ICT SELF-EFFICACY AND ACADEMIC PERFORMANCE OF LIBRARY AND INFORMATION SCIENCE UNDERGRADUATES IN NIGERIAN FEDERAL UNIVERSITIES

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ABSTRACT

The integration of Information and Communication Technologies (ICTs) into higher education has transformed teaching and learning, influencing students' academic performance. This study investigated the relationship between ICT self-efficacy and academic performance of Library and Information Science (LIS) undergraduates in Nigerian federal universities. A descriptive correlational survey was conducted with 2,150 undergraduates across 12 universities using a validated questionnaire with a reliability coefficient of α = 0.85. Data were analyzed with SPSS employing descriptive and inferential statistics. Results revealed a high level of ICT self-efficacy (mean = 3.23) and strong academic performance, with 68.4% of respondents achieving upper second-class or first-class honours. Pearson correlation indicated a significant positive relationship between ICT self-efficacy and academic performance (r = .269; p < 0.05), with Internet self-efficacy showing a slightly stronger association than computer self-efficacy. The study recommends integrating ICT-based tasks into LIS curricula to sustain and enhance technological competence and academic achievement. The findings highlight the importance of integrating ICT into LIS curricula to improve academic outcomes.

Keywords: ICT self-efficacy, Academic performance, LIS undergraduates, Nigerian federal universities

Introduction

Undergraduates refer to students pursuing a bachelor's degree. In Library and Information Science (LIS), the curriculum focuses on acquiring, organizing, and disseminating information to meet diverse user needs. More specifically, an undergraduate degree programme in LIS is a programme that educates and trains students to become librarians and information professionals. Academic performance reflects students' mastery of competencies and progression through the programme. It is also key priority for the university and other stakeholders in the university community. Academic performance is typically measured using Grade Point Average (GPA) or Cumulative Grade Point Average (CGPA), which reflects cumulative scores from coursework, assignments, quizzes, discussions, and examinations (York, Gibson, & Rankin, 2015). A CGPA of 3.0 – 3.99 indicates high performance, while scores below 2.0 suggest poor achievement and risk of withdrawal (Al-Zoubi & Younes, 2015). Despite institutional efforts, many universities report delayed graduation and dropout rates, highlighting persistent challenges in student achievement. Several factors influence academic performance, including sleep patterns, food security, reading habits, teacher qualifications, and school environment. However, the growing integration of Information and Communication Technologies (ICTs) into education introduces a new dimension. ICTs have transformed teaching and learning, enabling access to digital resources and online platforms. Consequently, students' ability to use ICT tools effectively often conceptualized as ICT self-efficacy, which may significantly impact academic success (Talsma, Schüz, Schwarzer, and Norris, 2018; Kim, Hong, and Song, 2019).

ICT self-efficacy refers to an individual's confidence in performing tasks using ICT resources such as computers and Internet technologies (Hayashi, Chen, Ryan, and Wu, 2020). For the purpose of this study, ICT self-efficacy is conceptualized as encompassing two primary dimensions: computer self-efficacy and Internet self-efficacy. The LIS discipline is deeply rooted in digital infrastructure; thus ICT competence represents a critical skill set for undergraduates pursuing this field. UNESCO (2020) emphasizes that ICT self-efficacy can enhance access to education, equity, and quality learning when supported by robust IT infrastructure and policies. Despite global research linking ICT competence to learning outcomes, limited empirical evidence exists for LIS programmes in Nigerian universities. This study addresses this gap by investigating the influence of ICT self-efficacy on academic performance among LIS undergraduates in Nigerian federal universities.

Objectives of the study
The main objective of this study is to investigate the influence of ICT Self-Efficacy on academic performance of Library and Information Science (LIS) undergraduates in federal universities in Nigeria. The specific objectives are to:
  i. determine the level of ICT Self-Efficacy (computer self-efficacy and Internet self-efficacy) of LIS undergraduates in federal universities in Nigeria.
  ii. ascertain the level of academic performance of LIS undergraduates in federal universities in Nigeria.
  iii. find out the relationship between ICT Self-Efficacy and academic performance of LIS undergraduates in federal universities in Nigeria.

Literature Review

Self-Efficacy of Undergraduates

In recent times, research specific to ICT self-efficacy in online learning environments has primarily focused upon technology-related factors, such as computer self-efficacy, Internet self-efficacy, technological self-efficacy, and Learning Management System (LMS) self-efficacy (Alqurashi, 2016). Adedokun and Popoola (2024) investigated the interplay between computer self-efficacy, computer literacy skills, cognitive skills, and the utilization of electronic resources among social science students in Nigerian federal universities. Their findings revealed that these factors collectively exert a significant influence on students' ability to access and use electronic resources effectively. This study underscores the critical role of technological competence and cognitive ability in supporting advanced academic work, aligning with broader evidence that self-efficacy and digital skills are essential for scholarly success in technology-driven environments. Li, Zuo, Wei, and Ding (2023) developed and validated an ICT self-efficacy scale for medical students and examined its association with technology experience. Drawing on data from 486 first-year medical students in China, their study identified a significant relationship between ICT self-efficacy and the age at first ownership of a personal computer. Furthermore, the authors reported that general self-efficacy mediated the link between ICT self-efficacy and the age at first ownership of a smartphone. These findings highlight the influence of early technology exposure and self-belief on ICT competence, reinforcing the importance of self-efficacy in technology-driven educational contexts. Kuo, Seng, and Kuo (2020) investigated undergraduates Internet self-efficacy (ISE), self-regulation and performance in online learning environment. In particular, the study explores the relationships between these key variables (ISE, self-regulation, and student performance). This particular study was carried out at North Carolina A&T University, Greensboro, North Carolina, USA, a historically black research institution. An online survey was sent to students and analysed using a quantitative approach. Findings from the study revealed that student performance was significantly associated with ISE but not with self-regulation. However, ISE was positively related to self-regulation. Finally, the study did not find significant differences of gender, age, ISE and self-regulation. The results of this study were somehow consistent with a similar study by Suana (2018) who found significant differences between grades and ISE but not a significant difference between gender and ISE.

Academic Performance of Undergraduates

Academic performance among undergraduates is influenced by a complex interplay of cognitive, behavioral, and environmental factors. Several studies have examined these determinants within diverse contexts. For instance, research on Library and Information Science (LIS) undergraduates highlights those factors such as study habits, access to resources, and institutional support significantly shape academic outcomes (Adeagbo & Mabawonku, 2022). Similarly, Hamzat and Madu (2023) investigated the Students Industrial Work Experience Scheme (SIWES) and found that practical exposure through internships positively impacts students' cumulative grade point averages, reinforcing the value of experiential learning in bridging theory and practice. Academic performance can be described as the student's overall level of competence and consistent progress throughout their program, in alignment with the academic standards set by their institution. In the

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academic and research environment, academic performance is a broad concept that has been used interchangeably, and which encompasses other terms such as academic success, academic achievement, final grades, Grade Point Average (GPA) or Cumulative Grade Point Average (CGPA). Alhadabi and Karpinski (2020) reported that in the educational setting, grade point average (GPA) is a common and most acceptable measure of students' academic achievement. This is considered as the reflection of academic success (academic performance) and the achievement of pedagogical goals.

Adeagbo and Mabawonku (2022) conducted a descriptive survey to identify factors influencing the academic performance of LIS undergraduates in Nigerian universities. Using structured questionnaires distributed to students across multiple institutions, the study revealed that access to learning resources, effective study habits, and institutional support significantly impact students' cumulative grade point averages. The authors concluded that improving resource availability and promoting better study strategies could enhance academic outcomes. The findings of this study are further supported by Suleiman, Okunade, Dada, and Ezeanya (2024), who reported that resource availability, institutional support, and individual characteristics such as motivation and self-efficacy are significant predictors of academic success. Their research emphasized the importance of implementing evidence-based strategies to enhance learning outcomes through improved resource provision and the creation of supportive educational environments.

Hamzat and Madu (2025) examined the effect of the Students Industrial Work Experience Scheme (SIWES) on the academic performance of LIS undergraduates in two library schools in Osun State, Nigeria. Using a survey design, they found that practical exposure during industrial training significantly enhanced students' understanding of theoretical concepts and improved their academic performance. This study underscores the importance of experiential learning in bridging the gap between classroom instruction and professional practice. Similar findings have been reported in other contexts. Nakitiibwa and Gwokyalya (2024) investigated the impact of experiential learning strategies on students' academic achievements in Uganda and concluded that hands-on learning approaches foster problem-solving skills, intrinsic motivation, and higher academic performance. Likewise, Dissanayaka, Dissanayake, Bandara, Dissanayake, Tharuka, Bandara, Bandara, Pieris, Dhanapala, Rajapaksha, and Arachchige (2023) analyzed the effect of industrial training on students' grades in Sri Lanka and found a statistically significant improvement in academic outcomes following practical exposure, reinforcing the role of real-world application in strengthening theoretical knowledge. In addition, Bankole, Olusola, and Momoh (2025) evaluated LIS students' attitudes toward SIWES at Federal University Oye-Ekiti and reported that participation in industrial training enhanced practical proficiency and engagement, though challenges such as placement difficulties and inadequate orientation were noted.

Collectively, these studies affirm that experiential learning and industrial training are critical components of academic programmes, particularly in professional disciplines like LIS. By integrating practical experiences into the curriculum, institutions can improve students' academic performance and better prepare them for the demands of the workplace.

Haliti-Sylaj and Sadiku (2024) explored the influence of short-form video platforms such as Instagram Reels and TikTok on undergraduate students' attention span and academic performance. Employing a mixed-method approach, they found that frequent engagement

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with short videos was linked to diminished attention and lower academic achievement, attributing these effects to cognitive overload that disrupts sustained learning. These findings align with Rozati (2025) who observed that TikTok exerted a pronounced negative impact on freshmen's attention spans, impairing their ability to absorb information during lectures.

In another recent study by Praveen (2025), the researcher found that while short videos offer micro-learning opportunities, they simultaneously erode attention spans and academic focus, leading to diminished performance in traditional learning environments.

ICT Self-efficacy and Academic Performance of Undergraduates
For decades, research across educational settings from primary to tertiary has consistently identified self-efficacy as one of the strongest predictors of academic performance (Talsma et al., 2018; Honicke & Broadbent, 2016; Phan & Ngu, 2016). More recently, scholars have examined the role of ICT self-efficacy in influencing academic outcomes, particularly in technology-driven learning environments. Alqurashi (2016) noted that studies in this area often focus on computer self-efficacy, Internet self-efficacy, and technological self-efficacy.

Zhang, Tsang, and Zhu (2025) investigated the non-linear associations between ICT use and reading achievement, as well as the transfer of self-efficacy beliefs. A large, representative sample of 3830 Hong Kong fourth-grade students from PILRS 2021 was used in the analyses. The results indicated that students who used ICT to find and read information for 30 min or less demonstrated higher reading achievement than those who did not use ICT. However, using ICT for over 30 min showed no direct association with reading achievement compared to the shorter usage. These findings align with Peng, Wang, and Hu (2023), who reported that ICT-related factors such as autonomy, competence, and the quality of school ICT resources positively influence reading performance. Similarly, Zakir, Hoque, Susanto, Nisaa, Alam, Khatimah, and Mulyani (2025) emphasized that digital self-efficacy significantly enhances academic success, reinforcing Zhang et al.'s conclusion that self-efficacy beliefs play a critical role in ICT-based learning contexts.

Simões, Oliveira, and Nunes (2022) Simões, Oliveira, and Nunes (2022) explored the role of computer-related factors in shaping students' academic achievement. Their proposed model examined variables such as computer attitudes, learning environments, motivation, confidence, usage, self-efficacy, as well as social and demographic factors including loneliness, mothers' education, parents' marital status, and family size. To validate this framework, data were collected from 286 students aged 16–18 through an online questionnaire. The findings identified computer use, employment-related motivations, and mothers' education as the most significant positive predictors of academic achievement. The findings of this study were also echoed by the research of Becírovic, Dervic, & Mattos (2025) who also found that Internet habits and e-learning self-efficacy significantly predict students' academic achievement.

Dinh and Nguyen (2022) investigated how Internet self-efficacy and self-regulated learning influence student satisfaction and academic achievement in online learning environments. Drawing on data from 710 students across four Vietnamese universities, the study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) for analysis. The results indicate that Internet self-efficacy, goal setting, and help-seeking have significant

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positive effects on both satisfaction and achievement. Furthermore, student satisfaction was found to directly enhance academic achievement. These findings highlight the critical role of Internet self-efficacy and targeted self-regulation strategies in improving the quality of online learning experiences.

Kuo, Tseng, and Kuo (2020) investigated the relationship between Internet self-efficacy (ISE), self-regulation, and academic performance among undergraduates in an online learning environment at North Carolina A&T University, USA. Using a quantitative approach, the study found that student performance was significantly associated with ISE but not with self-regulation, although ISE was positively related to self-regulation. No significant differences were observed across gender or age. These findings align with Suana (2018), who reported significant differences between grades and ISE but not between gender and ISE.

Contrasting evidence emerges from Osisanwo, Simisaye, and Esun (2024) who investigated the computer self-efficacy, computer playfulness as determinants of academic performance of Library and Information Science undergraduates in Web Publishing course in TASUED. Their study found no significant relationship between computer self-efficacy and academic performance of Library and Information Science undergraduates echoing Puzziferro (2008), who also reported no correlation between technology self-efficacy and final grades or satisfaction. Similarly, Azizi, Rezai, Namaziandost, and Tilwani (2022) investigated the influence of Computer Self-Efficacy (CSE) on students' e-learning anxiety, a factor considered critical to success in online courses. Data were collected using a computer self-efficacy questionnaire, an online class anxiety questionnaire, and semi-structured interviews. The analysis, which included Pearson correlation, multiple regression, and content analysis, revealed a strong negative correlation between CSE and e-learning anxiety, indicating that higher computer self-efficacy significantly reduces anxiety in virtual learning environments. This study contradicts Hauser, Paul, and Bradley (2012), who observed a positive link between CSE and performance.

Kakaraki, Tselios, and Katsanos (2017) studied Internet addiction, personality traits, and ISE among Greek undergraduates and found no significant correlation between ISE and academic grades, suggesting these constructs may be unrelated in certain contexts. Conversely, Bayero, Dutse, and Ahmad (2017) reported a significant positive effect of CSE on academic performance among Nigerian undergraduates, a finding that diverges from Smith (2002), who found no such correlation. Other studies highlight nuanced relationships. Bai (2017) examined technology self-efficacy and attitudes toward hybrid learning among students at York College, USA, and found that higher self-efficacy was associated with positive learning experiences, including better time management and content understanding. Similarly, Chang et al. (2014) demonstrated that students with higher ISE exhibited greater confidence and better performance in online courses, with notable gender differences favoring males. These results align with Suana (2018), who linked frequent Internet use and higher ISE to improved grades.

Collectively, these studies reveal mixed findings: while many confirm a positive association between ICT self-efficacy and academic performance, others report no significant relationship, suggesting that contextual factors such as discipline, learning environment, and cultural attitudes toward technology may moderate this effect.

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Methodology

      The study adopted a descriptive survey research design of the correlational type. The population comprised 3,574 LIS undergraduates in 200, 300, and 400 levels across 12 accredited federal universities in Nigeria offering bachelor's degree programmes in LIS. These levels were selected based on students' experience and steady cumulative grade point average (CGPA). A stratified sampling method using proportionate random sampling was employed, with a sampling fraction of 60%, resulting in 2,150 participants. A sampling fraction of 60% was adopted to ensure adequate representation of the population and minimize sampling error. Given the finite population size (3,574 LIS undergraduates) and the correlational nature of the study, a large sample was necessary to achieve statistical power and generalizability of findings. This approach aligns with best practices in educational research where sampling fractions between 30–50% are recommended for similar contexts. Data was collected using a structured questionnaire designed to measure ICT self-efficacy and academic performance.

To ensure content validity, a pre-test was conducted by administering 30 copies of the questionnaire to LIS undergraduates at Kwara State University, Malete, Ilorin, Kwara State outside the actual study population. Feedback from the pre-test informed minor revisions to improve clarity and relevance. The internal consistency of the instrument was assessed using Cronbach's Alpha. The ICT self-efficacy scale recorded a reliability coefficient of $\alpha = 0.85$, while the overall instrument achieved $\alpha = 0.86$, indicating high reliability. According to Orodho (2009), an instrument is considered reliable if the coefficient falls between 0.75 and 1. Data were analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics (frequency counts, percentages, means, and standard deviations) were used to summarize demographic data and research questions. Pearson's correlation analysis was employed to determine the relationship between ICT self-efficacy and academic performance. Results were presented in tables for clarity.

Result and Discussion
Table 1: Demographic Distribution of Respondents and Return Rate

Name of Institution	Distribution	Return
Abubakar Tafawa Balewa University	140	130
Ahmadu Bello University, Zaria	549	538
Bayero University, Kano	413	353
Federal University of Technology, Minna	113	106
Modibbo Adama University	105	102
Nnamdi Azikiwe University, Awka	85	78
University of Calabar	133	118
University of Ibadan	90	82
University of Ilorin	91	81
University of Maiduguri	258	236
University of Nigeria	79	70
University of Uyo	94	81
Total	**2,150**	**1975**

Demographic characteristics of the respondents

The analytical presentation of the demographic characteristics of the respondents is presented in Table 2.

Table 2: Demographics Distribution of Respondents

Demography	Frequency	Percentage (%)
Age		
Below 18 years	96	4.9
18-20 years	480	24.3
21-25 years	1042	52.8
26 years and above	357	18.1
Gender		
Male	985	49.9
Female	950	48.1
prefer not to say	40	2.0
Level of study		
200L	546	27.6
300L	651	33.0
400L	778	39.4

N=1975

The demographic information of the respondents' age reveals that 96 (4.9%) are below 18 years of age, 480 (24.3%) are within the age bracket of 18-20 years, 1042 (52.8%) are between the ages of 21-25 years while the remaining 357(18.1%) are within the age range of 26 years and above. This implies that this study is dominated by respondents within the age bracket of 21-25 years. The demographic information about the respondents' gender reveals that 985 (49.9%) are male, 950 (48.1%) are females, while the remaining 40 (2.0%) prefer not to reveal their gender implying that male respondents dominated the study.

In terms of the respondents' level of study, 546 (27.6%) are currently in their second year, 651(33.0%) are currently in the 300 level, while the remaining 778 (39.4%) are currently in their 400 level. This implies that most of the respondents used in this study are currently in 400 level.

Objective 1: Level of ICT Self-Efficacy of LIS undergraduates in federal universities in Nigeria

Table 3 presents the result of the level of ICT Self-Efficacy of LIS undergraduates in federal universities in Nigeria.

Table 3: ICT Self-Efficacy of LIS undergraduates in federal universities in Nigeria

S/N	Items	SA	A	D	SD	$\bar{x}$	Std Dev
	Computer Self-Efficacy						
1.	I have the ability and feel confident using personal computers, laptops, smartphones, and other portable devices to access resources.	1191	709	45	30	3.55	.620
		60.30%	35.90%	2.30%	1.50%		
2.	I feel confident using a variety of computer programmes such as MS Office Suites, Adobe Reader, Web browsers.	814	944	198	19	3.29	.682
		41.20%	47.80%	10.00%	1.00%		
3.	I feel confident troubleshooting basic computer and printer problems such as installing and downloading programmes on the computer; and clearing paper jams from the printer.	688	807	421	59	3.08	.822
		34.80%	40.90%	21.30%	3.00%		
4	I feel confident printing resources from a computer.	656	954	330	35	3.13	.744
		33.20%	48.30%	16.70%	1.80%		
5.	I feel confident saving files on storage devices such as flash drives, CD-ROMs or External hard drives.	834	857	226	58	3.25	.770
		42.20%	43.40%	11.40%	2.90%		
6.	I feel confident using technology for learning.	1037	664	226	48	3.36	.778
		52.50%	33.60%	11.40%	2.40%		
7.	I feel confident that I could deal with unexpected computer errors or events such as a blue screen or frozen computer.	521	827	521	106	2.89	.855
		26.40%	41.90%	26.40%	5.40%		
8.	I stay up to date with trends and emerging technologies in library and information science.	774	803	344	54	3.16	.806
		39.20%	40.70%	17.40%	2.70%		
	Weighted mean= 3.21, std. dev=0.76						

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	Internet self-efficacy						
9.	I feel confident using the Internet to find educational resources.	1083	734	117	41	3.45	.700
		54.80%	37.20%	5.90%	2.10%		
10.	I feel confident changing password and pins on the web browsers.	664	907	295	109	3.08	.837
		33.60%	45.90%	14.90%	5.50%		
11.	I feel confident attaching files to emails or saving and copying files from the Internet to cloud storage such as DropBox, Google Drive or OneDrive.	839	879	213	44	3.27	.740
		42.50%	44.60%	10.80%	2.20%		
12.	I feel confident using the Internet to answer basic information in a productive way.	771	992	189	23	3.27	.678
		39.00%	50.20%	9.60%	1.20%		
13.	I feel confident using the Internet to find, organize synthesise, manage and such Information	773	951	228	23	3.25	.700
		39.10%	48.20%	11.50%	1.20%		
14.	I feel confident using social media such as Twitter, Facebook, LinkedIn, and others.	821	866	234	54	3.24	.765
		41.60%	43.80%	11.80%	2.70%		
15.	I feel confident identifying and accessing resources on the Internet.	714	960	266	35	3.19	.729
		36.20%	48.60%	13.50%	1.80%		
16.	I feel confident using hyperlinks and other Internet features to find resources that are relevant to my course.	667	1030	233	45	3.17	.719
		33.80%	52.20%	11.80%	2.30%		
	Weighted mean=3.24, std. dev=0.73						
	Grand mean= 3.23, std. dev=0.75						

Key: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree
Source: Field work, 2023

Table 3 underscored a high level of ICT Self-Efficacy among LIS undergraduates in federal universities in Nigeria. This proficiency may be attributed to their extensive exposure to computer systems and the internet, particularly given that a significant proportion fell within the 21-25 age bracket. These individuals can be characterized as digital natives, having grown up in the era of digital technology. Consequently, their familiarity with these systems from an early age has culminated in a robust confidence in utilizing these technological tools to their advantage. These findings are consistent with the study by Li et. al (2023), which demonstrated that ICT self-efficacy was significantly associated with the age at first ownership of a personal computer and further revealed a mediating effect of general self-efficacy in the relationship between ICT self-efficacy and the age at first ownership of a smartphone. This underscores the role of early technology exposure and self-efficacy in

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shaping digital competence within educational contexts. The findings of the above study are further supported by Adedokun and Popoola (2024) who concluded that computer self-efficacy, computer literacy skills, and cognitive skills exert a significant combined influence on the utilization of electronic resources within this academic cohort, reinforcing the critical role of technological competence in advanced scholarly work.

Objective 2: Level of academic performance of LIS undergraduates in federal universities in Nigeria

The result of the level of academic performance of LIS undergraduates in federal universities in Nigeria is presented in Table 4.

Table 4: Academic performance of LIS undergraduates in federal universities in Nigeria

Cumulative Grade Point Average	Frequency	Percentage (%)	Remarks
0-0.99	8	0.41%	Failed
1.0-1.99	32	1.62%	Third Class Honours
2.0-2.99	585	29.62%	Second Class Honours (Lower Division)
3.0-3.49	688	34.84%	Second Class Honours (Upper Division)
3.5-4.0	662	33.52%	First Class Honours
Total	**1975**	**100%**	

Source: Field work, 2023

The result in Table 4 shows that 8 (0.41%) of the LIS undergraduate students in federal universities in Nigeria have failed in their academic performance, as measured through the use of CGPA, 32 (1.62%) were currently with third class honours, 585 (29.62%) are on second class honours (lower division), 688 (34.84%) were on second class honours (upper division) while the remaining 662 (33.52%) on first class honours. Summing the proportion of the respondents with first class honours and second-class honours (upper division) shows that 1350 (68.4%) of them are currently doing well in their studies. On this basis, it can be concluded that the level of academic performance of most of the LIS undergraduate students in federal universities in Nigeria is high. This outcome somewhat echoes the findings of Adeagbo and Mabawonku (2022) whose study showed that the academic performance of most of the LIS undergraduates was on average. Thus, much is still desired to improve the quality of the academic performance of the LIS undergraduates in Nigeria

Objective 3: Relationship between ICT Self-Efficacy and academic performance of LIS undergraduates in federal universities in Nigeria

Table 5 presents the result of the relationship between ICT Self-Efficacy and academic performance of LIS undergraduates in federal universities in Nigeria.

Table 5: Relationship between ICT Self-Efficacy and academic performance of LIS undergraduates in federal universities in Nigeria

Variables	N	Mean	St. Dev	Df	r	P	Sig
Academic performance	1975	41.27	6.42				
ICT Self-Efficacy	1975	51.64	6.03	1974	.269	.000	S
ICT Self-Efficacy-subscales							
Computer Self-Efficacy	1975	25.71	3.45	1974	.257	.000	S
Internet Self-Efficacy	1975	25.92	3.33	1974	.295	.000	S

Source: Field work, 2023

The finding reveals that ICT Self-Efficacy (r = .269; p<0.05) has significant positive relationship with academic performance of LIS undergraduates in federal universities in Nigeria. Although the relationship was positive and significant, the relatively modest correlation suggests other factors that also contribute to academic performance. This also implies that there is positive linear association between ICT Self-Efficacy and academic performance of LIS undergraduates in federal universities in Nigeria. Furthermore, the correlation analysis between the components of ICT Self-Efficacy and academic performance of the respondents as captured in the table 5 above showed that these sub-scales have significant linear association with the academic performance of LIS undergraduates in federal universities in Nigeria; Internet self-efficacy (r = .295; p<0.05) and computer/ICT self-efficacy (r = .257; p<0.05).

The findings of this study reveal a significant positive relationship between ICT self-efficacy and academic performance among LIS undergraduates in Nigerian federal universities. This suggests that students who are confident in their ability to use technology tend to achieve higher academic outcomes. The high level of ICT self-efficacy observed may be attributed to students' familiarity with digital tools and their status as digital natives, which aligns with the study by Zakir et. al (2025) who reported that digital self-efficacy significantly enhances academic success, Likewise, Zhang et al. (2025) found that ICT self-efficacy beliefs play a critical role in ICT-based learning contexts.

However, these results contrast with studies by Osisanwo et al. (2024) which found no significant correlation between ICT self-efficacy and academic performance. A similar study by Azizi et al. (2022) also revealed a strong negative correlation between the students' CSE and e-learning anxiety. Such discrepancies may stem from differences in curriculum design, access to ICT resources, and cultural attitudes toward technology. In Nigerian LIS programmes, where ICT integration is increasingly emphasized, students may rely more heavily on technology for learning, making self-efficacy a stronger predictor of performance.

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In this present study, Internet self-efficacy demonstrated a slightly stronger correlation with academic performance than computer self-efficacy. This finding underscores the growing importance of online resources, cloud-based tools, and digital platforms in LIS education. As academic tasks increasingly involve accessing electronic resources, managing online content, and collaborating through virtual platforms, students' confidence in navigating the Internet becomes critical for success.

These findings have practical implications for LIS education. Universities should prioritize ICT integration in teaching and learning by embedding technology-based projects and assignments into the curriculum. Continuous training for students and faculty is essential to keep pace with emerging technologies. Furthermore, equitable access to ICT infrastructure such as reliable Internet connectivity and updated devices must be ensured to prevent disparities in learning opportunities.

Conclusion

The academic performance of LIS undergraduates holds paramount significance for their prospects of graduating with commendable grades and subsequently securing favorable employment opportunities or admission into postgraduate programmes at their preferred universities. A robust CGPA not only signifies a profound mastery of the LIS discipline but also augurs well for prospective success in professional endeavors. Conversely, subpar academic performance serves as a poignant indicator of constrained knowledge acquisition, potentially limiting post-graduation options. Hence, it is imperative for LIS undergraduates to accord due diligence to their academic pursuits, with an emphasis on leveraging technology as a means to this end. To uphold and enhance the high academic performance of LIS undergraduates, practical steps must be taken by stakeholders. First, universities should incorporate ICT-based projects and assignments into the LIS curriculum to strengthen students' confidence and competence in technology use. Second, continuous training programmes for both students and faculty should be implemented to keep pace with emerging technologies and digital tools. Third, equitable access to ICT infrastructure including reliable Internet connectivity, updated devices, and technical support must be ensured across all campuses to prevent disparities in learning opportunities.

Beyond immediate interventions, this study opens avenues for future research. Scholars should explore ICT self-efficacy in other disciplines to determine whether similar patterns exist across fields of study. Additionally, longitudinal studies are recommended to track changes in ICT self-efficacy and academic performance over time, providing insights into the long-term impact of technology integration in higher education. Such research will inform policy and practice, ensuring that ICT remains a catalyst for academic success rather than a barrier. This study was limited by its cross-sectional design and reliance on self-reported data, which may influence accuracy. Future studies may employ longitudinal or mixed-method approaches. Enhancing ICT self-efficacy through continuous curriculum integration and digital literacy programmes can strengthen the overall academic outcomes of LIS students in Nigerian federal universities.

Recommendations

To strengthen ICT self-efficacy and maintain high academic performance among LIS undergraduates in Nigerian federal universities, universities should integrate ICT-based projects and assignments into the LIS curriculum. Embedding technology-driven tasks will ensure continuous engagement with digital tools and foster confidence in their application for academic purposes. In addition, regular training sessions and workshops should be organized for both students and faculty to keep pace with emerging technologies and online research platforms. These initiatives should emphasize practical, hands-on experience with advanced applications relevant to library and information science practice.

Improving ICT infrastructure is equally critical. Institutions must provide reliable Internet connectivity, modern computer laboratories, and updated software to guarantee equitable access for all students. Technical support services should also be readily available to minimize disruptions in learning. Furthermore, government and educational stakeholders should formulate policies that prioritize ICT integration in LIS education and allocate sufficient funding for infrastructure development and capacity building.

Finally, future research should explore the long-term impact of ICT self-efficacy on academic performance through longitudinal or mixed-method designs. Comparative studies across disciplines and regions are recommended to broaden understanding and inform policy decisions. These steps will ensure that ICT remains a catalyst for academic success rather than a barrier.

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