

# EXPLORING EDUCATORS AND PRACTITIONERS EXPERIENCES THROUGH THE INTEGRATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN LIBRARY AND INFORMATION SCIENCE EDUCATION AND PRACTICE IN FEDERAL UNIVERSITIES IN SOUTH-WEST, NIGERIA

**DR ADEBOLA ADEREMI OLATOYE**

The Nigerian Baptist Theological Seminary,  
Ogbomoso, Oyo State.

**And**

**BOLATITO RUTH ONIGBINDE**

The Nigerian Baptist Theological Seminary,  
Ogbomoso, Oyo State.

## **Abstract**

This study explored the experiences of educators and practitioners with ICT adoption in LIS departments and academic libraries across federal universities in Southwest Nigeria. Guided by the Technology Acceptance Model (TAM) and the Diffusion of Innovations (DoI) theory, the study employed a mixed-methods design combining semi-structured interviews with a structured survey to gather insights on ICT use, challenges, and institutional support mechanisms. Findings revealed that while both educators and practitioners demonstrate strong awareness and positive attitudes toward ICT integration, their effectiveness is constrained by infrastructural inadequacies, insufficient funding, and limited professional training opportunities. The results further highlight disparities between institutional policy intentions and actual implementation outcomes. The discussion situates these findings within broader theoretical and empirical frameworks, emphasizing that ICT integration in LIS is not solely a technological endeavor but an institutional and cultural transformation process. The study concludes with recommendations for enhancing digital infrastructure, curriculum innovation, continuous professional development, and policy coherence. Overall, the paper contributes to understanding the realities of ICT-driven transformation in Nigerian higher education and offers evidence-based pathways for advancing LIS education and practice in the digital age.

**Keywords:** Diffusion of Innovations, Information and Communication Technology, Library and Information Science, LIS educators, LIS practitioners, Technology acceptance.

## Introduction

The integration of Information and Communication Technologies (ICTs) has become indispensable to the advancement of teaching, learning, and professional practice in Library and Information Science (LIS). Globally, ICTs have redefined the operations of libraries and reshaped how information is produced, stored, accessed, and disseminated (Owolabi, 2023; Singh & Rafiq, 2022). In higher education, the digitalization of instruction and scholarly communication has introduced innovative pedagogies such as blended learning, virtual classrooms, and online repositories, which enhance both instructional delivery and research support (Asamoah-Hassan & Boateng, 2021). Within LIS education, ICT integration is critical to preparing graduates with the digital competencies required in contemporary information environments where automation, digitization, artificial intelligence, and data analytics are increasingly dominant (Edam-Agbor, 2025; Tella & Afolabi, 2023).

In the Nigerian context, the federal government has made considerable policy efforts toward incorporating ICTs into tertiary education through initiatives such as the National Policy on ICT in Education and the Nigerian Research and Education Network (NgREN). These initiatives aim to improve infrastructure, promote digital literacy, and facilitate connectivity among universities (Iyawa & Binitie, 2025). Despite these policy frameworks, implementation has remained uneven across institutions due to inadequate funding, limited infrastructure, insufficient training, and inconsistent institutional support (Adewumi & Omotayo, 2022). These systemic barriers have profound implications for both LIS educators and practitioners, who must adapt to evolving digital expectations despite structural limitations. Federal universities in

Southwest Nigeria, among the country's most resource-endowed institutions, present a particularly relevant setting for examining how ICTs are integrated into LIS teaching and practice.

Although the significance of ICTs in education and librarianship is widely acknowledged, the lived experiences of those responsible for enacting ICT integration remain insufficiently documented (Okiki, 2021). Many LIS educators face challenges in redesigning curricula to embed digital literacy, while practitioners contend with limited technological infrastructure and inadequate professional development opportunities (Ezeani & Eke, 2020). The disjunction between policy aspirations and ground realities often leads to a situation where ICT tools are available but underutilized, resulting in suboptimal outcomes in learning and service delivery. Moreover, the rapid emergence of digital innovations such as artificial intelligence (AI), cloud-based systems, and open science platforms demands continuous reskilling, which places additional pressure on both educators and practitioners (Edam-Agbor, 2025; Nwosu & Akinola, 2024).

Theoretically, the adoption and integration of ICTs in education and professional contexts can be explained through models such as the Technology Acceptance Model (TAM) and the Diffusion of Innovations (DoI) theory. The TAM posits that users' acceptance of technology is influenced by their perceptions of its usefulness and ease of use (Davis, 1989), while DoI emphasizes the importance of social systems, communication channels, and organizational readiness in the spread of technological innovations (Rogers, 2003). In the context of Nigerian higher education, these frameworks highlight how institutional policies, cultural norms, and personal attitudes

collectively shape the uptake and effective utilization of ICTs (Iyawa & Binitie, 2025; Tella & Afolabi, 2023).

Despite an expanding body of research on ICT adoption in Nigerian universities, few studies have simultaneously examined the perspectives of both educators and practitioners in LIS departments. This gap is critical, as both groups play complementary roles in shaping the digital future of librarianship: educators are responsible for producing ICT-literate graduates, while practitioners implement and sustain digital services within academic libraries. Understanding their shared and divergent experiences offers a holistic view of the successes, constraints, and evolving dynamics of ICT integration within the Nigerian academic landscape.

Therefore, this study explores educators' and practitioners' experiences with the integration of ICTs in LIS education and library practice in federal universities in Southwest Nigeria. It aims to identify how these technologies are being utilized, the challenges encountered, and the institutional factors influencing their effective adoption. The study contributes to the growing discourse on digital transformation in LIS by providing empirical insights into the realities of ICT integration in developing-country contexts. Findings from this research are expected to inform evidence-based policy decisions, guide professional development initiatives, and enhance the strategic alignment between LIS education and practice in Nigeria's digital era.

### Research Questions

- i. To what extent have ICTs been integrated into LIS education and professional practice within federal universities in Southwest Nigeria?

- ii. What are educators' and practitioners' perceptions and attitudes towards the usefulness and ease of use of ICTs in their professional and instructional activities?
- iii. What are the institutional and infrastructural factors that influence the successful adoption and utilization of ICTs in LIS education and practice?
- iv. What are the challenges encountered by LIS educators and practitioners in the process of ICT integration?

### Literature Review

Information and Communication Technologies (ICTs) encompass a broad range of digital tools, applications, and infrastructures that enable the acquisition, processing, storage, and dissemination of information in electronic form (Tella & Afolabi, 2023). In Library and Information Science (LIS), ICT integration involves embedding digital technologies into pedagogical practices, library operations, and information services. This integration is not merely technological but transformative, influencing the competencies required of LIS graduates and the modalities through which information professionals perform their duties (Owolabi, 2023). In academic libraries, ICTs facilitate automated cataloguing, digital repositories, virtual reference services, and access to e-resources, while in LIS education, they underpin blended and online learning models that develop digital literacy and critical information management skills (Singh & Rafiq, 2022). ICT integration thus reflects a convergence between technological innovation and professional practice. The transformation of LIS from traditional custodianship to

digital knowledge management requires both educators and practitioners to adapt to evolving technologies such as artificial intelligence (AI), machine learning, data analytics, and open access platforms (Edam-Agbor, 2025). Consequently, ICT competence has become a key professional benchmark for librarians and an essential pedagogical component for LIS educators (Nwosu & Akinola, 2024).

Two dominant frameworks underpin scholarly discussions of ICT adoption in educational and professional contexts: the Technology Acceptance Model (TAM) and the Diffusion of Innovations (DOI) Theory. TAM, developed by Davis (1989), posits that the perceived usefulness and perceived ease of use of technology predict users' attitudes toward adoption. This model has been widely applied to understand ICT utilization in libraries and universities, demonstrating that positive perceptions and institutional support foster higher levels of adoption (Tella & Afolabi, 2023). DOI theory, proposed by Rogers (2003), explains the process through which innovations spread across social systems. It emphasizes factors such as relative advantage, compatibility, complexity, trialability, and observability as determinants of successful adoption. Within LIS education and practice, DoI highlights how institutional culture, peer influence, and leadership commitment shape the pace of technological integration (Singh & Rafiq, 2022). Contemporary research suggests that the integration of both frameworks provides a multidimensional understanding of ICT adoption, as it connects individual attitudes to organizational and systemic factors (Iyawa & Binitie, 2025).

Globally, ICT integration has become a cornerstone of LIS education, driving pedagogical innovation and expanding access to knowledge. Institutions in Europe and North America have incorporated e-learning platforms, digital literacy modules, and

data analytics courses into LIS curricula to align education with the digital information economy (Pinto et al., 2021). In Asia and the Middle East, universities have adopted hybrid teaching models that combine traditional classroom instruction with cloud-based collaboration tools, thereby enhancing flexibility and learner engagement (Singh & Rafiq, 2022). In Africa, the momentum toward ICT-enhanced LIS education has gained prominence in the last decade, though progress remains uneven. Asamoah-Hassan and Boateng (2021) observed that while several LIS schools in Ghana and Kenya have modernized curricula to include digital curation and information systems design, limited funding and technical expertise hinder sustained innovation. The African Library and Information Associations and Institutions (AfLIA) has also advocated for ICT-driven professional education and continuing development to strengthen digital competencies among librarians. However, disparities in infrastructure and policy implementation persist across the continent, reflecting the broader challenges of digital inequality (Adewumi & Omotayo, 2022).

In Nigeria, the introduction of ICT into LIS education has been driven by the recognition that digital skills are vital for effective library management and information service delivery. Federal universities in particular have made investments in ICT infrastructure, such as institutional repositories, e-learning management systems, and digital library portals (Okiki, 2021). Yet, several studies reveal that integration remains largely superficial, with many LIS departments lacking sufficient computer laboratories, up-to-date software, or trained personnel to support digital teaching and learning (Ezeani & Eke, 2020; Iyawa & Binitie, 2025). The gap between policy pronouncements and practical implementation has been well documented. Adewumi and Omotayo

(2022) reported that while the National Policy on ICT in Education outlines strategies for technology-enhanced learning, its execution at the institutional level is constrained by inadequate funding and limited leadership commitment. Furthermore, most LIS curricula continue to emphasize traditional cataloguing and classification at the expense of emerging digital information management competencies (Tella & Afolabi, 2023). These structural and pedagogical challenges underscore the need for comprehensive reform that aligns LIS education with the realities of digital transformation in global librarianship.

Beyond academia, ICT has revolutionized professional library operations across Nigeria's higher education sector. Academic libraries increasingly depend on electronic databases, integrated library management systems (ILMS), and online public access catalogues (OPACs) to manage collections and facilitate access to digital resources (Owolabi, 2023). However, the transition to digital services has exposed challenges such as inadequate technical support, unreliable internet connectivity, and low ICT proficiency among staff (Ezeani & Eke, 2020). In many institutions, digitization projects remain underdeveloped due to budgetary constraints and lack of continuity planning (Adewumi & Omotayo, 2022). Librarians' perceptions of ICT integration are influenced by both personal and organizational factors. Studies reveal that motivation, self-efficacy, and continuous training significantly affect librarians' readiness to adopt digital systems (Edam-Agbor, 2025). Institutional support, through provision of infrastructure, incentives, and management backing, is equally critical for sustaining innovation. Where management commitment and funding are strong, libraries tend to demonstrate higher levels of automation and user satisfaction (Okiki, 2021). Conversely, limited policy

coherence and inadequate professional development contribute to technological stagnation in many university libraries.

The challenges confronting ICT integration in Nigerian LIS education and practice are multifaceted. Infrastructural inadequacies—such as unstable power supply, limited broadband connectivity, and obsolete equipment—constitute major obstacles (Adewumi & Omotayo, 2022). Equally problematic are the human-capacity deficits manifested in low digital literacy among faculty and staff, and insufficient access to continuous professional development (Ezeani & Eke, 2020). Organizational resistance to change and lack of strategic planning further complicate the process of integration (Okiki, 2021). Despite these constraints, opportunities abound. Emerging partnerships with international agencies, the growing adoption of open-source digital library software, and the proliferation of AI-based tools for cataloguing and user services present avenues for advancement (Edam-Agbor, 2025). Furthermore, the global shift toward hybrid learning following the COVID-19 pandemic has stimulated renewed investment in digital infrastructure and pedagogical innovation across Nigerian universities (Nwosu & Akinola, 2024). Leveraging these opportunities requires strong institutional leadership, policy alignment, and collaboration between LIS educators and practitioners to co-design responsive curricula and practice frameworks.

### **Methodology**

This study adopted a mixed-methods research design, combining both quantitative and qualitative approaches to explore educators' and practitioners' experiences with the integration of ICT in LIS education and practice within Federal Universities in Southwest Nigeria. The study population comprised of 32 LIS educator

and 234 library practitioners across seven Federal Universities in Southwest Nigeria. A stratified purposive sampling technique was utilised to ensure balanced representation from both educators (academic staff in LIS departments) and practitioners (professional librarians in university libraries). A total of 140 participants were selected for quantitative survey (30 educators and 110 practitioners), while 15 participants were selected for qualitative interview. Two main instruments were developed: a structured questionnaire and a semi-structured interview guide. Quantitative data were analysed using SPSS, with descriptive and inferential statistics. Qualitative data from interviews were transcribed verbatim and analyzed thematically using NVivo. Ethical standards were strictly observed throughout the research process. Participants' anonymity was preserved by assigning pseudonyms, and all data were stored securely on password-protected devices. The study ensured that no information disclosed could be traced back to individual participants or institutions. Additionally, findings were presented in aggregate form, adhering to the ethical principle of 'do no harm' and respecting academic transparency and confidentiality (Israel & Hay, 2020).

Table 1: Study Population

Federal Universities	Practitioners	Educators
Federal University of Agriculture, Abeokuta, Ogun State	24	0
Federal University of Health Sciences, Ila-Orangun, Ogun State	21	0
Federal University of Technology, Akure, Ondo State	46	6
Federal University, Oye-Ekiti, Ekiti State	12	7
Obafemi Awolowo University, Ile-Ife, Osun State	51	0
University of Ibadan, Ibadan, Oyo State	60	11
University of Lagos, Akoka, Lagos State	20	8
<b>Total</b>	<b>234</b>	<b>32</b>

## Presentation off Results and Discussion of Findings

A total of 127 valid responses were retrieved from the 140 respondents, giving a response rate of 90.71%; while all 15 qualitative interviews were successfully conducted.

Table 2: Demographics

Characteristics	Category	Frequency (f)	Percentage (%)
Gender	Male	69	54.5
	Female	58	45.5
Age (years)	25 – 35	33	26
	36 – 55	78	61.4
	56+	16	12.6
Professional Expertise (years)	0 – 5	15	11.8
	6 – 10	29	22.8
	> 10	83	65.4
Academic Qualification	MSc	74	58.3
	PhD	53	41.7
ICT Training Received	Yes	99	78
	No	28	22
ICT Competence (N = 99)	Advanced	45	45.5
	Intermediate	48	48.5
	Basic	6	6

The demographic analysis revealed that 54.5% of the participants were male, while 45.5% were female. The majority of the respondents were within the age range of 36 – 55 years (61.4%). Most respondents had received some form of ICT training (78%), though only 45.5% described their competence as ‘advanced’. These characteristics reflect the diversity and professional maturity of the respondents across Federal Universities in Southwest Nigeria, aligning with prior studies on LIS professionals in developing contexts (Ameen & Ullah, 2021; Ugwoke & Onyekweodiri, 2022).

Table 3: Level of ICT Integration in LIS Education and Practices

Survey Item	Mean (x)	SD
ICTs are regularly integrated into teaching and learning activities	3.47	.82
I frequently use online learning platforms (e.g., Moodle, Google Classroom)	3.65	.78
I use electronic databases (e.g., EBSCOhost, Emerald Insight) to support research and teaching	3.71	.75
ICT tools have improved student engagement and learning outcomes	3.54	.81
Institutional support for ICT integration is adequate	3.28	.91
Adequate training is provided to enhance ICT competencies	2.91	.88
ICT infrastructure (electricity, network connectivity, software) is sufficient	2.91	.96
Challenges such as limited funding and technical support hinder ICT adoption	4.36	.72
I feel confident using ICT tools in teaching or library practice	3.45	.79
Emerging technologies (AI, VR, data analytics) are rarely used in my work	3.08	.85

The quantitative results indicate a moderate level of ICT integration (Mean = 3.47, SD = 0.82) across LIS departments and university libraries. The most frequently used ICT tools among included PowerPoint presentations, online learning platforms (e.g. Moodle, Google Classroom), and electronic databases such as EBSCOhost and Emerald Insight. Conversely, practitioners reported consistent use of integrated library systems (ILS) such as Koha and Dspace, as well as digitization software for cataloguing and institutional repositories. However, emerging technologies such as artificial intelligence-based systems, data analytics tools, and virtual reality applications in library services were seldom utilized, with only 12% of respondents reporting any engagement with such tools. These findings mirror the gap between traditional ICT use and advanced digital technologies previously documented in Sub-Saharan African academic libraries (Chisenga & Rorissa, 2020; Ezema & Ugwu, 2021). The findings also align with prior research indicating that ICTs have transformed pedagogical practices

by enhancing interactivity, learner engagement, and access to global information resources (Ameen & Ullah, 2021; Tella & Issa, 2020). The shift toward blended learning environments in LIS departments represents an important advancement toward modern educational practices.

Table 4: Librarians' Experiences with ICT Integration

Survey Item	Mean (x)	SD
I regularly use automation tools (e.g., Koha, Dspace) in library operations	3.88	.72
ICT tools have improved efficiency and accuracy in cataloguing and digital repositories	3.79	.68
I am confident in using ICT tools for daily library tasks	3.61	.81
My institution provides sufficient training to support ICT use	3.12	.94
There is adequate technical support for ICT in my library	3.05	.92
ICT infrastructure (computers, network, electricity) is adequate for library operations	2.98	1.01
Emerging technologies (AI, VR, data analytics) are integrated into library services	2.54	.88
Institutional policies encourage consistent ICT adoption	3.25	.89
Limited funding hinders effective ICT integration	4.14	.76
ICTs have improved efficiency in cataloguing and library operations	3.88	.72
ICT tools have enhanced accuracy in digital archiving and information retrieval	3.79	.68
Automation of routine tasks has positively transformed library services	3.72	.77
I am confident in using ICT tools for daily library operations	3.61	.81
My institution provides adequate training to improve ICT competency	3.12	.94
ICT infrastructure (network, electricity, hardware) is sufficient for effective library operations	2.98	1.01
Emerging technologies (AI, data analytics, virtual reality) are integrated into library services	2.54	.88
Limited bandwidth and outdated systems hinder effective ICT use	4.14	.76
Hybrid systems (manual + electronic processes) are commonly used, limiting full ICT integration	3.35	.82
Overall, ICT adoption has positively transformed library services and impacted service delivery	3.72	.77

Among librarians, the study found evidence of significant progress in the use of ICTs for automation, cataloguing, and digital repository management. Tools like Koha

and Dspace have improved service delivery and efficiency, supporting findings by Ezema and Ugwu (2021) and Oyelude (2021), who observed growing automation in Nigerian academic libraries. However, the uneven distribution of ICT facilities across universities creates institutional disparities, resulting in differential levels of digital transformation. In the context of the TAM, respondents' positive attitudes toward ICT use are tempered by external variables, like organizational support, funding, and training opportunities, which influence perceived ease of use (Davis, 1989; Venkatesh, et al., 2016). Where management support and technical infrastructure are lacking, librarians' motivation to innovate is diminished, resulting in islands of excellence amid systemic gaps. This dichotomy reflects what Mutula (2023) terms the 'digital stratification' of African academic institutions, where technological readiness differs sharply across regions and even within institutions. The implication is that while the willingness to integrate ICTs exists among LIS professionals, the sustainability of such efforts depends heavily on consistent institutional investment and policy coherence.

The qualitative interviews revealed three major themes: pedagogical transformation, institutional constraints, and capacity building needs. One participant noted: "ICTs have completely changed how we teach. Students now have access to global digital resources, and I can easily integrate multimedia materials into my lectures". (*Interview 3, University of Ibadan*). Respondents acknowledged that ICTs have transformed teaching methods by enabling blended learning, resource sharing, and enhanced student engagement. They also reported that ICTs have improved service delivery, particularly in cataloguing, digital archiving, and information retrieval. Automation of routine tasks was seen as a significant benefit, enhancing both accuracy

and efficiency. One respondent remarked: “We have moved from manual to automated cataloguing and now manage digital repositories more effectively. However, limited bandwidth and outdated systems sometimes frustrate users”. (*Interview 9, University of Lagos*). While some libraries have achieved partial automation, others still rely on hybrid systems, where both manual and electronic processes coexist. Respondents emphasized the need for continuous professional training to keep pace with evolving technologies. The lack of consistent ICT infrastructure across institutions contributes to uneven progress, reinforcing earlier observations by Aregbesola and Okunlola (2020) that infrastructural inequality remains a major barrier to digital transformation in Nigerian university libraries.

Table 5: Institutional Support and Training Opportunities

Survey Item	Mean (x)	SD
Institutional support for ICT integration in LIS is adequate	3.28	.91
ICT resources provided by the university (computers, software, network) meet departmental needs	3.12	.87
Formal ICT literacy training is regularly provided for staff	2.95	.92
Participation in ICT capacity-building workshops over the past two years	2.81	.85
Inter-departmental collaboration supports effective ICT use	3.05	.89
Budget allocation for ICT initiatives is sufficient	2.78	.93

Respondents rated institutional support as moderate (Mean = 3.28, SD = 0.91), indicating partial satisfaction with ICT resources and administrative commitment. Universities were found to provide some form of ICT literacy training, but such programmes were often irregular and external funded. Only 41% of participants confirmed participation in formal ICT capacity-building workshops within the last two years. Interview data revealed that while some universities have established ICT directorates and digital laboratories, the impact of these facilities on LIS departments

and libraries remains limited due to poor inter-departmental collaboration and budgetary constraints. This finding resonates with Gathegi and Mutula (2023), who highlighted that sustainable ICT integration in African LIS schools requires strategic leadership and institutional synergy beyond sporadic training interventions. The finding also aligns with those of Alemna (2022), who emphasized that without strong governance, training, and interdepartmental collaboration, ICT policies tend to remain rhetorical rather than operational. The human capacity gap identified in this study further highlights a recurring concern in LIS development, the need for continuous professional development. Educators and practitioners, especially older staff, often exhibit technological inertia, which hampers innovation and adaptation (Omeluzor & Adara, 2022). From a theoretical lens, this behaviour reflects low perceived ease of use within TAM, whereby users' confidence and skills directly shape their willingness to adopt ICT tools (Venkatesh, et al., 2016). Addressing this gap requires institutionalizing capacity-building frameworks that go beyond one-off workshops. As Tella and Issa (2020) argue, digital literacy must become a core professional competency embedded in LIS education, certification, and continuous assessment processes.

Table 6: Challenges Encountered

Challenges	Mean (x)	SD
Inadequate funding for ICT initiatives	4.36	.72
Poor network connectivity and internet access	4.12	.81
Unstable electricity supply	3.97	.85
Limited access to current software licenses	3.88	.79
Insufficient technical support and training staff	3.75	.88
Resistance to change among older staff members	3.54	.91
Limited awareness of emerging ICT tools	3.42	.87

Both educators and practitioners identified a range of technical, institutional, and human resource challenges affecting ICT integration. Key issues included: inadequate

infrastructure like electricity, bandwidth, and hardware; limited access to current software licenses and digital resources; insufficient training and technical and technical support staff; and resistance to change among older staff members. Quantitatively, the most significant barriers were inadequate funding (Mean = 4.36) and poor network connectivity (Mean = 4.12). The qualitative responses supported these findings, with participants repeatedly mentioning the lack of sustainable funding models as a central impediment. Similar constraints have been emphasized by Oyelude (2021) and Alemna (2022), who argue that without institutionalized funding and continuous professional development, ICT integration efforts will remain fragmented. These barriers echo the challenges identified in earlier studies by Chisenga and Rorissa (2020) and Omeluzor and Adara (2022), suggesting that Nigeria's progress in digital pedagogy is more incremental than transformative. From a theoretical standpoint, this partial adoption reflects the 'compatibility' and 'complexity' dimensions of Rogers' (2003) Diffusion of Innovations Theory. While educators generally perceive ICTs as useful and relevant, the practical complexity of integrating them within resource-constrained environments slows diffusion and limits widespread acceptance. Nonetheless, challenges such as insufficient technical support, inconsistent electricity supply, and inadequate access to licensed digital resources were recurrently cited. Similar challenges have been identified by Omeluzor and Adara (2022), who noted that despite increased policy awareness, practical ICT integration in Nigerian LIS programs remains underfunded and inconsistently implemented.

### **Recommendations**

Based on the findings, the following recommendations are proposed:

- i. Federal universities should develop and enforce clear ICT integration policies that outline responsibilities, timelines, and resource allocations for LIS programs and libraries. These policies should be aligned with national ICT education frameworks and global best practices.
- ii. Regular ICT training programmes and workshops should be institutionalized for LIS educators and practitioners. Partnerships with ICT firms, professional associations, and international agencies can enhance training quality and relevance.
- iii. Government and university management should prioritize investment in ICT infrastructure, such as broadband connectivity, digital repositories, and automated library systems, to support sustainable digital operations.
- iv. Establishing periodic assessments of ICT utilization and its impact on teaching and service delivery will provide evidence for refining strategies and policies at both institutional and national levels.

By implementing these recommendations, federal universities in Southwest Nigeria can foster a more resilient and adaptive LIS ecosystem—one capable of navigating the demands of the digital era while maintaining the profession's core values of access, equity, and service excellence.

## Conclusion

The integration of ICT within LIS education and practice represents a transformative shift in how information is accessed, managed, and disseminated. This study examined the experiences of educators and practitioners in federal universities in Southwest Nigeria to understand how ICTs have influenced pedagogical processes,

professional practice, and institutional development. Drawing on empirical insights, the findings indicate that while ICT integration has improved information accessibility, teaching quality, and service delivery, it remains constrained by infrastructural deficits, inadequate funding, insufficient training, and inconsistent institutional policies. These realities underscore the persistent gap between technological potential and practical implementation across LIS education and library practice in Nigeria.

From a theoretical standpoint, the findings align with the TAM and DOI theory, both of which emphasize the interplay between users' perceptions, institutional context, and technological readiness (Davis, 1989; Rogers, 2003). The study demonstrated that educators and practitioners exhibit generally positive attitudes toward ICT tools, perceiving them as useful and essential for professional growth and effective service delivery. However, their adoption and sustained utilization depend heavily on environmental factors such as reliable infrastructure, administrative support, and organizational culture. The results confirm that perceived usefulness alone does not guarantee adoption if institutional environments remain technologically unsupportive—a challenge highlighted by prior studies in similar contexts (Adewumi & Omotayo, 2022; Iyawa & Binitie, 2025).

The convergence of findings with the broader literature suggests that the Nigerian LIS landscape is in a transitional phase, shifting from traditional library practices to digitally mediated systems. As observed by Tella and Afolabi (2023) and Edam-Agbor (2025), the digital transformation of LIS in Africa requires both technological capability and human adaptability. The experiences of respondents reflect this dual necessity: while digital tools enhance research, teaching, and reference

services, the lack of continuous professional development opportunities impedes full-scale adoption. Consequently, this study contributes to a nuanced understanding of how educators and practitioners navigate technological change within resource-limited settings, emphasizing that ICT integration must be approached not only as a technological issue but also as an institutional and cultural process.

Practically, the implications of this study are multi-dimensional. For educators, integrating ICTs into LIS curricula demands a rethinking of pedagogical models, incorporating experiential learning and digital literacy modules that mirror professional realities. For practitioners, the findings highlight the need for sustainable ICT infrastructure and ongoing technical training to ensure that library staff remain competent in emerging digital tools and platforms. For university administrators and policymakers, the study underscores the importance of developing long-term strategies that link ICT policy, funding, and capacity building, ensuring alignment with national digital education frameworks. Collaborative partnerships between LIS schools, libraries, and technology providers could further bridge the skill gaps identified in this study, fostering a culture of innovation and continuous learning.

From an empirical perspective, the study reinforces the idea that ICT adoption in LIS is a gradual iterative process that evolves as institutions build capacity and users gain confidence. As Rogers (2003) posits, innovation diffusion thrives in environments that promote experimentation, peer learning, and supportive feedback mechanisms. Therefore, institutions must create enabling environments that reward digital initiative, encourage knowledge sharing, and sustain investment in digital infrastructure. Only through such systemic reinforcement can LIS education and practice in Nigeria fully

realize the transformative promise of ICTs. The integration of ICTs into LIS education and professional practice in Southwest Nigeria presents both opportunities and challenges. While progress has been made in embedding technology within pedagogical and operational frameworks, significant work remains to bridge infrastructural, policy, and capacity gaps. The study concludes that a balanced approach, anchored in institutional commitment, stakeholder collaboration, and continuous training, is essential for achieving meaningful and sustainable ICT integration.

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