

# Digital Preservation in Nigeria Universities Libraries: A Comparison between University of Nigeria Nsukka and Ahmadu Bello University Zaria

Suleiman Musa, Shuaibu Sidi Safiyanu

**Abstract**—This study examined the digital preservation in Nigeria university libraries. A comparison between the university of Nigeria Nsukka (UNN) and Ahmadu Bello University Zaria (ABU, Zaria). The study utilized primary source of data obtained from two selected institution librarians. Finding revealed varying results in terms of skills acquired by librarians before and after digitization of the two institutions. The study reports that journals publication, text book, CD-ROMS, conference papers and proceedings, theses, dissertations and seminar papers are among the information resources available for digitization. The study further documents that copyright issue, power failure, and unavailability of needed materials are among the challenges facing the digitization of library of the institution. On the basis of the finding, the study concluded that digitization of library enhances efficiency in organization and retrieval of information services. The study therefore recommended that software should be upgraded with backup, training of the librarians on digital process, installation of antivirus and enhancement of technical collaboration between the library and MIS.

**Keywords**—Digitalization, preservation, libraries, comparison

## I. INTRODUCTION

THE invention of computer and the internet facility seems to have posed new challenges to practice of librarianship. The application of computer to librarianship tends to be gaining momentum all over the world. Large quantities of information and information sources now exist in digital forms include emails e-journals, e-book, social networking websites and databases, which change rapidly in content and forms.

Preservation of recorded knowledge in the environment is basically digitization [1]. According to [1], digitization is the creation of multimedia databases enhanced by digital information and thus offering easy access to cultural and scientific heritage for large population of the users.

The goal of digital preservation is the accurate rendering of authenticated contents overtime. Preserving the content of a digital format has become a crucial issue in libraries. There is a need to preserve information material that is available in electronic format for future uses, like the printed materials. However, it has been realized that this is not as simple as the printed format due to non-availability of suitable standard in

relation to format and means. However, appropriate strategies at the beginning of implementation can ensure stability, accessibility and long term preservation of digital materials [2].

This paper therefore intends to compare digital preservation of university of Nigeria Nsuka and ABU Zaria libraries.

## II. STATEMENT OF THE PROBLEM

Most of the libraries in Nigeria are embracing the practice of e-collection, digitization and management. Over the years, preservation of library collection was not given much attention and most of the libraries are facing the problems of preserving digital material and sources, which are considered to be fragile and obsolete with technology and time. Based on this consideration, this study sought to compare digital preservation in university of Nigeria Nsukka and Ahmedu Bello University Zaria libraries.

## III. OBJECTIVES OF THE STUDY

Specific objectives of the paper are to;

- Access the level of skill possessed by the personnel involved in the digitization project.
- Ascertain whether there is improvement in the skill acquisition of the personnel as a result of the digitization project of the institutions selected.
- Identify the types of information resources available for digitization in both institutions
- Identify the challenges facing the institutions in their effort to digitize their materials
- To proffer solutions/strategies for improving the digitization project.

## IV. CONCEPTUAL ANALYSIS

It is conventional in this type of work to analyze some key concepts to be used. Digital preservation and libraries are the major key concepts in the work.

- Digitization:** could be view as a process of converting non digital document into digital format.
- Preservation:** According to [3], defines preservation as the specific individual and collective measures taken for repair, restoration and maintenance of archive.
- Digital preservation:** is a process of preserving both digitized and born-digital content to a distant future in reusable condition for access by its user.

Musa, Suleiman is with the Department of Library and Information Science Nasarawa State Polytechnic P.M.B 109 Lafia, Nigeria (Corresponding author; phone: +2348065723758; e-mail: musasulayman72@gmail.com).

Shuaibu S.S is with the Department of Social Sciences, Nasarawa State Polytechnic P.M.B 109 Lafia Nigeria (e-mail: shuaibu\_sidi@yahoo.com).

- **Library:** Library is a learning institution equipped with treasure of knowledge maintained, organized, and managed by trained person to educate members of society continuously and assist in their self improvement through an effective and prompt dissemination of information.
- **Comparison:** to assess the similarities and differences between two or more things.

## V. REVIEW OF EMPIRICAL LITERATURE

Several researchers have conducted on digital preservation. [4] examined digital preservation of the cultural heritage of university of Nigeria Nsukka using structure questionnaires to collect data from the librarians and technical assistance of the university library. The result revealed that the librarian in the project are yet to fully possess the skills needed for the job, the paper recommended more training for library staff and procurement of more state of the equipment. Furthermore, [5] investigated the challenges and prospects of digitization of library resources in Nigeria universities. The experience of Kashim Ibrahim library ABU Zaria, the research method adopted was a descriptive survey, the study revealed that thesis, dissertation and seminar papers are only library resources digitized at the moment. The study recommended training of librarians and additional staff to handle the digitization process of the institution.

The work on building the university of Zimbabwe repository began in June 2005 with the objectives of comprehensively collecting articles and research output of university scholars and researchers; digitizing the scholarly output of the university, disseminating these products and publications widely and preserving the products of the scholars [6]. However, [7] postulated that reasons for setting up repositories vary, and a range of projected profits has been suggested in the literature. These include benefits to the researcher, to the institution, and to individual disciplines. Academic libraries also benefit from being involved in the institutional repository initiatives, and these are implication for scholarly communication overall. The primary reason to persuade academics of the benefits of placing their output in an institutional repository is exposure that by having their research and publications openly available on the web, not just in fee based databases, scholarly journals, or books; their work is likely to be used and cited more. Similarly, [8] stated that refreshing enables digital files to be transferred periodically to new physical storage media in order to refresh the materials and keep them from physical decay and obsolescence of the medium, or the materials will be inaccessible. Loss of format is disturbing issue because information is transferred from program to program, information is lost when analogue material is digitized, and information may also be lost as digital resources are refreshed or migrated to modern computing environments.

## VI. METHODOLOGY

The research method adopted was a descriptive survey designed to investigate digital preservation in two selected

libraries in Nigeria universities. The study utilized the use of questionnaire and documentary research method as an instrument for data collection. Fifty questionnaires were distributed to the librarians of the universities selected, University of Nigeria, Nsukka (UNN) and Ahmadu Bello University Zaria (ABU Zaria) in digitization project. Data from the questionnaire was analyzed using frequencies and percentage.

## VII. ANALYSIS AND DISCUSSION OF RESULT

Table I shows the summary of the questionnaire distributed and returned from the two universities. Out of 25 questionnaire distributed to UNN librarians 23(92%) were returned while out of 25 questionnaire distributed to ABU librarians 24(96%) were returned.

Table II shows the level of adequacy of librarians involved in the digitization project of the UNN and ABU Zaria librarians in terms of the use of digitization skills. The result revealed that librarian's computer skill is 91% in UNN and 100% in ABU Zaria. In fact, the entire ABU Zaria librarians acquired computer literacy skill before digitization. The result also shows that ABU librarians acquired higher skills in signing of digital signature, book-marking, web linking and internet signing compared to UNN librarians.

Table III presents the skill acquisition of librarians as a result of digitization of the two university libraries. The result shows that there is improvement in librarians' computer skill from 91% in UNN while that of ABU Zaria require no further improvement since there are already at 100% rate before digitization. However, there is no improvement in signing of digital signature in UNN since the percentage remain the same, while there is improvement from 83% to 92% in ABU Zaria; moreover, there is remarkable improvement of book-marking, web linking and internet surfing skills in both institutions.

TABLE I  
SUMMARY OF DISTRIBUTED QUESTIONNAIRE

s/no	University	No. of questionnaire administered	No. of questionnaire returned	%
1	UNN	25	23	92
2	ABU Zaria	25	24	96

TABLE II  
ADEQUACY IN THE USE OF DIGITIZATION SKILL

Variables	UNN Librarians N=23		ABU Zaria Librarians N=24	
	Frequency	Percentage	Frequency	Percentage
Computer skill	21	91	24	100
Signing of digital signature	17	74	20	83
Book marking skill	12	52	15	63
Web linking	15	65	16	67
Internet signing skill	22	96	22	92

Sources: Field Survey, August, 2015.

Table IV revealed the types of information resources available for digitization in the two universities selected. The result shows that newspaper is not among the information resources available for digitization in both university,

however, 23(100%) of the respondents in both universities agreed that thesis and dissertation are among the information resources available for digitization. Moreover, journal publication, text book, CD-ROMS, conference paper and proceeding and seminar paper shows different results from the two universities as information resources available for digitization.

TABLE III  
ACQUISITION AS RESULT OF THE DIGITIZATION SKILL

Variables	UNN Librarians N=23		ABU Zaria Librarians N=24	
	Frequency	Percentage	Frequency	Percentage
Computer skill	22	96	24	100
Signing of digital signature	17	74	22	92
Book marking skill	16	70	16	67
Web linking	16	70	18	75
Internet signing skill	22	96	24	100

Sources: Field Survey, August, 2015.

Table V presents the challenges of digitization of library materials of the institutions. The result shows that individual intellectual property hardly make their work available for inclusion into the institutional repositories. Technical support and security to protect digitized information resources from illegal access and virus attack were also identified as a challenge of the project in both universities. Constant changing of hard and software, power failure and unavailability of needed materials are also among the major challenges faced in the process of digitization of the institutions.

TABLE IV  
TYPES OF INFORMATION RESOURCES AVAILABLE FOR DIGITIZATION

Variables	UNN Librarians N=23		ABU Zaria Librarians N=24	
	Frequency	Percentage	Frequency	Percentage
Journal publication	13	57	15	63
Text book	12	52	13	54
CD-ROMS	18	78	20	83
Conference papers and proceedings	18	78	20	83
Theses	23	100	24	100
Dissertation	23	100	24	100
Seminar paper	18	78	20	83
Newspaper	0	0	0	0

Sources: Field Survey, August, 2015.

Table IV depicted a numbers of approaches for improving the digitization project of the two institutions libraries. The result shows that 23(100%) of the respondents in UNN agreed that constant upgrading of software with backup and training of librarians in digital skill are strategies for improving the digital project of the institutions.

The study further revealed that antivirus installation, deployment of staff to check CDs before submission and enhancement of technical collaboration between library and MIS has been identified in both institutions as strategies for improving the digitization project.

TABLE V  
CHALLENGES OF DIGITIZATION OF LIBRARY MATERIALS

Variables	UNN Librarians N=23		ABU Zaria Librarians N=24	
	Frequency	Percentage	Frequency	Percentage
Copy right issues	20	87	21	88
Technical support And security	21	91	22	92
Constant changing of hard and software	21	91	23	96
Power failure	23	100	24	100
Unavailability of need materials	22	96	23	96

Sources: Field Survey, August, 2015.

TABLE VI  
STRATEGIES FOR IMPROVING THE DIGITIZATION PROJECT

Variable	UNN Librarians N=23		ABU Zaria Librarians N=24	
	Frequency	Percentage	Frequency	Percentage
Constant updating of SW with backup	23	100	23	96
Librarians should be sent for training on digital skills	23	100	24	100
Antivirus should be installed and periodically updated	21	91	22	92
Staff should be deployed for checking	22	96	21	88
CDs before submitting	20	87	18	75
Enhance technical collaboration between library and MIS				

Sources: Field Survey, August, 2015.

## VIII. CONCLUSION AND RECOMMENDATION

The study has attempted to compare digital preservation in Nigeria universities librarians using university of Nigeria Nsukka and Ahmadu Bello University Zaria libraries. The comparative was made in the area of skill possessed by the personnel involved in the digitization process before and after the digitization of the two institutions selected; the types of information resources available for digitization and also the challenges faced in the process of digitization and the way forward. Based on the finding of this study, we may conclude that digitization of library immensely enhanced the effectiveness of library services including efficient organization and retrieval of information resources.

Finding from this study revealed the following recommendations for efficient digitization services in the library.

1. Constant upgrading of software with backup before upgrading.
2. Training of librarian in the technical knowledge of the digitization process should be intensified
3. Installation of antivirus and periodically updated are recommended.
4. Additional staff should be deployed in digital selections for checking of CDs before submission.
5. Enhancement of technical collaboration between the library and MIS is advocated.

REFERENCES

- [1] Masakazi, N. (2009). What is the value of digitizing South Africans arts/culture and heritage to its citizens? E-Mzazi information society. Retrieved from
- [2] Sambo, A, Saturday, U and Usman, A. (2004). Awareness of Digital Preservation Strategies by libraries in Nigeria. International Journal of Information Research vol. 3 No 4 June.
- [3] Popoola, S.O (2003) Preservation and conservation of information resources. University of Ibadan: distance learning centre.
- [4] Chinwe, n. and Ifeayi, J. (2009) Digital preservation of cultural Heritage of University of Nigeria Nsukka: issue and current status.
- [5] Ibinaiye, I. (2012). Challenges and prospects of digitization of library resources in Nigeria universities: The Expsience of Kashim Ibarhim library. European Journal of Globalization and Development Research.Vol.5. No1. <http://www.pnc.gor.zalermazanzi-issue>. 1-07. Accessed on 6<sup>th</sup> of March, 2009.
- [6] Tevera, S and Mlambo, E. (2007). Digitizing local collection in Thata, M.B. Building a digital library at the University of Zimbabwe: A celebration of team worth and collaboration.
- [7] Cullen, R. and Chawneu, B. (2008). Institutional Repositories in New Zealand: Comparing Institutional Strategies for Digital Preservation and Discovery, paper presented at Digital Discovery: Strategies and Solutions, IATUL 2008, 20-24 April 2008, Auck Land, N2.
- [8] Asogwa, B. E. (2011), Digitalization Archival Collections. In Africa for Scholarly Communication: Issues, Strategies, and Challenges Library philosophy and Practice.