

# Management of Institutional Knowledge Packaged Resources in Nigerian University Libraries: Appraisal of Availability of University-based Institutional Repository

Bello, Stephen Adeyemi, Ojo, Roseline Funmilayo, Charles Bala Ocheje

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Department of Library and Information Science, Kogi State University, Anyigba, Nigeria  
Kogi State College of Education Technical, Kabba, Nigeria  
College Library, Kogi State College of Education, P.M.B. 1033, Ankpa, Kogi-State, Nigeria  
Corresponding Author: dymbello@yahoo.com; +234-807-830-1794, +234-806-964-8874

**Abstract:** University-based institutional repository helps effective management of knowledge packaged in university community for scholarly communication if established in university library. The purpose of this study is to appraise the availability of university-based institutional repository in university libraries in North Central States of Nigeria. Questionnaire and personal interview were used as instrument for data collection. Simple percentage was used for data analysis where 50% and above was considered acceptable; where below 50% was considered not acceptable. The results shows that out of eleven (11) university libraries surveyed 3(27.3%) has university-based institutional repository while 8(72.7%) do not have. Recommendations were provided in three segments which are: factors to be considered when preparing institutional knowledge package resources for university-based institutional repository; general and specific university-based institutional repository resources required and their functions (Table 2); basic steps and activities there-in in setting up university-based institutional repository in university library (Table 3).

**Keywords:** University-based; Institutional repository; Knowledge packaged; University libraries; North central states; Nigeria.

## 1.0 Introduction

The ultimate reason for this assertion “if you don’t published you will perished” is to stimulate the academic staff in Nigerian higher institutions precisely in universities to conduct researches that will promote and aid the development of their profession. It is worthy to note that, academic staff of Nigerian higher institution of today; the mean criteria for their promotion is basically depends on their educational qualifications and numbers of research publications they have. More to these, it is of standard that every post-graduate programme completed by students must be accomplished with evidence of research work, which is usually referred to as “Thesis and Dissertation”. Hence, this evidence of research work of post-graduate students as well as the published research articles in peer reviews and reputable journals with impact factor, conference proceedings, research monograph, technical reports and also text books can be referred to as knowledge packaged resources. They must be properly managed for onward development in academic world and others essential facet of life. Consequently, the precise and preferred avenue for the management of such knowledge in university community is the university library. This was based on the opinion of [1] when they said university library is a control center for information resources even in the contemporary age of information explosion. Hitherto, the primary objective of university library is to support teaching, learning and research [2]. It is imperative to note that, before the opinion as information control center and basic objectives of university library can be achieved there must be availability of well functional institutional repository in the university libraries. This is because; they are designed to support storage and distribution of digital content of knowledge packaged. More to this, they are collection-based digital repositories managed by library professionals. It could be stand-alone or aggregate, course management

systems and associated file stores, collections of research data and reports managed by academic departments, student academic portfolio systems, institutional file storage systems, digital asset management workflow systems, or and web content management systems used by institutions or departments of store and stage web content [3].

## 2.0 Brief Literature Review

### 2.1 University Library

University libraries are academic libraries situated in universities to help them accomplish their set goals usually teaching, learning and research. University library is a library established, administered and funded by a university to meet the information, research and curriculum needs of its students, faculties, and staff [4]. University libraries are set up to assist the universities in the execution of their statutory duties. With this, one cannot but agreed that university libraries are partners in progress in the educational process of their respective universities. More to these, university libraries have long been recognized as the heart of their universities to fulfill the mission of supporting the educational objectives of their parent organizations [2]. This includes teaching, learning, research and cultural development of information resources. In the same vein, the primary obligation of university library is to provide bibliographic resources (print and non-print materials and any other items that carries information in whatever format) that are essential to the fulfillment of the university’s mission. The objectives of university libraries as follows: provision of materials for supplementary reading; provision of materials in support of post graduate research; provision of materials in support of faculty, external and collaborative researches; provision of materials for personal development; external relationships and interlibrary cooperation and stimulation of interest in the printed

words[5]. To this end, the users of university libraries are the students, researchers, lecturers, and support staff which includes non-teaching staff and members of the local community in which the university is located. The provision of all kinds of knowledge packaged resources produced and published by the member of the university community in the university libraries will help effective building of university-base institutional repository.

## 2.2 Institutional Repository

Literally, "institution connotes organization that a particular kind of work or purpose; and while, repository is a place or container in which large quantities of something are stored [6]. Institutional repository is an important concept and vital to established in university libraries. From terminological perspective institutional repository is synonymous to E-print, Open archive, and Self-archive. The idea of setting up institutional repository in university libraries was noted at the down of year 2000 [7]. This was based on the opinion that every publications and post-graduate thesis and dissertation provided within specific university should be digitally preserved and made available for consultation. Institutional repository is "digital collections that preserve and provide access to the intellectual output of an institution" [8]. Institutional repository consists of formally organized and managed collections of digital content generated by faculty, staff, and students at an institution. The content of these repositories can be available for integration with on-campus library and course management made available to colleges and students at other institutions; as well as to the general public [3]. Hence, university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institutions and its community members [7]. The materials-knowledge packaged resources created or generated by the universities are scholarly publications which is an output of research gathered from all the functional faculties in the university. It is very imperative to note that, availability of institutional repository in university library will enable print materials to be digitized and preserved for present and future use. Institutional repository if properly build it will enhance easy accessibility to different scholarly publications that has been produced for very longtime; just with the power of clicking on programmed computer system designed for it. Consequently, institutional repository enhances teaching, learning and research which is the same as the basic objectives of university libraries [3]. More to this, it is worth to note that in university library, the concept of institutional repository is not far from conventional archiving system. Just that institutional repository is concern about the publications produced within it parent university communities by the scholars; while digitalized the publications for long-term preservation but friendly accessible electronically with the use of natural languages and precise metadata upon which the content of the files in the repository system were prepared. Hence, university-based institutional repository is electronic based. The power in this; enable quick access to accumulated and processed knowledge of documented scholarship communication that are made available from the time of memorial in the designated or unified university community. Relatively, university-based institutional repository as

follows: making intellectual output of students and staff of university to be known outside their institutions; help to control information resources; help to provide resources or tolls to create, and manage inventory rich media assess of university such as video, audio, presentation materials, datasets, records of collaborations, research works in progress; help internally generated intellectual property; and it also help to change foster in the academic practices[9]. Furthermore, institutional repository raise the profile and prestige of institution; managing institution information asset; aid accreditation and performance management; and it long-term cost saving [10]. With these, one cannot but says institutional repository is a dynamic institution itself that can serve as backbone for universities to achieve greatly of their goals and promote their standard beyond it locality. But most likely hindrance or obstacles to university-based institutional repository are usually associated with university staff not interested to submit copies of their publications to their university libraries, lack of fund to make needed resources available, poor management policy and practice, poor digital preservation policy, problem of author permission and licensing terms, and poor metadata quality standard. However, using of essential resources as tools for building standard and management of institutional repository is important. In fact, to a great extent, one might say "no resources covering human, computer system, software, storage devices, and internet and intranet resources no institutional repository". These resources can be categorized into two: general and specific. General institutional repository resources are basic. They must be available before and to build institutional repository system. While, specific institutional repository resources are those use to support the building and buttress the services rendered through the system. It is very imperative to note that, the use of specific institutional repository resources is strongly depends on the stage or advancement of the repository. Consequently, among the major players institutional repository are Library of Congress, Harvard, Virginia Tech, Los Alamos, Conell, CNI, NSF, Mellon foundation, Canadian Universities, University of Southamtop [3].

## 3.0 Objective of the Study

To appraise the availability of university-based institutional repository in the university libraries under surveyed.

## 4.0 Statement of the Problem

Availability of university-based institutional repository is essential in university library. This is because it aid scholarly communication, promotes the standard of the university and added prestige to the individual authors both within their university community and worldwide. Absence of institutional repository in the university libraries will affect the practice of long-term preservation on knowledge package resources, plagiarism, poor acquisition of knowledge and low rating might abide to academic staff, post-graduate students, and researchers of any; and university that do not have institutional repository in their library. Despite these, it seems no study have been carryout this area. This justifies the present study and the question in view is: what is the state of availability of university-based institutional repository in Nigerian university libraries?

## 5.0 Significance of the Study

The outcome of the study will be of important to some groups of people. These are university library administrators, librarians, university management, researchers, and library and information science students. To university library administrators and university management the study will helps them to know the resources to be made available in establishing institutional repository in university library. To librarians the study hoped to let them know their specific functions or roles to play as human resources in building successful institutional repository. It will also help librarians and university library administrators to know the basic steps in setting up institutional repository in university library. To researchers and students of library and information science, the study will be of reference point.

## 6.0 Scope of the Study

The research work is limited to federal and state university libraries in the North Central States of Nigeria. The university libraries are recognized with their parent organization's name. However, they are: University of Jos (Plateau State); Federal University of Agriculture, Makurdi and Benue State University, Makurdi (Benue State); Federal University, Lokoja and Kogi State University, Anyigba (Kogi State); University of Abuja, Gwagwalada

(Federal Capital Territory, Abuja); University of Ilorin (Kwara State); Federal University of Technology, Minna and Ibrahim Babangida University, Lapai (Niger State); Nassarawa State University, Keffi and Federal University, Lafia (Nassarawa State).

## 7.0 Research Methodology

Descriptive survey design was used. Instrument of data collection were questionnaire and oral interview. The questionnaire contains information to know whether there is availability of university-based institutional repository in the university libraries under survey. The items were based on option "Yes" and "No". Simple percentage was used for data analyses where 50% and above was considered accepted and below not accepted. Hence, information obtained from oral interview were used to buttress the discussion and implications of the findings

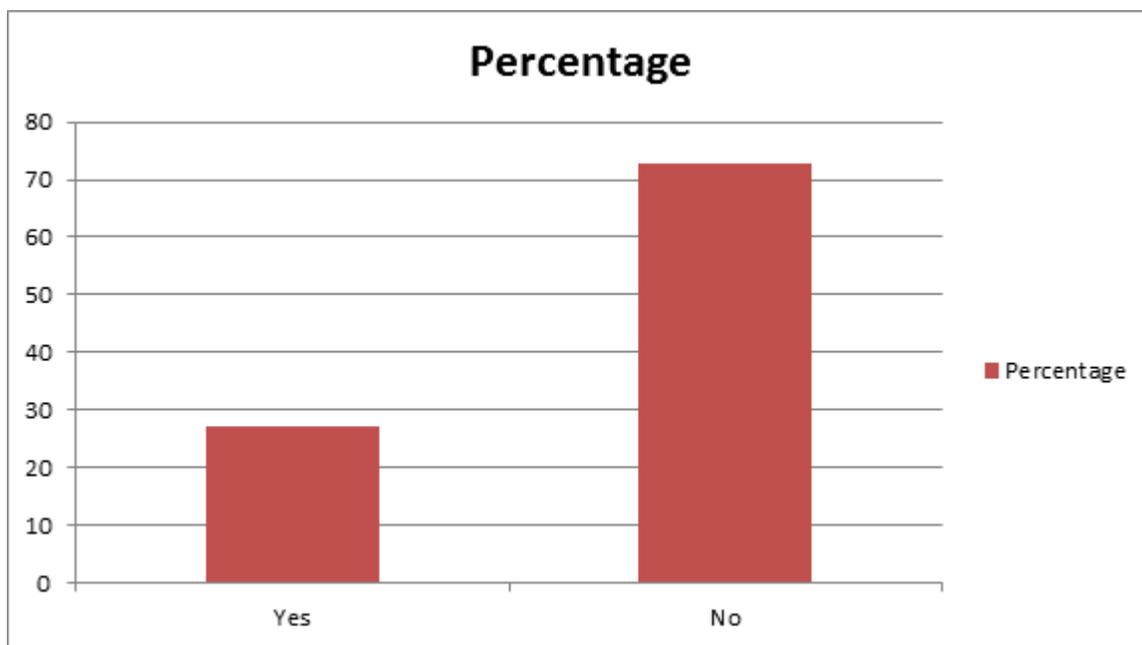
## 8.0 Data Analysis

### Question: Is there University-based Institutional Repository in your University Library?

Respondents were asked to indicate availability of university-based Institutional repository in their library. Data collected are analyzed below.

**Table 1: Availability of University-based Institutional Repository in University Libraries**

S/N	University Libraries	Yes	No
1	University of Jos Library	√	
2	University of Ilorin Library, Ilorin	√	
3	Federal University Technology Library, Minna	√	
4	Federal University of Agriculture Library, Makurdi		√
5	Benue State University Library, Makurdi		√
6	Kogi State University Library, Anyigba		√
7	Federal University Library, Lokoja		√
8	University of Abuja Library, Gwagwalada		√
9	Ibrahim Babangida University Library, Lapai		√
10	Nasarawa State University Library, Keffi		√
11	Federal University Library, Lafia		√
	<b>Total</b>	<b>3 (27.3%)</b>	<b>8 (72.7%)</b>



**Fig. 1:** Bar Chart showing the Percentages of Availability of University-based Institutional Repository in University Libraries Surveyed

From table 1 and chart above, it is observed that 27.3 % has “Yes” option while, 72.7 % has “No” option. It can be concluded that majority of the university libraries do not have university-based institutional repository.

## 9.0 Summary of Major Findings

From the data gathered and analyzed it was discovered that majority of the Federal and State university libraries in the North Central States of Nigeria do not have university-based institutional repository. This includes Federal University of Agriculture Library, Makurdi, Benue State University Library, Makurdi, Kogi State University Library, Anyigba, Federal University Library, Lokoja, University of Abuja Library, Gwagwalada, Ibrahim Babangida University Library, Lapai, Nasarawa State University Library, Keffi, and Federal University Library, Lafia. Those that have are University of Jos Library, University of Ilorin Library, Ilorin, Federal University Technology Library, Minna.

## 10.0 Discussion and Implications of the Findings

The findings of the study shows that majority of the university libraries surveyed have no institutional repository. This is very regrettable. However, for enhancing teaching, learning, and research in the university; and for effective scholarly communication within the university community and to the entire world as noted by [3] university-based institutional repository system must be established within the university library. This is because; it's an information control center as noted by [1]. Hence, without availability of university-based institutional repository in the university library the academic standard of the scholarly groups within the university community as well as the university itself will not receive scholarly appreciation.

## 11.0 Conclusion

The important of university-based institutional repository can never be over emphasized to promote standard of all notable academic staff, post-graduate students,

researchers and the university itself. However, it was discovered that university-based institutional repository has not gain ground for establishment in nine university libraries under survey. Hence, the proffered recommendations should be adherent to.

## 12.0 Recommendations

The following recommendations are made for effective establishment and management of university-based institutional repository in university library. However, it is divided into three segments as follows:

### 12.1 Factors to be considered when preparing Institutional Documents Packaged Resources for University-based Institutional Repository:

- Document types to be provided are pre-prints and post-print document; and their ownership must be recognized such as staff, students, institutions, etc.
- The document format should include: HTML (HyperText Markup Language), PDF (Portable Document Format), post-scription, RTF (Rich Text Format), ASCII (American Standard Code for Information Interchange), just among others.
- There should be strong and dynamic digital preservation policy.
- The submission of the knowledge packages (documents) should give room for file formats conversion, deposition of e-print, and creation of precise metadata such as structural, administrative, technical, and preservation. However, they must be of high standard.
- For collection and package of know ledges (documents), author's permission and licensing terms should be considered.

**12.2 Table 2: General and Specific University-based Institutional Repository Resources required and their Functions**

S/N	Examples		Functions
	General	Specific	
1.	Software Packages and Initiative	Open Archive	Buttress to develop and disseminate information content through the use of common and integrated metadata.
		MIT's DSpace	Capture, submission and distribution of works as well as long-term preservation.
		Flexible Extensible Digital Object and Repository Architecture (FEDORA) using XML and Web server	To develop interoperable digital libraries and institutional repositories.
		E-print	To manage disciplinary or institutional print collections.
		CD ware	For long-term storage and preservation
2	Human resources	Librarians	*Information resources content analysis *Reference of information *Indexing and abstracting of information and knowledge package *Cataloguing and description of metadata for resources and content location.
		Computer Programmers	Configuration and installation of both firmware and software in computer system for integration of data entry
		System Analysts	Determine precise hardware and software to use for certain knowledge package and those to use for building of entire institutional repository system
		Data Entry Operators	Input precise and refined data from specific knowledge to prescribe location in computer system.
		System Support Technicians and Engineers	*Maintenance of hardware parts of computer system *Determine electrical appliance and their installation
3	Computer system	Any model of computer system can serve. But should be of wide Flat screen Desktop with large memory, High speed processor.	To login quires, searching and retrieve precise information from knowledge package.
4.	Scanners	*Flatbed *Film *Drum scanners	*Conversion of hardcopy information resources to softcopy
5.	Internet and Intranet resources	*Coaxial cable *Fiber optics cable, *RJ 45, *Satellite disc and its tools *Server *Decoder* *Receivers *Meters * Regulator	For connection on different topology at both internet and intranet on worldwide and within the university repository.
6.	Power supply devices	*Giant standby and automatic power supply plant * Stabilizer *Extension wires *Plugs and sockets *Power and control *UPS *Electrical wires.	Enhance poor supply and effective use of it.
7.	Institutional Knowledge resources	*Thesis and dissertation *Serial publications *Text books *Research monographs and *Technical reports.	They contain information to be consulted.

**Source:** Author's Experience and Literature Search

**12.3 Table 3: Basic Steps and Activities there-in in Setting up University-based Institutional Repository in University Library**

Steps	Activities / Provisions
1	Make available space that is sizeable to be called division. This is because sections and units can be further needed in the repository.
2	Make available human resources that is professionals such as librarians, computers programmers, system analyst, data entry operators, system support technicians or engineers and electricians
3	Make available information technology (IT) infrastructure or resources prescribe by the individual professionals in step 2 above.
4	Make available institutional knowledge package such as thesis, dissertation, serial publication, text books, research monograph and technical report from all the faculties in the university community.
5	Make available institutional knowledge package. It content will be analyze, index, abstract, reference, catalogue and production of suitable metadata by the librarians.
6	The electricians should wire the room or the division created for the repository based on standard.
7	Provision of furniture for the work stations
8	All other professionals listed in step 2 above should carry out their responsibility duly as prescribed in table 2.
9	Precisely, system analysis can get free easy to install and configure, simple administrative procedure, customizable web interface for user, searching and browsing software for initial installation from <a href="http://www.eprints.org">www.eprints.org</a>

**Source:** Author's Experience

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