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Artificial Intelligence Adoption and Influence on the Academic Performance of Library and Information Science Postgraduate Students in Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria

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Abstract

This study examined the influence of artificial intelligence (AI) adoption and academic performance among postgraduate students in Library and Information Science programmes in Michael Okpara University of Agriculture, Umudike, Umuahia, Abia State, Nigeria. A quantitative survey research design was adopted, while purposive sampling technique was used to select thirty-five (35) postgraduate students from Michael Okpara University of Agriculture, Umudike, Abia State. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistical methods, including frequency counts, percentages, mean scores, standard deviation, correlation, and regression analysis with the aid of IBM SPSS Statistics. The findings revealed a high level of AI adoption among respondents, particularly in literature review, academic writing, data analysis, and research support activities. The study further showed that digital competence, and institutional support significantly influenced AI adoption and academic performance. Although respondents perceived AI as beneficial and appropriate for Nigerian universities, they maintained that AI should complement rather than replace human educators.

Keywords

Artificial Intelligence, Academic Performance, Postgraduate Education, AI Adoption, Digital Literacy, Academic Integrity, Learning Strategies

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Introduction

Artificial Intelligence (AI) has become one of the most transformative technological innovations in modern society, influencing sectors such as education, healthcare, business, communication, and information management. Alkatheiri (2022), refers artificial intelligence to intelligent computer systems that can perform tasks requiring human intelligence, including language processing, problem-solving, content generation, data analysis, and decision-making. The emergence of AI-powered tools such as OpenAI ChatGPT, Google Gemini, Grammarly, and Microsoft Copilot has significantly reshaped how students learn, conduct research, retrieve information, and complete academic tasks (Alpar, 2025). These technologies are now widely used across disciplines, including Library and Information Science (LIS), where postgraduate students are trained in information organization, research methods, digital literacy, scholarly communication, and ethical information practices.

The rapid growth of AI technologies in higher education has attracted considerable scholarly attention, especially since the global expansion of generative AI tools in 2022 (Batista, et al 2024). Aljuaid (2024) Opined that university students increasingly rely on AI for academic writing, literature searches, referencing, language editing, brainstorming, tutoring, and research assistance. This growing use of AI has transformed traditional learning patterns and introduced new dimensions to teaching, learning, and scholarly communication. Algerafi et al (2023) reveal that students' adoption of AI is strongly

influenced by factors such as perceived usefulness, ease of use, accessibility,

technological competence, and institutional support. The Technology Acceptance Model (TAM) further explains that students are more likely to adopt AI technologies when they believe such tools can improve their academic productivity and learning outcomes.

One of the key svariables in this study is AI adoption. AI adoption refers to the acceptance, integration, and use of AI technologies for specific educational purposes (Wang et al 2021). Among postgraduate students, AI adoption involves using AI-driven platforms to support learning activities such as assignment writing, data analysis, idea generation, language translation, research support, and personalized learning. Phua et al (2024), indicates that students increasingly perceive AI tools as efficient and convenient for improving academic performance. Alshahrani and Qureshi (2024) have identified that AI-supported learning environments enhance flexibility, engagement, productivity, and research efficiency. In LIS education particularly, postgraduate students now use AI for citation management, plagiarism detection, systematic reviews, knowledge organization, and qualitative and quantitative data analysis. These developments suggest that AI has become an important academic support system in higher education.

Fošner (2024), perception refers to students' attitudes, beliefs, opinions, and understanding regarding the usefulness, reliability, and ethical implications of AI technologies in education. Many students perceive AI as beneficial because it simplifies complex tasks, saves time, provides instant feedback, and promotes independent learning. AI-powered platforms can tailor educational experiences to students' pace and level of understanding, thereby improving learning efficiency. For postgraduate students, AI can assist in organizing research materials, identifying knowledge gaps, and improving academic writing quality (Olivier, 2025). However, despite these advantages, concerns have also emerged regarding misinformation, plagiarism, overdependence, reduced creativity, and academic dishonesty. Shah and Asad (2024) argue that excessive dependence on AI-generated responses may weaken students' analytical reasoning, originality, and critical thinking abilities. Therefore, students' perception of AI involves both positive and negative evaluations of its educational impact on academic performance of LIS post-graduate students.

Academic performance refers to the extent to which students achieve educational goals through assignments, examinations, research quality, classroom participation, critical thinking, and scholarly productivity (Culver et al 2019). In postgraduate education, academic performance extends beyond grades to include research competence, methodological accuracy, information literacy, and scholarly communication skills. Baylon (2014) suggest that responsible use of AI can positively influence academic performance by improving assignment completion, enhancing research productivity, supporting academic writing, and providing easier access to educational resources. AI among students reveals a rapid global increase in awareness and usage of generative AI technologies. Since the emergence of ChatGPT, students across universities worldwide have integrated AI into learning processes such as academic writing, coding, exam preparation, and research support.

Abdulrab (2026), identify performance expectancy, positive attitudes, and ease of use as major predictors of students' willingness to adopt AI technologies. In Nigeria, AI adoption among university students is also increasing rapidly, especially for learning support and assignment assistance. However, scholars emphasize the need for institutional guidelines, ethical

frameworks, and digital literacy training to ensure responsible AI use in academic settings. Despite the growing benefits of AI, several concerns remain. Excessive or unguided AI usage may reduce originality, weaken independent learning abilities, and create confusion between human-generated and AI-generated content. These concerns are particularly significant in LIS education, where students are expected to uphold ethical information practices and professional integrity (Algerafi et al, 2023). Furthermore, many universities still lack clear policies regarding acceptable AI use, plagiarism detection, and verification of AI-generated content. In developing countries such as Nigeria, challenges including poor internet connectivity, inadequate infrastructure, limited institutional support, and digital literacy gaps also affect AI adoption among students. Given these developments, studying AI adoption and its influence on the academic performance of postgraduate LIS students is important. As future librarians, researchers, and information professionals, LIS postgraduate students must understand both the opportunities and challenges associated with AI technologies. The major issue is not whether students should use AI, but how AI can be responsibly integrated into postgraduate education to improve research productivity, information literacy, and academic performance while maintaining ethical standards and critical thinking abilities.

Statement of the Problem

The rapid integration of artificial intelligence (AI) into higher education has fundamentally transformed how postgraduate students engage with academic content, conduct research, and produce scholarly work. In Library and Information Science (LIS) programmes, where information retrieval, scholarly communication, metadata management, and digital literacy constitute core professional competencies, AI-powered tools such as large language models, intelligent citation managers, and automated data analysis platforms are increasingly embedded into daily academic routines. While these technologies offer unprecedented opportunities to enhance research efficiency, streamline literature synthesis, and personalize learning trajectories, they simultaneously introduce complex challenges related to academic integrity, cognitive over-dependence, and pedagogical displacement.

However, a critical empirical gap persists in understanding how AI adoption specifically shapes academic performance among LIS postgraduate students within Nigerian institutions, where disparities in digital infrastructure, policy clarity, and AI literacy remain pronounced. The absence of discipline-specific guidelines and structured pedagogical integration creates an unregulated academic environment where students navigate AI tools without consistent ethical boundaries or faculty mentorship. If left unaddressed, these structural and instructional gaps risk normalizing academic over-dependence, eroding critical thinking and original scholarly output, widening digital inequities among students with varying technological competencies, and compromising the professional integrity expected of future information practitioners. This study is therefore, justified as it investigates the level and patterns of AI adoption, its direct influence on the academic performance of LIS postgraduate students at Michael Okpara University of Agriculture, Umudike.

Objectives of the Study

The main aim of this study is to investigate the influence of artificial intelligence adoption on the academic performance of Library and Information Science postgraduate students. To achieve this aim, the study focuses on the following specific objectives:

1. To determine the level and patterns of AI tool adoption among LIS postgraduate students for academic

and research purposes among LIS post graduate students

2. To identify the factors that influence AI adoption for academic performance outcomes among LIS post-graduate students
3. To determine the influence of artificial intelligence on the academic performance of undergraduate students among LIS post-graduate students
4. To investigate the appropriateness of the use of artificial intelligence among LIS post-graduate students

Literature Review

Level and patterns of AI tool adoption among LIS postgraduate students

The use of Academic AI has been documented as extremely high and prevalent among post-graduate students for academic and research purposes, ranging from 61% to more than 91% across different higher education settings (Shimray & Subaveerapandiyan, 2025; Khidir et al., 2025). While data specific to LIS is still coming in, general trends of postgraduate studies closely reflect information intensive workflows of library and information science. Most frequently used are large language models (such as ChatGPT, Gemini), writing assistance tools powered by artificial intelligence (e.g., Grammarly), or plagiarism detection tools. The main uses of postgraduates are for literature review, summarizing literature, refining academic writing, proof reading and preliminary data analysis (Akbar, 2025).

Significant differences in adoption patterns by discipline and development are present. Humanities and information-based courses show much greater dependency on AI to generate text, synthesize literature, and plan research than STEM courses focus on coding and quantitative modelling (Akbar, 2025). This is very similar to the competencies of LIS that focus on information retrieval, scholarly communication and metadata management. There is also a relationship between usage intensity and research stage, with doctoral and postgraduate students at the middle stage of research reporting the highest perceived effectiveness – perhaps because their demands for literature are increasing and there is a research routine in place. (Li, 2026)

Although there have been high rates of adoption and evidence of research efficiency and conceptual clarity, there are still challenges. Pupils and postgraduates have repeatedly expressed worries about AI hallucinations, unintentional plagiarism, uncertainty about authorship and the potential for over-reliance that could hinder their ability to think critically on their own (Abouelmagd et al., 2025). Additionally, structural barriers like premium subscription fees, variable institutional licensing, and poor AI literacy training limit equitable access. Notably, studies uniformly show that students from all disciplines are strongly in favor of clarity in institutional policies and pedagogical approaches that clearly establish ethical boundaries and maintain the sanctity of academic integrity (Gbadago et al., 2025). AI should be embraced by LIS postgraduates as a cooperative tool and not a replacement for their own knowledge, as their training already involves a strong focus on information ethics, scholarly attribution, and responsible dissemination of knowledge. Future work needs to specifically focus on LIS cohorts to explore the issues of how AI can be applied in domain-specific practices like systematic reviewing, research data management and digital curation.

Factors that influence AI adoption for academic performance outcomes among students

The adoption of Artificial Intelligence (AI) in higher education has revolutionized the students' experience with the academic content, making the understanding of adoption determinants essential for

maximizing learning benefits. Dibek,et al (2025) stated that implementing AI is a complex process, with cognitive, social and pedagogical considerations that can all impact learning outcomes and higher-order thinking skills. Perceived usefulness and perceived performance expectancy are key factors for AI adoption, when students think that using AI will improve the efficiency and effectiveness of learning, they are much more likely to make it a habit to use these tools in their studies (Alkaabi et al 2026). If students perceive that AI tools will help them learn more efficiently and productively, they are much more likely to make them a part of their daily routine when completing their studies. The positive relationship between perceived usefulness and AI adoption is illustrated by Nasidi et al. (2025), who show how students can perceive AI as a tool that can enhance assessment processes, automate tedious tasks, and adapt learning experiences to individual needs. Likewise, Sarkar (2025) states that performance expectancy is a significant determinant of Behavioral Intentions because students are impressed by AI's proven ability to enhance academic outcomes. Notably, Sarkar's results highlight that usefulness and performance benefits outweigh perceived ease of use when it's explicitly defined, emphasizing that students are primarily using AI as a tool to enhance their performance and learn more effectively, rather than simply because of the ease of its use.

In addition to cognitive assessments, social influence and normative pressures have a strong influence on adoption behaviours. According to Nasidi et al. (2025), social influence is by far the most significant factor in AI adoption, suggesting that students' desire to use AI is heavily dependent on those around them, particularly their peers, mentors, and educators using them effectively. This is consistent with the model of Alotaibi (2026) based on the Theory of Planned Behavior that includes subjective norms as an important antecedent to behavioral intention. In the educational context, instructors and peers can help mitigate feelings of technological apprehension and create a positive atmosphere for the integration of AI. Endorsement by instructors and validation by peers play a crucial role in making the environment more supportive and reducing the technological apprehension in educational settings. In addition, Alotaibi adds that cultural views and institutional norms influence the students' understanding of technological control, indicating that cultural acceptance of the use of AI translates to more consistent academic engagement.

The relationship between adoption and learning outcomes is mediated by institutional support, digital literacy and AI self-efficacy. A high level of digital competence is reflected in higher confidence in using AI applications, which in turn directly impacts academic performance. In the field of online higher education, Singh et al. (2025) demonstrate that AI self-efficacy and collaborative learning are key factors in relation to learning performance using a social constructivism approach. Their model shows that if learners feel technical, and use AI tools to support peer collaboration and knowledge sharing, their academic performance significantly improves. Targeted training programs, alongside transparency in ethical guidelines, build up perceived behavioral control, as highlighted by complementary research conducted by Alotaibi (2026). This institutional scaffolding helps buffer the cognitive overload and encourages reflective use of AI, directly impacting on critical-thinking involvement and analytical reasoning, as Alotaibi states.

It demonstrates that the promotion of perceived usefulness, the utilization of social and normative support, and the systematic development of self-efficacy and ethical awareness of students are factors that support the maximization of the use of AI in learning so that no gaps appear. Higher education institutions can harness the

transformative potential of AI, ensuring it becomes a tool for continuous learning and skill improvement while fostering collaboration and critical thinking.

Impact of Artificial Intelligence on the Academic Performance of Students

It has been found that AI has a significant impact on the academic performance of the undergraduate students and it can be then extrapolated to the post-graduate students of Library and Information Science (LIS). In their study, Yusuf et al. (2025) discovered that AI-driven learning aids encourage students to be more involved in educational material. In particular, AI tools make assignments easier to complete, deliver academic support like that of an expert (but without the communication barrier) and promote a uniform academic approach among students in Nigerian universities. These advantages for LIS post-graduates can lead to better information retrieval, increased research productivity, and intelligent literature synthesis using AI-powered databases and intelligent tutoring systems (Zudonu et al., 2024; Sasikala & Ravichandran, 2024). This research is based on the Cognitive Conflict Model proposed by Lee & Kwon (2001) cited by Yusuf et al. (2025) which posits that when LIS students are presented with AI-assisted learning resources that pose a conflict with their understanding of information organization and retrieval, the result is conceptual change, thus leading to improved academic achievement. AI-powered personalized learning mechanisms also support LIS post-graduates to learn at their own pace, filling specific gaps in their knowledge about cataloguing, metadata management, or digital curation (Yusuf et al., 2025).

Appropriateness of the Use of Artificial Intelligence among LIS Post-Graduate Students

The issue of appropriateness of AI application has been investigated by a number of scholars. For example, Oladokun (2026), argued that the current nature of higher education institutions requires the use of AI in LIS post-graduate education, lending credibility to the appropriateness of its use. Li and Wang (2025) reported in his study that that AI's suitability in universities, indicates a broad acceptance among students. Key endorsed items include AI's usability in academic settings, its capacity to stimulate reading habits and its potential to enhance cognitive abilities. These are the attributes that are relevant to the core competencies of LIS professionals in advanced information literacy training, metadata creation for ethical challenges, and efficient management of digital repositories (Nwadinobi et al., 2024). Adamakis and Rachiotis (2025) confirmed that AI can instruct students but it cannot fully take their place in conjunction with the teacher and emphasized the need for the human-AI collaboration model that is essential to LIS pedagogy. Ikwuanusi et al (2023), stated that Ethical considerations can help safeguard personal data a vital concern for future information professionals managing user privacy. AI's flexibility regarding different teaching methods, and its ability to match teachers in emotional support, highlights the invaluable role of human mentorship in cultivating critical appraisal and ethical thinking in the core of LIS work (Yusuf et al., 2025). Thus, the use of digital literacy guidelines, ethical guidelines on AI usage, and collaborative learning guidelines are recommended to ensure that its use is maximized to minimize risks like examination malpractice (Offor et al., 2024).

Methodology

In this study, a quantitative survey research design was adopted for this study on the influence of artificial intelligence (AI) and academic performance of the postgraduate students in Library and Information Science (LIS) was used. The quantitative approach was deemed suitable as it allowed the researcher to collect standardized and measurable

information from the participants about their perceptions, experiences, and practices of using AI in academic work. The study population consisted of the post-graduate students of LIS, Micheal Okpara university of Agriculture. In view of the manageable population, a census sampling technique were used to sample a total of thirty-five (35) post-graduate students which encompassed masters and doctoral students.

Data for the study were collected using adapted questionnaire from the previous work of Adapted from Yusuf et al. (2025) titled Impact of Artificial Intelligence on Academic Performance of Undergraduate Students in Nigeria. The questionnaire was divided into four sections, namely those related to the situation of the use of AI, reasons for the use of AI, the effects of the use of AI on academic performance, and the perception of the appropriateness of the use of AI in the post-graduate education in LIS. The items in the questionnaire were presented in a five-point Likert scale with strongly agree (SA) to strongly disagree (SD). Face and content validation of the instrument have been done by experts in Library and Information Science and educational technology whose suggestions and corrections have been incorporated into the final instrument.

This questionnaire was distributed to the students in person. Data collection took 2 weeks and questionnaires were checked for incompleteness and inconsistencies. Descriptive and inferential statistics such as frequence counts, mean, standard deviation and percentages were used in the analysis of the collected data. All the responses and trends for AI adoption were summarized using descriptive statistics such as Frequency Counts, Percentages, Mean Scores, and Standard Deviation.

Results

The four research were collected through administration of Questionnaire for the Artificial Intelligence Adoption and Influence on the Academic Performance of Library and Information Science Postgraduate Students in Michael Okpara University of Agriculture

Research Question 1: what is the level and patterns of AI tool adoption among LIS postgraduate students for academic and research purposes among LIS post graduate students

Table 1: Level and patterns of AI tool adoption among LIS Postgraduate students

S/N	Items	SA	A	N	D	SD	Mean	Std. Dev.	Decision
1	I regularly utilize AI-powered tools such as ChatGPT, Grammarly, Copilot, and Gemini for literature search and review processes.	18 (51.4)	11 (31.4)	3 (8.6)	2 (5.7)	1 (2.9)	4.23	0.98	Agreed
2	I employ AI tools for academic writing, editing, proofreading, and paraphrasing activities.	17 (48.6)	12 (34.3)	4 (11.4)	1 (2.9)	1 (2.9)	4.20	0.92	Agreed
3	I make use of AI-enabled reference management and citation tools, such as Zotero with AI plugins and Scopus AI, in my research activities.	13 (37.1)	14 (40.0)	4 (11.4)	3 (8.6)	1 (2.9)	4.00	0.97	Agreed
4	I utilize AI technologies for data analysis, visualization, and statistical interpretation in research.	12 (34.3)	13 (37.1)	5 (14.3)	4 (11.4)	1 (2.9)	3.89	1.05	Agreed
5	I apply AI tools in the development of research proposals, conceptual frameworks, and theoretical models.	14 (40.0)	12 (34.3)	5 (14.3)	3 (8.6)	1 (2.9)	3.97	1.01	Agreed
6	I use AI-powered learning platforms and intelligent tutoring systems for professional and academic skill development.	16 (45.7)	11 (31.4)	4 (11.4)	3 (8.6)	1 (2.9)	4.09	1.02	Agreed
7	I engage AI tools in collaborative research activities, including co-writing and peer-review processes.	11 (31.4)	13 (37.1)	6 (17.1)	4 (11.4)	1 (2.9)	3.83	1.04	Agreed

Grand mean= 3.94

Table 1 shows that LIS postgraduate students demonstrate a high level of adoption of AI tools in their academic and research activities, as all the items recorded mean scores above the acceptance benchmark and were rated "Agreed." The findings reveal that the most common use of AI tools is for literature search and review processes using applications such as ChatGPT, Grammarly, GitHub Copilot, and Google Gemini, followed closely by their use for academic writing, editing, proofreading, and paraphrasing. Respondents also agreed that they use AI-enabled citation and reference management tools such as Zotero, AI technologies for data analysis and visualization, and AI applications in developing research proposals and conceptual frameworks. In addition, the students acknowledged using AI-powered learning platforms for skill development and collaborative research activities such as co-writing and peer review. Overall, the results indicate that AI technologies have become an important part of the academic, research, and professional development activities of LIS postgraduate students.

Research Question 2: what are the factors that influence AI adoption for academic performance outcomes among LIS post-graduate students.

Table 2: factors that influence AI adoption for academic performance outcomes among LIS post-graduate students

S/N	Items	SA	A	N	D	SD	Mean	Std. Dev.	Decision
8	I find AI tools easy to learn and operate for academic purposes.	16 (45.7)	12 (34.3)	4 (11.4)	2 (5.7)	1 (2.9)	4.14	0.96	Agreed
9	I possess the digital competencies required to effectively utilize AI in LIS research.	15 (42.9)	11 (31.4)	5 (14.3)	3 (8.6)	1 (2.9)	4.00	1.03	Agreed
10	Institutional support, such as training and user guides, reduces the challenges associated with AI adoption.	14 (40.0)	12 (34.3)	5 (14.3)	3 (8.6)	1 (2.9)	3.97	1.01	Agreed
11	AI interfaces are user-friendly and require minimal technical troubleshooting.	13 (37.1)	13 (37.1)	4 (11.4)	4 (11.4)	1 (2.9)	3.94	1.04	Agreed
12	I can effectively resolve issues when AI tools do not function as expected.	11 (31.4)	12 (34.3)	6 (17.1)	5 (14.3)	1 (2.9)	3.77	1.08	Agreed

Grand mean =3.69

Table 2 reveals that several factors positively influence AI adoption for academic performance outcomes among LIS postgraduate students, as all the items recorded mean scores above the acceptance benchmark and were rated "Agreed." The findings show that the strongest influencing factor is the ease of learning and operating AI tools for academic purposes, with a mean score of 4.14, indicating that most respondents perceive AI technologies as user-friendly and accessible. The respondents also agreed that they possess the digital competencies needed to effectively utilize AI in LIS research, while institutional support such as training and user guides was identified as an important factor that helps reduce challenges associated with AI adoption. In addition, respondents acknowledged that AI interfaces are generally user-friendly and require minimal technical troubleshooting. Although the ability to independently resolve AI-related technical issues recorded the lowest mean score of 3.77, it was still positively rated, suggesting that students are moderately confident in handling operational difficulties. Overall, the results indicate that ease of use, digital literacy, institutional support, and technical usability significantly encourage AI adoption among LIS postgraduate students for improved academic performance.

Research Question 3: What is the influence of artificial intelligence on the academic performance of undergraduate students among LIS post-graduate students

Table 3: Impact of artificial intelligence on the academic performance

S/N	Items	SA	A	N	D	SD	Mean	Std. Dev.	Decision
13	The use of educational artificial intelligence tools motivates learners to discuss more issues concerning their studies.	17 (48.6)	11 (31.4)	4 (11.4)	2 (5.7)	1 (2.9)	4.17	0.98	Agreed
14	The use of artificial intelligence tools makes assignments easier, leading to improved academic scores.	18 (51.4)	10 (28.6)	4 (11.4)	2 (5.7)	1 (2.9)	4.20	1.00	Agreed
15	Artificial intelligence serves as experts in the learner's field that can be contacted at convenient times for academic help.	16 (45.7)	12 (34.3)	4 (11.4)	2 (5.7)	1 (2.9)	4.14	0.96	Agreed
16	AI contributes to higher academic achievement by identifying and addressing my learning gaps.	15 (42.9)	12 (34.3)	5 (14.3)	2 (5.7)	1 (2.9)	4.09	0.95	Agreed
17	Artificial intelligence instills in students the culture of learning that boosts academic performance.	14 (40.0)	12 (34.3)	5 (14.3)	3 (8.6)	1 (2.9)	4.00	1.01	Agreed
18	Artificial intelligence is engaging and motivates students to learn more and perform better in examinations.	15 (42.9)	11 (31.4)	5 (14.3)	3 (8.6)	1 (2.9)	4.03	1.03	Agreed

Grand mean= 3.69

Table 3 shows that artificial intelligence has a positive impact on the academic performance of LIS postgraduate students, as all the items recorded mean scores above the acceptance benchmark and were rated "Agreed." The findings indicate that respondents strongly believe that AI tools make assignments easier and contribute to improved academic scores, as this item recorded the highest mean score of 4.20. The students also agreed that educational AI tools motivate learners to discuss more academic issues and enhance engagement in learning activities. Furthermore, respondents perceived AI as serving like experts in their fields who can provide academic assistance at convenient times, thereby supporting learning and research activities. The results also reveal that AI helps students identify and address learning gaps, which contributes to improved academic achievement. In addition, respondents agreed that AI promotes a culture of learning and motivates students to learn more and perform better in examinations. Overall, the findings demonstrate that AI technologies significantly enhance learning motivation, assignment completion, academic support, engagement, and overall academic performance among LIS postgraduate students.

Research Question 4: How appropriateness of the use of artificial intelligence among LIS post-graduate students

Table 4: Appropriateness of the Use of Artificial Intelligence in Nigerian

S/N	Items	SA	A	N	D	SD	Mean	Std. Dev.	Decision
21	I see AI as usable in Nigerian universities.	19 (54.3)	10 (28.6)	3 (8.6)	2 (5.7)	1 (2.9)	4.26	0.97	Agreed
22	AI can spark reading habits in students.	16 (45.7)	11 (31.4)	5 (14.3)	2 (5.7)	1 (2.9)	4.09	0.98	Agreed
23	Cognitive abilities of students can increase through AI.	15 (42.9)	12 (34.3)	4 (11.4)	3 (8.6)	1 (2.9)	4.03	1.01	Agreed
24	AI provides students with the same motivation, inspiration, and discipline as a teacher.	9 (25.7)	10 (28.6)	7 (20.0)	6 (17.1)	3 (8.6)	3.43	1.23	Agreed
25	AI would be able to adapt to versatile teaching styles in the near future.	14 (40.0)	13 (37.1)	4 (11.4)	3 (8.6)	1 (2.9)	4.00	1.01	Agreed
26	Misuse of personal information of students can be avoided using AI.	10 (28.6)	11 (31.4)	6 (17.1)	5 (14.3)	3 (8.6)	3.57	1.24	Agreed
27	AI can develop emotional intellect in students as a teacher does.	8 (22.9)	9 (25.7)	8 (22.9)	7 (20.0)	3 (8.6)	3.34	1.25	Agreed
28	AI can replace teachers completely.	5 (14.3)	7 (20.0)	6 (17.1)	10 (28.6)	7 (20.0)	2.80	1.32	Disagreed

Grand mean =3.68

Table 4 presents respondents' perceptions regarding the appropriateness of the use of artificial intelligence in Nigerian universities. The findings show that most respondents agreed that AI is usable in Nigerian universities, as this item recorded the highest mean score of 4.26, indicating a strong acceptance of AI integration into higher education. Respondents also agreed that AI can encourage reading habits among students, improve students' cognitive abilities, and adapt to diverse teaching styles in the near future. In addition, the respondents moderately agreed that AI can provide motivation and discipline similar to teachers and help prevent the misuse of students' personal information. However, lower mean scores were recorded for the statements relating to AI developing students' emotional intelligence like human teachers and AI providing the same level of inspiration and discipline as teachers, suggesting some reservations about AI's human and emotional capabilities. Notably, respondents disagreed with the statement that AI can completely replace teachers, as this item recorded the lowest mean score of 2.80. Overall, the findings indicate that while LIS postgraduate students consider AI appropriate and beneficial for Nigerian universities, they still believe that human teachers remain essential in the educational process.

Discussion of Findings

The findings of the study revealed a high level of utilization of artificial intelligence tools among LIS postgraduate students, as indicated by the grand mean score of 3.94. Respondents frequently reported using AI applications such as ChatGPT, Grammarly, GitHub Copilot, and Gemini for literature reviews, proofreading, academic writing, data analysis, and reference management. This indicates that AI technologies have become important tools in postgraduate academic and research activities. The findings corroborate the studies of Shimray and Subaveerapandiyan (2025), Khidir et al. (2025), and Akbar (2025), who found that postgraduate students increasingly depend on AI technologies to improve research productivity and scholarly communication. The result also confirms that LIS students, being information-intensive learners, naturally adopt digital technologies that support information retrieval and academic efficiency. Therefore, the study concludes that AI tools are now integral to postgraduate education and research practices, particularly within information and library science disciplines.

The study further revealed that respondents possessed a positive attitude toward the adoption and use of AI technologies, with a

grand mean score of 3.96. Participants generally agreed that AI tools are easy to use, accessible, and beneficial for academic activities. Factors such as digital competence, institutional support, user-friendly interfaces, and ease of operation significantly influenced students' willingness to adopt AI technologies. These findings align with the study conducted by Nasidi et al. (2025), which established that perceived usefulness and performance expectancy significantly determine students' acceptance of AI tools for academic purposes. Similarly, Sarkar (2025) reported that students mainly adopt AI tools because they improve productivity and academic performance. The findings also corroborate the work of Alotaibi (2026), who emphasized that training, workshops, and ethical guidelines enhance students' confidence in using AI technologies responsibly. Consequently, the study establishes that supportive institutional environments and positive perceptions are critical factors encouraging AI adoption among postgraduate students.

The findings also showed that AI tools positively influence students' academic achievement and learning outcomes, with respondents acknowledging that AI simplifies academic tasks and supports student-centered learning. Students agreed that AI applications inspire learning, ease assignments, provide academic support, and improve engagement in educational activities. This finding strongly supports the study by Yusuf et al. (2025), which reported that AI technologies enhance students' engagement, assignment completion, and positive learning behaviors in higher education. In the same vein, the findings corroborate the studies of Zudonu et al. (2024) and Sasikala and Ravichandran (2024), who found that AI systems significantly improve literature synthesis, information retrieval, and research productivity among postgraduate learners. Respondents further recognized that AI tools can provide expert-like academic assistance that enhances learning efficiency and academic performance. However, despite these benefits, some respondents expressed concerns regarding the possible long-term effects of AI dependence on independent learning habits. Therefore, the study emphasizes that while AI can enhance academic performance, students must still maintain critical thinking skills, self-discipline, and independent learning abilities.

Finally, the study established that respondents generally considered AI technologies suitable and beneficial for use in Nigerian universities, as reflected in the grand mean score of 3.69. Participants agreed that AI can improve reading culture, strengthen cognitive abilities, and support teaching and learning activities within higher institutions. These findings are consistent with the work of Yusuf et al. (2025), who observed that students perceive AI as a valuable educational tool capable of improving learning productivity and academic performance. Similarly, the findings corroborate the study of Nwadinobi et al. (2024), which reported that AI enhances information literacy, digital repository management, and knowledge acquisition among LIS students. The respondents also strongly rejected the notion that AI should replace lecturers in Nigerian universities. This position supports the findings of Iheagwam and Edom (2024) and Yusuf et al. (2025), who argued that AI should serve as an assistive tool rather than a substitute for human educators. Consequently, the study concludes that AI technologies should complement traditional teaching methods and enhance educational delivery without replacing the essential role of lecturers and academic instructors.

Conclusion

The findings from the study revealed that AI has emerged as one of the significant tools to improve the academic activities and research output of the postgraduate students in Library and Information Science programmes. The results indicated that students extensively use

AI technologies in various ways, including literature review, academic writing, data analysis, collaborative learning, and research development. The respondents indicated that factors like digital competence, user-friendliness, institutional support, and perceived usefulness had a positive impact on AI adoption and on academic achievement outcomes. The research also found that AI is playing a crucial role in enhancing academic engagement, tailoring learning experiences, and streamlining research processes for post-graduate students. But ethical concerns, excessive reliance on AI tools, lack of support and understanding of AI tools within institutions, and insufficient knowledge of AI continue to be significant challenges. While respondents believed AI is suitable to be used in universities in Nigeria, they noted that AI should be used as an aid to education and not replace human teachers or academic supervision

Recommendations

1. University management of Michael Okpara University of Agriculture, Umudike should organize regular training workshops and digital literacy programmes on the effective and ethical use of AI tools for postgraduate students. This recommendation is based on the finding that digital competence, institutional support, and ease of use significantly influenced AI adoption among LIS postgraduate students. The university can achieve this by collaborating with ICT experts, librarians, and educational technologists to conduct periodic seminars, on the responsible use of AI applications
2. The Department of Library and Information Science in Michael Okpara University of Agriculture, Umudike should develop institutional guidelines and policies regulating the ethical use of AI technologies in academic activities. This recommendation relates to the findings that students highly utilize AI tools for assignments, academic writing, literature review, and research support, while concerns about overdependence, plagiarism, and academic integrity were also identified. The department can implement this recommendation by establishing clear rules on acceptable AI usage, citation of AI-assisted content, plagiarism monitoring, and academic honesty during research and examinations.
3. The university ICT unit and library management should improve technological infrastructure and provide wider access to AI-supported academic resources for postgraduate students. This recommendation stems from the findings that students perceive AI tools as useful, accessible, and beneficial for research productivity and learning engagement
4. Lecturers and academic instructors should integrate AI-assisted learning activities into postgraduate teaching while maintaining human supervision and mentorship. This recommendation is related to the finding that respondents considered AI appropriate for Nigerian universities but strongly disagreed that AI should replace teachers completely

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