commissioning a solution from external supplier. A proprietary solution has a number of advantages as well as a number of negative points to be considered by any organization embarking on virtual (digital) library. Globally, as publishing is presently between print and electronic ages, the management of our virtual library project should go along this line. Education is also very paramount to the management and sustainability of the virtual library. Both the public and the managers should be educated from time to time. Managers should have access to information from countries that have made substantial achievement in the running of the virtual library, especially the African countries in this category. Lastly, right from the conception of the implementation of the virtual library, the idea of commercialization should be incorporated so that the program can be sustained. Constant evaluation should also be carried out to measure effectiveness and progress. Education should be made a top-priority by the government. This includes general literacy as well as computer literacy and of course a national commitment on a range of information awareness on the need for information communication skills in order to remain relevant. Also different consortia –librarians, academicians, private sector operators, commercial, government, etc. should come together to provide all manners of databases that will connect Nigeria or other African countries concerned to them. It is also very necessary to collaborate with the international community to fund or part-sponsored programs on awareness as well as reduce the cost of computer software and hardware and provide technical expertise. It is very important for the government to reduce telecommunication charges as well as commercializing library and information services. The private sector as well should be encouraged to bankroll some of the expenses of the program.

Recommendations

The following recommendations are made to ensure the successful implementation of virtual libraries in Nigerian academic libraries

☐   The Federal government of Nigeria should improve the basic national information infrastructure as

well as ensuring the full implementation of the national information policy

☐   Information professionals involved in building the Virtual Library should be trained in information and web technologies skills.

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

☐   The government of Nigeria should encourage the use of open source software and open access electronic resources.

☐   Higher institutions in Nigeria should be provided with the enabling technology to access the Virtual Library.

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

CONCLUSION

It is established in this paper that digitization is expensive to come by but its importance to institutions of higher learning cannot be overemphasis. Lack of funds and lack of information resources have been problems for academic libraries in Nigeria for many years. In addition, automation of information resources and services pose new problems. These include the acquisition, selection, and cataloguing of online information resources, the construction of databases, providing information literacy education for library users, and the new skills required by, and continuing education for, librarians. However, if the library ensures sound and quality automation of services and information recourses, creates new approaches to user education, pay attention to the provision of continuing education for library staff, helping them to master the new techniques required for the management of electronic and the networked information resources and services, the library stands to gains immeasurable return from automation.

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