Institutional Repositories and Digitisation in Federal University Libraries: Succor and Challenges of Access to Grey Literature

 By

Jibril Attahiru Alhassan\*, Sadiat Adetoro Salau\*\* and Aisha Jimada\*\*\*

\*Federal University of Kashere, Gombe State

\*\*Federal University of Technology, Minna, Niger State

\*\*\*Ahmadu Bello University, Zaria, Kaduna State

**Abstract**

Information and Communication Technology has democratised access to information through the Internet. However, in Nigeria, a lot of relevant information available in grey literature like theses, annual reports, musical collections, old newspapers, government documents, inaugural reports, datasets to mention but a few, are still inaccessible to researchers because they are obscured owing to the fact that they are available in hard copies only in libraries and archives. As a succor to literature obscurity, librarians and archivists globally have resulted to digitising grey literature and providing access to them through Institutional Repositories (IRs). Thus, this paper used an exploratory research design to describe the concept of digitisation and the relevance of digitisation and IRs in providing access to grey literature. It also analysed the grey literature that are curated and accessible on the IRs. It highlighted the number of IRs with grey literature and the types of grey literature available on them. Findings indicated that out of the twelve (12) university IRs in Nigeria registered on OpenDOAR, only eight (8) had grey literature that are available and accessible. The types of grey literature available on the IRs include theses, government documents, manuscripts, public lectures, to mention a few. Of these outputs, only one IR had up to four (4) types of grey literature that can be accessed. The challenges of digitisation and use of repositories in archives and libraries in Nigeria were also discussed. The recommendations made include the synergy between archives and universities to digitise and provide access to more scholarly grey literature.

1. **Introduction**

One of the reasons for the formulation of open access policies and mandates was to ensure that information is freely accessible to all irrespective of status or location. These policies have been made easier with the advent of ICT which has democratised information through the Internet with tools and processes like digitisation and repositories aiding the process. Since the advent and adoption of ICT, libraries globally have leveraged on the advantages repositories offer to have an archive of information resources in form of white literature for their institutions. This scenario is not surprising as the essential elements of institutional repositories (IR) tally with the traditional role libraries play which is to collect, preserve and disseminate information resources, thus making it a viable technological tool that represents physical libraries in the digital environment. (Salau, 2021). By definition, institutional repositories are mechanisms for gathering, storing, and disseminating intellectual results both within and outside the institution (Jain, 2011).

Developing countries like Nigeria have keyed into these processes to make white literature which are scholarly publications like journal articles and book chapters accessible to researchers globally and significant progress has been made. However, a lot of relevant information available in grey literature like dissertations, annual reports, musical collections, old newspapers, government documents, inaugural reports, datasets to mention but a few, are still inaccessible to researchers because they are obscured owing to the fact that they are available in hard copies only in libraries and archives. As a succor to this literature obscurity, preservation challenges and in a bid to populate the repositories, librarians and archivists have resulted to digitising grey literature and providing access to them through Institutional Repositories (IRs).

According to Du, Li and Huang (2019), grey literature is called "grey" because the documents have some secrecy, but lack confidentiality and publicity. Grey literature is primarily circulated within each unit, and it contains a large amount of industry internal information as well as the potential function of sustainable development and utilisation, but it lacks the concentration and systematicness of information. In the academic settings, grey literature includes research reports, theses, dissertations, unpublished seminars, technical specifications and standards, workshop proceedings, academic trends, official documents and research data. The Prague definition of grey literature recognises the importance of libraries and institutional repositories in collecting, organising, and providing access to previously inaccessible or scattered grey literature information (Samzugi, 2017). Interestingly, the number of grey literature in repositories have been growing steadily globally for over a decade. The French repositories had over 18% of its full-text documents as grey literature. (Schofel & Prost, 2010). Similarly, 23% of the deposited items with full-text in Spanish repositories were grey. (Melero, et. al., 2009). This may be attributed to the high level of technological advancement in these countries that made these literature available in e-copies for onward upload to the repositories. However, during this period in Nigeria and Africa, these forms of literature were in hard copies and required some form of digitisation before they can be uploaded to the repositories. Over the years, e-copies have become readily available as corroborated in Samzugi (2017) study of Institutional Repositories (IRs) in Tanzania’s academic libraries that found that majority (7,533[60.2%]) of the content type in the repositories were grey literature, yet there is a dearth of literature on accessibility of grey literature in institutional repositories in Federal Universities in Nigeria.

It is against the backdrop that the study adopted an exploratory research design to describe the digitisation and the adoption of IRs in providing access to grey literature and the opportunities and challenges associated with providing access to grey literature in institutional repositories. Content analysis was used to retrieve and analyse the grey literature that are curated and accessible on the IRs. The population were the Nigerian institutional repositories that were registered on the Directory of Open Access Repositories (Open DOAR). The Open DOAR lists and provides information on academic open access repositories globally.

1. **Digitisation and Adoption of Institutional Repositories in Nigerian University Libraries**

Digitisation is the process of converting library resources from analog to digital format, allowing them to be viewed at any time and even printed if desired. Similarly, a single book or document can be used by multiple users at the same time, eliminating the problem of having to wait for one user to finish before moving on to another in terms of digitalisation.. Interestingly, the history of digitisation and institutional repositories in Nigeria which started in 2008 began with the digitisation of institutional grey literature in the form of theses and dissertations, when an international workshop was held at ABU, Zaria which heralded the open access initiative in Nigeria (Okoye and Ejikeme, 2011). Another workshop which also increased the zeal to start up digitisation and repositories in Nigeria was sponsored by United Nations Educational Scientific and Cultural Organisation (UNESCO) for six university librarians on the use of the Greenstone open source software. Finally, two university libraries (Jos and Ife) provided a theses and dissertations digitisation model under the AAU-DATAD programme for ABU, Zaria library to start digitising its postgraduate research findings. (Eke, 2011).

University of Jos started the digitisation of theses and dissertations in Nigeria in 1985 (Baro *et al.,* 2014.) Since then, several universities have also joined the initiative. Baro *et al.* (2013) stated in their study of twelve repositories in Nigeria that theses and dissertations formed the bulk of library resources digitised.  Jagboros (2007) stated that Obafemi Awolowo University library started their digitization projects with Newspaper collections and abstract of Master and Doctoral theses and dissertations authored by the students of the university in 2003. The Carnegie foundation of New York sponsored the digitisation project of the newspapers with a substantive grant (Ahmed, 2013).

University of Nigeria, Nsukka, as reported by Eke (2011) had deployed staff and technical infrastructure to aid the digitisation project in the library. Similarly, Anunobi and Onyebinama (2011) and Ibinaiye (2012) both reported the digitisation of theses and dissertation at Federal University of Technology, Owerri (FUTO) and Ahmadu Bello University, (ABU) Zaria, respectively. FUTO digitisation process was initiated under the DATAD initiative in Africa, while that of Ahmadu Bello University was initiated by the library management according to Ibinaiye (2012) when they acquired both hard and software to begin the digitisation of resources which included theses and dissertations and seminar presentations.

(Ahmed, 2013).

**3.0 Grey Literature in Federal University Libraries**

A content analysis of Nigerian University libraries on Directory of Open Access Repositories (OpenDOAR) indicated that out of the thirty one (31) repositories registered on OpenDOAR, only twelve (12) were owned by federal universities.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Grey Literature** | ABU, Zaria | UI | FUT, Minna | OAU, Ile-Ife | UniLag | UniJos | UNN | UDUS |
| Government Documents | √ | X | X | X | X | X | X | X |
| Compendiums | X | X | X | X | X | X | X | X |
| Inaugural lectures | √ | X | √ | √ | √ | √ | √ | X |
| Theses & Dissertations | √ | √ | √ | √ | √ | √ | √ | √ |
| Newsletters/Graduation Booklets | X | X | X | X | X | X | X | X |
| Lecture Notes | X | X | √ | X | X | X | X | X |
| Convocation Lectures | X | X | X | X | X | √ | X | X |
| Datasets | X | X | X | X | X | X | X | X |
| Newspaper Collection | X | √ | X | X | X | X | X | X |
| Reports | X | X | X | X | X | X | X | X |
| Policies | X | X | X | X | X | √ | X | X |

From the table above, only eight (8) of the twelve IRs had grey literature available and accessible on them. The types of grey literature with communities on the institutional repositories of Nigerian federal libraries include: theses, government documents, manuscripts, government documents, convocation/public lectures, and newspaper collection to mention a few. Of these outputs, all of the IRs had theses and dissertations contents in them. Only one IR had up to four (4) types of grey literature that can be accessed. The findings from this table corroborates the history of digitisation which started with theses and dissertations in these universities.

**3.0 Opportunities of Grey Literature in Institutional Repositories**

Grey literature are a useful origin of information pertaining to research for prospective graduate students, researchers and decision makers (Alam and Pandey, 2012). They can make important contributions to a systematic review (Paez, 2017). Thus, there is a need for future accessibility and preservation of these vital information resources for posterity (Salau, 2021). On the contrary, however, Han (2014) noted that grey literature are not usually accessible through the usual distribution channel of scholarly publication and distribution. This author further stated that within the traditional libraries’ workflow, these resources are either partially catalogued or available only at the different units they emanate from, thus making them difficult to access.

Institutional repositories are technological tools that can be leveraged to make accessibility to these grey literature easier. However, the focus of most institutions are on scholarly publications. A number of benefits are thus discussed below:

1. Grey literature increases the content of institutional repositories. Establishing and developing repositories does not necessarily mean that the contents are automatically available (Salau, 2021) and a measure of the success of any IR is the volume and scope of its contents (Dubinsky, 2014). However, content recruitment and management seem to be a challenge of IR administrators. Thus, digitising and uploading grey literature in the form of theses, technical reports, policies, inaugural lectures to mention but a few will help populate the repositories and enable accessibility to these resources.
2. Digitisation and institutional repositories are tools for preservation and long-term accessibility of grey literature.
3. In most cases of grey literature, the copyright is usually for the institution and in some cases the author, thus there are fewer cases of copyright challenges than with third party journal articles.
4. Grey literature in repositories can increase prestige and visibility for institutions, due to broader dissemination and increased engagement of the grey items for research (Schofel & Prost, 2010).

 With the benefits associated with grey literature in institutional repositories, there are several challenges to be discussed:

1. **Metadata Control:** Identification of specific grey literature resources through metadata tags is sometimes difficult. However, recent updates of institutional repositories software are gradually including specific metadata tags that takes care of grey literature.
2. **Funding:** Due to the limited funding for the management of repositories, priority is usually given to scholarly published resources like books and journal articles at the expense of grey literature.
3. **Institutional Support:** Most academic institutionsmay not fullysupport the upload of grey literature through policies like the published scholarly information resources. It is believed that the scholarly publications and not grey literature supports the teaching and research mandate of the institutions. Thus, poor knowledge on grey literature will make it more difficult to sustain continuous support and commitment from the management and academic staff (Schofel & Prost, 2010).

**Conclusion**

Grey literature information resources have become an integral part of research documents for researchers. They are more detailed and at times gives insights than the structures scientific studies. Thus concerted efforts must be in place for the preservation of accessibility of these resources through digitisation and institutional repositories.

**Recommendations**

1. There is a need for synergy between archives and universities to digitise and provide access to more scholarly grey literature.
2. Librarians and library educators should increase the awareness on the benefits of grey literature for research, teaching and learning.
3. Libraries can come up with their in-house metadata tags based on the available tags on updated repository software to reduce the issue of metadata control of grey literature.

**References**

1. Ahmed, M. (2013) An Overview of Digitization Project in University Libraries in Nigeria: A Perspective from the Literature. *Control Theory and Informatics* 3(6)
2. Alam, N. M. & Pandey, P. (2012). GeoTheses: Development of a union catalogue of Indian geoscience theses using GSDL. *The Electronic Library, 30*(4), 456-468.
3. Anunobi, V. C., & Onyebinama, O.C. (2011). *ETDs initiatives in Federal University of Technology, Owerri (FUTO): Successes, challenges, prospects.* International Symposuim on Electronic Theses and Dissertations. Cape Town.
4. Baro, E. E., Godfrey, V.Z., & Eze, M.E. (2014). Electronic theses and dissertations and IR; roadmap to research visibility in Africa. *Preservation, Digital Technology and Culture, 43*(3), 114-126.
5. Dubinsky, E. (2014). A current snapshot of institutional repositories: growth rate, disciplinary content and faculty contributions. *Journal of Librarianship and Scholarly Communication, 2*(3), 1167.
6. Eke, H. N.(2011). Digitising resources for University of Nigeria repository: process and challenges. *Webology, 8*(1), 1-10.
7. Han, Y. (2014). Guidelines for collecting usage metrics and demonstration of value for ETD programs. In *Guidance Documents for Lifecycle Management of ETDs.* Educopia.
8. Ibinaiye, I. D. (2012). Challenges and prospects of digitisation of library resources in Nigeria universities: The experience of Kashim Ibrahim library. *European Journal of Glabalization and Development Research, 5*(10), 287-299.
9. Jain, P. (2011) New trends and future applications/directions of institutional repositories in academic institutions, *Library Review*, 60 (2), 125-141
10. Jagboro K.O (2007) “Digitization of Library Materials: the Obafemi Awolowo University Experience” a paper presented at the National Workshop on Digitization of Library Materials: process and tools’ organized by National Library of Nigeria and Held at computer Center University of Jos. July 16th 2007 p.1-7
11. Melero, et al. (2009). `The situation of open access Institutional repositories in Spain: 2009 report'. Information Research 14(4).
12. Okoye, M. O. &. Ejikeme, A. N. (2011). Open access, institutional repositories, and scholarly publishing: The role of librarians in south-eastern Nigeria. *Library Philosophy and Practice*.
13. Paez A. (2017) Grey literature: An important resource in systematic reviews. J Evid Based Med. doi: 10.1111/jebm.12265. Epub ahead of print. PMID: 29266844
14. Pinging Du, Yuke Li and Bolou Huang (2019) Repositories and Institutional Grey Literature. *IFLA conference*, Athens
15. Salau, S. A. (2021) Development and usability evaluation of a web search system for ETDs in repositories in Federal Universities in Nigeria. PhD Dissertation, FUT Minna.
16. Samzugi, A. (2017) The Role of institutional repositories in promoting grey literature in Academic Libraries in Tanzania. *University of Dar es Salaam Library Journal* 12(2)
17. Schöpfel, J. Prost, H., Le Bescond, I. (2011). Open is not enough: Grey literature in institutional repositories. GL 13: Thirteenth International Conference on Grey Literature: The Grey Circuit. From Social Networking to Wealth Creation. Washington, 5-6 December 2011, Dec 2011, France. ffsic\_00908862f