

Digital information repository as a tool for knowledge management in African university libraries: The Nigerian experience

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ABSTRACT

This paper opines a view of the extent of digitalization and Information repositories in Nigerian Universities. It is a case for an urgent intervention for institutional repositories (IRS). The importance and contributions of IRS to research and universities were exposed. The paper discussed challenges such as inadequate funding, Lack of ICT manipulation skill on the part of librarians, fear of exploitation, manpower development, awareness campaign on the availability of IRS, etc. The paper proffered solutions to the creation of institutional repository in Nigerian university libraries.

Key Words: Digitalisation; Repositories; Information; Library; Knowledge Management; Nigeria.

INTRODUCTION

Innovations in the areas of book publishing and increase in knowledge in this era has made knowledge management a source of worry for libraries all over the world especially the African continent. This is so because in Africa our main area of expertise is storage, safe keeping and directional information services. Little wonder the continent was regarded prior to this decade as the dumping ground of the world for outdated and unused information resources.

Libraries in Africa especially Nigeria, acquire information resources of books, journals, magazines, specialized documents, gray literatures etc, through purchase, but mainly through gift and endowment over the years and stack them on shelves for patrons consumption. This practice though okay and beneficial presently and in time past, was without adequate plan for space conservation, adequate safe keeping from hazard. This situation in libraries further worsened by the information explosion trend which was occasioned by the multiplicity of print information materials.

Wiki (2010) sees "Information explosion as the rapid increase in the amount of published information". This trend "Information explosion" is however related to both print and non print published information sources. In Nigeria; the situation is pathetic; given the "publish or perish syndrome". Situations where academicians are compelled to publish articles in

journals as well as present papers at conferences. These have given room for the influx of mushroom publishing outfits in all nooks and crannies of the Nigerian society.

Taking proper stock of books, journals, magazines and publishing houses is now the bane for libraries, hence the novel convergence of virtual antecedents in libraries all over the world. Schiller (1992) cited in (Daniel, 2002) was the first person who used the term virtual library, to mean "libraries with moving walls" which I termed libraries without book shelves. These forms of libraries are gradually expunging the old conventional form of library, since they involve the use of Information and Communication Technologies (ICT) in carrying out all information functions that have hitherto been done manually in libraries.

This paper is of the opinion that virtual library practices have heralded the paradigm shift from paper to paperless society as propounded by Futurologist (Bell, 1976; (Garfield, 1979). It is said and believed that information is power, it also means money. In the words of Weiner (Ochogwu, 2009) "to live effectively is to live with adequate information". That is why we have to access it. Accessing information this 21st century has however become one of the cheapest and easiest ventures to be involved in by libraries especially when such library has gone into the various aspects of Automation. (Obaseki and Momoh, 2010) opined that the term automation is used interchangeably by librarians to mean computerisation and digitalisation which they see as misleading hence the three concepts mean different connotations.

The main thrust of this paper is furthering the case for digitalisation of information repositories as a means for adequate knowledge management in African University libraries especially in Nigeria. Digitalisation of information resources have provided easy access to information materials which hitherto are difficult to acquire for Nigerian libraries especially through the ever increasing access provided by online databases such as JSTOR, Ebsco-host, Medline, Oxfordonline journal, Hinary, Agora, Aginta, etc.

DIGITIZATION AND ITS TENETS

Digital records are mile stone from imperfection amongst mans numerous innovations in the area of information knowledge management, since it has been acknowledged by authorities as the easiest, cheapest, and fastest and by far most convenient method for knowledge management, in area of accessibility, resource sharing, storage, retrieval and dissemination of information for use. In the words of Gbaje (2007) digitalisation is a process of converting non digital born documents to a digital format. A previous survey by the current writer, (Obaseki and Momoh, 2010) stated that "digitalisation is the process of transferring materials from solid manual state into soft visible automatic state". This above description seems to be perfectly suitable as the term digitalization is an action that takes place in gradually reproducing whatever information contained in any medium originally especially in print form into machine readable forms. However, (Gbaje, 2007) making a case for digitalization, summed that:

1. Digital records are not localized, with ICT a digital record can be used from any were without any geographical restriction
2. Several people can use the same records at the same time
3. Digital records can be stored electronically, arranged, indexed and retrieved easily
4. Easily copied, flexible and less bulky

Recognized universities in the world are presently recognized by the availability of their institutional information repository viewed/accessed through their universities web page. This paper is prompted by the continuous ranking of world universities, which hardly have seen a Nigerian university placed among the first hundred universities in the world. Hence university recognition globally is achieved through its ability to make their research outputs accessible without much restriction. This is only achievable through digital information repositories as earlier stated by Gbaje (2007).

This paper is of the opinion that no institutional repository is obtained without the library. In the simplest term, institutional repositories are known as digital repositories where digital content and assets are stored and can be searched and retrieved for later use. A repository supports mechanism to import, export, identify, store and retrieve digital assets. A repository is a type of content management system that holds the core intellectual resource of a university or college.

Similarly, Journal for Information Science Consultants (JISC, 2005) stated that digital repositories may include research outputs and journal articles, thesis, e-learning objects and reading materials or research data. Information repositories are important for universities and colleges in helping to manage and capture intellectual assets as a part of their information strategy, since a digital repository can hold a wide range of materials for a variety of purposes and users. Furthermore, LeFurgy (2002) stated that digital preservation research has made important gains in recent years, and the capability for libraries and archives to manage digital collections continue to grow. This is good in that an expanded body of digital records, publications, and other objects will be preserved and made available. Justifying the need for digitalisation (Obaseki, 2010) appealed that it is through automatic indexing and abstracting of information resources in Nigerian tertiary institutions libraries that easy and convenient preservation will be achievable.

INSTITUTIONAL REPOSITORIES IN NIGERIA: THE JOURNEY

This paper having elucidated the concept of digitalisation and institutional repositories has also found that effort at creating institutional repositories so far in Nigeria institutions of high learning is not so good.

Nigeria prides itself of having one of the highest number of universities in the world, according to Joint Admission and Matriculation Board (JAMB, 2010). The total number of 104 registered universities in Nigeria is classified as follows: federal universities (27), state universities (36), private universities (41).

Observable scenario in the Nigeria University system as regards institutional repositories is still in its infancy. University of Nigeria Library, Nsukka and University of Jos Library are supposedly the only known universities in Nigeria that have gone to the extent of having their institutional repositories hosted, but extent to its accessibility and updating the IRS are in doubt as problems of inadequate skill to low bandwidth is a bane to Nigerian universities. This may have led to the view by Christian (2008) that in Nigeria there is yet an open access institutional repositories. These submissions above have prompted questions as to what constraints have prevented a state such as Nigeria, with large number of academic institutions and so much research outputs, from having open access institutional repositories.

This paper will however disabuse the notion held by many that attempt is not been made to digitalize information resources held in university libraries in Nigeria. This is because quite a number of universities in Nigeria are presently undergoing transformation into a digital library. Earlier, a study by Obaseki and Momoh (2010) revealed that 78.1% respondents from universities agreed that digitalization of their library information resources is ongoing.

This position paper is meant to expose that the digitalization efforts so far in Nigerian universities is still at the first stage of bibliographic digitalization, with content digitalization yet to be actualized. However, Obaseki and Momoh (2010) submitted that:

1. Inadequacies arising from the dearth of necessary facilities and equipments such as quality ICT
2. Inadequacies in power supply
3. Lack of trained librarians on ICT use in university libraries in Nigeria are banned to information resources digitalization

The goal of the University especially in Nigeria requires the introduction of novel media in its libraries to help the actualization of its goals. Academic libraries must provide access to both print and electronic resources to serve users and to increase the visibility of their institutions, and as a measure of prestige (National University Commission, 2007).

CHALLENGES FOR AFRICAN UNIVERSITIES

Actualizing the Millennium Development Goal is a priority of all state. Since, without information there is no wealth, it is a stagnant situation for universities in Africa especially Nigeria which are faced with challenges such as:

1. Poor funding system of library services in Nigeria

This is a major challenge and bane to academic libraries especially in Nigeria who derive their funds from government alone. Although the Federal Government of Nigeria expenditure on libraries have increased from 5% to 10%. But since 2001 it seems that such fund 10% have ceased as the method such fund is released makes it look as if the funding program is inexistence. Also there is available to academic libraries, Educational Trust Fund (ETF) allocation on yearly basis. Accessing such funds by libraries has not been without struggle as some unseen circumstances seem to have marred the ability of libraries in accessing such funds, this however is inimical to Academic library growth and development.

2. Slow pace of academic library staffs in embracing new library trends

Nok (2006) opined that lack of ICT skills by academic librarians slows down digitalisation, computerisation and automation processes in libraries. Observable trends show that librarians (majority of them) still have technophobia, even with the glaring attributes that technology is sine-qua-non in modern day academic libraries. These attitudes towards ICT by librarians have effects on the process of automation, as the question of utilization for information services delivery and monitoring of use by patrons comes to mind. Obaseki (2009), earlier in his survey indicated that lack of ICT skill by librarians is a detriment to the introduction of ICT in academic libraries.

3. Inability of government to implement information policy

Information policy enables the library to function adequately in its full capacity as a major player in information, modification provision and storage in all society. Developed countries such as the United States and United Kingdom operate standards information policies. This practice made provisions for the recognition attributed to existing libraries in such states. The reverse is the case in Nigeria. The clamour for passage of information bill has fallen on the deaf ears of the government and its collaborating agencies (the legislature). This stance above has paved way for competition by commercial information peddlers such as Cyber Cafes, telecommunication giants (GLO, MTN, etc) and News Media. Similarly, Chisenga (2006) highlighted the following as challenges facing by Africa in the uptake of institutional repositories:

- i. Non-acceptance of electronic information
- ii. Absence of information management strategies/policies
- iii. Copyright and intellectual property rights (IPR) concerns
- iv. Inadequate technical infrastructures
- v. Lack of awareness and understanding of the concepts
- vi. Lack of funds

The challenges stated above are peculiar to majority of the African states. However, the main trust of this paper is on Nigeria in particular.

4. Inadequate technology in universities vis-a-vis libraries

There are so many clamours for digitalisation cannot be achieved with limited number of technologies, since the tenet of digitalisation entails the utilization of technologies not human physical efforts. The scenario in sampled Nigerian Universities is poor, as there exist inadequate infrastructure to aid the actual digitalisation. Although, a number of universities in Nigeria have good number of varying ICT at their disposal through the efforts of Educational Trust Fund (ETF), the report is that they are inadequate. There exists non availability of digitalisation equipment in university libraries, inadequate computers, and slow Internet connections.

5. Qualified librarians experienced in ICT application and use

University Libraries are short of qualified staff. This situation may not be unconnected with the acute unemployment trend being witnessed all around the socio-economic sphere. A glaring situation exists in universities in Nigeria. An observable scenario in a survey by Obaseki and Momoh (2010) showed that around one hundred and ten staffs of a university Library, only about twenty (20) are professional librarians. Out of this number of professional librarians, only about four (4) could adequately use the internet to access personal mails and out of which two (2) can effectively access the Directory of Open Access Repository (OpenDOAR) and Directories of Open Access Journals (DOAJ). The implication of these assertions is that university libraries are understaffed. This situation is not too different from the other universities.

6. Exploitation

Universities in Nigeria have been able to embark on successful scientific researches especially in areas of plant (herbal) use. These results are carefully guided, so that it should not be mutilated or siphoned away with little or no compensation to the originator. This is one major impediment to information repositories. Chisenga (2006) aptly put it "there are concern, based on the history of exploitation of indigenous knowledge from Africa by the West, that if outputs of scientific research in Africa, i.e. research into plant medicine, are made accessible via institutional repositories and open access archives, the West will

exploit the knowledge for commercial gains without compensation to the institutions or countries that generated the knowledge.”

CONCLUSION AND RECOMMENDATION

As the clamour for freedom of information (FOI) legislature continues to gain momentum in Nigeria, little or nothing is being done to ensure the management of the abundance of information resources available both in print and grey literatures. Managing these information resources will not only pave way for the actualisation of the Millennium Development Goals (MDG) through making information easily accessible, also it will project the image and resources of Nigerian Universities to the entire continent and the world at large; as the hidden researches will be made available to all. Hence, the only media that ensures adequate management of these information resources is via digitalisation of information resources and hosting of institutional repositories. Paraphrasing the words of Chan et al., (2005, cited in Chisenga, 2006):

“as a body of institutional repositories, if Open Access archives is established in Africa, not only will the research community on the continent at last be a part of the international research community, but researchers in the developed world will begin to understand the value of Africa research and knowledge and it’s potential contribution to the resolution of world’s major problems in health, agriculture, the environment...”

In the writers view the above phrase show Africa stands for Nigeria. However for this to be actualised, Nigerian Universities need to provide on enabling environment that will accommodate, promote and support the digitalization of Library resources. In addition parent management of universities in Nigeria should expedite support for the creation of IRS.

Man Power Development

With special reference to the Library Unit of Universities, the observable trend of understaffing witnessed in the professional cadre should be corrected by parent management with attention on the recruitment of qualified ICT compliant librarians. In addition, provision should be on ground for the training and retraining of professional librarians on the importance, use, creation, and maintenance of IRS.

Awareness Campaign on IRS

All stake holders in the Nigerian University communities should be adequately informed, oriented and re-oriented about the typical issue of IRS. As it seems, majority of the stakeholders of universities which include university management teams, academic professionals, non-academic professionals, students, researchers, librarians, ICT Unit experts, just to mention a few, exhibit ignorance of not only the existence of/and the availability of access to IRS, but also the use of IRS. Furthermore the need for and the importance of Institutional repositories (IRS) should be made clear to all stakeholders.

Contributory Role of Donor Agencies

Over the years, the role of corporate non-governmental donor organizations such as Carnegie groups, McArthur Foundation, Open System Initiative for West Africa (OSIWA), MTN Telecommunications, Zain Telecommunication, Globacom Telecommunication, Ford Foundation, etc; Governmental agencies, such as Education Trust Funds (ETF), Niger Delta Development Cooperation (NDDC), and a host of other personal private agencies to the development of university education especially through the libraries in Nigeria have not gone unnoticed, hence should be appreciated. However, since there is a paradigm shift from the conventional library practices (functions and services) to the university community, the mode, type and nature of donations should also take a paradigm shift. This paper is advocating that donor agencies should be informed by libraries of the ICT needs such as automation, computerisation and digitalisation that will invariably coincide in IRS. Donor agencies can, however, provide technical aid and assistance, procurement of technologies (hardware's and software's), training and retraining of university staff, funding of bandwidth subscription etc. These recommendations, will not only create the necessary attention needed, but will also attract increase in funding.

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