



Digital and Reading Skills as Motivators of Digital Reading among Library and Information Science Undergraduates in Kwara State, Nigeria

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Abstract

The advent of digital technologies has transformed reading activities and processes, requiring the availability of digital facilities and reading abilities. Unraveling how Library and Information Science (LIS) undergraduates read in the digital-driven world makes this study investigated how digital and reading skills motivate digital reading among LIS undergraduates in Kwara State, Nigeria. A descriptive survey design was adopted, targeting the entire population of 520 final-year LIS students across three universities. Using a total enumeration sampling technique, 520

questionnaires were distributed, of which 387 were duly completed, yielding a 73.53% response rate. The data collection instrument, a researcher-developed questionnaire, was validated by two experts and demonstrated acceptable reliability ($\alpha = 0.793$). Data were analysed using frequencies, percentages, means, and standard deviations. Findings revealed that students predominantly read academically oriented digital resources. The most frequently used resources were digital books, digital journals, digital theses/dissertations, academic databases and OERs. Digital skills were generally high in e-book navigation, digital literacy, and digital research, but moderate in digital reading comprehension, resource evaluation, and text annotation. Reading skills showed strong proficiency in vocabulary recognition and comprehension, moderate ability in fluency/speed and summarisation, and weaker performance in interpretation and inference. Smartphones were the most used digital reading tool. Major challenges included slow Internet connectivity, high data costs, poor electricity supply, gadget costs and eye fatigue. The study concludes that while students possess strong foundational digital and reading skills, significant infrastructural and higher-order skill gaps hinder optimal digital reading engagement.

Keywords: Digital skills, Digital reading, LIS undergraduates, Reading skills

Introduction

Reading remains a fundamental cognitive activity that underpins intellectual development, critical thinking, and lifelong learning. However, evidence suggests that reading culture in Nigeria has continued to decline, posing serious implications for educational development and national productivity. Studies reveal that about 40% of Nigerian adults do not complete a single non-fiction text after formal education (Aramide, 2023; Onyenachi et al., 2021; Sulyman et al., 2023), while reading habits among students are reported to be deteriorating steadily (Oghenetega & Lydia, 2024). Factors such as social media distraction, limited motivation, and inadequate reading skills have been implicated in this decline. For undergraduates, especially those in LIS, this situation is particularly concerning because their academic and professional success depends heavily on sustained engagement with information resources.

In recent years, digital reading has emerged as a potential catalyst for reviving reading habits, particularly among young people who are increasingly becoming digital natives. Digital reading involves accessing, interpreting, analysing, and evaluating texts presented through digital media

(Lim & Toh, 2020; Sulyman et al., 2024; Yila, 2024). It allows readers to harness multimedia, hyperlinks, annotations and interactive features that enhance comprehension and engagement. Unlike traditional print reading, digital reading enables personalised navigation, multimodal exploration, and faster access to diverse information sources (Dani, 2023). For LIS undergraduates who frequently interact with digital information systems, the shift towards digital reading aligns naturally with their learning environment and professional expectations.

Yet, effective digital reading does not occur automatically; it requires essential digital and reading skills. Digital skills, defined as the ability to locate, evaluate, manage, and use digital resources, have become indispensable for navigating complex digital environments (American Library Association, 2022; Ayalon & Aharony, 2024). These skills include technological, communication, information evaluation, critical thinking, and digital security competencies (Rodríguez-de-Dios & Igartua, 2020). Without sufficient proficiency in these areas, students may struggle to identify credible resources, interpret multimodal content, or meaningfully engage with digital texts. Similarly, reading skills such as comprehension, vocabulary development, fluency, phonemic awareness, and critical interpretation remain crucial for deriving meaning from any form of text print or digital (Chimah et al., 2021; Onyenachi et al., 2021). Reading skills influence the extent to which learners can understand, analyse, and apply information. For LIS undergraduates, whose training emphasises information literacy, research, and knowledge organisation, strong reading skills are essential for academic achievement and professional competence.

Despite the growing global shift toward digital reading, there is insufficient empirical evidence on how digital and reading skills motivate digital reading behaviour among LIS undergraduates in Nigeria. Given that LIS professionals are expected to be champions of information access and digital literacy, understanding the drivers of their digital reading practices is imperative. In Kwara State, a home to several tertiary institutions offering LIS programmes, it becomes crucial to investigate whether students possess the necessary skills and how these skills influence their willingness and ability to engage in digital reading. This study, therefore, examines digital and reading skills as motivators of digital reading among Library and Information Science undergraduates in Kwara State, Nigeria. By analysing the relationship between these skill sets and digital reading behaviour, the study provides insights that can support curriculum enhancement,

digital literacy training, and interventions aimed at strengthening reading culture in Nigerian higher institutions.

Statement of the Problem

Reading remains a foundational skill for academic success and lifelong learning, but the shift from print to digital environments now requires students to possess both traditional reading abilities and digital competencies. Although digital reading offers affordability and supports self-learning, motivation, and problem-solving (Kumara & Kumar, 2021; Zhang et al., 2024), students can only fully benefit when they are proficient in navigating digital tools and multimodal texts. In Nigeria, however, students' reading culture has continued to decline, with diminishing interest in reading for pleasure and personal development (Onyenachi et al., 2021). This decline is linked to weak reading skills, low value placed on reading, and inadequate digital competencies, as students often struggle with tasks such as annotation, keyword searching, and managing digital text features (Peras et al., 2023). These challenges are further intensified by technological complexities, limited access to digital literacy training, resistance to adopting new technologies, and insufficient financial support for technological integration across educational institutions (Kodua-Ntim & Fombad, 2020; Ogunbodede & Sawyerr George, 2023; Owate & Chikezie, 2024).

Despite the rapid integration of digital devices into education and the growing shift from print to digital reading, existing studies on digital reading among Nigerian students predominantly focus on general student populations in public tertiary institutions. Works such as Ambrose et al. (2021), Biogera and Utami (2024), Wiche and Ogunbodede (2021), and Ogunbodede and Sawyerr George (2023) offer broad insights but overlook the specific experiences of undergraduates in Kwara State, particularly those studying Library and Information Science (LIS). Even when private institutions are included, LIS undergraduates are often excluded, as seen in Sulyman et al. (2024). This omission is significant because LIS students are expected to become information professionals capable of navigating digital resources and promoting digital literacy in an increasingly digitised society. Without empirical evidence on how their reading and digital skills shape their engagement with digital reading, institutions lack the basis to design targeted interventions or curricular improvements. Addressing this gap, the present study focuses on LIS undergraduates in Kwara State to generate evidence-based insights that can enhance digital literacy training, strengthen

reading culture, and promote effective digital reading engagement within this critical academic and professional group.

Objectives of the Study

The main objective of this study was to investigate digital and reading skills as motivators for digital reading among LIS undergraduates in Kwara State, Nigeria. The specific objectives are to:

1. Identify the digital resources commonly read by LIS undergraduates in Kwara State, Nigeria;
2. Assess the level of digital skills possessed by LIS undergraduates in Kwara State, Nigeria;
3. Determine the reading skills possessed by LIS undergraduates in Kwara State, Nigeria;
4. Identify the tools commonly used for digital reading among LIS undergraduate in Kwara State, Nigeria; and,
5. Examine the challenges associated with digital reading among LIS undergraduates in Kwara State, Nigeria.

Research Questions

This study sought to answer the following questions:

1. What are the digital resources being read by LIS undergraduates in Kwara State, Nigeria?
2. What is the level of digital skills possessed by LIS undergraduates in Kwara State, Nigeria?
3. What are the reading skills possessed by LIS undergraduates in Kwara State, Nigeria?
4. What are the tools commonly used for digital reading among LIS undergraduates in Kwara State, Nigeria?
5. What are the challenges associated with digital reading among LIS undergraduates in Kwara State, Nigeria?

Review of Related Literature

Digital Resources Read by Undergraduates

Digital resources such as e-journals, e-books, databases and institutional repositories have transformed higher education by expanding access to diverse scholarly materials and eliminating many limitations associated with print collections. As Jonathan and Udo (2020) note, their integration into university libraries enhances knowledge accessibility, while SOAS Library (2022)

highlights the advantages of searchability, remote access and interactivity. However, the effectiveness of these resources depends on students' ability to navigate, interpret and critically evaluate digital content. Thus, digital reading practices are shaped not only by technological availability but also by users' competence, which ultimately influences learning outcomes (Sulyman et al., 2024).

The growing prominence of digital formats, including e-books, multimedia files, databases, OERs and institutional repositories, has increased the demand for advanced digital literacy among students, particularly those in LIS. While affordability and accessibility encourage the adoption of digital resources (Adenariwo & Sulyman, 2022; Eiriemiokhale & Sulaiman, 2024; Olarongbe et al., 2026), these environments require strong evaluative and interpretive skills. Students lacking such competence may feel overwhelmed by complex digital platforms (Amadi & Igwe, 2021; Peterson, 2022). For LIS undergraduates in Kwara State, motivation to engage in digital reading is therefore shaped by both access to resources and the digital proficiency needed to utilise them effectively.

Digital Tools Used for Reading

Digital reading involves accessing text on electronic screens enriched with multimedia features such as hyperlinks, videos and graphics, which support interactive engagement and navigation (Eiriemiokhale & Sulaiman, 2024; Ibrahim, 2020). The rapid proliferation of digital resources has significantly expanded students' reading practices beyond print to include web pages, emails, blogs, instant messaging and multimedia documents (Umeh, 2021; Yila, 2024). With smartphones, tablets, laptops and computers serving as major access devices, students increasingly rely on these technologies to retrieve, store and manipulate digital content (Oyeyemi, 2021; Peras et al., 2023). This shift reflects the broader Internet revolution that has widened access to diverse reading materials, with evidence showing that digital device availability enhances reading frequency and engagement (Soroya & Ameen, 2016). Undergraduates now prefer digital formats including e-books, databases, audiobooks, educational videos and online course materials, while institutional websites and OPACs serve as key gateways to scholarly resources (Ambrose et al., 2021; Ogunbodede & Sawyerr-George, 2023; Olarongbe et al., 2026).

Globally, digital reading has become central to higher education. Studies from Indonesia, Malaysia and the United States report increasing acceptance and adoption of digital texts, supported by hypertext and hypermedia environments that demand nonlinear navigation, critical evaluation and sophisticated digital literacy skills (Pardede, 2022; Perrin, 2020; Kazazoğlu, 2020; Divya & Mohamed, 2020).

Purposes for Engaging in Digital Reading by Undergraduates

Digital reading has evolved into a significant extension of traditional literacy, reshaping how students access, process and engage with information. While both print and digital reading remain essential for intellectual development and socio-economic empowerment (Kabir, 2022; Onyenachi et al., 2021; Yila, 2024), digitisation has broadened access and diversified reading options, enabling learners to engage autonomously across multiple platforms (Lim & Toh, 2020; Sulyman et al., 2024). In Nigeria, digital reading further supports language development and everyday academic learning (Biogera & Utami, 2024). The availability of diverse digital materials, often enhanced with multimedia and interactive features, boosts motivation, increases exposure to varied content and fosters habitual reading practices.

Effective digital reading depends on students' digital competencies and supportive tools. Learners increasingly rely on e-books, annotation software and collaborative platforms such as Google Docs, Hypothes.is and Annotation Studio to search, annotate and co-construct meaning (Ibrahim, 2020; Olarongbe et al., 2026; Seatter, 2022). These tools enhance comprehension monitoring and peer collaboration, although concerns persist that digital environments may encourage skimming and surface-level processing (Durant & Horava, 2020). Nevertheless, digital materials remain dominant due to their accessibility, currency and constant availability (McMaken, 2023; Ogunbodede & Sawyerr-George, 2023), underscoring the need for strong digital literacy and deep reading skills among Nigerian undergraduates.

Challenges Associated with Digital Reading among LIS Undergraduates in Kwara State, Nigeria

The rapid rise of convergent and mobile technologies has transformed global reading practices, shifting students from linear, print-based reading to more fragmented digital behaviours such as browsing, scanning and selective reading (Cardoso et al., 2014; Liu & Huang, 2016).

These changing practices demand stronger digital and reading competencies, yet many Nigerian undergraduates still lack the skills to search, retrieve and critically evaluate digital information, limiting meaningful engagement (Ogunbodede & Sawyer-George, 2023). Skill deficits are further compounded by infrastructural constraints, including poor computer access, unreliable Internet connectivity, unstable electricity and limited e-resource availability, which hinder sustained digital reading (Ajayi et al., 2014; Liasu & Bakrin, 2022). Physical discomforts such as eye strain and screen fatigue also negatively influence students' willingness to read digitally (Demir & Büyükbaykal, 2024).

Beyond these structural and skill-related issues, motivation is shaped by perceptions of usefulness, concerns about privacy and cybersecurity, information overload and competition from social media (De Saulles, 2012; Kabir, 2022). For LIS undergraduates, who are expected to expertly navigate and evaluate digital information environments, the interplay of digital skills, reading competencies and motivational factors is crucial to effective academic engagement.

Methodology

This study employs a descriptive survey design. The population of this study is 520 final-year (400 level) LIS undergraduates in LIS schools in Kwara State, Nigeria, comprising Al-Hikmah University, Kwara State University and University of Ilorin. 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 to have a reliable .793 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.

Data Analysis

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

The demographic characteristics of the respondents show a near balance in gender distribution, with males constituting 51.9% (201 respondents) and females 48.1% (186 respondents), suggesting minimal risk of gender-related bias in the sample. Age distribution indicates that the respondents are predominantly young adults, with the largest group falling within the 20–24 years category (43.4%, 168 respondents), followed by those aged 15–19 years (30.7%, 119 respondents). Smaller proportions were observed among respondents aged 25–29 years (16.8%, 65 respondents) and those 30 years and above (9%, 35 respondents). This youthful profile implies that the findings primarily reflect the perspectives of younger students, which may affect the applicability of results to older or non-traditional student populations.

Institutional affiliation reveals a strong concentration of participants from Kwara State University, Malete, representing 75.5% (292 respondents), while the University of Ilorin contributes 23.5% (91 respondents) and Al-Hikmah University only 1% (4 respondents). This significant institutional imbalance indicates that the dataset is heavily oriented toward a single institution, thereby shaping

the dominant viewpoint captured in the study. Collectively, the demographic profile reflects a sample that is youthful and institutionally skewed, though gender representation remains relatively balanced. These characteristics should be considered when interpreting the results, as they have implications for the generalisability of the study's conclusions across broader institutional and age-diverse contexts.

Table 2: Digital resources commonly read by LIS undergraduates in Kwara State, Nigeria

Options	SA		A		D		SD			
	F	%	F	%	F	%	F	%	M	SD
Digital books	106	27.4	157	40.6	97	25.1	27	7.0	2.88	0.89
Digital journals	101	26.1	154	39.8	107	27.6	25	6.5	2.86	0.88
Digital projects, theses and dissertations	123	31.8	107	27.6	84	21.7	73	18.9	2.72	1.10
Academic databases	102	26.4	136	35.1	81	20.9	68	17.6	2.70	1.04
Open educational resources (OERs)	115	29.7	101	26.1	94	24.3	77	19.9	2.66	1.11
Digital reference books	58	15.0	96	24.8	140	36.2	93	24.0	2.31	1.00
Digital newspapers	54	14.0	91	23.5	141	36.4	101	26.1	2.25	1.00
Digital newsletter	58	15.0	73	18.9	140	36.2	116	30.0	2.19	1.03
Microforms	54	14.0	68	17.6	141	36.4	124	32.0	2.13	1.02
Online articles	31	8.0	67	17.3	103	26.6	186	48.1	1.85	0.98

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)

The findings in Table 2 indicate that LIS undergraduates in Kwara State predominantly use academically oriented digital resources. Five resources; digital books, digital journals, digital projects/theses/dissertations, academic databases and open educational resources (OERs) fall within the Agreed category, with mean scores ranging from 2.66 to 2.88. Digital books are the most frequently used ($\bar{X}$ = 2.88), followed closely by digital journals ($\bar{X}$ = 2.86), while digital projects, theses and dissertations ($\bar{X}$ = 2.72) attract the highest proportion of strong agreement (31.8%). Academic databases ($\bar{X}$ = 2.70) and OERs ($\bar{X}$ = 2.66) also show substantial engagement. In contrast, digital newsletters ($\bar{X}$ = 2.19), microforms ($\bar{X}$ = 2.13) and online articles ($\bar{X}$ = 1.85) fall

within the Disagreed category, reflecting low utilisation, with high levels of disagreement or strong disagreement among respondents. These results demonstrate a marked preference for structured, academically focused digital resources over less formal or outdated formats.

Table 3: Levels of digital skills possessed by LIS undergraduates in Kwara State, Nigeria

Options	VH		H		M		L		M	SD
	F	%	F	%	F	%	F	%		
E-book navigation	113	29.2	159	41.1	82	21.2	33	8.5	2.91	0.92
Digital literacy	108	27.9	156	40.3	93	24.0	30	7.8	2.88	0.90
Digital research	102	26.4	136	35.1	81	20.9	68	17.6	2.70	1.04
Digital summarisation of e-books	88	22.7	102	26.4	150	38.8	47	12.1	2.60	0.97
Digital reading comprehension	94	24.3	93	24.0	84	21.7	116	30.0	2.43	1.16
Digital resources evaluation	86	22.2	87	22.5	94	24.3	120	31.0	2.36	1.14
Digital text annotation	54	14.0	91	23.5	141	36.4	101	26.1	2.25	1.00

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

The data in Table 3 shows that the first four digital skills assessed among LIS undergraduates in Kwara State, Nigeria, fall within the “High” category, indicating relatively strong competencies. E-book navigation has the highest mean score ($\bar{X} = 2.91$), suggesting strong proficiency in accessing digital academic resources, followed closely by digital literacy ($\bar{X} = 2.88$), which reflects a solid foundation in essential digital tool usage. Digital research skills ($\bar{X} = 2.70$) also rank high, though slightly lower, indicating some room for improvement in advanced research techniques. Digital summarisation of e-books ($\bar{X} = 2.60$) is the lowest among the strong skills, with moderate ratings showing that summarizing digital content poses more difficulty. In contrast, the last three skills—digital reading comprehension ($\bar{X} = 2.43$), digital resources evaluation ($\bar{X} = 2.36$), and digital text annotation ($\bar{X} = 2.25$)—all fall in the “Moderate” category, highlighting weaker areas. These skills are vital for deep engagement with digital texts, and the notably low score in digital text annotation indicates a significant gap in students’ ability to critically read and engage with digital materials.

Table 4: Reading skills possessed by LIS undergraduates in Kwara State, Nigeria

Options	SA		A		D		SD		M	SD
	F	%	F	%	F	%	F	%		
Vocabulary recognition	113	29.2	179	46.3	62	16.0	33	8.5	2.96	0.89
Comprehension	108	27.9	176	45.5	73	18.9	30	7.8	2.94	0.88
Fluency and speed	102	26.4	136	35.1	81	20.9	68	17.6	2.70	1.04
Summarisation	121	31.3	93	24.0	84	21.7	89	23.0	2.64	1.15
Synthesis	53	13.7	176	45.5	122	31.5	36	9.3	2.64	0.83
Analysis	121	31.3	87	22.5	86	22.2	93	24.0	2.61	1.16
Interpretation	60	15.5	84	21.7	150	38.8	93	24.0	2.29	1.00
Inference	65	16.8	86	22.2	115	29.7	121	31.3	2.25	1.07

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 shows that the first four reading skills, such as vocabulary recognition, comprehension, fluency and speed, and summarisation, fall within the “Agreed” category according to their mean scores. Vocabulary recognition ($\bar{X}$ = 2.96) and comprehension ($\bar{X}$ = 2.94) have the highest means, supported by high percentages of agreement and strong agreement, showing that LIS undergraduates generally see themselves as competent in recognizing vocabulary and understanding texts. Fluency and speed ($\bar{X}$ = 2.70) and summarisation ($\bar{X}$ = 2.64) are also agreed upon but with lower mean scores, and the notable levels of disagreement suggest these skills are weaker and need improvement, especially summarisation, where nearly a quarter strongly disagreed with their proficiency. In contrast, interpretation ($\bar{X}$ = 2.29) and inference ($\bar{X}$ = 2.25) fall within the “Disagreed” category, reflecting significant weaknesses in higher-order reading skills, as shown by high levels of disagreement and low percentages of strong agreement. Overall, vocabulary recognition and comprehension are the strongest skills, fluency and summarisation are moderately developed, while interpretation and inference require focused attention in teaching and curriculum development.

Table 5: Tools commonly used for digital reading among LIS undergraduates in Kwara State, Nigeria

Options	SA		A		D		SD		M	SD
	F	%	F	%	F	%	F	%		
Smartphones	101	26.1	154	39.8	107	27.6	25	6.5	2.86	0.88
Reading Apps	123	31.8	107	27.6	84	21.7	73	18.9	2.72	1.10
Computers	115	29.7	101	26.1	94	24.3	77	19.9	2.66	1.11
E-readers	114	29.5	91	23.5	101	26.1	81	20.9	2.61	1.12
AudioBooks	58	15.0	96	24.8	140	36.2	93	24.0	2.31	1.00
Tablets	58	15.0	90	23.3	140	36.2	99	25.6	2.28	1.01
Project Gutenberg	79	20.4	86	22.2	81	20.9	141	36.4	2.27	1.16
Medium	28	7.2	135	34.9	129	33.3	95	24.5	2.25	0.91
Over Drive	54	14.0	85	22.0	141	36.4	107	27.6	2.22	1.00
Scribd	31	8.0	102	26.4	103	26.6	151	39.0	2.03	0.99

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 5 presents the level of acceptance of various digital reading tools among LIS undergraduates in Kwara State, Nigeria. Among the first four tools, smartphones received the highest mean score ($\bar{X}$ = 2.86), placing them firmly in the “Agreed” category, supported by strong levels of agreement, which indicates that they are the most widely used digital reading tool. Reading apps followed with ($\bar{X}$ = 2.72), computers ($\bar{X}$ = 2.66), and e-readers ($\bar{X}$ = 2.61). In contrast, Medium ($\bar{X}$ = 2.25), OverDrive ($\bar{X}$ = 2.22), and Scribd ($\bar{X}$ = 2.03) all fell within the “Disagreed” category, reflecting low adoption rates. Medium and OverDrive showed high levels of disagreement and limited strong agreement, while Scribd had the lowest mean and the highest level of strong disagreement, making it the least utilized tool. Overall, smartphones and reading apps are the most preferred digital reading tools, while Medium, OverDrive, and Scribd remain largely unpopular among the respondents.

Table 6: Challenges associated with digital reading among LIS undergraduates in Kwara State, Nigeria

Options	SA		A		D		SD		M	SD
	F	%	F	%	F	%	F	%		
Slow Internet connectivity	162	41.9	91	23.5	85	22.0	49	12.7	2.95	1.07
Cost of data subscription	109	28.2	156	40.3	93	24.0	29	7.5	2.89	0.90
Inadequate electricity supply	151	39.0	66	17.1	91	23.5	79	20.4	2.75	1.18
Cost of gadgets	137	35.4	96	24.8	65	16.8	89	23.0	2.73	1.17
Eye fatigue	123	31.8	107	27.6	84	21.7	73	18.9	2.72	1.10
Lack of digital literacy	106	27.4	133	34.4	75	19.4	73	18.9	2.70	1.07
Lack of manipulability of online features	140	36.2	86	22.2	54	14.0	107	27.6	2.67	1.23
Lower reading concentrations	115	29.7	101	26.1	94	24.3	77	19.9	2.66	1.11
Inadequate access to digital tools and resources	87	22.5	135	34.9	91	23.5	74	19.1	2.61	1.04
Tendency to spend most of one's time on social media	101	26.1	97	25.1	121	31.3	68	17.6	2.60	1.06
Inability to retrieve digital information	58	15.0	96	24.8	140	36.2	93	24.0	2.31	1.00
Cyber security threats	54	14.0	85	22.0	141	36.4	107	27.6	2.22	1.00
Lack of interest in reading with digital tools	31	8.0	102	26.4	103	26.6	151	39.0	2.03	0.99

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)

The data in Table 6 highlights the major challenges affecting digital reading among LIS undergraduates in Kwara State, Nigeria, with the first seven items falling within the “Agreed” category, indicating widely acknowledged barriers. Slow Internet connectivity ($\bar{X}$ = 2.95) emerged as the most critical issue, followed closely by the high cost of data subscription ($\bar{X}$ = 2.89), inadequate electricity supply ($\bar{X}$ = 2.75), high cost of gadgets ($\bar{X}$ = 2.73), while health concerns such as eye fatigue ($\bar{X}$ = 2.72) highlight discomfort associated with prolonged screen use. Skill-

related barriers, including lack of digital literacy ($\bar{X} = 2.70$) and limited manipulability of online features ($\bar{X} = 2.67$), also impede effective engagement with digital content. In contrast, inability to retrieve digital information ($\bar{X} = 2.31$), cybersecurity threats ($\bar{X} = 2.22$), and lack of interest in using digital tools ($\bar{X} = 2.03$) fall within the “Disagreed” category, showing that students generally feel confident accessing digital resources and remain motivated to use digital tools. Overall, the findings reveal that infrastructural, financial, technical, and health-related factors constitute the main barriers to digital reading, while motivation and information-retrieval skills are not perceived as significant challenges.

Discussion of Findings

Digital resources commonly read by LIS undergraduates in Kwara State, Nigeria

The findings indicate the respondents’ strong preference for academically oriented digital resources such as digital books, journals, theses/dissertations, academic databases and OERs. This trend aligns with global patterns where students prioritise materials that directly support coursework and research. The high usage of e-books and e-journals reflects assertions by Adenariwo and Sulyman (2022), SOAS Library (2022) and Yila (2024) regarding their cost-effectiveness, accessibility and enhanced features, including searchability and hyperlinking. The significant engagement with theses, dissertations and academic databases further illustrates students’ reliance on institutional repositories and structured information systems, as noted by Amadi and Igwe (2015) and Peterson (2022). The positive uptake of OERs also echoes their description as freely accessible, inclusive and multimedia-rich educational tools.

Conversely, the low usage of digital newsletters, microforms and online articles may stem from limited academic relevance, technological obsolescence or users’ inadequate digital search competencies. Microforms, in particular, remain largely outdated and require specialised access tools (Jonathan & Udo, 2020). The underutilisation of online articles, despite their abundance, may reflect challenges in identifying credible sources and formulating effective search strategies, a concern highlighted by Oyeyemi (2021). Overall, students’ preference for structured academic resources underscores the central role of digital and reading skills in shaping digital reading behaviour, consistent with the views of Sulyman et al. (2024) and Lim and Toh (2020). Comparative studies from India, Pakistan and Nigeria (Kumara & Kumar, 2021; Mirza et al., 2021;

Okorie, 2018; Eze et al., 2022; Ogunbodede & Sawyerr-George, 2023) similarly affirm that digital literacy and device proficiency remain critical motivators of meaningful engagement with digital resources.

Level of digital skills possessed by LIS undergraduates in Kwara State, Nigeria

The study shows that the respondents demonstrate strong operational digital skills, particularly e-book navigation, digital literacy, digital research and summarization, yet only moderate competence in comprehension, evaluation of digital resources and digital text annotation. This reflects a gap between instrumental and higher-order analytical skills. The findings align with Sulyman et al. (2024) and Kumara and Kumar (2021), who reported high familiarity with digital tools among university students, and with Divya and Mohamed (2020), who highlighted the role of digital reading features in enhancing selective reading and information synthesis. These competencies underscore students' comfort with digital platforms and basic academic tasks.

However, the moderate levels of comprehension, evaluation and annotation indicate weaker critical engagement, consistent with concerns raised by Durant and Horava (2020) and Lim and Toh (2020) regarding the challenges of deep reading in digital environments. Rodríguez-de-Dios and Igartua's (2020) distinction between instrumental and critical digital skills further clarifies this disparity. Although annotation tools support reflective and collaborative reading (Seatter, 2022; Saaris, 2021), their limited use suggests inadequate training or exposure. In the Nigerian context, infrastructural constraints and insufficient digital literacy, as identified by Ogunbodede and Sawyerr-George (2023), Kabir (2022) and Oyeyemi (2021), likely contribute to these gaps. Overall, the findings show that while students are adept at navigating digital tools, their critical reading skills require deliberate strengthening.

Reading skills possessed by LIS undergraduates in Kwara State, Nigeria

Findings reveal a clear hierarchy of reading skills among the respondents: vocabulary recognition and comprehension are highly developed, whereas fluency and summarisation show only moderate strength. Interpretation and inference remain notably weak, indicating gaps in higher-order cognitive engagement. These findings align with research emphasising vocabulary and comprehension as foundational to effective reading (Kabir, 2022; Onyenachi et al., 2021) and suggest that multimodal digital environments may enhance these skills by providing contextual

cues (Lim & Toh, 2020). However, the moderate development of fluency and summarisation is consistent with evidence that digital reading encourages selective, surface-level engagement at the expense of sustained attention (Divya & Mohamed, 2020).

The underdevelopment of interpretation and inference is the most critical concern, echoing broader claims that digital reading environments can hinder deep reading and critical thinking (Durant & Horava, 2020). In the Nigerian context, infrastructural limitations and inadequate digital literacy further constrain students' ability to critically process digital texts (Ogunbodede & Sawyerr-George, 2023). These findings highlight the need for targeted instructional interventions such as deep reading strategies, digital self-efficacy development and the use of collaborative annotation tools to strengthen higher-order comprehension skills in digital environments (Sulyman et al., 2024; Saaris, 2021).

Tools commonly used for digital reading among LIS undergraduates in Kwara State, Nigeria

Findings show that the respondents predominantly rely on accessible and multifunctional digital tools such as smartphones, reading apps, computers and e-readers devices widely recognised for their portability, ease of use and compatibility with diverse reading formats. This aligns with findings by Oyeyemi (2021) and Peras et al. (2023), who observed similar dominance of smartphones and laptops among student populations. In contrast, platforms such as Medium, OverDrive and Scribd remain underutilised, likely due to limited awareness, subscription barriers and perceived irrelevance patterns also noted by Cardoso et al. (2014) in Portugal and Bala and Lal (2016) in India, where digital platforms were available but marginally adopted. These preferences can be understood through the Technology Acceptance Model, in which perceived ease-of-use and perceived usefulness shape technology uptake (Adenekan et al., 2023). Smartphones and reading apps fulfil both conditions, providing immediate access and intuitive interfaces that support academic reading demands.

The findings further resonate with evidence from Sulyman et al. (2024), who reported a similar reliance on smartphones among LIS postgraduate students in the same region, indicating continuity of device preference across academic levels. However, the limited use of platforms like Medium and Scribd may reflect broader gaps in critical digital skills, as Rodríguez-de-Dios and Igartua (2020) argue that digital literacy extends beyond technical operation to include evaluation and

information management. Tools most commonly used by students smartphones, apps and computers offer features such as annotation, bookmarking and hyperlink navigation that facilitate the deep reading strategies identified by Lim and Toh (2020) as essential for digital comprehension. Their absence or under-recognition in subscription-based platforms may further contribute to low adoption. Overall, the findings highlight how accessibility, perceived usefulness and digital skill levels collectively shape students' digital reading behaviours.

Challenges associated with digital reading among LIS undergraduates in Kwara State, Nigeria

The study identifies slow Internet connectivity, high data costs, unreliable electricity supply, expensive digital devices, eye fatigue, limited digital literacy and poor manipulability of online features as the primary obstacles to digital reading among LIS undergraduates in Kwara State, Nigeria. These challenges mirror earlier findings by Ogunbodede and Sawyerr-George (2023) and Liasu and Bakrin (2022), who emphasised infrastructural deficits, especially poor Internet access and power instability, as persistent barriers to digital engagement in Nigerian higher education. Financial constraints such as the cost of devices and data subscriptions further reinforce observations by Kabir (2022) and Sulyman et al. (2024), indicating that economic limitations continue to shape students' access to digital reading tools despite the theoretical affordability of digital content (Kumara & Kumar, 2021). Physiological and ergonomic concerns, particularly eye strain, align with Demir and Büyükbaykal (2024), who noted that screen design and brightness contribute to discomfort, thus influencing users' reading experience.

Conversely, the study found that inability to retrieve digital information, cybersecurity threats and lack of interest in digital reading were not perceived as significant constraints, an interesting deviation from studies such as Oyeyemi (2021), which reported deficiencies in search and security competencies among undergraduates. This discrepancy may indicate rising digital awareness or reflect the specialised training of LIS students, who may possess comparatively stronger information-handling skills. The absence of disinterest in digital reading also contrasts with Kabir (2022), who observed low enthusiasm for digital texts among Nigerian learners; the current findings suggest a shifting attitude driven by greater integration of digital resources in academic curricula. Overall, the results highlight that infrastructural and economic constraints remain the

core challenges, while cognitive and motivational barriers may be diminishing as students become increasingly digitally oriented.

Conclusion

This study examined how digital and reading skills motivate digital reading among LIS undergraduates in Kwara State, Nigeria. The findings show that students actively engage with academically oriented digital resources such as e-books, journals, theses, databases and OERs, supported by strong operational digital skills including e-book navigation, general digital literacy and digital research. Foundational reading abilities, particularly vocabulary recognition and comprehension, were also well developed, enabling meaningful interaction with digital texts. However, notable gaps were identified in higher-order reading skills such as interpretation and inference, alongside moderate levels of critical digital skills including annotation, resource evaluation and digital reading comprehension. These cognitive limitations are compounded by infrastructural and financial barriers such as poor Internet connectivity, high data costs, unstable electricity, the cost of digital devices and screen-related discomfort. Overall, the findings highlight the need to strengthen advanced reading and digital competencies through improved digital literacy training, deep reading strategies, and enhanced access to digital tools and infrastructure. Such interventions will better prepare LIS undergraduates for professional roles in an increasingly digital information environment.

Recommendations

Based on the findings, this study recommends that:

1. University management should adequately provide digital infrastructure, such as dedicated computers/laptops/tablets and reliable power sources for reading in strategic places in the university, such as classrooms and libraries. The availability of these infrastructure will enhance students' options for digital materials they can read.
2. University management should collaborate with faculties and departments to organise advanced digital literacy training on annotation tools utilisation, digital resources evaluation and critical reading strategies for the students. This will enhance their overall digital skills, particularly their abilities to manipulate and navigate online reading features.

3. Indigenous digital device developers should consider inventing devices that are eye-friendly to digital readers, such as students. This will minimise eye fatigue, increase their reading time with digital devices, and thus enrich their overall reading experience.
4. University management should incorporate digital reading into their curricula as a general course. This will improve digital reading awareness among the students and enhance their skills in their areas of deficiency, such as digital reading comprehension, digital resources evaluation, and digital text annotations.
5. Future studies should focus on balancing the representation of participants across LIS schools in their areas of study. This will ensure the generalisability of the findings reported in their studies.

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