



DIGITIZING ACADEMIC LIBRARY MATERIALS: CHALLENGES AND THE WAY FORWARD

Mohammed Musa Gwoma¹, Dawi Dala Mangari²

¹Department of General Studies Education, Kashim Ibrahim College of Education, Maiduguri (Nigeria).

²Department of Political Science Education, Kashim Ibrahim College of Education, Maiduguri (Nigeria)

ABSTRACT

Digitization provides an efficient, flexible and robust way of preserving, retrieving and accessing data and information. It is a process by which materials are converted from hard copies to electronic copies that can readily be stored, processed and retrieved on selected digital electronic devices. This paper discusses reasons for the need of digitization of academic library materials, processes and components of digitization, the potential benefits of the digitization of academic library materials and problems involved in the procedure of digitization. Such challenges discussed include financial constraints, legal issues, inadequate qualified personnel, and longevity of storage media. Other challenges also discussed include selecting documents to be digitized, technophobia and lack of will on the side of library managers among others. The way forward in addressing these hindrances were also stressed. The paper concludes despite the issues affecting against the digitization of academic library materials and resources, information professionals/librarians must for its enormous advantages have the vision to implement it in a controlled and manageable fashion.

Key words: *digitization, academic libraries, information, library materials.*

1. INTRODUCTION

1.1 Definitions:

Ian Witten and David ^[1] defined Digitization as the process of taking traditional library materials that are in form of books and papers and converting them to the electronic form where they can be stored and manipulated by a computer.

An academic library is a library that is attached to a higher education institution which serves two complementary purposes to support the school's curriculum, and to support the research of the university faculty and students^[2].

1.2 Reasons for digitizing Academic Library materials

According to Otubelu Blessing, Nnenna Ume, Leonard Emenike^[3], three main reasons in the digitization procedure were identified. These reasons are;

- i. The necessity to reserve endangered library materials
- ii. Progress in the efficacy of information hunttool
- iii. Digitization increasescontact to library materials.

The traditional hard copy library system, is not sufficient for theprotection of archives. Digitization is confirmed the possibility of every arrangement and meanscurrently used by libraries. The use of hardware and software intaking item and stirringpictures to melodic recording, and application of item and changing it into bits and bytes accompanied by fastemerging set of exercise for relating and recovering digital items, is providing forconversation of a library without walls “^[4]. Flexible and robust storage, retrieval and access to library materials is therefore the basic reasons for digitization

1.3 Potential benefits of digitizing academic library materials

Giving room for change is one of the main properties of digital information and exactly what is required in a word processing program. It is not difficult tocorrect, reformat, and to compel to print in differentrepetitions without the work needed to produce hard copy from a typewriter. That is why computer-assisted design programs are preferred by visual designers. It is not difficultto sum up fast manydisparities inits worth, type, and location to view instead of imagining what diverse visual choices look like. Additionally, we can makeboundlessamount of similarreplicas from a digital file since files do not expire nor rot by virtue of copying“^[4]

Howard Batchelor^[5] opined that Digitization is assumed to increase worth to bodilygroups because:

- *Digital information results to acquisition of new data for academicusage which is not feasible with print materials likewritteninvestigation and academic messages.*
- *Making of freshinvestigatingsupports, connections to bibliographic annals, and growth of meta-information which increaselogicalregulator of collections.*
- *Capability to hunt, ascertain, and influence pictures, manuscript, and sound in fresh settings will enhance and spread theusage of collections.*
- *Broaderspreading of exclusive collections will inspire academic usage.*
- *Digital substitutes will assist in preservingexclusive materials by keeping them away from poor handling.*
- *Digitization gives room forincorporation of interrelatedresources on numerouscongregations in "virtual collections."*

When materials are digitized they become "digital objects," but not all digital objects are substitutes for bodily things. The desire to achieve meta-information structures and the availability of many materials that were "born digital," leads to wider description of "digital library" – a data space that permits detection and steering of digital objects by self-guided operators.

Since there is no possibility that tangible library materials will substitute digital materials soonest, the price of digitization are additional burden that libraries have to accept without considering a comparable decrease in the price of manpower and packing space. The advantage of spending on digitization is often stated in relation to improved scholarly reach for the public, or allowing fresh learning. Since physical duplicate of the original material is usually kept, digitization rarely keeps resources on packing or collection organization.

Situations may arise where digital library items may produce a profit on ventures which saves employees time in relation to "digital library", it is widened to comprise reaching structures and interactions, and even interactive assistance systems that lessen the volume of time librarians require to take intervening between library materials and library consumers.

2. DIGITIZATION PROCESS AND COMPONENTS

2.1 Setting of digitization projects

According to Fabunmi, Paris and Febunni^[6]. The setting of digitization projects includes the following:

Policy Enactment: Policy is a statement which guides management in the conduct of the day to day activities of an organization. Policy serves as a reference material and directs organization in executing projects designed by organizations. A good policy comprises of the goals which the digitization project is designed to achieve, and the aim of achieving such target is a key for the success to the plan in making resources available to reached on the internet. It is also desirable to be exact more especially on the types of people that will get the collection, how they will utilize it, how many people are expected to utilize it, and the intended process for its announcement and advantage of the resources to people and organizations. Consideration may be given to conduct survey with view to assess the project's target population in order to study how they are presently using the resources, and how they intend to use it otherwise if it was digitized. It will also be an advantage to liaise with other institutions that have digitized their collections and borrow from their experiences.

Policy Approval: After a policy is made, it must be ratified by appropriate authorities before digitization process is applied. For example, a university library requires acceptance of the university management and other funding agencies before the commencement of any digitization process.

Planning, Budgeting and Monitoring: This is the most essential component of digitization process. Plan must be in place in formulating budget for the digitization program. The budget should capture the followings;



- Salaries, wages and benefits of staff
- Training of personnel
- Procurement of equipment to be used
- General services and legal fees
- Overhead, maintenance costs and miscellaneous
- Contingency.

At the planning stage, the reason for the digitization project, the source of funding and the amount available at hand for the commencement of project should be the guiding principle to be considered. Effective planning for digitization at the local or regional level can make all kinds of “libraries, museum, academic/professional societies, historical societies and archives” to take advantage of the program through the following means;

Procurement of Suitable Technology; The kind of plan designed for the project will decide the suitable technology to procure. Technology here denotes both hardware and software equipment that are required. Decision on the process to be used has to be taken on the modus operandi of the digitization.

Awareness, Preparation of the mindset and Reorientation of Staff: In an attempt to digitize a library, the employees may show resistance to the exercise because it is a common feature for people to resist transformation, just for the fear of what may likely follow. The library employees will have the feeling that the project may bring an end to their job more especially those who have no computer background. Therefore, it is necessary for the management of the library to embark on sensitization exercise with view to educate them adequately so that their fear will be dispelled.

Patent Issues: Clear understanding of copyright laws and the rights of ownership must be clearly and precisely understood. One of the most essential criteria in the selection of digitization materials is the copyright status of the original materials. It is therefore necessary to get permission from the authorities concerned while selecting materials for digitization. If the institution does not have the rights to digitize, then digital project should not have embarked on.

Criteria for selection; While formulating the criteria for selection of digitization, the procedure of selecting exact item to be digitized will adopt a standard library selection criterion such as worth, importance to the overall collections, people's need and concern, accessibility and insubstantiality of the original. The UNESCO, IFLA, and ICA suggest that digitization projects –“should be user driven or based on high demand for access”

Certifications: The next step after selecting materials for digitization is to verify whether digital copies of such materials already exist to avoid duplication. Though, re-digitization is required if the materials made were conducted by means of older technologies. Additionally, if the right to digitize materials was not in the open purview (for

internal use only) and if the institution concerned desire to start on a broader linkage such as the Internet or World Wide Web, then, there is the need to re-digitize the resources.

Today institutions can no longer count-on "the fact that legal rights are transferable. For this reason, institutions must be assured that project objectives are attained within the context of the Copyrights Act, Metadata: Metadata simply means information about information that describes digital objects and enables users to find, manage and use digital objects. It represents the total historic record of the digital object and the totality of information about the object. For developing countries, good metadata is a key component of developing digital archives that are usable and useful for long term. Metadata helps to identify the work, who creates it, migrated or reformatted it and other descriptive information; it provides unique identifying information about the organization's files, and databases that have detailed information about the digital contents; describes the technical environment in which the digital files were created, equipment, used, the software, operating systems and other things. The justification for digitization and provision of metadata is to enable it in future for without metadata there is no access and when there is no access, it would be difficult for users to learn from the past in terms of their successes and failure. These are the key issues which they should bear in mind whenever they are planning for digitization of their collections.

2.2 Functional Components of Digital Library

Most digital libraries share common functional components. These include:

i. Selection and acquisition

The typical processes covered in this component include the selection of documents to be added, the subscription of database and the digitization or conversion of documents to an appropriate digital form.

ii. Organization

The key process involved in this component is the assignment of the metadata (bibliographic information) to each document being added to the collection.

iii. Indexing and storage

This component carries out the indexing and storage of documents and metadata for efficient search and retrieval.

iv. Search and retrieval

This is the digital library interface used by the end users to browse, search, retrieve and view the contents of the digital library. It is typically presented to the users as Hyper-Text Mark-up Language (HTML) page.

These mentioned components are the important characteristics of digital library, which differ it from others collections of online information.

3. ISSUES AND CHALLENGES IN DIGITIZING ACCADEMIC LIBRARY MATERIALS

Selecting Documents: In an age of information explosion and information pollution, librarians are in a dilemma about what type of records not to be digitized. The documents in high demand today may become obsolete even tomorrow because of the vast developments in the subject, printing and publishing industry. A digitized documents deselected from the collection is lost forever. To overcome the problem, librarians should seek the advice of subject experts in each field and users of the library about the importance of each and every record and from this list selection of records for digitization can be done.

Patents: The issues regarding copyright rise serious matters before librarians in digitization. Research scholars usually include graphs, data from books and journals without prior permission of the author. In a digital library, users are always demanding back issues of journals and rare historical archives for which the library has no copyright. This may lead to serious dissatisfaction about digitization among users, as a final solution to this matter, librarians must be given permission to digitize copyrights works in connection with digitization.

Durability of Storage Media: Many of the storage media praised by people all over the world may become less useful only long after they become unreadable. Thus documents digitized and stored in such media become useless and their maintenance will be more difficult than print media. The digital archival media today used are magnetic tapes, CD – Rom discs and DVDs. From the scene magnetic tapes disappeared because of their short life due to demagnetization, material decay and oxidation.

During 1980" s CD – ROMS appeared into the arena and increasedlengthier life duration of 30 -100 years. Today most of the CD" s goes to the way of 51/4 diskettes. DVD having several standards pushed CD" s off from display. The transformation of storage facility raised a lot queries about the prospect of digitized resources and their modification.

Finance: Digital projects are capital intensive. Digitization of archival library computerizationneedshugefinance because ofregular hardware and software improvements, and rising costof payment to electronicdatabanks. Besidesinsufficient money to train archivists in digitization, protection of electronic plan becomes extremely difficult. Adequately funded digitization project guarantees improved facility and endurance of the project.

Fear of Technology: As a result of poor skills in information technology old-fashionedlibrarians and activists will develop fear for computers. As a result of age gaps between the new and old specialists, computers are viewed as risk to their position as specialists. Consequently, they find it challenging to manage with the essentials of the

electronic/ digital age, and at the same time veryunwilling to abandon the old practices for new one. Effectiveness of information management technologies demands the skill to overwhelmed employees and their opposition to changes.

Lack of will: Library managers and other stakeholders in the academic library tend to shy away from digitization. This perhaps is the greatest challenge faced in the digitization initiative and is linked to all of part of the issues discussed above

4. CONCLUSION

The paper extensively discussed the need to digitize academic library materials, identified the potential benefits of digitizing academic library, formulation of policy guidelines, process of planning, budgeting and monitoring, acquisition of appropriate technology to be used, staff sensitization and retraining, criteria for digitalization and verification of existing digital materials and the challenges of digitization of library resources.

Way Forward:In line with of the significance of digitization, there is need for a special financial allocation by management bodies concerned. This is due to the fact that digitization, libraries continue procuring new resources which need to be digitized. Funding therefore needs to be provided to digitization exercise. Sensitization programs in form of workshops and seminars should be organized for library staff and managers to enhance better understanding of its purpose and importance. Staff training on the needed skills and employment of qualified manpower to man the digitization process should be carried out. Special policy framework aimed at transforming libraries into digital mode need to be framed. Monitoring and evaluation team should be set up to ensure proper implementation and conformity to standards of digitization. Notwithstanding the challenges, priorities be set on how records in the storehouses can best be well-kept and put to use for benefit the establishments and the people in this digital age. There is the need on the part of the library to keep well-informed of continuous changes technology in order to meet up with the challenges. Digitization of library resources in the 21st Century can refresh the libraries as information suppliers, but only if issues of copyright, licensing, access and cost can be successfully addressed to allow a wide range of libraries to adopt the concept.

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