

AWARENESS AND UTILIZATION OF SCHOLARLY INFRASTRUCTURE AMONG LIS ACADEMICS IN FEDERAL UNIVERSITIES IN NORTHERN NIGERIA

By

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Abstract:

This paper discusses awareness and utilization of scholarly infrastructure among LIS academics in federal universities in northern Nigeria. Grounded in a conceptual model linking awareness, utilization, and visibility, the study explores the relationships among these variables using data collected from 311 respondents. Despite high levels of awareness of Open Access platforms and institutional repositories, actual utilization remains modest, particularly for advanced citation indexing tools. The study identifies institutional inertia, digital illiteracy, and lack of structured policies as limiting factors. Through inferential statistics and correlation analysis, the research highlights the need for deliberate institutional strategies to enhance digital engagement and scholarly visibility. The article concludes with recommendations for integrating scholarly infrastructure into national higher education policies to support research visibility and collaboration.

Keywords: Awareness, Utilization, scholarly infrastructure, LIS academics, citation tools, academic librarians, Nigeria.

Introduction

Digital revolution has fundamentally changed the landscape of scholarly communication thereby, creating unprecedented opportunities for researchers all over the world to disseminate their research work and achieve global visibility. In the contemporary academic environment, the traditional gatekeepers of knowledge dissemination i.e. primarily commercial publishers and

established journals no longer hold exclusive control over scholarly visibility. Instead, a multifaceted ecosystem of scholarly infrastructure has emerged, encompassing open access platforms, institutional repositories, citation indexing tools, and digital publishing networks that collectively determine how academic work reaches global audiences.

Within the framework of Library and Information Science (LIS) practice, education and research, this transformation carries particular significance. Simisaye and Popoola (2022) elucidated that as information professionals, LIS scholars are uniquely positioned to understand and leverage these technological advancements for knowledge dissemination. However, the extent to which this theoretical understanding translates into practical utilization of scholarly infrastructure remains a critical question, particularly in northern Nigeria where institutional capacity and digital literacy may constitute additional challenges.

Generally, Nigeria as Africa's most populous nation and home to numerous higher education institutions, presents a compelling case study for examining the dynamics between scholarly infrastructure awareness, utilization, and global visibility. The LIS community in Nigeria represents a significant portion of the continent's information science scholarship, yet questions persist regarding the effective integration of modern scholarly communication tools into research dissemination practices. While federal universities in Nigeria have made substantial investments in digital infrastructure and many scholars demonstrate awareness of contemporary publishing platforms, the translation of this awareness especially among federal universities in northern Nigeria into meaningful engagement with global scholarly networks remains inconsistent.

The relationship between knowledge creation and global visibility as noted by Owolabi et.al. (2020) is neither linear nor automatic. Simply producing quality research does not

guarantee international recognition or citation impact. Instead, contemporary scholarship requires strategic navigation of digital platforms, understanding of indexing systems, and deliberate engagement with open access principles. This reality creates a potential divide between scholars who effectively leverage scholarly infrastructure and those who remain confined to traditional, often limited, dissemination channels.

Previous research by Suleiman and Joshua (2019), Adamu (2022), Ladipo et.al. (2022), Mahji et.al. (2023) all highlighted the importance of institutional support, policy frameworks, and digital literacy in facilitating scholarly communication. However, limited empirical evidence exists regarding the specific relationships between awareness of scholarly infrastructure, actual utilization patterns, and resulting visibility outcomes among LIS scholars in federal universities in northern Nigerian. This knowledge gap is particularly significant given the potential for enhanced global collaboration and knowledge exchange that effective utilization of scholarly infrastructure could facilitate.

The present study therefore, addresses this gap by examining the complex interplay between awareness, utilization, and visibility among LIS academics in federal universities in northern Nigeria. By developing and testing a conceptual model that links these variables, this research seeks to understand not only the current state of scholarly infrastructure engagement but also the factors that facilitate or impede effective utilization. The findings have implications for institutional policy development, professional development programs, and national strategies for enhancing research visibility and international collaboration. Understanding these dynamics is crucial for several reasons. It provides understanding into how developing nations such as Nigeria can better integrate into global scholarly networks, potentially accelerating knowledge

transfer and collaboration. It also offers practical guidance for federal universities with LIS schools and academic librarians seeking to enhance their scholars' global impact. Finally, it contributes to the broader discourse on digital equity in scholarly communication, highlighting the challenges and opportunities facing academic communities in environments where resources constitute a challenge.

Statement of the Problem

Despite the availability of modern scholarly infrastructures such as Institutional Repositories, ORCID, ResearchGate, there is a significant gap between awareness and actual use among Library and Information Science (LIS) academics in federal universities in Northern Nigeria. Preliminary evidence suggests that while these tools are often promoted by their institutions, engagement levels remain low and uneven. This underutilization has serious consequences such as limiting the scholars' ability to disseminate their research, engage in global knowledge exchange and enhance their academic visibility. However, the specific reasons for this gap i.e. why awareness does not translate into usage are not well understood due to a lack of empirical research. This study therefore aims to investigate the extent of awareness, the level of utilization, and the factors influencing the adoption of scholarly infrastructures among LIS academics in this region. It will also examine the impact of these tools on the scholars' web visibility.

Research Questions

1. What is the level of awareness of scholarly infrastructure among LIS academics in federal universities in Northern Nigeria?

2. What is the extent of utilization of scholarly infrastructure by LIS academics in federal universities in Northern Nigeria?

Hypothesis

1. HO1: There is no significant relationship between awareness, utilization and web visibility of scholarly infrastructure among LIS academics in federal universities in northern Nigeria

Conceptual Framework

The conceptual framework for this study is anchored on the premise that scholarly infrastructure plays a role in enhancing the global visibility of research outputs. In the context of Library and Information Science (LIS) academics, scholarly infrastructure includes institutional repositories, open-access platforms, digital identifiers (e.g., ORCID), academic social networks (e.g., ResearchGate, Academia.edu), citation indexing services (e.g., Google Scholar, Scopus), and other digital tools that support scholarly communication and dissemination. This framework conceptualizes three core variables namely; awareness of scholarly infrastructure, utilization of scholarly infrastructure and web visibility of research outputs.

Awareness refers to the degree to which LIS academics are informed about the existence, purpose, and functionality of scholarly infrastructure. It is influenced by factors such as training programs, peer influence, institutional policies, and exposure through academic forums. Awareness is critical as it often precedes the actual adoption or usage of the infrastructure. Utilization encompasses the frequency and depth of engagement with available scholarly infrastructure. This includes activities like uploading research to institutional repositories, maintaining ORCID profiles, publishing in open-access platforms, and participating in citation

tracking services. Utilization is influenced by digital literacy, institutional support, infrastructure availability, and perceived benefits. Web visibility refers to the degree to which an academic's research output is accessible, discoverable, and cited online. High web visibility can lead to increased citations, collaborations, academic reputation, and professional opportunities. Visibility is assumed to be enhanced by effective utilization of scholarly infrastructure.

The interrelationships in the Framework are that awareness is assumed to be a precursor to utilization. Academics are unlikely to engage with tools they are unaware of. On the other hand, Utilization is posited as the direct influencer of web visibility. Effective and consistent use of scholarly infrastructure increases the discoverability of academic work online. Additionally, contextual factors such as academic rank, years of experience, access to ICT infrastructure, and institutional policies may moderate the relationships between these variables. This framework is guided by the Technology Acceptance Model (TAM), which posits that users' acceptance of technology is influenced by perceived usefulness and ease of use. In this study, the perceived usefulness of scholarly infrastructure and the ease of integrating them into academic workflows shape LIS scholars' awareness and eventual utilization. The conceptual framework is depicted in figure 1 below:

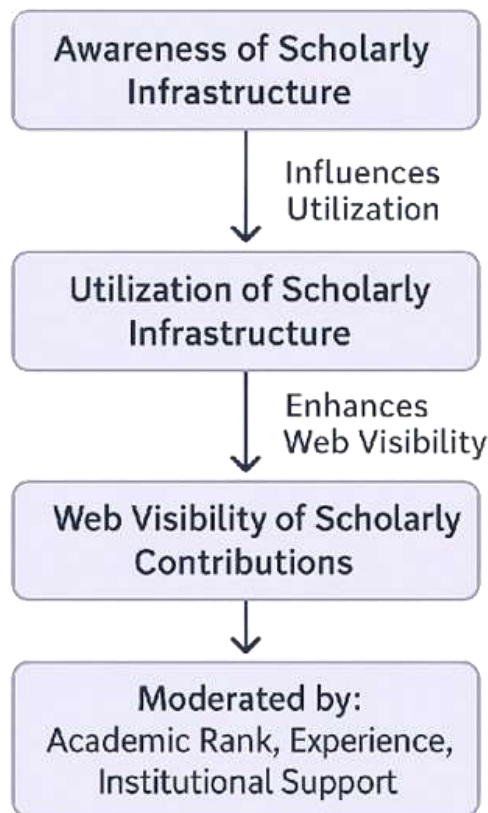


Fig. 1: Conceptual framework showing relationship: awareness, utilization and web visibility

Review of Related Literature

Digital transformation of academic communication has fundamentally reshaped how scholarly knowledge is created, managed, and disseminated. Scholarly infrastructure in the context of this research encompasses the comprehensive ecosystem of digital platforms, tools, and services that facilitate knowledge creation, management and dissemination. They include institutional repositories, open access publishing systems, persistent author identifiers such as ORCID, bibliometric databases like Scopus and Web of Science, and academic networking platforms including ResearchGate and Academia.edu. These infrastructural components serve as the backbone of modern scholarly communication, enabling researchers to enhance the visibility,

accessibility, and measurable impact of their research outputs in an increasingly interconnected academic landscape. The significance of scholarly infrastructure extends beyond mere technological adoption, it represents a paradigm shift toward more transparent, collaborative, and democratized knowledge sharing. As Majhi et al. (2023) argue, the Findable, Accessible, Interoperable and Reusable (FAIR) principles have become fundamental to modern research infrastructure, emphasizing the need for systems that not only store and disseminate knowledge but also ensure its long-term discoverability and utility.

The implementation and adoption of scholarly infrastructure present unique challenges and opportunities particularly in Sub-Saharan Africa. According to Ezema (2013), in Nigeria as in many developing countries, the integration of digital scholarly tools is significantly influenced by a complex interplay of factors including institutional policies, digital literacy levels, technological infrastructure readiness, and resource availability. Onyancha (2011) explained that while many Nigerian universities have established institutional repositories, demonstrating a growing institutional recognition of the importance of preserving and disseminating research outputs, the actual utilization of these platforms by scholars including those in Library and Information Science (LIS) remains disappointingly inconsistent and often sporadic. This disparity between infrastructure availability and utilization reflects broader systemic challenges within the academic ecosystem of northern Nigeria. Okeji et.al. (2018) identified several barriers to utilization, including inadequate technical support, limited awareness campaigns, and the absence of institutional mandates that would encourage or require scholars to engage with digital platforms. Furthermore, the persistence of traditional academic evaluation systems that primarily recognize conventional publication formats may inadvertently discourage scholars from exploring alternative dissemination channels.

Awareness serves as the foundational prerequisite for the meaningful adoption of any technological innovation within academic contexts. Giresh (2020) conceptualized that comprehensive awareness encompasses not merely the superficial knowledge of platform existence, but rather a deep understanding of functionalities, strategic advantages, and potential applications of diverse scholarly tools. This includes familiarity with institutional repositories, open-access journals, academic social networks such as ResearchGate and Academia.edu, and sophisticated bibliometric tools including Scopus, Web of Science, and emerging altimetric platforms. The absence of adequate awareness creates a cascading effect that significantly constrains the potential of scholarly communication systems to foster enhanced visibility and measurable academic impact. Davis and Connolly (2007) and Xia (2010), opined that research conducted across various academic frameworks has consistently demonstrated that substantial numbers of academics remain either completely unaware of available scholarly infrastructure or lack the necessary technical competencies to utilize these tools effectively. In the specific context of Sub-Saharan Africa, Agu and Nkebem (2022) identified that awareness of critical platforms such as ORCID, Scopus, and Web of Science remains severely limited, primarily attributed to inadequate training programs and the persistent digital divide that characterizes many academic institutions in the region. Even in instances where researchers possess basic awareness of such tools, their practical utilization is frequently constrained by multifaceted challenges including infrastructural limitations, perceived relevance to their specific research contexts, and insufficient institutional support mechanisms.

The Nigerian academic landscape presents a particularly illuminating case study of the complex relationship between awareness, infrastructure availability, and actual utilization of scholarly tools. Ezema's (2013) comprehensive investigation revealed that despite the

establishment of institutional repositories across numerous Nigerian universities, usage levels among LIS scholars remain persistently low, primarily due to inadequate training programs and the conspicuous absence of mandatory publishing policies that would incentivize platform adoption. This finding is corroborated by Edem's (2015) research, which highlighted the continued reliance of LIS professionals on traditional publishing models and their notable hesitancy to embrace open-access platforms and digital scholarly tools. The persistence of conventional approaches to scholarly communication reflects not merely technological resistance, but rather a complex web of structural, cultural, and economic factors that collectively impede the transition to digital-first scholarly practices. Sife and Lwoga (2014) further explained that additional barriers identified in the literature include chronic internet connectivity issues, prohibitive subscription costs for premium features of academic platforms, and the absence of clear motivational frameworks that would encourage scholars to invest time and effort in learning new digital tools. These challenges are further compounded by limited technical support infrastructure within many academic institutions and the absence of peer networks that could facilitate knowledge transfer and skill development.

The place of web visibility in contemporary research cannot be glossed over. Web visibility has emerged as a critical determinant of scholarly impact in the digital age, fundamentally altering how academic success is measured and achieved. Thelwall and Kousha (2015) and Ortega (2017) explained that web visibility encompasses the degree to which a scholar's work is discoverable, accessible, and engaging within online academic spaces. Sophisticated tools such as Google Scholar, ResearchGate, Academia.edu, and institutional repositories have been demonstrated to contribute significantly to increasing both the visibility and citation impact of scholarly publications. Empirical evidence strongly supports the

correlation between digital visibility and academic impact. Rowlands and Nicholas (2005) documented that researchers who strategically utilized open access repositories experienced substantial increases in both download rates and citation frequencies compared to their peers who relied exclusively on traditional publishing channels. Similarly, Erfanmanesh et al., (2022) found that more recent studies have shown that scholars who maintain active profiles on academic social networks and contribute to institutional repositories achieve measurably higher h-indices and broader international collaboration networks.

On the contrary, Rodrigues and Gallardo (2018) argued that in developing countries, achieving meaningful web visibility remains a significant challenge due to persistent digital literacy gaps, infrastructural constraints, and limited access to high-quality internet connectivity. These challenges are particularly pronounced for LIS academics, who, as custodians and advocates of information access principles, are expected to model best practices in scholarly communication yet often find themselves constrained by the same systemic barriers that affect their broader academic communities.

The role of institutions in facilitating awareness and promoting utilization of scholarly infrastructure cannot be overstated. Aguaded (2021) argues persuasively that universities must develop and implement comprehensive policies that actively promote the use of institutional repositories, encourage ORCID adoption, and incentivize open access publishing. Without clear institutional mandates, structured incentive systems, or supportive policy frameworks, individual academics may lack the motivation or institutional pressure necessary to prioritize engagement with digital scholarly tools. The importance of systematic institutional support is further emphasized by Mingle et al. (2020), who advocate for the implementation of comprehensive

training programs and sustained awareness campaigns, particularly in regions where the digital divide continues to impede academic progress. Their research demonstrates that well-designed training interventions and workshops can significantly improve digital literacy levels and enhance awareness of available platforms, leading to measurably increased adoption rates. Tenopir et al., (2015) further explained that the establishment of mentoring systems within academic departments and libraries has shown particular promise in helping junior scholars navigate the complex landscape of digital scholarly tools and develop effective strategies for maximizing their academic visibility and impact. These mentoring relationships not only facilitate technical skill development but also help to create sustainable cultures of digital scholarship that can persist beyond individual training interventions.

Methodology

This study adopted a quantitative descriptive survey design. Purposive sampling method was used to select 9 out of the 16 federal universities in northern Nigeria. All the LIS academics in the selected federal universities were covered using total enumeration method. The purposive sampling method was adopted because the nine federal universities had both academic libraries and LIS departments. A structured questionnaire using a 5-point Likert scale was used to collect data from respondents. Four hundred and fourteen (414) copies of the questionnaire were administered, and three hundred and eleven (311) were retrieved giving a response rate of 74.9%. Data were analyzed using SPSS software. Descriptive statistics (mean and standard deviation) were computed to assess general trends. One-way ANOVA tested institutional differences, and Pearson correlation examined relationships between variables. A mean score of 3.0 was used as a benchmark for the interpretation of data.

Table 1: Questionnaire Administration and Response Rate

S/N	University	Questionnaire Distributed	Questionnaire Completed	Percentage
1	Ahmadu Bello University (ABU), Zaria	112	68	16.4
2	Bayero University Kano (BUK), Kano	56	49	11.8
3	Usmanu Danfodiyo University (UDUS), Sokoto	20	20	4.8
4	Federal University of Technology (FUT), Minna	46	34	8.2
5	University of Abuja (UNI ABUJA)	21	20	4.8
6	University of Ilorin, (UNILORIN)	57	49	11.8
7	Modibbo Adama University of Technology (MAUT), Yola	22	19	4.6
8	University of Maiduguri (UNIMAIID)	55	32	7.7
9	Abubakar Tafawa Balewa University (ATBU), Bauchi	25	20	4.8
	Total	414	311	74.9

Source: Field Survey, 2025

Results of analysis

Research Question one: *What is the level of awareness of scholarly infrastructure among LIS academics in federal universities in Northern Nigeria?*

The level of awareness of scholarly infrastructure among LIS academics in the nine (9) federal universities was examined with response scale of Very Low (VL), Low (L), Undecided (U), High (H) and Very High (VH) respectively.

Table 2: Level of awareness of scholarly infrastructure among LIS academics in federal universities in northern Nigeria

S/N	Scholarly Infrastructures	VL	L	U	H	VH	M	SD
1	Institutional repositories	11 (3.5%)	110 (35.4%)	70 (22.5%)	104 (33.4%)	16 (5.1%)	3.01	1.02
2	Open access publishing platforms	41 (13.1%)	112 (36.0%)	75 (24.1%)	72 (23.2%)	11 (3.5%)	2.68	1.08
3	Academic social networks	18 (5.8%)	110 (35.4%)	76 (24.4%)	85 (27.3%)	22 (7.1%)	2.95	1.07
4	Bibliographic management tools	75 (24.1%)	98 (31.5%)	61 (19.6)	60 (19.3%)	17 (5.5%)	2.50	1.20
5	Online databases and journal repositories	26 (8.4%)	113 (36.3%)	74 (23.8%)	84 (27.0%)	14 (4.5%)	2.83	1.06
6	Citation analysis tools	31	96	79	93	12	2.87	1.07

		(9.9%)	(30.9%)	(25.4%)	(29.9%)	(3.9%)		
7	Open educational resources	19	80	101	91	20	3.04	1.02
		(6.1%)	(25.7%)	(32.5%)	(29.3%)	(6.4%)		

Table 2 shows the analysis of the level of awareness of scholarly infrastructure among the respondents. Open Educational Resources (OER) and Institutional Repositories (IR) scored above the benchmark, indicating that LIS academics are highly aware of these infrastructures. Other infrastructures such as Bibliographic Management Tools and Open Access Platforms recorded lower awareness, suggesting the need for awareness campaigns and training. The standard deviation values ranging from 1.02 to 1.20 also indicate moderate variability in responses, meaning not all respondents had similar awareness levels. The higher awareness levels of OERs and IRs among LIS academics in federal universities in northern Nigeria can be attributed to institutional promotion, library-driven advocacy, accessibility, and the professional relevance of these tools to the LIS discipline. This position agrees with the finding of Ocholla, Mostert and Rotich (2016) which revealed that institutional efforts play a vital role in promoting awareness of scholarly infrastructures. Most of the federal universities especially under the TETFund-supported modernization agenda have actively developed and promoted institutional repositories to showcase research outputs. Similarly, OER initiatives have been integrated into training workshops, orientation programs, and curriculum development, particularly for digital teaching and open-access promotion. This institutional push likely increases exposure and awareness among academics.

Research Question two: *What is the extent of utilization of scholarly infrastructure among LIS academics in federal universities in Northern Nigeria?*

The extent of utilization of scholarly infrastructure among LIS academics in the nine (9) federal universities was examined with response scale of Not Utilized (NU), Rarely Utilized (RU), Undecided (U), Frequently Utilized (FU) and Highly Utilized (HU) respectively

Table 3: Extent of Utilization of Scholarly Infrastructure by LIS Academics in Federal Universities in Northern Nigeria

S/N	Scholarly Infrastructures	NU	RU	U	FU	HU	M	SD
1	Institutional repositories	25 (8.0%)	132 (42.4%)	53 (17.0%)	85 (27.3%)	16 (5.1%)	2.6	1.1
2	Open access publishing platforms	60 (19.3%)	98 (31.5%)	55 (17.7%)	80 (25.7%)	18 (5.8%)	2.5	1.2
3	Academic social networks	40 (12.9%)	121 (38.9%)	41 (13.2%)	97 (31.2%)	12 (3.9%)	2.5	1.1
4	Bibliographic management tools	57 (18.3%)	149 (47.9%)	36 (11.6%)	69 (22.2%)	0 (0%)	2.2	1.0
5	Online databases and journal repositories	52 (16.7%)	113 (36.3%)	49 (15.8%)	84 (27.0%)	13 (4.2%)	2.6	1.1
6	Citation analysis tools	9 (2.9%)	111 (35.7%)	91 (29.3%)	81 (26.0%)	19 (6.1%)	2.9	1.0
7	Open educational resources	67 (21.5%)	112 (36.0%)	42 (13.5%)	78 (25.1%)	12 (3.8%)	2.4	1.1

Table 3 revealed that none of them met the benchmark score (3.0) for high utilization. The highest utilization was observed for Citation Analysis Tools (2.9) and Institutional Repositories (2.6) suggests a disconnect between awareness and utilization i.e. being aware does not necessarily translate into active use. The variability in standard deviation again shows moderate divergence in respondent behaviour. The utilization pattern shows that citation analysis tools with mean score of (2.9) indicates a growing awareness among LIS academics about the importance of tracking research impact. Furthermore, institutional repositories and online journal databases and journal repositories had mean scores of 2.6 each, suggesting a fair but inconsistent utilization. The analysis further showed that institutional repositories are moderately utilized

with many LIS academics unsure or underutilizing them. This may be largely due to a lack of full integration of repositories into academic workflow or possible access/technical issues. The key finding here is that none of the infrastructures surpassed the utilization benchmark, indicating a general underutilization of scholarly infrastructure among LIS academics in the region

Test of Hypothesis

Hypothesis one: There is no significant relationship between awareness, utilization and web visibility of research output among LIS academics in federal universities in northern Nigeria.

Table 4: Correlation Between Awareness, Utilization and Web Visibility

Correlations		Awareness	Utilization	Web Visibility
Awareness	Pearson Correlation	1	.886**	.850**
	Sig. (2-tailed)		.000	.000
	N	311	311	311
Utilization	Pearson Correlation	.886**	1	.851**
	Sig. (2-tailed)	.000		.000
	N	311	311	311
Web Visibility	Pearson Correlation	.850**	.851**	1
	Sig. (2-tailed)	.000	.000	
	N	311	311	311

** . Correlation is significant at the 0.01 level (2-tailed).

The results in table 4 confirmed that all correlations are positive, strong ($r > 0.85$) and statistically significant at $p < 0.001$. This means there is a significant and strong relationship between awareness, utilization, and web visibility of research output hence, the null hypothesis (H_{01}) was rejected. These results suggest that LIS academics who are more aware of scholarly infrastructure tools are also more likely to use them, and that both higher awareness and greater utilization are strongly associated with increased web visibility of their research output.

The findings affirm the interconnectedness of the three constructs i.e. awareness, utilization and web visibility within the scholarly communication process. The high correlation between awareness and utilization supports previous research by Tenopir et al. (2012) and Okeji et al. (2018) which suggests that knowledge of digital tools is a prerequisite for meaningful use. The strong relationship between utilization and web visibility further confirms that digital scholarly engagement contributes significantly to online discoverability, citation rates, and broader academic impact.

Recommendations

Based on the findings of this study, the following recommendations are made to enhance the awareness, utilization, and consequent web visibility of research output by LIS academics in federal universities in northern Nigeria:

1. Federal universities in northern Nigeria should organize regular, hands-on training sessions and workshops on the use of scholarly infrastructure, including institutional repositories, bibliometric tools, research networking platforms, and citation management software. Such training should be continuous and tailored to different academic ranks and skill levels.
2. Academic departments and university libraries should embed the use of scholarly infrastructure into research processes, from proposal writing to publication. This may include requiring researchers to maintain updated profiles on platforms such as ORCID, Google Scholar, and ResearchGate.
3. Federal universities in northern Nigeria should implement clear policies mandating the deposit of publications in institutional repositories and encouraging open access

publishing. This will promote compliance and ensure consistent visibility of research outputs.

4. To bridge the technology gap, institutions should invest in reliable internet access, modern research software, and user-friendly repository systems to make scholarly tools easily accessible and functional for academics.
5. Informal learning channels such as peer mentoring, collaborative research groups and departmental seminars should also be leveraged to disseminate knowledge and encourage the adoption of scholarly tools among academics.
6. Federal universities in northern Nigeria should facilitate partnerships between LIS academics in Northern Nigeria and those in other regions or countries to encourage knowledge exchange and the use of advanced scholarly tools for collaborative research projects.
7. Federal universities in northern Nigeria should periodically evaluate the levels of awareness, utilization, and impact of scholarly infrastructure among their staff, using performance indicators such as research output visibility, citation counts, and global collaborations.

Conclusion

This study examined the influence of scholarly infrastructure on the research visibility of Library and Information Science (LIS) academics in federal universities in northern Nigeria, with particular attention to their levels of awareness, extent of utilization and the resulting implications for web visibility. The findings revealed that while awareness levels of certain infrastructures such as Open Educational Resources (OER) and Institutional Repositories (IRs)

were relatively high, this awareness did not always translate into consistent and effective utilization across the board. Infrastructures such as bibliometric tools, citation management software and research networking platforms recorded lower engagement, reflecting a persistent gap between knowledge of these tools and their practical application. Despite the potential of these tools to enhance research visibility, collaboration, and global scholarly impact, systemic barriers such as inadequate institutional training programs, low digital literacy in certain areas, and infrastructural challenges continue to limit optimal adoption.

Finally, the findings highlight the need for strategic institutional interventions, including regular capacity-building programs, mandatory integration of scholarly tools in research workflows and policy frameworks that encourage active participation in scholarly communication platforms. By bridging the gap between awareness and utilization, LIS academics in federal universities in northern Nigeria can significantly improve their global research visibility and contribute more robustly to the advancement of knowledge in their discipline.

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