KHAIRUN International Journal of Contemporary Librarianship
Vol. 2 No. 1 (June, 2025) E-ISSN: 1595-0751 https://kijcl.khairun.edu.ng

Exploring the Strategies for Enhancing Infopreneurship Opportunities among LIS Undergraduates in Kwara State, Nigeria

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Abstract

The presence of infopreneurship has widened the business opportunities librarians can venture into. However, studies have reported librarians' minimal participation in infopreneurship. The need to expand the awareness of infopreneurship among the students underscores why this study explores the strategies for enhancing infopreneurship opportunities among Library and Information Science (LIS) undergraduates in Kwara State, Nigeria. A descriptive survey design was employed, targeting a population of 520 final-year LIS students across three universities. Using a total enumeration sampling technique, all students were reached, and data were collected through a self-developed questionnaire validated by two experts and confirmed reliable at 0.809. Of the 520 questionnaires administered, 387 were duly completed and analyzed, representing a 73.53% response rate. Data were analyzed using frequency counts, percentages, mean, and standard deviation. Findings revealed that the availability of infopreneurship opportunities for LIS undergraduates is generally moderate. Foundational competencies such as information literacy and research services were moderately available. Opportunities related to information product development and taxonomy/classification also fell within the moderate range. However, more entrepreneurial and market-oriented opportunities were rated low, including library services outsourcing, digital content creation and information consultancy. Regarding strategies for strengthening infopreneurship skills, respondents agreed on four key approaches: identifying market needs, attending conferences/workshops, identifying technology-based opportunities, and developing marketing skills. Conversely, strategies such as creating information products, connecting with professionals/clients, and developing technical skills like programming were disagreed with by the majority of respondents. The study concludes that while foundational skills are fairly developed, significant gaps remain in advanced entrepreneurial competencies, necessitating curriculum review, enhanced practical exposure, and targeted capacity-building initiatives.

Keywords: business opportunities, infopreneurship, LIS undergraduates, Nigeria.

Introduction

The rapid transformation of the global information landscape has expanded the scope of Library and Information Science (LIS) beyond its traditional boundaries, positioning information as both a developmental asset and an economic commodity. As information creation, management, and dissemination continue to accelerate, new pathways have emerged for individuals capable of harnessing these opportunities for financial, economic, and social value creation (Sulyman et al., 2024). Currently, Kwara State has up to 14 universities, with only three, including Al-Hikmah University, Ilorin; Kwara State University, Malete, and University of Ilorin, offering LIS.

From personal observations, these universities provide close to 700 graduates to the LIS employment climate annually. The surge in LIS graduates, coupled with the rising unemployment, makes infopreneurship, which is entrepreneurial ventures built around information products and services, increasingly vital. For LIS undergraduates, whose training is deeply rooted in information organisation, preservation, and dissemination, the evolving information economy presents unique prospects for innovation, wealth creation, and self-employment. Despite this potential, unemployment among Nigerian graduates has continued to rise, affecting professionals across sectors, including librarians (Sulyman et al., 2024). Scholars have argued that infopreneurship activities can serve as viable solutions to this growing unemployment dilemma by equipping graduates with practical, market-driven information skills (Adetayo & Hazmat, 2021; Babalola et al., 2021). These entrepreneurial avenues enable LIS graduates to independently engage in activities such as information brokerage, abstracting and indexing, database design, digital content creation, reprographic services, and knowledge organisation. However, the capacity to actualize these opportunities is contingent upon the possession of advanced digital, entrepreneurial, and innovative competencies.

The LIS profession in the 21st Century has evolved significantly, driven by technological advancements that demand practitioners who are adaptable, creative, and entrepreneurially minded (Nwoka et al., 2024; Musa & Tsafe, 2020). To this end, LIS educators and institutions are expected to provide training that equips students with relevant entrepreneurial skills, business knowledge, and technological expertise. Oguedoihu (2023) emphasized that enhancing employability in LIS requires integrating business planning, marketing, innovation, and financial management into LIS curricula, enabling students to identify and capitalize on entrepreneurial opportunities within the information ecosystem. Without such targeted training, many LIS graduates may find it difficult to transform their professional competencies into viable economic ventures.

Yet evidence reveals that LIS graduates in Nigeria often face significant constraints when attempting to venture into infopreneurship or technopreneurship. Challenges such as inadequate funding, insufficient ICT infrastructure, limited technical and business skills, and a lack of entrepreneurial mindset hinder their ability to fully exploit infopreneurial opportunities (Ali, 2021; Adetayo & Hazmat, 2021; Arowosola et al., 2022; Obiukwu & Onuoha, 2022). Even among

academic librarians and LIS faculty, Makinde et al. (2023) observed a notable deficiency in technical, ICT, and business capabilities, suggesting systemic gaps that trickle down to undergraduate training. These limitations underscore the urgent need for stronger institutional strategies to build students' entrepreneurial competencies and their confidence to operate within the digital information marketplace.

Nonetheless, studies have shown that LIS students and professionals who possess appropriate digital, social media, online research, and database management skills are capable of generating additional income, establishing businesses, and supporting innovation-driven ventures (Toane & Figueiredo, 2021; Nwoka et al., 2024; Adamu & Dogara, 2024). Infopreneurship and technopreneurship thus present viable paths for enhancing employability, promoting self-reliance, and expanding career possibilities for LIS undergraduates. However, unlocking these benefits requires deliberate strategies aimed at nurturing entrepreneurial skills through targeted training, exposure, mentorship, experiential learning, and supportive institutional frameworks.

Given this landscape, it becomes imperative to explore how infopreneurship opportunities can be enhanced for LIS undergraduates, especially within specific contexts such as Kwara State, Nigeria. Considering the unique infrastructural, educational, and economic realities of Nigerian tertiary institutions, strategic interventions are necessary to prepare LIS students for the emerging digital information economy. Therefore, this study seeks to investigate the strategies for enhancing infopreneurship opportunities among LIS undergraduates in Kwara State, to identify actionable pathways that can strengthen their entrepreneurial readiness, maximize employment prospects, and contribute to Nigeria's broader knowledge-based development.

Statement of the Problem

Despite the expanding opportunities presented by the digital information economy, many LIS undergraduates in Nigeria remain inadequately prepared to exploit infopreneurship as a viable pathway to employment and self-reliance. Although infopreneurship offers numerous possibilities, ranging from information brokerage and digital content creation to indexing, database management, and web-based services, evidence shows that LIS students in Nigeria possess only

moderate proficiency in basic ICT and LIS skills, while struggling considerably with the advanced entrepreneurial, digital, and technological competencies needed to thrive in infopreneurial ventures. This gap in skills has contributed to persistent unemployment among LIS graduates, despite the profession's inherent alignment with information-driven entrepreneurship.

Furthermore, existing literature highlights several constraints hindering students' ability to engage effectively in infopreneurship. These include limited access to ICT infrastructure, inadequate funding, weak technical and business skills, and the absence of a strong entrepreneurial mindset among students (Adetayo & Hazmat, 2021; Ali, 2021; Obiukwu & Onuoha, 2022). Compounding these challenges is the fact that many LIS faculty and training institutions themselves lack sufficient technopreneurial and business capabilities, resulting in limited exposure and insufficient practical training for students (Makinde et al., 2023). As a result, students often feel unprepared to pursue capital-intensive or technologically sophisticated ventures, gravitating instead toward low-skilled or minimally profitable opportunities.

The mismatch between the entrepreneurial demands of the 21st-century information environment and the practical readiness of LIS students underscores an urgent need to identify effective strategies that will enhance students' infopreneurship capacities. Without targeted interventions that develop their digital competencies, business skills, and entrepreneurial confidence, LIS undergraduates will continue to miss out on emerging opportunities within the growing information economy. One of the problems causing LIS graduates' abilities to harness infopreneurship is a lack of effective strategies for enhancing infopreneurship opportunities among LIS undergraduates in Kwara State, despite the profession's potential for job creation, self-reliance, and contribution to Nigeria's knowledge-based development. This gap necessitates a systematic exploration of the strategies that can better prepare LIS students to successfully engage in infopreneurial ventures.

Objectives of the Study

The main objective of this study was to explore the strategies for enhancing infopreneurship opportunities among LIS Undergraduates in Kwara State, Nigeria. The specific objectives are to:

1. Assess the level of availability of infopreneurship opportunities to LIS undergraduates in Kwara State, Nigeria; and,
2. Identify the strategies for strengthening infopreneurship skills of LIS undergraduates in Kwara State, Nigeria.

Questions

This study answered the following questions:

1. What is the level of availability of infopreneurship opportunities to LIS undergraduates in Kwara State, Nigeria?
2. What are the strategies for strengthening infopreneurship skills of LIS undergraduates in Kwara State, Nigeria?

Review of Related Literature

Infopreneurship has been considered a pivotal pathway toward technology-mediated services and entrepreneurial value creation. At its core, infopreneurship demands a calibrated blend of technical, cognitive, research, soft, and business/managerial skills. Literature have reported that the traditional roles of librarians have expanded into opportunity spaces such as digital content services, research support, data analytics, and knowledge management consulting, domains where LIS graduates can build independent careers or hybrid roles (Anaeme et al., 2025; Uzuegbu & Elonye, 2013). A convincing theme running through the evidence is that employability, and by extension, infopreneurial readiness, rests not simply on tool-use, but on the ability to translate information competencies into marketable, client-facing services (Adedokun & Popoola, 2024; Ali et al., 2023; Read & Cox, 2020).

Literature on inforpreneurship in the Nigerian context have reported empirical findings as a useful starting point and also reveals a developmental gap. Studies from Bayelsa, Rivers, and Anambra show that basic ICT proficiencies, email use, word processing, Internet surfing, PowerPoint preparation, and file handling correlate with employability of librarians (Friday & Onuh, 2022; Nwankwo et al., 2020). Likewise, technical proficiencies in digital preservation and asset management have been reported as employability markers (Owate & Chiekezie, 2024). However, while these foundational abilities are necessary, they are insufficient for infopreneurship, which requires value differentiation, productization of services, and client acquisition. The pivot should therefore be from baseline ICT to functional ICT literacy mapped to service lines (e.g., repository setup, metadata services, analytics dashboards), aligning with UNESCO's ICT competence framing and calls for curricular embedding of ICT skills for job creation (UNESCO, 2018; Jatto et al., 2024).

A salient and often underemphasized dimension is cognition: logical reasoning, complex problem-solving, mental imagery, and computer self-efficacy. The literature makes a strong case that cognitive abilities underpin speed and accuracy in information retrieval, learning transfer, and confidence with emerging technologies; the capabilities that map directly onto entrepreneurial experimentation, opportunity recognition, and solution design (Mak et al., 2020; Leopold et al., 2021). Adedokun and Popoola (2024) further argue for balancing technical and cognitive abilities, which suggests that pedagogies should move beyond tool training to include problem-based learning, scenario labs, and decision-making simulations. For Kwara State, embedding iterative design challenges (e.g., designing a fee-based current awareness service or a lightweight institutional repository for local NGOs) would concretize these cognitive competencies in entrepreneurial contexts.

Research skills are particularly marketable in knowledge economies and are repeatedly requested by academics and organizations seeking evidence-based decision support. The component skills, such as critical thinking, literature synthesis, methodology, data analysis, argumentation, and research communication, translate into billable infopreneurial offerings such as systematic/rapid reviews, data cleaning/visualization, research data management plans, and training workshops

(Anorue et al., 2022; Ganapathi, 2020; Blankendaal-Tran et al., 2023). The literature also shows the evolution of research skills to include digital search strategies, source evaluation, and online knowledge management (Ukonu & Habu, 2022; Awodoyin et al., 2020). For LIS undergraduates, structured capstones that deliver real client reports (with scopes, timelines, and deliverables) would help convert research competency into a portfolio that signals market readiness.

Soft skills and networking emerge as decisive factors in entrepreneurial success, shaping client relationships, collaborations, and opportunity discovery. Evidence highlights communication, teamwork, ethics, customer service, leadership, and lifelong learning as essential complements to technical skill (Read & Cox, 2020; Ali et al., 2023). Crucially, networking is framed not as optional but as core professional practice in a digitally mediated information landscape—supported by findings specific to Kwara State, where librarians actively network through skill development, reading current literature, mentorship seeking, and scholarly engagement (Howerton-Hicks & Maleeff, 2020; Taiwo et al., 2024). For undergraduates, purposeful networking via student chapters, professional associations, and targeted engagement on scholarly platforms should be scaffolded through mentorship programs that connect students with practitioners and alumni (Opele, 2022; Opele et al., 2015; Islam & Habiba, 2015).

Entrepreneurial readiness also requires explicit managerial and business acumen. Tondo and Ugba's typology from managerial, marketing/sales, accounting/financial, and general business skills provides a pragmatic scaffold for curriculum design and co-curricular programming (Tondo & Ugba, 2023). The literature points to high-yield development mechanisms: online courses and webinars to track fast-moving tech trends (Pun, 2017), workshops and mentoring for situated learning (Ntogo-Saghanen & Essor, 2021), and structured pathways such as continuous training, internships, and internationalized curricula to build exposure and confidence (Sulyman et al., 2022). Experiential learning and student employment in academic libraries further deepen competency articulation and professional identity, creating a pipeline from classroom to client work (Bischoff, 2024; Cady et al., 2022).

Importantly, the review material cautions against neglecting core LIS technical practice. Practical abilities in knowledge organization (cataloguing, classification, indexing) and digital curation are not obsolete; they are monetizable in contemporary contexts through metadata consultancy, taxonomy projects, repository services, and digital asset management for heritage organizations and SMEs (Salman et al., 2023; Owate & Chiekezie, 2024). Leadership, adaptability, advocacy, and change management round out the profile of graduates who can scope and deliver complex information services (Joel & Ibrahim, 2021). When fused with competencies around AI, machine learning awareness, and content management systems, and anchored by ethical and user-centered sensibilities, these skills position LIS infopreneurs to deliver differentiated, trustworthy services (Read & Cox, 2020; Ali et al., 2023).

For Kwara State, a coherent strategy would integrate these threads into a three-pillar model encompassing skill stack, pathways, and enablers. Skill stack comprises ICT/service-oriented tech, research/data competencies, cognitive/problem-solving strength, soft skills, and business/financial literacy, while the pathways include curricular infusion (entrepreneurship-infused course modules, research consulting practicums), co-curricular accelerators (short courses, hackathons, client projects, micro-internships), and structured networking/mentorship pipelines. The enablers cut across faculty-industry mentorship, an information entrepreneurship lab, seed micro-grants for student ventures, and assessment mechanisms tied to real outputs. This approach directly operationalizes the literature's recommendations on training, internships, and networking while maintaining a spine of LIS professional practice (Sulyman et al., 2022; Opele, 2022; Taiwo et al., 2024).

Methodology

This study employs a descriptive survey design. The population of this study is 520 four-hundred level LIS undergraduates in Kwara State, Nigeria, comprising Al-Hikmah University, Kwara State University and University of Ilorin. The reason for restricting this study to the four-hundred level LIS undergraduates is the researchers' belief that the undergraduates have taken different courses and practicals, which must have exposed them to different information opportunities they can venture into after graduation. Total enumeration sampling was employed due to the manageable

size of the final-year LIS undergraduates in the selected universities, allowing for a comprehensive analysis of each member without incurring high costs, stress, or time limitations. A self-developed questionnaire validated by two LIS experts was used for data collection after the questionnaire was found reliable at .809 internal consistency. From the 520 copies of questionnaires distributed, only 387 questionnaires, representing 73.53%, were filled and adequate for analysis. Data gathered was presented and analysed using frequency and percentage tables, as well as mean and standard deviation.

Demographic Characteristics of the Respondents

Table 1: Respondents' Demographic Information

Options		**F**	**%**
Gender	Male	201	51.9
	Female	186	48.1
	Total	**387**	**100**
Age range	15 – 19 years	119	30.7
	20 – 24 years	168	43.4
	25 – 29 years	65	16.8
	30 years and above	35	9.0
	Total	**387**	**100**
Institution	Al-Hikmah University, Ilorin	4	1.0
	Kwara State University, Malete	292	75.5
	University of Ilorin	91	23.5
	Total	**387**	**100**

Source: Researchers' Field Survey, 2025

The demographic characteristics of the respondents reveal a nearly balanced gender distribution, with males representing 51.9% and females 48.1%, indicating minimal gender bias in the sample. Age-wise, the respondents are predominantly young adults: 43.4% fall within the 20–24 age range, followed by 30.7% aged 15–19. Those aged 25–29 make up 16.8%, while only 9% are 30 years or older. This youthful demographic suggests that the findings primarily reflect the perspectives of typical undergraduate students, with limited representation of mature learners.

Institutional affiliation, however, is heavily skewed toward Kwara State University, Malete, which accounts for 75.5% of the sample. The University of Ilorin contributes 23.5%, while Al-Hikmah University represents only 1%. This concentration implies that the study's outcomes are more reflective of the experiences of students from Kwara State University. Overall, while gender distribution is fairly balanced, the dominance of younger respondents and the overrepresentation of one institution should be considered when interpreting the generalizability of the study's findings.

Table 2: Level of availability of infopreneurship opportunities to LIS undergraduates in Kwara State, Nigeria

	VH		H		M		L		VL			
Options	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**M**	**SD**
Information literacy training	16	4.1	113	29.2	163	42.1	62	16.0	33	8.5	3.04	0.98
Research services	16	4.1	108	27.9	160	41.3	73	18.9	30	7.8	3.02	0.97
Information product development	27	7.0	89	23.0	122	31.5	81	20.9	68	17.6	2.81	1.18
Taxonomy and classification	40	10.3	88	22.7	51	13.2	150	38.8	58	15.0	2.75	1.25
Library services outsourcing	51	13.2	62	16.0	38	9.8	84	21.7	152	39.3	2.42	1.47
Digital content creation	26	6.7	77	19.9	50	12.9	94	24.3	140	36.2	2.37	1.33
Information consultancy	32	8.3	37	9.6	40	10.3	141	36.4	137	35.4	2.19	1.25

Source: Researchers' Field Survey, 2025

Decision Rule: If mean ($\bar{X}$) is 1.0 – 1.74 = Very Low (VL); 1.75 – 2.49 = Low (L); 2.50 – 3.24 = Moderate (M); 3.25 – 3.99 = High (H); 4.00+ = Very High (VH)

Table 2 shows that LIS undergraduates in Kwara State demonstrate moderate proficiency in foundational skills such as information literacy ($\bar{X}$ = 3.04) and research services ($\bar{X}$ = 3.02), indicating they can handle basic information tasks but have not yet attained high-level expertise. Skills like information product development ($\bar{X}$ = 2.81) and taxonomy and classification ($\bar{X}$ = 2.75) also fall within the moderate range, though at lower levels, suggesting challenges in transforming information into value-added products and organising resources—abilities essential for emerging digital and entrepreneurial roles. These patterns reflect a curriculum effective in building basic competencies but less successful in cultivating advanced information-handling capacities.

In contrast, the more entrepreneurial and market-oriented skills, such as library services outsourcing ($\bar{X}$ = 2.42), digital content creation ($\bar{X}$ = 2.37), and information consultancy ($\bar{X}$ = 2.19), are rated low, with many students reporting very low competence. These deficits highlight significant gaps in students' readiness for infopreneurial activities that require negotiation, digital content production, client engagement, and advisory expertise. The sharp decline in these areas underscores the need for curriculum strengthening, increased hands-on training, and exposure to real-world entrepreneurial experiences. Without targeted interventions, LIS undergraduates may struggle to compete effectively in an information-driven economy where innovation, consultancy, and digital service creation are central to professional success.

Table 3: Strategies for strengthening infopreneurship skills of LIS undergraduates in Kwara State, Nigeria

	SA		A		D		SD			
Options	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**M**	**SD**
Identification of market needs	109	28.2	156	40.3	93	24.0	29	7.5	2.89	0.90
Attend conferences/seminars/workshops	151	39.0	66	17.1	91	23.5	79	20.4	2.75	1.18
Identify tech-based opportunities	137	35.4	96	24.8	65	16.8	89	23.0	2.73	1.17
Develop marketing skills	123	31.8	107	27.6	84	21.7	73	18.9	2.72	1.10
Seek funding support	106	27.4	133	34.4	75	19.4	73	18.9	2.70	1.07
Stay up-to-date with emerging technologies	115	29.7	101	26.1	94	24.3	77	19.9	2.66	1.11
Build a personal brand through social media	87	22.5	135	34.9	91	23.5	74	19.1	2.61	1.04
Join professional associations	58	15.0	96	24.8	140	36.2	93	24.0	2.31	1.00
Take online courses	58	15.0	90	23.3	140	36.2	99	25.6	2.28	1.01
Creating information products	79	20.4	86	22.2	81	20.9	141	36.4	2.27	1.16
Connect with professionals and clients	54	14.0	85	22.0	141	36.4	107	27.6	2.22	1.00
Develop technical skills such as programming	31	8.0	102	26.4	103	26.6	151	39.0	2.03	0.99

Source: Researcher's Field Survey, 2025

Decision Rule: If mean ($\bar{X}$) is 1.0 – 1.74 = Strongly Disagreed (SD); 1.75 – 2.49 = Disagreed (D); 2.50 – 3.24 = Agreed (A); 3.25 – 3.99 = Strongly Agreed (SA)

Table 4 reveals that the first four strategies fall within the "Agreed" category, indicating that respondents generally consider them important for strengthening infopreneurship skills. Identification of market needs received the highest support ($\bar{X}$ = 2.89), with 68.5% agreeing or strongly agreeing, highlighting students' recognition of the importance of understanding market demands. Attending conferences, seminars and workshops ($\bar{X}$ = 2.75) was also positively viewed

by 56.1% of respondents, though the relatively high rate of strong disagreement (20.4%) may reflect barriers such as cost or accessibility. Similarly, identifying technology-based opportunities ($\bar{X}$ = 2.73) and developing marketing skills ($\bar{X}$ = 2.72) were seen as valuable, with over 59% in agreement, suggesting that students appreciate the role of technology and marketing in modern entrepreneurial ventures.

In contrast, the strategies that fall into the "Disagreed" category revealed limited acceptance among respondents. Creating information products ($\bar{X}$ = 2.27) and connecting with professionals and clients ($\bar{X}$ = 2.22) were largely rejected, with over 60% disagreeing or strongly disagreeing, possibly due to a lack of awareness or perceived difficulty in executing these activities. The least supported strategy was developing technical skills such as programming ($\bar{X}$ = 2.03), where 65% disagreed. This suggests that students do not view programming as essential for infopreneurship.

This trend reflects curriculum gaps, implying that undergraduates are yet to be taught programming to a satisfactory level and deepen their understanding of the relevance of technical skills in information-based entrepreneurial careers.

Discussion of the Findings

Level of availability of infopreneurship opportunities to LIS undergraduates in Kwara State, Nigeria

The findings indicate that while LIS undergraduates demonstrate moderate proficiency in foundational competencies such as information literacy and research skills, they lack the advanced entrepreneurial abilities required for navigating the contemporary digital economy. This trend is consistent with scholarship emphasising the centrality of information literacy and research skills to LIS practice (Dinata, 2021; Jatto et al., 2024; Awodoyin et al., 2020; Blankendaal-Tran et al., 2023). The moderate skill levels observed suggest that LIS curricula continue to impart basic competencies effectively, corroborating earlier studies among Nigerian LIS students and professionals (Nwankwo et al., 2020; Friday & Onuh, 2022). However, significant deficiencies in areas such as digital content creation, outsourcing and consultancy echo persistent concerns that LIS education insufficiently addresses entrepreneurial and technopreneurial skill development

(Oguedoihu, 2023; Makinde et al., 2023), thereby limiting graduates' ability to capitalise on emerging digital opportunities.

These gaps have broader implications for employability in a labour market marked by escalating graduate unemployment (Sulyman et al., 2024). Although some studies report high perceived readiness among LIS graduates to engage in infopreneurial activities (Sulyman et al., 2024), the present findings highlight a disconnect between perceived readiness and demonstrated competence, a discrepancy similarly noted by Ahmed et al. (2024). Scholars have long advocated the integration of entrepreneurship into LIS curricula to foster innovation and enhance students' capacity for consultancy, digital content production and outsourcing (Anaeme et al., 2025; Ogbonyomi, 2024; Butt & Ahmad, 2022; Ramugondo & Ocholla, 2022). Yet the persistent skill deficits observed indicate that such recommendations remain underimplemented. Addressing these shortcomings requires comprehensive curriculum reform, practical and hands-on training approaches (Pun, 2017; Ntogo-Saghanen & Essor, 2021), and strengthened industry partnerships and tech-hub-based experiential learning (Bischoff, 2024; Opele, 2022) to better align LIS education with the demands of Nigeria’s evolving digital and entrepreneurial landscape.

Strategies for strengthening infopreneurship skills for employability of final year LIS undergraduates in Kwara State, Nigeria

The findings reveal that respondents prioritised strategies such as identifying market needs, participating in conferences and workshops, recognising technology-based opportunities, and developing marketing skills as key enablers of infopreneurship. These preferences reinforce established arguments that entrepreneurial success in LIS depends on understanding user demands and sustaining professional growth through continuous learning and networking platforms (Uzuegbu & Elonye, 2013; Anaeme et al., 2025; Ntogo-Saghanen & Essor, 2021; Pun, 2017). However, respondents expressed limited support for strategies such as creating information products, building professional networks, and acquiring technical skills like programming. This divergence from scholarly positions that emphasise product development, networking, and ICT proficiency as foundational to infopreneurial practice (Aregbesola et al., 2021; Ujoumunna, 2021; Adamu & Dogara, 2024) suggests potential gaps in practical exposure, confidence, or institutional

support. It also mirrors concerns regarding the limited integration of technopreneurial competencies within LIS training environments (Oguedoihu, 2023; Makinde et al., 2023).

These contrasts paint a nuanced picture of how LIS undergraduates perceive the requirements for successful infopreneurship. Their preference for market-driven and business-oriented skills, particularly marketing, aligns with contemporary calls to strengthen soft and strategic competencies to enhance professional relevance and employability (Tondo & Ugba, 2023; Paletta & Fermann, 2023; Trembach, 2024). Yet their reluctance toward networking and technical skill acquisition raises concerns, given the established role of professional connections and ICT expertise in career advancement and entrepreneurial innovation (Howerton-Hicks & Maleeff, 2020; Taiwo et al., 2024; Adamu & Dogara, 2024). This tension may reflect cultural attitudes, limited structured opportunities, or curriculum gaps that constrain experiential learning. Overall, the findings underscore the need for LIS programmes to balance theoretical orientation with hands-on training, mentorship, and exposure to real-world entrepreneurial ecosystems to cultivate a more holistic and practice-ready infopreneurial skill set.

Limitations of the Study

This study, like all other studies, is limited in different dimensions, despite its contributions. One of the major limitations of this study is its focus on the four-hundred level LIS undergraduates in Kwara State, Nigeria. The restriction of this study to such a group of students undermined the gathering of data that reflects the opinions of all LIS undergraduates. Moreover, the data is skewed in nature: by having LIS undergraduates of Kwara State University as its main participants, this affects the generalizability of the findings of this study.

Another notable limitation of this study is its quantitative approach. The use of a self-developed questionnaire for data collection minimizes the quality of the findings of this study by limiting the respondents to the responses provided in the questionnaire. Future studies can address this gap by adopting a qualitative approach, which will offer opportunities for in-depth investigation of the status of infopreneurship opportunities among LIS students/practitioners.

Conclusion

This study demonstrates that LIS undergraduates in Kwara State possess a reasonable command of foundational information-handling competencies; however, their preparedness for advanced, market-oriented infopreneurial activities remains limited. While students exhibit moderate proficiency in areas such as information literacy and research services, significant shortcomings persist in digital content creation, outsourcing, consultancy, and other entrepreneurial skill domains essential for effective participation in the contemporary information economy. These gaps indicate that existing curricular structures, though adequate for basic skill development, do not sufficiently equip students with the higher-order competencies required for infopreneurial engagement.

The findings further reveal that students acknowledge the relevance of several strategies for strengthening infopreneurship, particularly the identification of market needs, participation in professional development events, recognition of technology-driven opportunities, and the cultivation of marketing abilities. Nonetheless, their reluctance toward developing information products, building professional networks, and acquiring advanced technical skills such as programming suggests a disconnect between perceived priorities and the skill sets widely recognised in the literature as critical for entrepreneurial success. This misalignment underscores the need for greater exposure to practical, technology-enabled, and innovation-driven experiences within LIS education.

Overall, the study underscores the imperative for LIS programs in Kwara State to adopt more comprehensive and practice-oriented approaches to entrepreneurial capacity building. Strengthening infopreneurial readiness will require curricular reforms, enhanced ICT infrastructure, structured mentorship and networking opportunities, and deliberate efforts to foster an entrepreneurial mindset among undergraduates. By addressing these deficits, LIS schools can better prepare students to leverage the expanding opportunities within the digital information landscape and contribute meaningfully to national development through knowledge-based innovation and self-reliance.

Recommendations

Based on the findings, this study recommends that:

1. University management and LIS departments should undertake a comprehensive review of the current curriculum to integrate relevant infopreneurship-focused content. This should include practical modules on digital content creation, information product development, information consultancy, outsourcing, and ICT-enabled information services. The revised curriculum should emphasize experiential learning, ensuring that students engage in hands-on activities that build competencies aligned with real-world entrepreneurial requirements.
2. LIS departments, in collaboration with university training units and professional associations, should organize regular workshops, seminars, and symposia that focus on practical skill development. These training sessions should cover areas such as marketing of information services, information product packaging, innovation management, and digital technologies. Institutions should also provide financial support or fee waivers for students to participate in national and international conferences, thereby broadening their professional exposure.
3. University management and relevant developmental units should establish Infopreneurship and Digital Innovation Hubs within LIS schools. These hubs should be equipped with modern ICT tools, multimedia production facilities, and data analysis software necessary for developing information-based products and services. In addition, the hubs should coordinate mentorship programs and provide microgrants or seed funding to support student-driven entrepreneurial initiatives.
4. LIS departments and student affairs units should encourage students to actively participate in professional associations and networking platforms. Programmes such as career fairs, meet-and-greet sessions with industry experts, alumni mentorship programmes, and project exhibitions should be institutionalized. Such initiatives will help students develop stronger professional identities, improve their communication and interpersonal skills, and expose them to diverse infopreneurial opportunities within the LIS field.
5. University management should prioritize continuous capacity development for LIS lecturers to ensure they are adequately equipped to teach modern, industry-relevant skills.

This should include training in digital content creation, data management tools, innovation ecosystems, and entrepreneurship pedagogy. Faculty–industry partnerships should also be incentivized to facilitate co-teaching arrangements, consultancy projects, and internship placement pipelines that benefit both staff and students.

References

Adamu, M.S. & Dogara, L. (2024). An assessment of librarians ICT skills in Federal University of Technology Library, Minna, Nigeria. *International Journal of Knowledge Dissemination*, 5(1), 31-42. https://doi.org/10.70118/ijkd.0202405010.4

Adedokun, O.O. & Popoola, S.O (2024). Computer self-efficacy, computer literacy skills, cognitive skills and use of electronic resources by social science doctoral students in Nigerian federal universities. *International Journal of Information Science and Management*, 22(4), 185-205. https://doi.org/10.22034/ijism.2024.2007424.1187

Adetayo, A. J., & Hamzat, S. A. (2021). Infopreneurship and financial satisfaction among library professionals in tertiary institutions in Ede, Osun, Nigeria. *Library Philosophy and Practice (e-journal)*, 4749. https://digitalcommons.unl.edu/libphilprac/4749

Adetayo, A. J., Suleiman, A. I., & Olajire, A. M. (2022). Leveraging digital infopreneurship for financial well-being of academic librarians: The Nigerian perspective. *Library Philosophy and Practice (ejournal)*, 6652. https://digitalcommons.unl.edu/libphilprac/6652

Ahmed, Y. O., Yusuf, T. I., Mahammuod, S. O., & Jimoh, O. J. (2024). An assessment of entrepreneurial skills of LIS students in Federal Polytechnic, Offa, Kwara State, Nigeria. *Journal of Library Services and Technologies*, 6(1), 40-48. https://doi.org/10.47524/jlst.v6i1.41

Ali, M.A., Rafiq, M. & Arshad, A. (2023). Perceptions of academic librarians regarding their interpersonal competencies: A case of Pakistani universities. *Journal of Librarianship and Information Science*, 1–19. https://doi.org/10.1177/09610006231201409.

Ali, S. (2021). The importance, challenges, and issues of infopreneurship training for library and information science students. *Jewel Journal of Librarianship*, 16(2), 7-15.

Anaeme, F.O., Okoro, J.U. & Anuforo, Y.O. (2025). Enhancing career opportunities and practices of Library and Information Science professionals through entrepreneurship education and wealth creation. *International Journal of Information Resource Management (IJIRM)*, 2(1), 1 – 20.

Anorue, H.C., Ochehe, O. & Madu, M.A. (2022). Digital research proficiency in information and communication technology skills employed by secretarial staff and business teachers in

day-to-day administration and training in secondary schools. *Library Philosophy and Practice (e-journal)*. 7438. https://digitalcommons.unl.edu/libphilprac/7438

Aregbesola, A., Van der Walt, T., Owolabi, T., Idiegbeyan-Ose, J., Okocha, F., & Eyiolorunshe, T. (2021). Infopreneurship in a developing country: Opportunities and challenges. *IOP Conference Series: Materials Science and Engineering*, 640, 1-5. https://doi.org/10.1088/1757-899X/640/1/012123

Arowosola, O., Musa, K., Lamidi, B. O., Ochai, J., & Adam, H. (2022). Awareness and relevance of infopreneurship among Library and Information Science (LIS) students at Prince Abubakar Audu University, Anyigba, Kogi State, Nigeria. *Library Philosophy and Practice (e-journal)*, 7087. https://digitalcommons.unl.edu/libphil prac/7087

Awodoyin, A.F., Adetoro, N. & Oke, P. (2020). Perceived research skills of graduating Library and Information Science (LIS) undergraduates in a Nigerian University of Education. *Library Philosophy and Practice (e-journal).* 4741. https://digitalcommons.unl.edu/libphilprac/4741

Babalola, G. A., Adamu, S. M., Aji, K. O., Fati, A., & Shekarau, M. I. (2021). Reinvigorating Library and Information Science (LIS) curriculum in a fast-changing society. Information Impact: *Journal of Information and Knowledge Management*, 9(4), 63-72. https://doi.org/10.4314/iijikm.v9i4.6

Bischoff, M., Armstrong, M., & Waddell, D. A. G. (2024). Professionalizing a student's library employment through experiential learning workshops. *Journal of Library Administration*, 64(3), 261–274. https://doi.org/10.1080/01930826.2024.2316519

Blankendaal-Tran, K. N., Meulenbroeks, R. F. G. & van Joolingen, W. R. (2023). Digital research skills in secondary science education: A guiding framework and university teachers' perception. *European Journal of STEM Education*, 8(1), 03. https://doi.org/10.20897/ejsteme/13017

Butt, K. & Ahmad, P. (2022). Entrepreneurship opportunities for library and information science graduates: a qualitative study. *Library Philosophy and Practice (ejournal)*. 6960. https://www.digitalcommons.unl.edu/libphilprac/6960

Cady, J. E., Beavers, K. F., Jiang, A., & McCoy, L. (2022). Developing a meaningful student employment experience for students' success on campus. *New Review of Academic Librarianship*, 29, 189–202. https://doi.org/10.1080/13614533.2022.2122852

Dinata, K.B. (2021). Literasi digital dalam pembelajaran daring. *Journal Eksponen*, 11, 1-8.

Fermann, A., & Paletta, F. C. (2022). The librarian in the complexity of the labor market in the digital economy. *Cadernos de Educação, Tecnologia e Sociedade*. https://doi.org/10.14571/brajets.v15.nse2.153-163

Friday, J.E. & Onuh, N.S. (2022). Acquisition of 21st Century librarianship skills by librarians in public university libraries in Bayelsa and Rivers States, Nigeria. *Library Philosophy and Practice (e-journal). 7265*. https://digitalcommons.unl.edu/libphilprac/7265.

Ganapathi, B. (2020). Entrepreneurial opportunities for library and information science professionals. *A paper presented at MANLIBNET's international conference on creating wisdom and knowledge through shared learning: role of librarians and information managers, IIM, Indore*. Available at https://www.researchgate.net/publication/270141872

Howerton-Hicks, L. & Maleeff, T.Z. (2020). Network like nobody's watching: Demystifying networking as a skill for the librarian and information professional community. *International Journal of Librarianship*, 45(2), 47 – 58.

Islam, T., Zahra, I., Rehman, S. U., & Jamil, S. (2022). How knowledge sharing encourages innovative work behavior through occupational self-efficacy? The moderating role of entrepreneurial leadership. *Global Knowledge, Memory and Communication*, 45(2), 1 – 22. https://doi.org/10.1108/GKMC-02-2022-0041

Jatto, E.O., Fasola, S. O., & Abioye, A. (2024). Information literacy skills and research output of library and information science postgraduate students of the University of Ibadan. *Information Impact: Journal of Information and Knowledge Management*, 15:1, 59-72, DOI https://dx.doi.org/10.4314/iijikm.v15i2.5.

Joel, A.P. & Ibrahim, F.L. (2021). Digital competencies needed by librarians and information professionals for knowledge management of 21st century university libraries in Borno State. Library Philosophy and Practice (e-journal). 5355. https://digitalcommons.unl.edu/libphilprac/5355.

Leopold, C., Mayer, R.E. & Dutke, S. (2021). The power of imagination and perspective in learning from science text. *Journal of Educational Psychology*, 111(5), 793–808. https://doi.org/10.1037/edu0000310

Mak, M., De Vries, C. & Willems, R.M. (2020). The influence of mental imagery instructions and personality characteristics on reading experiences. *Collabra: Psychology*, 6(1), 43. https://doi.org/10.1525/collabra.281

Makinde, O. B., Hamzat, S. A., Oketunji, I., Ogunniran, O. O., & Olatunji, T. O. (2023). Entrepreneurial skills assessment of library and information science faculty and academic librarians in Nigeria: Issues and prospects. 28, 255–277. https://doi.org/10.1080/08963568.2023.2263315

Musa, J., & Tsafe, A. G. (2020). Entrepreneurship Opportunities for Graduates of Library and Information Science. *Journal of Library Services and Technologies*, 1(2), 76-82.

Ntogo-Saghanen, G.B. & Essor, G.C. (2021). Information entrepreneurship and use as a mechanism for self-employment of librarians in Rivers State, Nigeria. *Library and Information Perspectives and Research*, 3(1), 104-118. DOI: 10.47524/lipr.31.12

Nwankwo, N.G., Seimode, D.F. & Ismaila, O.S. (2020). Assessment of digital literacy skills of 21st century librarians in college libraries in Anambra State, Nigeria. *International Journal of Social Sciences and Humanities Reviews*, 10(2), 201 – 211.

Nwoka, I.B., Ihejirika, I.C. & Obuah, O.B. (2024). Librarians' digital skills and utilisation of innovative technologies for library service delivery in public university libraries in Rivers State. *Information Managers: A Journal of Nigerian Library Association Rivers State Chapter*, 7(1), 19 – 35.

Obiukwu, C. P., & Onuoha, B. C. (2022). Technopreneurship and growth of new tech companies in Nigeria. *International Academy Journal of Management Annals*, 6(2), 56-72. https://doi.org/10.2721 42562624

Ogbonyomi, M.A. (2024). Exploring entrepreneurial opportunities available to Library and Information Science graduates for sustainable national development. *Global Review of Library and Information Science (GRELIS)*, 20(1), 156 – 164.

Oguedoihu, J.C. (2023). Entrepreneurship education for socio-economic empowerment of library and information science students. *International Journal of Knowledge Dissemination (IJKD)*, 4(2), 32-47.

Owate, C.N. & Chikezie, H.E. (2024). Assessment of information professionals' digital competence in promoting access to electronic information resources in academic libraries in Rivers State, Nigeria. *The Catalyst Journal of Library and Information Literacy*, 3(2), 52-67.

Pun, R. (2017). Becoming the entrepreneur librarian: building skills, networks and experiences abroad. http://library.ifla.org/1919/

Ramugondo, L. S., & Ocholla, D. N. (2022). Can infopreneurship be an employment option for Library and Information Science students? *Mousaion: South African Journal of Information Studies*, 40(2), 1-24. https://doi.org/10.25159/2663-659X/9665

Read, A. & Cox, A. (2020). Underrated or overstated? The need for technological competencies in scholarly communication librarianship. *The Journal of Academic Librarianship*, 46(4): 102155.

Salman, A. A., Ajani, F. O., & Sulyman, S. A. (2023). The nexus between professional ethics, competence, and emerging technologies on the sustainability of the LIS profession. *Information Technology and Librarianship*, 3(2), 59-76

Sulyman, A. S., Usman, I., & Badmus, I. B. (2022). Investing in employability of librarians: An impetus for enhancing the professionalism of librarians in Nigeria. *Business Information Review*, 40, 56–67. https://doi.org/10.1177/02663821221141814

Sulyman, A.S., Ajani, F.O., Idowu, A.O. & Badmus, I.B. (2024). Infopreneurship and technopreneurship readiness for job creation among Nigerian library and information science graduates. *Asian Journal of Information Science and Technology*, 14(2), 27-33. DOI: https://doi.org/10.70112/ajist-2024.14.2.4278

Taiwo, M.A., Sulyman, A.S., Idris, A.O., Olosasa, A.T. & Uzoh, U.L. (2024). Perceived effects of professional networking on career growth of librarians in Kwara State, Nigeria. *International Journal of Knowledge Dissemination*, 5(1), 43-54. https://doi.org/10.70118/ijkd.0202405010.5

Toane, C., & Figueiredo, R. (2021). Toward core competencies for entrepreneurship librarians. *Journal of Business & Finance Librarianship*, 23(1), 35–62. https://doi.org/10.1080/08963568.2018.1448675

Tondo, R.I. & Ugba, T. (2023). Entrepreneurship skills development of library and information science professionals in the 21st Century. *International Journal of Library and Information Studies*, 13 (1), 1-9. http://www.ijlis.org

Trembach, S. (2024). Employability of Library and Information Science (LIS) school graduates: Library leadership perspective. *Journal of Library Administration*, https://doi.org/10.1080/01930826.2024.2305070

Ujoumunna, J. (2021). Infopreneurial librarianship: A panacea for chartered librarians in Nigerian practices. *Academia Letters*, Article 4112. https://doi.org/10.20935/AL4112.

Ukonu, E.E. & Habu, J.U. (2022) Impact of ICT skill acquisition towards improved pedagogy in the covid-19 pandemic era. *International Journal of Management Science and Business Analysis*, 24(7), 249-262.

UNESCO. (2018). Digital skills are critical for the job and social inclusion. Retrieved from https://en.unesco.org/news/digital-skills-critical-jobs-and-social-inclusion

Uzuegbu, C. P. & Elonye, G.U. (2013). Entrepreneurial opportunities for library and information science professionals in contemporary society. *The Research Librarian*, 7, 23-42.