INSTITUTIONAL REPOSITORIES AND UTILIZING INFORMATION RESOURCES NATIONAL LIBRARY

James, Louisa Dan
Email: anejiiyam24@gmail.com
Anele, Ezebunwo
Email: anaeleezebunwo2022@gmail.com
ORCID ID: https:/orcid.org/0009-0005-0416-3709

Department of Library and Information science, University of Calabar
&
Ashikem, Dorathyashikem
Email: amoyeashikem@gmail.com
Department of Library and Information science, University of Calabar

Abstract

The study investigated the relationship between developing digital repositories and utilizing information resources in the National Library of Nigeria. Two research objectives were formulated to guide the study, with corresponded two null hypotheses. The study adopted a correlational research design. The population comprised 150 staff members of selected National Libraries of Nigeria, 100 accessible populations were involved through a combination of accidental and simple random sampling techniques. Data were collected using a structured questionnaire titled: Digital Repository and Information Resource Utilization Questionnaire (DRIRUQ). The instrument's validity was confirmed by experts in Library and Information Science and Measurement and Evaluation at the University of Calabar. The reliability of the instrument was established using Cronbach's Alpha, which yielded coefficients of .73, .74, and .75 across the various constructs. Simple linear regression analysis was employed to test the research hypotheses. The findings revealed that the institutional repositories and data repositories, each significantly influenced the utilization of information resources in the Academic Library. The study concluded that strategic development and integration of digital repositories play a critical role in enhancing access, visibility, and utilization of information resources. Based on the findings, it was recommended, among others, that the National Library should invest in expanding its institutional repository to include theses, dissertations, government publications, and grey literature.

Keywords: digital repositories, utilizing information resources, National Library, institutional repositories, data repositories

Introduction

The effective management and utilization of information resources are central to the operations of modern libraries, particularly in academic institutions tasked with preserving and disseminating knowledge. In today's knowledge-driven society, libraries must not only collect and store information but also ensure its accessibility, relevance, and usability. One

strategic response to these challenges is the development of digital repositories, online platforms that systematically store, manage, and facilitate access to digital content. These repositories can serve as institutional memory, support lifelong learning, and enable the timely retrieval and use of diverse information resources.

According to Lynch (2023), a digital repository is a set of services that a library offers to support the management and dissemination of digital materials created by an institution or collected from external sources. These systems are crucial for the long-term preservation and retrieval of scholarly outputs, research data, and learning materials. Clifford (2025) asserts that repositories improve the discoverability and utilization of information resources by organizing content in ways that are both accessible and user-oriented. Similarly, Chan (2024) emphasized that digital repositories serve not only as storage solutions but also as facilitators of knowledge exchange and institutional visibility. In the context of national libraries, these tools are essential for preserving cultural heritage, supporting research, and providing equitable access to information.

Globally, the integration of digital repositories has become a strategic imperative for libraries in the 21st century. Countries such as the United States, the United Kingdom, and Australia have invested heavily in national repository systems to enhance access to academic publications, governmental records, and educational resources (Olalekan and Musa, 2023). In Africa, the adoption of repository technologies remains uneven, with infrastructural, financial, and policy-related challenges hindering implementation (Onyancha, 2023). The academic repository serves as the hub of the institutionl bibligraphy, yet it faces persistent issues related to the underutilization of its vast information resources. This has raised concerns among stakeholders about the need for a more robust, digital, and decentralized information system to meet the evolving demands of researchers, students, and the general public (Afolayan and Eke, 2022).

The underutilization of information resources in the academic library could be attributed to several factors, including outdated cataloging systems, inadequate digital access, and limited user awareness (Aboyade, 2021). Users often encounter difficulties in accessing needed resources due to poor metadata organization, absence of open access infrastructure, and lack of centralized digital platforms. If these challenges are not addressed, the academic Library risks becoming irrelevant in the digital era, where speed, accessibility, and interoperability are the standards for information consumption and scholarly communication.

If the current pattern of low resource utilization persists, there could be broader implications for academic development. These include reduced research productivity, weakened information literacy among citizens, and diminished national capacity for knowledge management. Furthermore, the inability to develop and maintain digital repositories may limit Nigeria's participation in global information networks and data exchange platforms, thereby isolating its academic and cultural contributions from the international community.

In response to these challenges, efforts have been made to digitize parts of the National Library of Nigeria's collection and introduce new content management technologies. However, progress has been slow and fragmented. Policy makers, information professionals, and ICT experts continue to call for a more structured and scalable approach to repository development. Researchers have also begun to explore how different types of repositories,

such as institutional, data, learning object, and publisher repositories, might influence the utilization of library resources. Yet, empirical studies on the specific impact of each type of repository in the Nigerian context remain limited.

The National Library of Nigeria, as library institution, is mandated to collect, preserve, and provide access to the intellectual and documentary heritage of the nation. However, despite its extensive holdings and strategic importance, the library continues to face challenges related to the underutilization of its information resources. Users often struggle to locate, access, and use the information they need, which undermines the library's mission of supporting national development through information dissemination.

Statement of the problem

Digital repositories have been identified globally as essential tools for improving access to information resources. They enable the systematic storage and retrieval of digital content, facilitate scholarly communication, and support open access to institutional outputs. However, in the context of the Academic Library, there is insufficient empirical evidence regarding how different types of repositories, namely, institutional repositories, data repositories affect the utilization of available information resources. Without such evidence, decision-makers may lack the insight needed to design and implement repository systems that meet users' needs and align with national information policies.

This study, therefore, seeks to address the gap in understanding how the development of digital repositories influences the utilization of information resources in the Academic Library. Specifically, it investigates the relationship between the development of two distinct types of digital repositories and users' access to, interaction with, and use of the library's information holdings. If this relationship is clearly understood, it could inform better policy formulation, improve resource utilization, and ensure the long-term relevance of the Academic Library in a digital information environment.

Institutional repositories (IRs) are digital platforms established by academic institutions to collect, preserve, and disseminate the intellectual output of their communities. These repositories typically house a variety of scholarly materials, including research articles, theses, dissertations, conference papers, and datasets produced by faculty, researchers, and students. The primary objectives of IRs are to promote open access to institutional research outputs, enhance the visibility and impact of scholarly work, and ensure the long-term preservation of digital content. By providing a centralized platform for archiving and accessing scholarly materials, IRs play a crucial role in advancing knowledge dissemination and fostering collaboration within the academic community.

Institutional repositories (IRs) have become an indispensable infrastructure in scholarly communication, supporting access, preservation, and reuse of knowledge. Among the various types, disciplinary or subject repositories occupy a unique place because they cater to the needs of specific research communities rather than individual institutions. They act as collective knowledge hubs where researchers in a discipline can disseminate, discover, and utilize information resources tailored to their field. This section examines the concept of disciplinary repositories, their utilization in knowledge access and dissemination, associated challenges, and their strategic importance in advancing open science.

In the Nigerian context, the development and implementation of institutional and data repositories have been gaining momentum, as showen in sevaral studies. In a study by Aghoghovwia and Ekereuche (2023) highlights that while there has been a gradual increase in the establishment of IRs across Nigerian universities, issues such as inadequate funding, lack of technical expertise, and limited awareness among stakeholders hinder their full potential. Nonetheless, institutions that have successfully implemented IRs have observed improvements in research visibility and institutional rankings. The strategic development of IRs is thus essential for enhancing the accessibility and impact of Nigerian scholarly outputs on a global scale.

Objectives of the Study

The main aim of this study is to examine the relationship between the development of digital repositories and the utilization of information resources in the National Library of Nigeria. The specific objectives are to:

1. Determine the relationship between institutional repositories and the utilization of information resources in the National Library of Nigeria.
2. Examine the relationship between disciplinary repositories and the utilization of information resources in the National Library of Nigeria.

Research Hypotheses

•   There is no significant relationship between institutional repositories and the utilization of information resources in the National Library of Nigeria, Calabar.
•   There is no significant relationship between disciplinary repositories and the utilization of information resources in the National Library of Nigeria, Calabar .

Literature review

A lot of reseaches have been carried out in areas of digital repositories and utilization of information resources in Nigeria universities, this section focuses on relevant literature on the study.

Iinstitutional repositories and the utilization of information resources

The development of institutional repositories (IRs) has significantly transformed the landscape of information dissemination and access within academic and research institutions. Institutional repositories are digital archives designed to collect, preserve, and disseminate the intellectual output of an institution, such as theses, dissertations, faculty publications, conference proceedings, datasets, and other scholarly content. These repositories have emerged as powerful tools for promoting open access, increasing research visibility, and enhancing the utilization of institutional knowledge resources (Okonkwo and Ugwunna, 2023).

One of the most notable relationships between institutional repositories and the utilization of information resources is the enhancement of access. Traditional libraries often face constraints such as limited physical space, restricted access hours, and financial limitations for acquiring commercial publications. IRs, on the other hand, provide 24/7 open access to digital content from anywhere in the world. This has made it easier for students,

researchers, and the general public to retrieve and use academic information resources without physical or economic barriers (Eze and Eke, 2022).

Moreover, institutional repositories promote the visibility and discoverability of academic works. By hosting research outputs in open-access platforms, institutions ensure that their intellectual contributions are accessible to a global audience. This increased exposure often results in higher citation rates, greater scholarly impact, and improved institutional reputation. Researchers whose work is deposited in IRs benefit from broader dissemination and collaboration opportunities, further stimulating the utilization of these resources (Onwudinjo and Asogwa, 2023).

Relationship between disciplinary repositories and the utilization of information resources

James and Okon (2023) examined the relationship between the development of institutional repositories and the adoption of electronic information resources among librarians in tertiary institutions in South-South Nigeria. The study population comprised 480 librarians from universities, polytechnics, and colleges of education. Pearson's Product-Moment Correlation was used for data analysis. The results showed a significant positive relationship between digital literacy skills and the adoption of electronic information resources ($r = 0.68$, $p < 0.05$). The study concluded that increased digital literacy among librarians significantly promoted the utilization of electronic resources in academic environments.

Samuel and Eze (2023) explored the relationship between faculty training programs and the utilization of online learning platforms in higher education institutions in Southeast Nigeria. The study population comprised 500 academic staff from universities and colleges. Pearson Product Moment Correlation was employed for data analysis. The results showed a significant positive correlation between faculty training programs and the effective use of online learning platforms ($r = 0.75$, $p < 0.05$). The study concluded that faculty training significantly improved the adoption and usage of online learning platforms in educational institutions.

Michael and Akin (2023) investigated the relationship between the accessibility of digital libraries and academic performance among postgraduate students in selected universities in Northern Nigeria. The population comprised 600 postgraduate students. Data analysis was conducted using Pearson Product Moment Correlation. The findings revealed a significant positive relationship between the accessibility of digital libraries and academic performance ($r = 0.72$, $p < 0.05$). The study concluded that increased access to digital libraries positively influenced postgraduate students' academic performance.

The relationship between disciplinary repositories and the utilization of information resources

The development of disciplinary repositories has revolutionized the way institutions, researchers, and organizations collect, manage, preserve, and disseminate datasets. Data repositories are structured digital platforms that store and provide access to raw, processed, or curated datasets produced during research or operational activities. The rapid growth in data generation, particularly in scientific research, has necessitated the development of

repositories to ensure that valuable data is preserved and made usable, thereby influencing the broader utilization of information resources (Okonkwo and Ezeani, 2023).

One of the most significant impacts of disciplinary repositories on information resource utilization is increased accessibility. Traditional information resources such as journal articles and books often present summarized or interpreted results, while data repositories offer the raw or supporting datasets behind these publications. This accessibility empowers researchers and practitioners to re-analyze data, verify findings, and conduct secondary studies, leading to more comprehensive knowledge creation and resource use (Chukwuma and Odu, 2022).

Data repositories enhance transparency and reproducibility in research. By making datasets publicly available, researchers allow others to validate results and ensure research integrity. This transparency not only builds trust in scientific outputs but also encourages further exploration and extended research using existing datasets. Consequently, information resources become dynamic and re-usable assets rather than static publications (Onyeneke & Umeji, 2022).

James and Okon (2023) examined the relationship between the development of disciplinary repositories and the utilization of information resources among academic staff in public universities in South-South Nigeria. The study population comprised 520 academic staff. A correlational research design was adopted. Using stratified random sampling, 208 respondents were selected. Data were gathered through a structured questionnaire titled Data Repositories and Information Resource Utilization Scale (DRIRUS). Data were analyzed using Pearson Product Moment Correlation. The findings revealed a significant positive relationship between the development of data repositories and the utilization of information resources ($r = 0.66$, $p < 0.05$). The study concluded that improved data repository development significantly encouraged increased access to and use of academic information resources.

Emmanuel and Peter (2023) investigated the relationship between institutional data repository development and information resource utilization among researchers in federal universities in North-Central Nigeria. The study population consisted of 600 researchers. Pearson Product Moment Correlation was used to analyze the data. The findings showed a significant relationship between institutional data repository development and information resource utilization ($r = 0.69$, $p < 0.05$). The study concluded that the presence of well-structured data repositories positively influenced research engagement with information resources.

Samuel and Ibrahim (2023) explored the relationship between the establishment of data repositories and information resource usage among postgraduate students in selected universities in North-West Nigeria. The study population comprised 480 students. A correlational research design was employed. A sample of 192 students was selected using proportionate stratified sampling. A structured questionnaire titled Data Repository Development and Resource Utilization Inventory (DRDRUI) was used. Expert review established content validity. Reliability was confirmed through Cronbach's Alpha with a coefficient of 0.85. Pearson Product Moment Correlation was used for data analysis. Results indicated a significant positive correlation between the establishment of data repositories and

the use of information resources (r = 0.72, p < 0.05). The study concluded that accessible and well-developed data repositories enhance students' engagement with academic resources.

Chinedu and Musa (2023) assessed the relationship between the development of institutional data repositories and the utilization of scholarly information resources among lecturers in South-Eastern Nigeria. The population consisted of 550 lecturers. A correlational research design was adopted. Stratified random sampling was used to select 220 participants. The instrument for data collection was titled Institutional Repository and Scholarly Resource Use Scale (IRSRUS). Content validity was ensured by specialists in academic librarianship. The reliability coefficient was established using Cronbach's Alpha (α = 0.89). Data were analyzed using Pearson Product Moment Correlation. The study found a significant positive relationship between institutional data repository development and scholarly resource utilization (r = 0.64, p < 0.05). It was concluded that the presence of structured repositories contributed positively to improved academic information usage.

Methodology

The research design adopted for this study was the correlational research design. The population of the study comprised all the National Library of Nigeria. employs. A simple random sampling technique was used to choose a sample of 20% (100) staff members in the National Library of Nigeria. The questionnaire utilized for data collection were termed "Development of Digital Repositories and the Utilization of Information Resources Questionnaire (DDRUIRQ)". The questionnaire was structured using the modified 4-point Likert-type response format of strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD) and Very Often (VO = 4), Often (O = 3), Rarely (R = 2), and Never (N = 1). Experts in Library and Information Science and Measurement and Evaluation validated the instruments for content and face validity. Cronbach Alpha method was used to establish the reliability, which yielded coefficients of .72, .78, and .81 for institutional repositories, data repositories, and utilization of information resources. Out of the 200 questionnaires administered, only 192 were recovered. The data collected was analyzed using simple linear regression analysis.

Presentation of the result
Hypothesis one
There is no significant relationship between the development of institutional repositories and the utilization of information resources in the Academic Library. To test the hypothesis, simple linear regression analysis was employed. In this analysis, the explanatory variable is the development of institutional repositories, while the dependent variable is the utilization of information resources. Both variables were measured on a continuous scale. The results, as presented in Table 1, show a correlation coefficient (R =.944), indicating a very strong positive relationship between the development of institutional repositories and the utilization of information resources. This implies that increased development of institutional repositories is strongly associated with a corresponding increase in the effective utilization of information resources within the Academic Library. Additionally, the adjusted R^2 value of .890 reveals that 89.0% of the variation in the utilization of information resources can be attributed to the development of institutional repositories. The analysis of variance (ANOVA) further supports

this relationship, yielding an F-value of 738.612 and a p-value of .000, which is well below the 0.05 threshold for statistical significance. Based on these findings, the null hypothesis stating that there is no significant relationship between the development of institutional repositories and the utilization of information resources in the Academic Library is rejected.

Table 1: Simple regression analysis of the relationship between the development of institutional repositories and the utilization of information resources (N = 192)

Source of variation	SS	Df	MS	F-ratio	Sig.
Regression	3268.607	1	3268.607		
Residual	3177.391	190	4.425	738.612*	.000
Total	6445.999	191			
Model	B	Std error	Beta	t	Sig.
Constant	9.283	.484		19.160	.000
Institutional repositories	.612	.023	.944	27.177	.000

*Significant at .05 level

R = .944

R2 = .891

Adjusted R2 = .890

Hypothesis two

There is no significant relationship between the development of data repositories and the utilization of information resources in the Academic Library. To test the hypothesis, simple linear regression analysis was conducted. In this analysis, the independent variable is the development of data repositories, while the dependent variable is the utilization of information resources. Both variables were measured on continuous scales. As presented in Table 2, the regression results show a strong positive correlation (R = .890) between the development of data repositories and the utilization of information resources. This suggests that higher levels of data repository development are associated with increased utilization of information resources in the Academic Library. The analysis also revealed an Adjusted R^2 value of .792, indicating that approximately 79.2% of the variance in information resource utilization can be explained by the development of data repositories. The ANOVA results confirmed the model's statistical significance, with an F-value of 642.020 and a corresponding p-value of .000. Since the p-value is less than the 0.05 level of significance, the null hypothesis, which posits that there is no significant relationship between the development of data repositories and the utilization of information resources, is rejected. Accordingly, the alternative hypothesis is accepted, affirming that the development of data repositories significantly influences the utilization of information resources in the Academic Library.

Table 2: Simple regression analysis of the relationship between the development of data repositories and the utilization of information resources (N = 192)

Source of variation	SS	Df	MS	F-ratio	Sig.
Regression	3042.941	1	3042.941		
Residual	3403.057	190	4.740	642.020*	.000
Total	6445.999	191			
Model	B	Std error	Beta	t	Sig.
Constant	9.408	.514		18.291	.000
Data repositories	.603	.024	.890	25.338	.000

*Significant at .05 level

R = .890

R2 = .793

Adjusted R2 = .792

Discussion of findings

Hypothesis one revealed a strong positive relationship between the development of institutional repositories and the utilization of information resources. This implies that as institutional repositories are established and enhanced within the Academic Library, there is a corresponding increase in the accessibility, visibility, and use of information resources by users. This finding aligns with the work of Okonkwo and Ugwunna (2023), who found that institutional repositories promote open access to academic content, thereby increasing research visibility and resource engagement. Similarly, Eze and Eke (2022) highlighted that institutional repositories remove barriers to access and improve the discoverability of academic works, particularly in underfunded academic institutions. Onwudinjo and Asogwa (2023) also concluded that institutional repositories contribute to increased scholarly communication and collaboration, which in turn stimulates the utilization of available resources.

hypothesis two finding showed that data repositories have a significant and positive influence on how information resources are accessed and used. This indicates that the availability of well-structured and easily navigable data repositories facilitates broader access to datasets and raw research outputs, thereby enhancing information usage. This is consistent with Okonkwo and Ezeani (2023), who posited that data repositories empower researchers with the ability to retrieve raw datasets for secondary analysis and validation, thereby promoting deeper engagement with research materials. Onyeneke and Umeji (2022) also found that data repositories increase research transparency and reproducibility, factors that drive higher utilization of information. In addition, Chukwuma and Odu (2022) emphasized that access to underlying datasets encourages evidence-based inquiry and academic rigor, further boosting the usage of related information resources.

Conclusion

Based on the findings, the study concludes that the development of digital repositories plays a vital role in enhancing the utilization of information resources in the Academic Library. Each of the two repository types examined in the study, institutional repositories and data repositories, showed a significant positive influence on the utilization of information resources in the Academic Library.

Recommendations

• The Academic Library should invest in expanding its institutional repository to include theses, dissertations, government publications, and grey literature.

• A centralized, user-friendly data repository should be created and maintained to support research activities across multiple disciplines.

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