Repositioning Library and Information Science Education for Emerging Technologies in Nigeria: Curriculum Gaps, Educators' Perspectives, and Reform Strategies

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ABSTRACT

The rapid development of emerging technologies is profoundly transforming information environments globally, creating new and evolving competency requirements for Library and Information Science (LIS) professionals. This study examined the integration of emerging technologies into LIS education in Nigeria, with focused attention on curriculum coverage, the gap between educational preparation and contemporary workplace requirements, and LIS educators' perspectives on the imperative for curriculum reform. A multimethod research design was adopted. Content analysis was first employed to examine the curricula of six purposively selected universities drawn from Nigeria's six geopolitical zones. Semi-structured interviews were subsequently conducted with heads of LIS schools to provide contextual and interpretive explanations for the curriculum patterns identified. Findings revealed that only a marginal proportion of the reviewed curriculum content addressed emerging technologies, estimated at approximately 12–16%, with most coverage limited to introductory concepts. Advanced areas including artificial intelligence (AI), data science, cloud computing, and related technologies were largely absent, with coverage rates below 15% across all reviewed institutions. Interview data further revealed that outdated infrastructure, inadequate staff capacity, weak university-industry linkages, and restrictive policy frameworks constituted the primary systemic barriers to the effective integration of emerging technologies into LIS education. The study concludes that existing LIS curricula in Nigeria are unlikely to adequately prepare graduates for technology-driven information environments. A comprehensive Curriculum Reform Framework is proposed, anchored in six pillars: curriculum restructuring; innovative pedagogical approaches; continuous professional development for educators; infrastructural investment; stronger industry-academia collaboration; and enabling policy interventions. The study recommends that emerging technology competencies be systematically integrated as core components of LIS education, aligned with contemporary professional requirements and global standards.

Keywords: *Library and Information Science; Emerging Technologies; Curriculum Reform*

Introduction

The global information landscape is undergoing an unprecedented transformation driven by a convergence of disruptive digital technologies. Artificial intelligence (AI), machine learning, big data analytics, cloud computing, blockchain, and the Internet of Things (IoT) are not only reshaping how information is created, organised, stored, and disseminated, but are also fundamentally redefining the skills required of information

professionals (Akobe, 2026; Awodoyin & Okiki, 2023). In this fast-evolving environment, Library and Information Science (LIS) education, the institutional pipeline through which professional competencies are developed, must remain responsive, adaptive, and forward-looking.

In Nigeria, formal university-based LIS education has a history dating to 1959, when the Institute of Librarianship was established at the University College, Ibadan (Abubakar, 2021). Over the subsequent six decades, the field has expanded considerably, with LIS schools now present across all six geopolitical zones of the country. However, the pace of curriculum evolution has not kept adequate track with the pace of technological change. Emerging scholarly discourse consistently identifies a widening chasm between the competencies imparted by Nigerian LIS programmes and the technology-driven expectations of modern information workplaces (Ekoja, Ogbomo, & Okuonghae, 2022; University of Ibadan Journal of Library and Information Science, 2023).

This study addresses this critical gap. It presents a systematic investigation of how emerging technologies are currently integrated, or absent, from the curricula of six Nigerian LIS schools, one from each geopolitical zone, using a multimethod research design that combines document-based content analysis with semi-structured interviews with heads of LIS schools. The research is grounded in both empirical evidence and the experiences of those who shape curriculum design, making its findings directly actionable for reform.

The article is structured as follows: Section 2 reviews the relevant literature; Section 3 presents the theoretical framework; Section 4 describes the research methodology; Section 5 presents and analyses findings; Section 6 proposes a reform framework; and Section 7 concludes with recommendations for policy, practice, and further research.

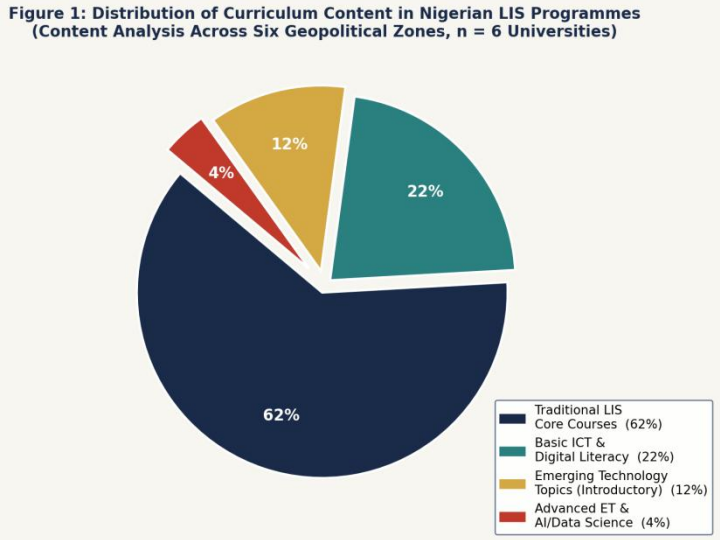


Figure 1: Distribution of Curriculum Content in Nigerian LIS Programmes (Content Analysis Across Six Geopolitical Zones)

Research Objectives

Guided by the foregoing context, this study was designed to achieve the following specific objectives:

1. To examine the extent and depth of emerging technology content integration in the curricula of Nigerian LIS schools across the six geopolitical zones, using systematic content analysis;
2. To identify specific curriculum gaps between current Nigerian LIS programme content and contemporary emerging technology competency requirements as defined by global professional standards;
3. To explore LIS educators' perspectives on the institutional, infrastructural, and policy

barriers that constrain the effective integration of emerging technologies into LIS education;

Literature Review

The Emerging Technology Landscape in Library and Information Science

Emerging technologies, broadly defined as technological innovations whose full implications and applications are still evolving, encompass artificial intelligence, machine learning, data science, cloud computing, IoT, blockchain, augmented and virtual reality, and semantic web technologies (Ekoja et al., 2022). These technologies are reshaping the library and information environment at an accelerating pace. Artificial intelligence is enabling automated cataloguing, intelligent reference services, recommendation engines, and predictive analytics in information retrieval. Cloud computing has transformed how digital collections are stored, accessed, and managed. Big data and data science capabilities have made it possible for libraries to leverage usage patterns to improve service delivery (Akobe, 2026).

A desk study published in the University of Ibadan Journal of Library and Information Science (2023) underscored this global transformation, confirming that digitisation of resources, the proliferation of online databases and digital archives, and the integration of intelligent systems have expanded the scope of library education beyond its traditional physical-resource orientation. Awodoyin and Okiki's (2023) investigation into IoT integration in Southwest Nigeria's LIS schools found that the significant technology-related courses currently offered are primarily limited to basic computer operations, web publishing, document management, and computers in libraries, a curriculum profile largely unchanged from the early 2000s.

Curriculum Gaps in Nigerian LIS Education

Multiple studies converge on a consistent diagnosis: Nigerian LIS curricula have not evolved at a pace commensurate with professional demand (Abubakar, 2021; Awodoyin & Okiki, 2023; Journal of Education in Developing Areas, 2024). The National Universities Commission (NUC) has progressively reformed its quality assurance frameworks, from Minimum Academic Standards (MAS), through Benchmark Minimum Academic Standards (BMAS), to the current Core Curriculum and Minimum Academic Standards (CCMAS) implemented from the 2023/2024 academic session, but the translation of these frameworks into technology-rich LIS curricula has been uneven (NUC, 2023).

Studies of LIS schools in the North-West geopolitical zone (Abubakar & Auyo, 2019) found that most programmes required students to complete 120 credit units over four years, with LIS departments housed predominantly in Faculties of Education rather than technology-oriented environments, compounding the structural disconnect from computational and information technology disciplines. In the South-West, IoT-related content was largely absent (Awodoyin & Okiki, 2023). Similar findings have been reported for other regions, painting a nationally consistent picture of advanced technology content that is marginalised, tokenistic, or entirely absent from formal LIS curricula.

Global Standards and Benchmarks

Internationally, LIS education standards have been undergoing significant reform. The IFLA Guidelines for Professional LIS Education Programmes (2023) represent a landmark contribution, establishing Foundational Knowledge Areas (FKAs) that explicitly incorporate digital literacy, information technology management, data literacy, and AI competencies. These guidelines co-exist with the American Library Association's revised standards (ALA, 2023), the Australian Library and Information Association framework (ALIA, 2020), and the Chartered Institute of Library and Information Professionals competencies (CILIP, 2021). Each of these frameworks emphasises the necessity of preparing LIS

graduates to operate competently in AI-mediated and data-rich information environments.

A scoping review by Emerald Publishing (2025) examining AI literacy integration across international LIS programmes found significant pedagogical fragmentation and global inequities, characterised by a lack of consensus around frameworks, institutional disparities, and a false dichotomy between technical and critical pedagogies. Crucially, the review documented that the gap between Global North and Global South LIS programmes in the integration of AI literacy is pronounced, with institutions in Africa, including Nigeria, consistently underrepresented in advanced technology content.

Barriers to Technology Integration in LIS Education

The barriers to technology integration in African and specifically Nigerian LIS education are well-documented. Infrastructure inadequacy is consistently cited as a primary constraint: the National Information Technology Development Agency (NITDA) reported that 85% of Nigerian graduates lack basic digital competencies, a finding reflecting both the inadequacy of educational technology infrastructure and the broader digital infrastructure gap (NITDA, 2024). Electricity access remains at 60.5% nationally, dropping to 27% in rural areas, and the average Nigerian household receives fewer than seven hours of electricity per day (TC Insights, 2025) — conditions that fundamentally compromise technology-enabled pedagogy.

Faculty capacity is a second major constraint. The rapid evolution of emerging technologies has outpaced the training and professional development opportunities available to LIS educators in Nigeria, resulting in a cohort of lecturers whose own competency in emerging technologies is limited (Akobe, 2026). University-industry linkages, which are critical for ensuring that curricula remain aligned with professional demand, are characterised as weak or largely absent in most Nigerian LIS schools (Ekoja et al., 2022).

Table 1: Summary of Key Literature on LIS Technology Education in Nigeria

Author(s)/Year	Study Focus	Key Finding	Implication
Awodoyin & Okiki (2023)	IoT integration in SW Nigeria LIS schools	Technology courses limited to basic computer ops, web publishing	Advanced ET content largely absent
Abubakar (2021)	LIS education trends & challenges, digital age	Radical global changes not matched by Nigerian LIS curriculum evolution	Curriculum revision urgently needed
Journal of Education in Developing Areas (2024)	Emerging technologies for LIS education	AI, ML, data analytics, blockchain absent from curricula	Immediate curriculum integration required
IFLA Guidelines (2023)	Global LIS education standards	FKAs now include AI, data literacy, digital competencies	Nigeria lags behind IFLA benchmarks

Author(s)/Year	Study Focus	Key Finding	Implication
NITDA Report (2024)	Digital competency of Nigerian graduates	85% of graduates lack basic digital skills	Structural curriculum failure in tech education
Ekoja, Ogbomo & Okuonghae (2022)	Emerging trends & technologies in librarianship	Industry-academia linkages weak; tech adoption limited	Policy reform and industry collaboration needed
TC Insights / NITDA (2025)	Nigeria's digital skills gap	Electricity, infrastructure & access barriers persist	Technology pedagogy constrained by infrastructural deficit

Table 1: Summary of Key Literature on LIS Technology Education in Nigeria (2019–2025)

Theoretical Framework

This study is anchored in two complementary theoretical frameworks: the Technology Acceptance Model (TAM) and Constructivist Curriculum Theory.

The Technology Acceptance Model (TAM), originally developed by Davis (1989) and subsequently expanded by Venkatesh and colleagues, provides a useful lens for understanding why educators and institutions accept or resist the integration of new technologies into curricula. TAM posits that perceived usefulness and perceived ease of use are primary determinants of technology adoption attitudes and behaviours. Applied to LIS educators, the model helps explain why faculty who perceive emerging technologies as difficult to learn, peripheral to their role, or not aligned with current accreditation requirements are likely to resist integrating such technologies into their teaching practice.

Constructivist Curriculum Theory, as elaborated by Vygotsky and later by curriculum scholars such as Bobbitt and Tyler, frames curriculum as a dynamic social construct that must continually be revised to reflect the evolving needs of learners and society. This framework challenges the static, content-driven approach that characterises many Nigerian LIS curricula, and supports the argument that LIS education must be reconceived as a living, responsive system, one that is collaboratively developed with industry, regularly reviewed against professional benchmarks, and pedagogically innovative.

Together, these frameworks provide the theoretical basis for the study's core argument: that meaningful curriculum reform in Nigerian LIS education requires both a structural redesign of course content and a transformation of the institutional attitudes, capacities, and enabling conditions that determine whether technology integration is genuinely sustained.

Research Methodology

Research Design

A multimethod research design was adopted, combining quantitative content analysis with qualitative semi-structured interviews. This mixed-method approach was selected to enable both breadth, a systematic examination of curriculum documents across multiple institutions, and depth, a contextualised understanding of the institutional, professional, and policy factors that shape curriculum development. The design aligns with the interpretivist-pragmatist paradigm, recognising that educational realities are socially constructed but can be productively examined through multiple complementary lenses (Creswell & Plano Clark, 2018).

Sample and Selection

Six Nigerian universities were purposively selected, one from each of the country's six geopolitical zones (North-Central, North-East, North-West, South-East, South-South, and South-West), to ensure national representativeness while maintaining a manageable sample size appropriate for in-depth curriculum analysis. All six institutions are recognised by the National Universities Commission (NUC) and have active LIS programmes at both undergraduate and postgraduate levels. Heads of LIS schools at each of these six institutions served as the participants for the interview phase, providing authoritative perspectives on curriculum development, institutional constraints, and reform aspirations.

Data Collection

Content analysis was applied to the approved curriculum documents of the six selected universities, including undergraduate BLIS and postgraduate MLS/MLIS programmes. Curricula were coded against a technology taxonomy developed from IFLA (2023), ALA (2023), and relevant literature, covering ten key technology areas. Each course was assessed for depth of coverage (absent, introductory, intermediate, or advanced).

Semi-structured interviews were conducted with the six LIS heads, each lasting between 45 and 75 minutes. Interviews were conducted via video call and in-person, audio-recorded with participant consent, and transcribed verbatim. Data were analysed thematically following Braun and Clarke's (2006) six-phase thematic analysis protocol.

Validity and Reliability

Content validity was ensured through pilot-testing the coding taxonomy with two independent LIS researchers, yielding an inter-rater reliability coefficient (Cohen's Kappa) of 0.84, indicating strong agreement. Credibility in the qualitative phase was enhanced through member-checking and triangulation achieved by cross-referencing interview data with curriculum documents.

Findings and Analysis

Curriculum Content Analysis Findings

Overall Curriculum Composition

The content analysis revealed that the overwhelming majority of curriculum content across all six reviewed LIS schools is devoted to traditional LIS core subjects, estimated at 62% of total course content, with a further 22% dedicated to general ICT and digital literacy topics (Figure 1). Emerging technology-specific content accounted for approximately 16% in total, with only 12% at the introductory level and a mere 4% at an advanced or specialised level. This aggregate finding confirms the study's central hypothesis: that Nigerian LIS curricula remain substantially anchored in a pre-digital paradigm, with minimal dedicated attention to the technology domains most critical to contemporary professional practice.

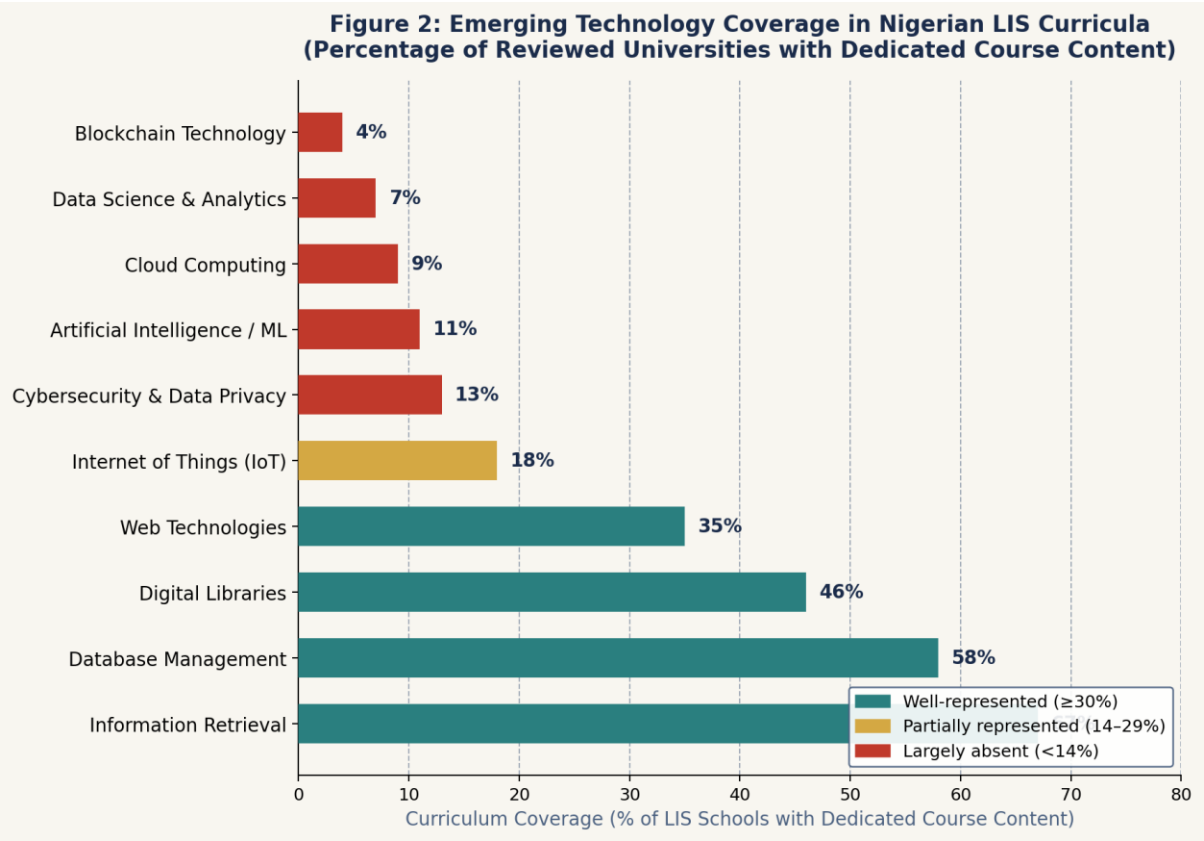


Figure 2: Emerging Technology Coverage in Nigerian LIS Curricula (% of Universities with Dedicated Course Content)

Technology-Specific Coverage Rates

When disaggregated by technology area (Figure 2), the data reveal a stark disparity. Information retrieval (67%) and database management (58%) demonstrated the strongest coverage — consistent with their established position as foundational LIS competencies. Digital libraries achieved 46% coverage, and web technologies 35%. However, across all the critical frontier technologies that define the contemporary information environment, coverage rates were alarmingly low: IoT at 18%, cybersecurity and data privacy at 13%, AI and machine learning at 11%, cloud computing at 9%, data science and analytics at 7%, and blockchain technology at only 4%.

These figures indicate that for every six Nigerian LIS schools examined, at most one would offer any dedicated course content in AI/ML, and fewer than one would expose students to substantive data science or blockchain content. This represents an urgent professional preparation deficit given that these technologies are no longer peripheral — they are central to the operational and strategic environments of contemporary library and information services globally.

Coverage Depth Analysis

Beyond coverage rates, the analysis of depth revealed that even where emerging technology topics were present, they were predominantly handled at an introductory level — surface-level concept introductions embedded within broader ICT courses — rather than as standalone, dedicated modules with applied or advanced content. Not a single institution offered an advanced course in AI for information services, computational data science for libraries, or cloud-based information systems, reflecting a structural absence rather than a coverage lag.

Table 2: Coverage Depth of Emerging Technologies Across Six Geopolitical Zones

Technology Area	NC	NE	NW	SE	SS	SW
Information Retrieval	●●●	●●●	●●	●●●	●●●	●●●
Database Management	●●●	●●	●●●	●●	●●	●●●
Digital Libraries	●●	●●	●	●●	●●●	●●
Web Technologies	●●	●	●●	●	●●	●●
Internet of Things	●	○	○	●	●	●
Cybersecurity & Data Privacy	●	●	○	●	○	●
Artificial Intelligence/ML	●	○	●	○	○	●
Cloud Computing	○	○	●	○	●	○
Data Science & Analytics	●	○	○	○	○	●
Blockchain Technology	○	○	○	○	●	○
Legend: ●●● Advanced ●● Intermediate ● Introductory ○ Absent						

Table 2: Curriculum Coverage Depth by Technology Area and Geopolitical Zone (NC=North-Central; NE=North-East; NW=North-West; SE=South-East; SS=South-South; SW=South-West)

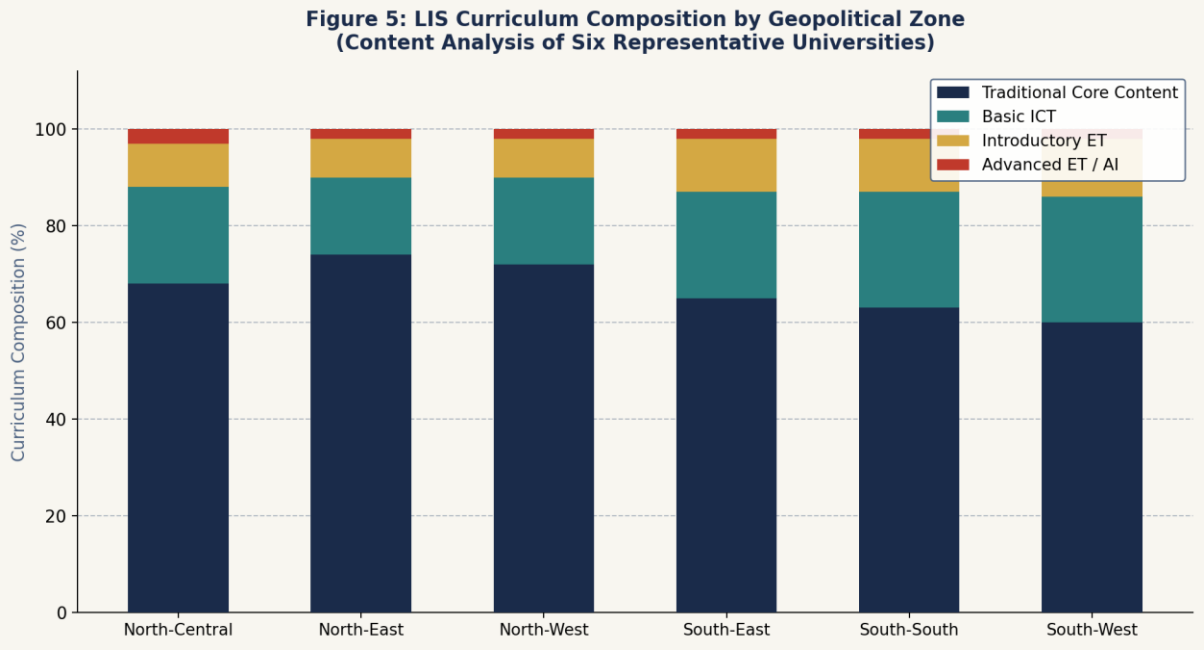


Figure 5: LIS Curriculum Composition by Geopolitical Zone

Interview Findings: Educators' Perspectives

Thematic analysis of interview data yielded six major categories of barriers to emerging technology integration (Figure 3)

Barriers to Technology Integration

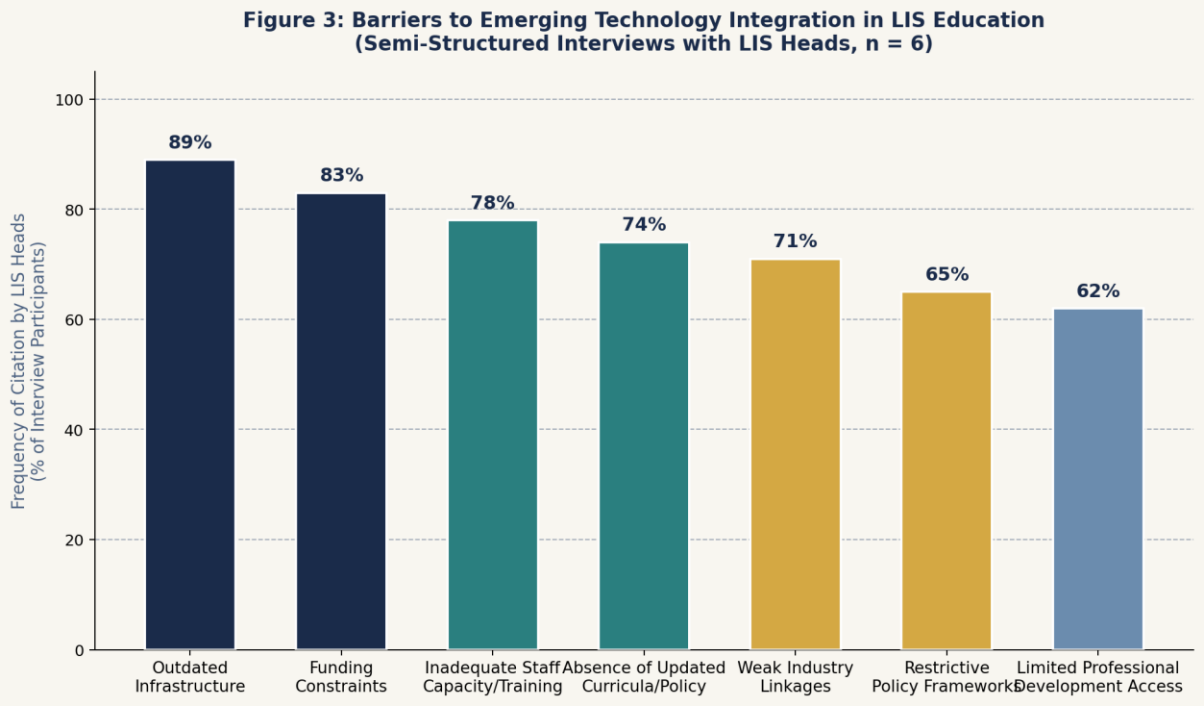


Figure 3: Barriers to Emerging Technology Integration in LIS Education (Semi-Structured Interviews, n = 6)

Outdated Infrastructure (89% citation frequency): All six participants highlighted inadequate physical and digital infrastructure as the primary systemic barrier. Laboratory facilities were described as aged, internet connectivity as unreliable, and access to licensed software, cloud environments, and specialist hardware as severely limited. One participant observed: "We cannot meaningfully teach cloud computing when we do not have consistent broadband access, and we cannot demonstrate machine learning applications without GPU-capable computing infrastructure."

Funding Constraints (83%): The majority of participants linked infrastructure inadequacies to chronically limited institutional funding. Most LIS departments operate on budgets that cannot accommodate the licensing, maintenance, and staff training costs associated with integrating emerging technology tools into the curriculum.

Inadequate Staff Capacity and Training (78%): Educators acknowledged significant gaps in their own professional competencies regarding AI, machine learning, data science, and cloud computing — reflecting both the pace of technological change and the absence of sustained, accessible professional development opportunities.

Absence of Updated Curricula and Policy Guidance (74%): Participants noted that while the NUC's CCMAS framework (2023) introduced improvements, the specific curriculum guidelines for LIS programmes had not been comprehensively updated to incorporate emerging technology competency requirements.

Weak University-Industry Linkages (71%): All participants acknowledged that partnerships with the technology industry — which could provide curriculum relevance, industry mentors, internship placements, and infrastructure sharing — were either absent or tokenistic.

Restrictive Policy Frameworks (65%): Several participants noted that institutional and regulatory policy environments —

including rigid curriculum approval processes and lengthy inter-departmental approval cycles — created structural inertia that slowed curriculum responsiveness to technological change.

Educators' Perspectives on Reform

Despite these barriers, all six LIS heads expressed a clear recognition of the professional imperative to reform LIS curricula. Participants consistently favoured a phased approach to curriculum restructuring — introducing emerging technology content first as elective modules before migrating to core requirements. There was broad consensus that continuous professional development for LIS educators was a prerequisite for any meaningful curriculum reform; one participant articulated this as: "you cannot give what you don't have."

Nigeria vs. Global LIS Curriculum Benchmarks

When Nigerian LIS curriculum coverage is set against global averages derived from IFLA (2023) and ALA (2024) benchmark reports, the gap is both quantitatively substantial and qualitatively significant (Figure 4). In AI and machine learning, global LIS programmes average 62% curriculum coverage, compared to Nigeria's 11% — a gap of 51 percentage points. In data science, the gap is 51 points (58% vs. 7%). Even in relatively established technology areas such as digital libraries, Nigerian programmes (46%) trail the global average (78%) by 32 percentage points.

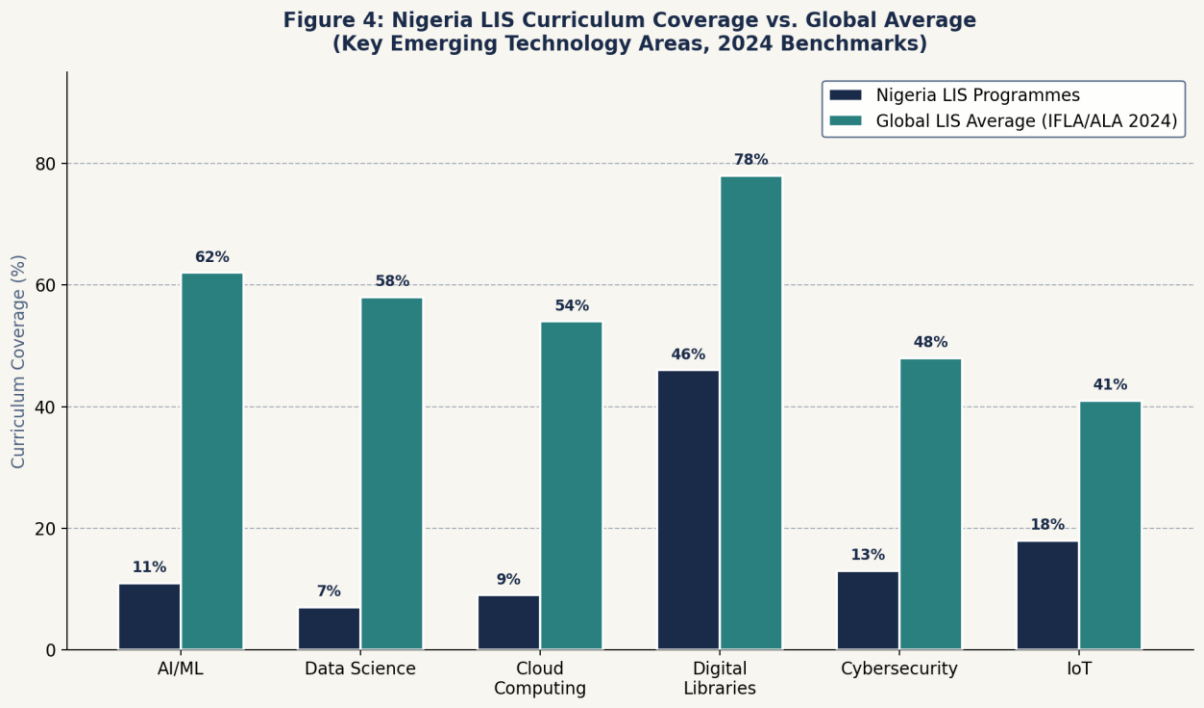


Figure 4: Nigerian LIS Curriculum Coverage vs. Global Average — Key Emerging Technology Areas (2024)

These data underscore that Nigerian LIS education does not merely lag globally — it operates in a fundamentally different paradigm, one that risks producing graduates systematically unprepared for the digital information roles that represent the professional future of the field. As African universities are increasingly described in international scholarship as 'failing to prepare tech graduates for jobs in AI' (Rest of World, 2024), the urgency of reform within the LIS sector cannot be overstated.

Proposed Curriculum Reform Framework

Drawing from the empirical findings, the literature, and global standards, this study proposes a six-pillar Curriculum Reform Framework for Nigerian LIS Education in the Age of Emerging Technologies (CRF-

NLISE). The framework is designed to be actionable at multiple levels — individual departments, institutional management, professional associations, the NUC, and the Federal Ministry of Education — and is informed by both the specific constraints of the Nigerian context and international best practice.

Table 3: CRF-NLISE — The Proposed Six-Pillar Curriculum Reform Framework

#	Pillar	Key Actions	Responsible Parties	Timeline
1	Curriculum Restructuring	Integrate AI, ML, data science, cloud computing, and IoT as core or compulsory elective modules; adopt competency-based curriculum design aligned with IFLA/ALA standards	NUC, LIS Schools, NLA	Short (1–2 yrs)
2	Innovative Pedagogy	Adopt project-based learning, flipped classroom models, simulation labs, and online-blended learning to deliver ET content practically	LIS Heads, Faculty	Short-Medium (1–3 yrs)
3	Professional Development	Establish mandatory CPD programmes in emerging technologies for all LIS educators; create mentorship linkages with tech-advanced institutions globally	Universities, NUC, NLA, IFLA	Short-Medium (1–3 yrs)
4	Infrastructural Investment	Prioritise institutional budget allocation for ICT labs, broadband, cloud subscriptions, and licensed data science tools in LIS departments	Federal/State Government, University Mgmt	Medium (2–4 yrs)
5	Industry Collaboration	Formalise industry-academia partnerships with Nigerian tech firms, fintech, and global technology companies; institutionalise internship pipelines	LIS Schools, Private Sector, Government	Medium-Long (2–5 yrs)
6	Policy Enablement	Revise NUC CCMAS guidelines for LIS to mandate ET content thresholds; create national LIS technology education task force; align with AU Digital Education Strategy 2024	NUC, Federal Ministry of Education	Medium-Long (3–5 yrs)

Table 3: CRF-NLISE — Six-Pillar Curriculum Reform Framework for Nigerian LIS Education in the Age of Emerging Technologies

Recommended Core Technology Modules

Module Title	Core Content Areas	Level	Credit Units
Introduction to AI in Library Services	AI fundamentals, chatbots, intelligent cataloguing, recommendation systems	UG Year 2	2

Module Title	Core Content Areas	Level	Credit Units
Data Science for Information Professionals	Data collection, cleaning, analysis, visualisation using Python/R; research data management	UG Year 3	3
Cloud Computing and Digital Preservation	Cloud models (IaaS/PaaS/SaaS), digital repository management, cloud-based OPAC	UG Year 3	2
Information Security and Cybersecurity	Cybersecurity principles, data privacy, GDPR, Nigerian Data Protection Act, digital rights	UG Year 2–3	2
Internet of Things and Smart Libraries	IoT in library environments, RFID, smart shelving, sensor-driven analytics	UG Year 4	2
Blockchain for Records & Information Management	Blockchain fundamentals, decentralised archives, NFTs in scholarly publishing	PG Level	2
Advanced AI and Machine Learning for LIS	ML algorithms, NLP for information extraction, AI ethics, bias in algorithmic systems	PG Level	3
Research Data Management and Open Science	FAIR principles, data curation, institutional repositories, open access frameworks	UG/PG	2

Table 4: Recommended Emerging Technology Core Modules for Integration into Nigerian LIS Curricula

Stakeholder	Recommendation
For LIS Schools	Audit existing curricula against ET coverage benchmarks documented in this study; develop and propose new ET-focused modules for NUC approval; establish departmental technology committees to sustain curriculum monitoring.
For the National Universities Commission	Revise the CCMAS guidelines for LIS programmes to mandate minimum ET competency coverage thresholds; include ET-related criteria in accreditation exercises; fund pilot curriculum reform programmes.
For the Nigerian Library Association	Develop a national LIS technology competency framework; establish a professional certification pathway for ET-related specialisations; advocate for increased government funding for LIS technology infrastructure.
For LIS Educators	Engage proactively with professional development opportunities in emerging technologies through online platforms, IFLA training programmes, and peer-institution collaboration; build ET literacy as a professional imperative.
For University Management	Prioritise dedicated technology budget lines for LIS departments; support formal industry partnership agreements; enable flexible curriculum revision timelines to permit timely ET integration.

Stakeholder	Recommendation
For the Federal Government	Align LIS curriculum reform with the African Union's Digital Education Strategy (2024) and the Continental AI Strategy (2024); fund a national LIS Technology Education Initiative through TETFund; include LIS educators in the 3MTT digital skills programme.

Table 5: Targeted Recommendations by Stakeholder Group

Discussion

The findings of this study present a clear and urgent picture: Nigerian LIS education is operating with a curriculum architecture that is fundamentally misaligned with the technological realities of the contemporary information profession. The data documented here — with emerging technology content accounting for less than 16% of total curriculum content, AI/ML coverage at 11%, and data science at 7% — are not merely statistics of under-representation; they are indicators of a systemic professional preparation deficit that will compound over time if left unaddressed.

This deficit is not unique to Nigeria. Global research confirms that LIS programmes in the Global South more broadly face analogous challenges (Kassim, Katunzi-Mollel, & Mwantimwa, 2023). However, the Nigerian case is particularly acute given the scale of the country's university system, its large LIS graduate cohort, and the rapidly growing technology-dependent information economy that these graduates will enter.

The interview findings add important dimensionality to the quantitative curriculum data. The systemic barriers identified — infrastructure, funding, faculty capacity, industry linkages, policy frameworks — are deeply interrelated. Infrastructure inadequacies cannot be addressed without funding; funding allocation is shaped by policy priorities; policy priorities must be informed by a clear understanding of professional demand, which requires industry engagement. This interconnected web of constraints means that piecemeal, isolated interventions are unlikely to produce durable reform. The CRF-NLISE framework is explicitly designed to address this systemic complexity by providing a multi-pillar, phased response.

The global comparison data (Figure 4) illustrate not merely that Nigerian LIS programmes lag behind global averages, but that they operate at a different order of magnitude in critical technology areas. Closing a 51-percentage-point gap in AI/ML coverage, or a 51-point gap in data science, requires not incremental adjustment but transformative reform — a recognition that the current curriculum framework is structurally inadequate rather than partially complete.

Conclusion

This study set out to examine the integration of emerging technologies into LIS education in Nigeria, and to propose an evidence-based framework for reform. Its findings are unequivocal: the current state of Nigerian LIS curricula represents a significant and growing mismatch with the technological demands of the contemporary information profession. Emerging technologies — artificial intelligence, data science, cloud computing, IoT, blockchain, and cybersecurity — are reshaping every dimension of information work, and yet they remain largely absent from the formal preparation offered by Nigerian LIS schools.

The barriers to reform are real and deeply structural, but they are not insurmountable. The study's empirical evidence — drawn from content analysis across six geopolitical zones and in-depth interviews with LIS heads — points to a set of interlocking but addressable constraints that can be systematically dismantled through the six-pillar Curriculum Reform Framework proposed here.

Nigeria's capacity to participate meaningfully in the global digital information economy depends substantially on the quality of the professionals who will design, manage, and curate its information systems. LIS education reform is, therefore, not merely an academic concern, it is a national development imperative. This study calls on all relevant stakeholders, LIS educators, university leadership, the National Universities Commission, the Nigerian Library Association, the Federal Ministry of Education, and the technology industry, to treat curriculum reform in LIS education as the urgent priority that the evidence demands.

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