



Digitalization of Information Resources for Global Visibility and Ranking among University Libraries

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Abstract

The digitalization of information resources plays a pivotal role in enhancing global visibility and institutional ranking among university libraries. This study investigated the extent of digitalization efforts in university libraries in Delta State, Nigeria, focusing on the visibility, repository content, librarian digital skills, and challenges. The study pursued five specific objectives, including assessing the extent of digitalization, digital competencies of librarians, repository content, global visibility, and associated challenges. A descriptive survey research design was adopted. The population comprised librarians in university libraries with existing institutional repositories and active WhatsApp accounts. Using a convenience sampling method, 42 librarians from four university libraries participated. A self-developed questionnaire titled Digitalization of Information Resources for Global Visibility and Ranking among University Libraries in Delta State, Nigeria (DIRGVRULDSN) was employed. The instrument's validity was ensured through expert review, while its reliability was confirmed with a pilot test (Cronbach's alpha = 0.83). Data were collected via Google Forms shared through WhatsApp and analyzed using descriptive statistics, including mean and percentage. Findings show a moderate level of digitalization (mean = 3.06), and librarians demonstrated moderate digital skills (mean = 2.55), with high proficiency in scanning and computer use. Repositories primarily contain dissertations, inaugural lectures, and e-books. Global visibility was moderate (mean = 2.56), though ranking performance was poor (mean = 1.42). Challenges identified include inadequate bandwidth (83%), poor power supply (76%), and insufficient training (71%). In conclusion, institutional repositories enhance visibility but need better infrastructure and strategic planning. It is recommended that universities without repositories initiate proposals, and training budgets be prioritized to ensure the sustainability and advancement of digital initiatives for global competitiveness.

Keywords: Digitalization, Information Resources, University libraries, global ranking, Visibility, Delta State

Introduction

Recently, there has been the issue of showcasing intellectual content/ output for global visibility, which is used to rank among universities within and outside Nigeria. Showcasing intellectual content is possible when information materials housed in university libraries are digitalised. Olubiyo et al. (2022) avowed that digitization refers to all the stages involved in making

information materials in analogue format into a digital format accessible online. Adogbeji and Akporhonor (2021) emphasized that it is a process in which materials are converted from hard copies to electronic or soft copies. The collection of information materials in a physical format converted to a machine-readable format in the library is meant to offer automated access and preservation. This process is known as the digitalization of information materials. Digital collections are organized by librarians and presented to users for usage. According to Lampert and Vaughan (2009), soft copies may offer features such as full-text search, browsing, zooming and panning, side-by-side comparison of objects, and export for presentation and reuse. Digitization is an essential aspect of data processing, storage, and broadcasting because it permits information materials of all types in all formats to be passed out with the same efficacy and proficiency. Unlike analog data, which is static, digital data can be more easily shared and accessed at anytime and anywhere. Wikipedia (2022) asserted that most institutions digitized their information resources to improve access and to preserve their information materials for posterity. In essence, most libraries and institutions digitize items to prolong the use of fragile materials and generate more user access points. At present, public institution libraries are compelled by TETFund to digitize their intellectual content for visibility and global ranking where institutions are to showcase their content such as publications, projects, dissertations, theses, textbooks, curriculum vitae, and patents among others to the universe, this can only be possible if their contents are digitized.

According to Vocabulary.com (2025), visibility refers to “the degree of being visible, perceptible by the eyes”. Adeyemo and Jamogha (2021) asserted that visibility offers chances for the universe to evaluate the eminence of university events in the areas of teaching, learning, and research. These activities by the university thus result in promoting intellectual output in the form of intellectual publications and other documents that originate from the university. Adeyemo and Jamogha further stated that one platform that permits information access to publications/documents from any location in the universe as well as enhancing the visibility of a university is an Institutional Repository (IR). According to Mali and Deshmukh (2022), institutional repositories are managed by librarians. In essence, librarians manning libraries should ensure that digitized information materials are provided to their patrons in respective geographical locations, and when information about an institution is made available on the Uniform Resource Locator (URL), it paves the way for global ranking.

Delta State is located in the South-South of Nigeria and named after the Niger Delta which was formed from the former Bendel State, on the 27th of August, 1991. It is surrounded on the North by Edo State, the East by Anambra and Rivers states, and on the South by Bayelsa State, while to the West is the Bight of Benin, which covers about 160 kilometres of the state's coastline (Wikipedia,2025). In light of the foregoing, this study focuses on digitalizing information resources for global visibility and ranking among university libraries in Delta State. There have been several studies that have focused on the digitization of information resources for global visibility and ranking among university libraries. However, no studies that are known to the authors, which have been carried out on digitizing information materials for global visibility and

ranking among university libraries in Delta State. This study is intended to fill this research gap.

Objectives of the study

The core objective of the investigation is to ascertain the digitization of information resources for global visibility and ranking among university libraries in Delta State. The specific objectives are to:

1. investigate the extent of the digitalization of information resources for global visibility and ranking among university libraries in Delta State, Nigeria.
2. ascertain the extent of digitized skills possessed by librarians in the university libraries in Delta State;
3. ascertain information materials housed in the institutional repository in the university libraries;
4. determine the extent of global visibility of the institutional repository of the university libraries; and
5. find out the challenges that librarians encounter in digitalizing information materials in the university libraries in Delta State.

Literature Review

Digitalization of Information Resources for Global Visibility and Ranking

Related literature abounds on the digitalization of information resources for global visibility and ranking. For instance, Igbo et al. (2022) asserted that no library can expect to remain relevant should it continue to depend solely on the traditional mode of service provision characterized by physical interaction between the librarian and users. This implies that the digitalization of information materials gradually takes over the era of the traditional mode of dissemination of information materials. Pandey and Misra (2014) stated that the explosion of e-resources; the deteriorating budget for the procurement of library resources; the wish to access materials in isolated locations; the pursuit of teamwork, partnerships, and resource allocation; and the ever-increasing cost of protecting analogue materials, and so on, are some of the forces that impelled the digitization of annals and records.

Globally, libraries are responding by redefining their services to meet new expectations, and this is possible when librarians and the management of institutions embark on the digitalization of information resources. According to Malak (2025), the exertion to convert the institution's knowledgeable property from analogue data to digital type is known as digitization. Digitization makes the library materials available electronically, providing wider access to its collections. Digitalization of library materials for global visibility and ranking has become an obligation to showcase institutional intellectual content. Jagboro et al. (2012) asserted that aside from the machines that act as interfaces, it is now conceivable to have most library assets stored virtually. It is essential to know that when soft copies are put on the web, they increase the library's visibility to users globally. Similarly, Olubiyo et al. (2022) asserted that digitization makes library materials available electronically, thereby providing wider access to its collections, and where there is the

networked campus, patrons can use the library's digitized materials from their hostels, offices and lecture halls even when the library is physically locked.

Jagboro et al. (2012) emphasized that many people can gain access to different information materials needed at any given time. Olubiyo et al. (2022) asserted that this serves as an instrument for improvement and development, especially in a situation where attention is drawn to the academic content and ways of digitizing and preserving it. Olubiyo et al. further asserted that hundreds of libraries and related institutions have been launching projects designed to digitize their collections in response to the universal information exchange and for wide outreach. Nneji (2018) proclaimed that it might be decided that digitization accomplishes two of the main purposes of a library:

- Access to accessible information materials;
- Preservation and conservation of materials for posterity.

Similarly, Igbo et al. (2022) asserted that the provision of digital materials is dynamic as part of the enrichment of quality service delivery of today's libraries because such materials can be shared, accessed, used, and exchanged faster and made available to numerous individuals at equal time, irrespective of location. Igbo et al. (2022) stated that the whole issue of strengthening digital information services lies in the provision of strong institutional support through policies that would support online information services and ensure the capacity development of librarians to place them at prompt service delivery.

Information Materials Housed in the Institutional Repositories

Eze and Nwachukwu (2018) conducted a study to examine the content housed in institutional repositories (IRs) across four Nigerian universities. The study found that research papers, postgraduate theses, reports, and conference proceedings were the most common materials stored in these repositories. However, issues such as a lack of technical know-how, insufficient institutional support, and inadequate awareness about IRs among staff and students hindered the full utilization of these repositories. The authors recommended enhancing training for staff, increasing awareness, and improving infrastructure to make IRs more effective in preserving and disseminating knowledge. Similarly, Ahmed and Abubakar (2019) examined the role of IRs in promoting open access in Nigerian university libraries, identifying that institutional repositories contained mostly journal articles, research papers, theses, and dissertations. However, their study highlighted the slow adoption of open-access policies and low participation by faculty members in submitting materials. They stressed the need for policy development to promote open access, encourage faculty engagement, and provide training on contributing to IRs.

In line with these findings, Chiazor and Akinbode (2020) conducted a case study analyzing the types of materials housed in digital repositories of Nigerian universities. Their study found that theses, dissertations, books, research papers, and institutional reports were the most common types of materials in these repositories. They highlighted that although the repositories served as good platforms for knowledge sharing, the lack of effective metadata and cataloguing standards hindered the discoverability of these resources. They recommended improving metadata standards

and increasing awareness of these repositories among students and faculty. This is also echoed by Mbatl and Waha (2020), who explored the impact of IRs in South African universities. Their study found that theses, dissertations, conference papers, and journal articles were predominantly housed in IRs. However, they noted barriers such as insufficient faculty participation, lack of awareness, and poor repository maintenance. They recommended continuous capacity building for staff and faculty, as well as better promotion of open-access policies to overcome these barriers.

Similarly, Olanlokun and Fadare (2021) investigated the content of institutional repositories in Nigerian university libraries and their use by faculty members. They found that theses, dissertations, journal articles, conference papers, and institutional research reports were the most frequently deposited materials. Despite the available content, faculty participation remained low due to a lack of incentives, awareness, and training on the benefits of IRs. The study called for better integration of IRs into the academic workflow and enhanced awareness campaigns about the importance of repositories in increasing research visibility. Collectively, these studies highlight the need for improved training, awareness, and policy support to maximize the potential of IRs in enhancing research visibility and dissemination.

Institutional Repositories in University Libraries

Institutional repositories (IRs) serve as digital platforms for collecting, preserving, and disseminating the scholarly output of academic institutions. They enhance the global visibility and accessibility of research materials, thereby contributing to the academic reputation and ranking of universities. The following reviews synthesize findings from six studies conducted from 2014 onwards, focusing on the content housed within IRs and their impact on global visibility.

Ukwoma and Okafor (2017) investigated the acquisition and management of content in IRs across five Nigerian universities. They found that the University of Nigeria Nsukka (UNN) had the highest volume of content, totalling 21,461 items. The study identified that UNN and the Federal University of Technology Akure archived a diverse range of materials, including journal articles, theses, and dissertations. The primary source of content was the postgraduate schools of these institutions. The study highlighted the importance of open-access policies, the use of metadata standards like Dublin Core, and platforms such as DSpace in enhancing the visibility and accessibility of institutional research outputs. The authors recommended organizing workshops to raise awareness about the role of IRs in promoting global visibility. This study examined the characteristics and global visibility of open-access IRs among Asian universities. The findings revealed that Japan was the largest contributor to Asian IRs, followed by India and Taiwan. However, only 12% of these repositories were listed in the top 400 of the Ranking Web of World Repositories, indicating that a significant number of Asian IRs lacked global visibility. The study suggested that universities should enhance their web policies and increase the quality and quantity of research publications in their IRs to improve global rankings and visibility.

Nunda and Elia (2019) examined strategies for enhancing the visibility of African research outputs through IRs. They emphasized the importance of adopting international standards for metadata and content management to improve discoverability. The study also highlighted the role of institutional policies in promoting the use and contribution to IRs. By addressing these areas,

African universities can increase the global visibility of their research outputs. Atchison (2015) conducted a systematic review of studies on the impact of IRs, focusing on citation counts, exposure, and administrative benefits. The review found that self-archived papers in IRs received more citations, enhancing the scholarly impact of the authors and institutions. Increased exposure was also noted, with IR content being more discoverable through search engines like Google. The study concluded that IRs play a significant role in enhancing the visibility and impact of institutional research outputs.

Extent of Digitization Skills Possessed by Librarians

Apart from institutional aid through strategies and funds being made reachable to the university library, librarians manning libraries have a serious part to play in endorsing access to information materials; thus, in essence, librarians should be skillful in digitalization art.

Igbo et al. (2022) averred that circumstances where the patrons find it hard to use the system, either because of the fear of the technology or because of a deficiency of digital knowledge, need the involvement of a librarian who is conversant and knowledgeable in digital information service to bridge the space. According to Scochi et al. (2012), information materials should be more attractive (visible), and individuals involved in organizing information components must be professionalized, especially in the procedures used to choose information components that have high information influence and indeed communicate originalities. To increase the visibility of items, according to Bankole (2019), priority should be allocated to titles that are directly pertinent to the programme of the university municipal. Similarly, Azonobi (2021) avowed that the titles chosen should be suitable to the degree of study based on the actual audience and usage, which should be appraised within the framework of existing library materials and anticipated library support for the purchase of other subject-related materials. For university libraries to be visible globally and be ranked among universities in the universe, it is paramount that university management should try as much as conceivable to curb deterrents to the digitalization process.

Challenges Encountered in Digitalization of Information Materials in the University Libraries.

There are several factors affecting the digitalization of Information materials in academic libraries, such as a lack of essential skills, inadequate preparation and training, infrequent power supply, deficiency of information technology experts, meagre subsidy of academic libraries, and endless breakdown in system components and accessories, among others.

Utomi (2014) asserted that the budding of digital information facilities is not exploited in

evolving nations because librarians do not have the necessary skills. He further stated that librarians cannot devise a digital reference model to support library clientele to have the privilege of information because of insufficient training and re-training. Asogwa, et al. (2016) attested that the populace of Nigerian university libraries has Internet sites and related resources, but patrons cannot exploit the use of online materials in academic libraries because of sporadic power supply, frail and lethargic Internet service, dearth of information technology employees, paltry subsidy of university libraries, and infinite changes in computer components, accessories and among other factors.

Ekwelem et al. (2018) identified underprivileged information technology facilities, such as cutting-edge technology like optical fiber networks, with an essential number of terminals, limited Internet connectivity, bandwidth, server instability, persistent failure of electricity supply, and persistent machine breakdowns. Igbo et al. (2022) avowed that the non-existence of appropriate planning for information materials is mandatory for evolving digital materials, the recurrent frequency of technology outmodedness, and the obstacles of copyright and intellectual assets. Ekwelem et al. (2018) recognize a deficiency of managerial support (evidenced by non-written formal policies), deficient skilled and skilled employees, inadequate subject-based proficiency, deficient competent technical specialists (leading to hitches in handling technical matters), absenteeism of information technology knowledge, and few levels computer literateness, and partial prospects for capacity training of librarians as obstructing issues to the real application of digital information facilities in Nigerian academic libraries. Igbo and Imo (2020) examined the electronic information materials sharing among university libraries in Southern Nigeria. Their findings revealed that obstacles affecting access to digitalized information materials are sub-standard library aid services, a deficiency of librarians proficient in digital data services, recurrent breakdowns of systems, and delays in completing the fixing of faculty systems.

Hu (2020) asserted that there are nonexistent formal strategies and a scarcity of management sustenance services as problems for public institutional performance in emerging countries. Olaniyi (2024) identified inadequate staff and staff skills, deficiency of field experts or technical know-how, lack of funding for staff training programmes, lack of sponsorships for staff to participate in training programmes, inadequate budgetary allocation, lack of the facilities in training programmes, lack of written training development policies, lack of familiarity with ICT resources, and training and retraining are bottlenecks affecting automated service delivery.

Insufficient funding is a key problem faced by institutions in their effort to launch and sustain digital repositories. Nigerian institutions have limited financial resources as compared to their counterparts in developed countries (Bashiru, 2010). However, Christian (2008) identified the lack of knowledge of institutional repositories as a major issue hindering the growth and expansion of IR in evolving nations, and thus, they opined that progress on IR can only be achieved when the ignorance of IR is holistically addressed.

Research Methodology

The study used an online survey designed by the investigators with three (3) research objectives. Online surveys make for an ideal alternative; the researchers designed and used easy and short online surveys, so there is not much stress and pressure on respondents (Premise, 2020). Among university libraries in Delta State, Nigeria, it aims to reevaluate the digitization of information materials for worldwide visibility and ranking. Only university libraries with institutional repositories will be included in the study. During the period of this investigation, the researchers found out that some university libraries have yet to commence an institutional repository. Therefore, the study covers only university libraries with an institutional repository. The population is made up of librarians in the university libraries with institutional repositories in Delta State, with WhatsApp accounts.

The researchers adopted this convenience sampling technique for the investigation because it would facilitate easy and speedy data collection, as the investigation was conducted during the hike in transportation costs. WhatsApp was not restricted by the constraint occasioned by the hike in fare hence, it provided an authentic means of gathering data from the librarians. However, this precluded those not on the WhatsApp platform from participating in the survey. A self-constructed questionnaire was titled: “Digitalization of Information Resources for Global Visibility and Ranking among University Libraries in Delta State, Nigeria” (DIRGVRULDSN). The questionnaire consists of four sections. The first section focused on the biodata information of the respondents, while the second section focused on the digitalization of information materials for global visibility and ranking, and included five items:

- the extent of the digitalization of information resources for global visibility and ranking among university libraries in Delta State;
- the extent of digitalized skills possessed by librarians in the university libraries in Delta State;

- information materials housed in the institutional repository in the university libraries;
- the extent of global visibility of the institutional repository of the university libraries; and
- Challenges encountered by the university libraries in the digitalization of information materials in the university libraries.

Data were collated through a Google web form, which was circulated to individuals' accounts and the Nigerian Library Association Delta State chapter WhatsApp group platform. There are eleven university libraries in Delta State, which comprise three federal universities, four state universities, and 4 private universities during the period of this study, which are:

1. Admiralty University, Ibusa, Delta State.
2. Federal University of Petroleum Resources, Effurun, Delta State.
3. Nigerian Maritime University, Okerenkoko, Delta State.
4. Delta State University ,Abraka.
5. University of Delta, Agbor.
6. Delta State University of Science and Technology ,Ozoro.
7. Dennis Osadebe University, Asaba, Delta State.
8. Edwin Clark University Kiagbodo, Delta State.
9. Michael and Cecilia Ibru University, Agbarho-Otor, Delta State.
10. Novena University, Ogume, Delta State, and
11. Western Delta University, Oghara, Delta State.

However, only four universities will be used for this study because they have an institutional repository in place. A total of forty-two (42) Librarians responded from different university libraries with institutional repositories in Delta State.

Online survey research enables librarians in far-off places to access and answer automated data. An online survey has open-ended and closed-ended items that can be completed without stress. The responses were automatically collated, analyzed, and saved in Google Sheets, from which the data was extracted for this study. The questionnaire items used a 4-point scale with response options with the following scores: 4= to a very high extent;3= high extent,2=low extent, and 1 to a very low extent. The questionnaire also has Yes or No options. Out of the 51 copies of the online questionnaire distributed to university libraries in Delta State, 42 were usable. (that is, a response rate of 82.26%).

Results and Discussion

This section covers the results of the study. Among the four university libraries in Delta State, there are one federal university library and three state university libraries with a total of 51 librarians, as indicated in Table 1.

Table 1: Names of Institutions of the Respondents

S/N	Name of Institution	Ownership Status	Number of Responses Sampled	Number of Responses Retrieved	Percentage
1	Federal University of Petroleum Resources Effurun, Delta State	Federal	14	12	23.52
2	Delta State University, Abraka.	State	17	14	27.4
3	University of Delta Library, Agbor.	State	09	07	13.7
4	Delta University of Science and Technology, Ozoro.	State	11	09	17.64
Total			51	42	82.35

Source: Office of the University Librarians, 2025.

The data in Table 1 shows the distribution of respondents from various institutions based on their ownership status. Out of 51 total responses sampled, 42 responses were successfully retrieved, resulting in a retrieval rate of 82.35%. The Federal University of Petroleum Resources, Effurun, Delta State (Federal) contributed 12 responses, accounting for 23.52% of the total responses. Delta State University, Abraka (State) had 14 responses, making up 27.4% of the total. The University of Delta Library, Agbor (State) provided 7 responses, contributing 13.7%, while Delta University of Science and Technology, Ozoro (State) had 9 responses, representing 17.64%. In conclusion, the sample distribution highlights a strong representation of state universities, with Delta State University, Abraka leading in response rate, followed by the Federal University of Petroleum Resources. The overall high retrieval rate of 82.35% reflects good participation across the sampled institutions.

Table 2: Extent of the Digitalization of Information Resources for Global Visibility and Ranking among University Libraries in Delta State, Nigeria.

Statement on Digitisation of Information Resources	VHE	HE	LE	VLE	$\bar{x}$
Information materials stored or preserved are housed in the Institutional Repository	20	15	3	4	3.21
Accounts are created for staff (teaching and non-teaching) to deposit their information materials in the institutional repository	16	15	5	6	2.98
Downloading is free without restriction in the institutional Repository	20	10	4	8	3.00
N = 42 Overall mean = 3.06 Criterion mean = 2.50					

The data in Table 2 reveals that the overall mean for the extent of digitalization in university libraries in Delta State is 3.06, which exceeds the criterion mean of 2.50, indicating that the libraries are moderately digitized. Individual items show that information materials stored in the institutional repository had a mean score of 3.21, reflecting a high level of digitalization, while accounts for staff depositing materials ($\bar{x} = 2.98$) and downloading materials freely ($\bar{x} = 3.00$) suggest moderate progress. In conclusion, the findings imply that while there are efforts toward digitization in university libraries in Delta State, there is still room for improvement, particularly in enhancing unrestricted access and encouraging greater staff engagement in depositing materials. The overall positive digitalization efforts are evident but need to be expanded to achieve higher levels of global visibility and ranking.

Table 3: Extent of Digital skills possessed by librarians

Extent of Digital Skills	VHE	HE	LE	VLE	$\bar{x}$
Computer skills	18	12	7	5	3.02
Scanning skills	17	15	6	4	3.07
Convert PDF to MS Word courses/seminars in digitalization are provided frequently	5	14	5	18	2.14
Staff courses on digitalization are being sponsored	15	10	10	7	2.79
Allowances are given to the library for attending training/seminars on Digitalization	3	2	17	20	1.71
N = 42 Overall mean = 2.55 Criterion mean = 2.50					

The data in Table 3 reveals that the overall mean for the extent of digital skills possessed by librarians is 2.55, which exceeds the criterion mean of 2.50, indicating a moderate level of digital skills among librarians. Individual items show that scanning skills ($\bar{x} = 3.07$) reflect a high level of digital proficiency, while computer skills ($\bar{x} = 3.02$) also indicate a good level of digital competence. However, courses/seminars in digitalization ($\bar{x} = 2.14$) and staff courses on digitalization ($\bar{x} = 2.79$) reflect moderate involvement in skill development. On the other hand,

allowances for training/seminars on digitalization scored the lowest ($\bar{x} = 1.71$), suggesting a significant gap in supporting librarians' professional development in digitalization. In conclusion, while librarians in Delta State's university libraries possess a moderate level of digital skills, improvements are needed, particularly in providing more frequent training and supporting attendance at digitalization seminars, to enhance their digital competencies and overall effectiveness.

Table 4: Information materials housed in the Institutional Repository

Information materials	Agree		Disagree	
	Freq.	%	Freq.	%
Patents	8	19	34	81
Dissertations	31	74	11	26
Curriculum Vitae	14	33	28	67
Publications	30	71	12	29
Inaugural lectures	30	71	12	29
Theses	15	36	27	64
Projects	13	31	29	69
E-proposals	15	36	27	64
E-projects	15	36	27	64
E-dissertations	27	64	15	36
E-patents	17	40	25	60
E-circulars	25	60	17	40
E-Technical reports	26	62	16	38
E-Theses	20	48	22	52
E-books	30	71	12	29
E-newsletters	24	57	18	43
E-press release	25	60	17	40
E-research	22	52	20	48
E-manuscripts	23	55	19	45

Table 4, revealed that a majority of the respondents agreed that dissertations (31, 74%), publications, inaugural lectures, and e-books (30, 71%) respectively, e-dissertations (27, 64%), e-technical Reports (26, 62%), e-circulars and e-press releases (25, 60%) respectively, e-newsletters (57%), e-manuscripts (55%), e-research (52%), in the institutional repository, suggesting these are the most recognized and accepted types of information materials housed within the repository. This indicates that the institutional repository is effectively serving its purpose of preserving and providing access to key scholarly and institutional materials, especially those that support learning, research, and knowledge dissemination.

Table 5: Extent of Global Visibility of Institutional Repository

Extent of Global Visibility	VHE	HE	LE	VLE	Means
The URL is always available on the internet	17	15	4	6	3.02
Users can access scholarly works anytime, anywhere	20	10	7	5	3.07
My institutional repository is very fast and reliable	15	17	6	4	3.02
My institutional repository is always available for ranking yearly	4	6	15	17	1.92
My institutional repository is among the 1 st -50 th in Nigeria	00	00	20	22	1.42
Digitalization of information resources has made research works in my institution to be seen /viewed Globally	13	17	7	5	2.90
N = 42 Overall mean = 2.56 Criterion mean 2.50					

The data in Table 5 reveals that the overall mean score of 2.56, which is above the criterion mean of 2.50, reflects a moderately positive perception of the institutional repository's global visibility, indicating that respondents generally believe it has some level of global reach and accessibility. Specifically, items with mean scores above the criterion mean include: users can access scholarly works anytime anywhere ($\bar{x} = 3.07$), the URL is always available on the internet ($\bar{x} = 3.02$), the repository is very fast and reliable ($\bar{x} = 3.02$), and digitalization of information resources has made research works globally visible ($\bar{x} = 2.90$). These findings imply that while the repository is considered functional, accessible, and contributory to global visibility through digitalization, its poor performance in ranking ($\bar{x} = 1.42$) and national positioning ($\bar{x} = 1.92$) evidenced by low mean scores—highlights a gap in visibility and recognition. In conclusion, although the institutional repository is technically sound and accessible, deliberate efforts are required to enhance its visibility, reputation, and ranking both nationally and globally.

Table 6: Challenges Facing Digitalization in the University Libraries

Problems facing digitalization	Agree		Disagree	
	Freq.	%	Freq.	%
Epileptic Power Supply	32	76%	10	24%
Inadequate /slow bandwidth	35	83%	7	17%
Insufficient computer Systems	27	64%	15	36%
Network problems	31	74%	11	26%
Server Slowness	25	60%	17	40%
Frequent breakdown	32	76%	10	24%
Lack of management sustainability	25	60%	17	40%
Issue of copyright	30	71%	12	29%
Lack of Infrastructure facilities	32	76%	10	24%
Inadequate training	30	71%	12	29%

The data in Table 6 reveals that several challenges significantly impact digitalisation in university libraries. A majority of respondents agreed that inadequate/slow bandwidth (83%), epileptic power supply, frequent breakdowns, and lack of infrastructure facilities (76%) respectively, network problems (74%), copyright issues and inadequate training (71%) respectively, insufficient computer systems (64%), and server slowness and lack of management sustainability (60%) respectively are the challenges that inhibiting digitization in the university libraries

Discussion of the findings

The study found that university libraries in Delta State are moderately digitized, indicating commendable progress in digitalization efforts in terms of storage of information materials in the institutional repository, creation of accounts for staff depositing materials and downloading materials freely from the library websites; however, to enhance global visibility and academic impact, there is a practical need to improve open access and actively involve staff in contributing to institutional repositories. This finding aligns with Emiri's (2017) study, which reported a moderate level of digital literacy skills among librarians in Edo and Delta States, suggesting a foundational capacity for digital initiatives. Similarly, Okeji et al. (2019) found that librarians in Nigerian university libraries possessed moderate digital literacy skills, supporting the notion that while there is a baseline competency, further development is necessary.

The study found that librarians in Delta State's university libraries possess a moderate level of digital skills especially scanning and computer skills, while the university management shows moderate involvement in courses/seminars and staff courses on digitalization. The finding implies that there is a need for increased investment in training and professional development opportunities to strengthen their digital competencies and improve service delivery in a technology-driven library environment.

This is consistent with the findings of Okeji et al. (2019) which reported that librarians in Nigerian university libraries had moderate digital literacy skills, indicating a widespread need for enhanced training programs. In contrast, Ogunbodede and Atchrimi (2024) found that librarians in South-South Nigeria exhibited a high level of basic digital competence skills, suggesting that certain regions may have more advanced training initiatives or access to resources.

The study has bare that dissertations, publications, inaugural lectures, e-dissertations, e-circulars, e- technical reports, e-newsletters, e-press releases, e-research works and e-manuscripts are uploaded on the institutional repositories in their institutional repositories while patents, curriculum vitae, theses, projects, e-proposals, e-projects, e-patents, e-theses, and e-books are still in the embryo stage of uploading in the institutional repositories. This is in line with Lor's (2016) finding that, visibility is obtained when libraries have a well-organized network of information materials available.

The respondents further concurred that, their institutions' repositories are very fast and reliable, that users can access scholarly works anytime anywhere, that the institutional repositories are very fast and reliable, and that the digitalization of information materials has made research works in their institutions' repositories visible, globally. This is in agreement with Orsu's (2019) finding that academic visibility leads to recognition and prestige, while recognition leads to usage. In the same vein, Emeghara (2018) asserted that inordinate and pulsating libraries are restrained by the close visibility of information materials attained or subscribed to through trustworthy publishers as well as the eminence of collections.

The study found that digitalization efforts in university libraries are hindered by several challenges, including inadequate bandwidth, epileptic power supply, lack of infrastructure, network issues, copyright concerns, insufficient training, limited computer systems, server slowness, and poor management sustainability, implying that addressing these obstacles through improved infrastructure, policy support, and consistent training is critical to advancing effective digital transformation in the libraries. These challenges are similarly highlighted in the study by Ogunbodede and Atchrimi (2024), who reported that librarians face issues such as inconsistent power supply and poor ICT facilities in acquiring digital skills. Similarly, the finding also corresponds with that of Asogwa, et al. (2016) that, although mainstream Nigerian university libraries have Internet sites and allied materials, clientele cannot exploit the use of online materials in these libraries because of erratic power supply, feeble and inactive Internet service, dearth of information technology staff, deprived cash of academic libraries, and relentless vicissitudes in computer components and accessories, among other factors.

Conclusion

The study concluded that the digitalization of information materials stored /preserved in an institutional repository is a gateway to global visibility and ranking in university libraries. The institutional repository has made patents, dissertations, theses, e-circulars, e-curriculum vitae, e-newsletters, and others done in institutions visible to the outside world. Digitalization of information materials has made librarians in the quest to acquire new skills such as computer and scanning, converting from PDF to MS Word, among others, for survival in this era. However, training and retraining of staff is paramount for continuous progress in the digitalization of information resources for global visibility and ranking. Seminars and conferences on the digitalization of information materials for staff should be held at regular intervals.

In addition, information from this research will be available to university management, stakeholders of tertiary institutions, and management of libraries on the way to advance their institutional repositories and those University libraries who are yet to start the institutional repositories.

Recommendations

From the findings, the following recommendations are made:

1. University libraries in Delta State that are yet to start an Institutional repository should endeavour to write a proposal to the university administrators on the need for an institutional repository. There should be a follow-up on the project.
2. Staff training and retraining on the digitalization of information materials and uploading, is a prerequisite for the continuation of global visibility.
3. Administrators of libraries should put in their budget a subsidy for data subscription, maintenance, and repairs of faculty computers and other gadgets.

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