

Lecturer Readiness for the Utilization of Artificial Intelligence Tools in Academic Research: A Descriptive Survey Study

By

¹Usman, Binta Fatima, ²Buhari Abdulkareem Issa, ²Ifabiye Gbenga, ³Ibrahim Mutiu B.,
⁴Abdulkadir Okanlawon

¹Department of Computer Science, Kwara State College of Education, Ilorin, Nigeria

²Department of Technical Education, Kwara State College of Education, Ilorin, Nigeria

^{3,4}Science Education Department, Faculty of Education, Al-Hikmah University, Ilorin, Kwara State

Emails: ²buhariabdulkareem71@gmail.com, ³ibrahimmutiu007@gmail.com

³okanbolanta@gmail.com

Corresponding author email: bf_usman@kwcoeilorin.edu.ng,

<https://orcid.org/0009-0005-1822-0399>

Abstract

Lecturer readiness for the utilization of artificial intelligence tools in academic research was investigated in this study. This study investigated the readiness of lecturers in the Colleges of Education in Kwara State to adopt and employ Artificial Intelligence (AI) tools for research activities. It also explores dimensions such as technological readiness, institutional support, and main barriers perceived by the facilitators. The study adopts a descriptive survey research design in order to address the research problems. Population comprised lecturers from the three government owned colleges of education in Kwara State. Data collection instruments included a validated questionnaire with reliability through a pilot study yielding a Cronbach's Alpha of 0.82. Descriptive statistics (frequency, percentage and mean) were applied to analyse the quantitative data collected for research questions. The findings of the study for research question one to four reveal that the lecturers' level of awareness of AI research tools is moderately low, lecturers' technical competence in utilizing AI tools is generally low, institutional support for AI integration is also moderately low and challenges such as lack of training and fear of technology replacing intellectual input and ethical concerns are the major challenges. The paper concludes with recommendations that colleges of education should enhance AI use in research through training, reliable infrastructure, clear policies, industry partnerships, and embedding AI literacy in postgraduate methodology courses for lecturers and future researchers.

Keywords: Lecturer readiness, AI tools, research adoption, institutional support

INTRODUCTION

AI is revolutionizing research completely via automation, literature mining, predictive analytics, and data visualization, lecturers are unprepared globally. For lecturers, leveraging AI tools can significantly enhance efficiency, depth, and impact in scholarly work. Yet in developing contexts especially in Nigeria's Colleges of Education adoption remains patchy due to infrastructural, attitudinal, and institutional constraints.

Artificial intelligence (AI) is increasingly transforming research worldwide, offering innovative tools for data analysis, knowledge discovery, and problem-solving. In higher education, AI enhances teaching, learning, and academic research, enabling lecturers to drive research innovation and advance scholarly work.

Studies have shown that while awareness of AI is growing, actual utilization is hindered by factors such as limited digital literacy, inadequate institutional support, and lack of access to training resources (Idika et al., 2025). This study seeks to evaluate the level of readiness among lecturers in

Colleges of Education in Kwara State, Nigeria, with a focus on their awareness, accessibility, and application of AI tools in research activities.

Despite increasing availability of AI research tools, empirical evidence regarding lecturers' readiness to utilize such tools remains limited, particularly in developing higher education systems. The extent to which lecturers possess technical competence, ethical awareness, and institutional support remains unclear. This uncertainty necessitates empirical investigation.

The main purpose of this study is to explore lecturer readiness for utilizing ai tools in research: a study among colleges of education in Kwara State, Nigeria. Specifically, the aim is to:

1. To determine lecturers' level of awareness of AI research tools.
2. To assess lecturers' technical competence in utilizing AI tools.
3. To examine institutional support for AI integration.
4. To determine challenges affecting AI adoption.

Research Questions:

1. What is the level of lecturer awareness of AI tools for research?
2. what is the lecturer technical competence in utilizing AI tools?
3. How often is the institutional support for AI integration?
4. What are the main challenges face by the lecturers in utilizing AI tools?

LITERATURE REVIEW

Theoretical Frameworks Supporting AI Adoption

The adoption of artificial intelligence in higher education can be explained through several well-established theoretical frameworks. Understanding how and why educators adopt artificial intelligence (AI) tools in research and teaching requires a solid theoretical foundation. Several frameworks have been widely applied to explain the behavioral, institutional, and technological factors influencing AI adoption. Many studies on AI integration in education are anchored in the Technology Acceptance Model (TAM), which explains how perceived usefulness and ease of use influence technology adoption. Idika et al. (2025) applied TAM to assess lecturer attitudes toward AI tools, finding that positive perceptions significantly correlated with higher usage rates (Tarisayi, 2024).

The Technology Acceptance Model (TAM), developed by Davis (1989), remains one of the most influential frameworks for studying technology adoption. It posits that two key factors perceived usefulness and perceived ease of use determine an individual's intention to use a technology. In the context of AI, TAM has been used to assess how lecturers perceive the value and usability of AI tools in research. Idika et al. (2025) applied TAM to evaluate lecturer attitudes toward AI in Nigerian universities, finding that positive perceptions significantly correlated with higher usage rates.

Unified Theory of Acceptance and Use of Technology (UTAUT) model expands on TAM by incorporating additional constructs such as social influence, facilitating conditions, and performance expectancy. It has been particularly useful in educational settings where institutional support and peer influence play a role in technology adoption. A recent review by Granić (2025) emphasized that UTAUT helps explain generative AI adoption among educators by accounting for both individual and organizational factors.

Granić (2025) also introduced a Three-Tier Framework for integrating generative AI in education. This model includes: Pedagogical Tier: Focuses on instructional design and learning outcomes. Technological Tier: Addresses infrastructure and tool accessibility and Institutional Tier: Examines policy, leadership, and strategic alignment. This framework supports targeted, evidence-based strategies for AI integration and is particularly relevant for institutions seeking to scale AI adoption responsibly

Activity Theory provides a socio-cultural lens for understanding how tools (like AI) mediate human activity within a community. It emphasizes the interaction between users, tools, and institutional rules. This framework is useful for analyzing how lecturers engage with AI tools within the

constraints and affordances of their educational environments (Ikeda & Binarkaheni, 2024).

The Rise of AI in Academic Research

Artificial Intelligence (AI) has become a transformative force in higher education, particularly in research practices. AI tools such as natural language processing, predictive analytics, and automated data visualization are increasingly used to enhance research efficiency, accuracy, and innovation (Uddin, 2024). Artificial Intelligence (AI) is rapidly transforming the landscape of academic research, offering tools that enhance efficiency, accuracy, and innovation across disciplines. AI applications such as machine learning, natural language processing, and automated data analysis are now integral to research workflows, enabling scholars to process large datasets, detect patterns, and generate insights with unprecedented speed.

According to Idika et al. (2025), the integration of AI tools in Nigerian universities is reshaping how lecturers approach research methodology and data analysis, offering new possibilities for academic productivity.

Bouchrika (2025) highlights that AI tools are revolutionizing academic research by streamlining data analysis, improving the quality of scholarly writing, and assisting in plagiarism detection. These capabilities not only accelerate research timelines but also improve the integrity and reproducibility of findings. Similarly, Alawamleh et al. (2025) conducted a mixed-methods study that revealed a positive correlation between AI usage and academic morale among undergraduate students, suggesting that AI fosters engagement and motivation in research environments Springer. Moreover, AI is enabling new research methodologies. For instance, AI-driven literature review tools can scan thousands of articles to identify trends and gaps, while predictive analytics can forecast research outcomes or model complex systems. A study published by UL Open Access (2025) emphasizes that AI is not just a tool but a paradigm shift in how research is conceptualized and executed, particularly in interdisciplinary fields where data complexity is high. Despite these advancements, scholars caution against over-reliance on AI.

Artificial intelligence (AI) is revolutionizing industries worldwide, and academic research is no exception. By expediting data analysis, improving the quality of writing, and detecting plagiarism, AI tools are reshaping the research landscape for students and professionals. While these advancements promise immense benefits, they also raise ethical concerns that need careful navigation (Bouchrika 2025).

How AI Streamlines Research Processes

As stated by Bouchrika (2025) AI streamlines research processes by speed and accuracy: AI can perform repetitive tasks like data sorting, categorization, and pattern recognition much faster and with fewer errors than humans. Predictive Analysis: Machine learning models allow researchers to predict trends or outcomes based on historical data. Data Visualization: Tools like Tableau and Google AI-powered datasets help create easy-to-understand visual reports. Automated Literature Review Tools: Scans thousands of academic papers to extract themes, gaps, and trends (e.g. ChatGPT, Grammarly, Scite, Elicit, Iris.ai, ResearchRabbit, and Copilot). Plagiarism Detection Software: Ensures originality of research content (e.g., Turnitin, Grammarly's AI-based checker etc. AI tools also provide detailed recommendations to align the tone and style of the writing with academic standards. For instance, these programs can detect informal language, suggest more precise word choices, and guide researchers on maintaining a consistent tone throughout their work. This feature is particularly beneficial for students and early-career researchers who may still be learning the conventions of academic writing (Bouchrika, 2025). By integrating AI, researchers can focus more on interpreting findings and deriving meaningful conclusions, significantly improving the quality of academic output. However, there is a growing dependency on these tools, which raises concerns about researchers potentially losing essential skills for manual data interpretation (Bouchrika, 2025).

Lecturer Awareness and Utilization of AI Tools

Despite the growing availability of AI technologies, lecturer awareness and utilization remain

uneven across Nigerian institutions. For lecturers to optimally use AI, they need to be aware of its utilization and impact on their academic activities and be proficient in its use. The knowledge of lecturers on the utilization of AI for education is fundamental to enabling lecturers to utilize it successfully for their academic activities. A study conducted at the University of Calabar revealed that while many lecturers are aware of AI tools, only a fraction actively use them in teaching and research due to limited training and institutional support (Idika et al., 2025). Similarly, research by Sánchez et al. (2025) found that although AI tools were accessible, their adoption was hindered by low digital literacy and lack of structured implementation strategies.

The application of AI-driven tools in educational and research environments signifies the strategic and effective use of these technological innovations. This encompasses the enhancement of teaching strategies, the optimization of research methodologies, and the overall elevation of educational quality (Clinciu, 2023). Results that emanated from Alimi et al., (2021) in university students' awareness of, access to, and use of artificial intelligence for learning in Kwara State, study revealed that most of the students are aware of AI through seminars, journals, and media. However, studies have shown a contradictory conclusion in terms of colleges of education lecturers' awareness of modern technologies in education. Studies have shown that lecturers' awareness of AI technologies is low.

Institutional Readiness and Support for AI in Education

Institutional readiness plays a critical role in facilitating AI adoption among lecturers. Al-Zahrani and Alasmari, (2025) emphasized that successful integration of AI in higher education depends on adequate infrastructure, continuous professional development, and supportive policies. In Ondo State, lecturers who received institutional backing and training were significantly more prepared to engage with AI tools compared to those in less supported environments.

Egere et al. (2025) assessed institutional readiness for AI, cybersecurity, and programming in Nigeria's digital curriculum reform. They found that while federal initiatives introduced AI into the curriculum, many institutions lacked the technical infrastructure and trained personnel to implement it effectively. AI's potential in Nigerian education is constrained by systemic challenges such as poor funding, inadequate digital infrastructure, and limited strategic planning (Ukala & Ukala, 2024), their work calls for a national roadmap to guide AI adoption and ensure policy alignment across institutions.

Teacher educators revealed that professional development programs and institutional support significantly enhance readiness and positive attitudes toward AI adoption (Idika et al., 2025). Institutions that invested in workshops, digital literacy programs, and collaborative platforms saw higher engagement with AI tools among lecturers. These findings suggest that institutional readiness is not just about access to technology but also about fostering a culture of innovation, providing ongoing support, and aligning AI initiatives with educational goals. Without these elements, AI integration risks being superficial and unsustainable.

Barriers to AI Integration in Research

Common barriers to AI utilization include insufficient access to digital tools, lack of technical training, and resistance to change. These challenges are particularly pronounced in Colleges of Education, where research resources are often limited. Studies suggest that without targeted interventions, the digital divide may widen, leaving many educators unable to benefit from AI-driven research advancements. The adoption of AI into Nigerian education is still in its infancy, primarily due to several factors including limited infrastructure, inadequate funding, and a shortage of skilled professionals (Akinmideyi et al., 2024). Only a small fraction of Nigerian secondary schools has implemented AI-driven solutions in teaching, research, and administrative processes (Adebowale et al., 2019). The lack of awareness and understanding of AI among teachers, and school administrators can further impede its adoption.

While artificial intelligence (AI) offers transformative potential for academic research, its integration into Nigerian institutions faces several persistent challenges. One of the most cited

barriers is limited infrastructure, including unreliable internet access, outdated hardware, and lack of institutional investment in digital tools. Egere et al. (2025) found that many Nigerian universities lack the foundational resources required to support AI-driven research, making adoption difficult despite growing interest. Another major obstacle is low faculty expertise and digital literacy. Many lecturers are unfamiliar with AI tools or lack the training to use them effectively. Policy and strategic alignment also pose significant challenges. Institutions often lack clear guidelines or frameworks for AI integration, resulting in fragmented efforts and inconsistent adoption. Akindeyi et al. (2024) emphasizes that without coordinated national policies and institutional strategies, AI implementation risks being superficial and unsustainable.

The integration of Artificial Intelligence (AI) into academic programs in Nigerian institutions faces several significant challenges. A major constraint is the lack of resources, faculty expertise, and infrastructure (Adesiji, 2024). Many institutions struggle with inadequate funding for research laboratories, limited access to high-performance computing systems, and a shortage of qualified instructors with advanced knowledge of AI technologies (Adepoju & Ikuomola, 2022). Moreover, limited partnerships with industry and global academic institutions restrict access to the tools and platforms required for hands-on learning and innovation (Okolie et al., 2021). Furthermore, ethical concerns such as data privacy, algorithmic bias, and academic integrity complicate AI adoption. These issues require thoughtful regulation and awareness among researchers to ensure responsible use of AI technologies (Khan, 2024)

METHODOLOGY

This study adopted a descriptive survey design to examine lecturer's readiness for utilizing artificial intelligence (AI) tools in research across three public Colleges of Education in Kwara State, Nigeria. The population comprised lecturers across three government colleges of education in Kwara State, a stratified random sampling techniques was used to select a total of 120 lecturers from 210 who were able to respond to the questionnaire through google form using Taro Yamane (1967), to ensure representation across various departments and academic levels. The instrument was divided into two section, the first session was the demographic information and the second sessions was the items list the lecturer's awareness of AI tools, competency level of utilization, institutions support for AI tools and challenges facing the utilization using four likert scale of SA, A, SD, D, for the first one to three items and not barrier (NB), minor barrier (MB), moderately barrier (MB) and major barrier (MB) for the last items. Data was collected using a structured questionnaire that captured information on awareness, technical competence, institutional support to AI tools for research and challenges/barriers in utilizing Ai tools for research, the instrument was subjected to both validity and reliability. Validity was established through expert reviews and content validation, while the reliability of the instruments was ensured through a pilot study with Cronbach's Alpha values of 0.82. Descriptive statistics were employed to analyze the data collected. Frequency counts, percentages, and mean were used to answer the research questions. The analysis was conducted using SPSS version 27.0, with a significance threshold set at $p < 0.05$ to ensure reliability and validity of the findings.

RESULTS AND DISCUSSION OF FINDINGS

This chapter presents the results of the data collected from 120 lecturers across three public Colleges of Education in Kwara State. The analysis was conducted using descriptive statistics including frequency counts, percentages, and means. The findings are organized into four key areas: demographic profile, awareness of AI tools, technical competence in utilizing AI tools, institutional support and challenges faced in utilizing AI tools.

Table 1:

Gender Distribution of Respondents

	Frequency	Percent
Valid MALE	55	45.8%
FEMALE	65	54.2%

Total 120 100.0

Gender: male 45.8% and 54.2% female, indicating a slightly higher female representation.

Table 2:

Qualification Distribution of Respondents

	Frequency	Percent
Valid B.Ed	25	20%
M.Ed	45	37.5%
PhD	38	32.5%
Others	12	10%
Total	120	100.0

Table 2 indicates 25(20%) of respondents were B.Ed, 45(37.5%) were M.Ed, 38(32.5%) were PhD while the remaining 12(10%) were others qualification, this demographic profile suggests a diverse sample with a majority of mid-career lecturers holding postgraduate qualifications.

Table 3: Teaching Experience Distribution of Respondents

	Frequency	Percent
Valid 1–5 years	25	20%
6–10 years	35	29%
11+ years	60	51%
Total	120	100.0

Table 1 indicate 25(20%) respondents had between 1-5years experience, 35(29%) had 6-10years experience, while the remaining 60(51%) had 11years above experience, this demographic profile suggests a diverse sample with a majority of the lecturers have years of experience

Research Question One: What is the level of lecturer awareness of AI tools for research?

Table 4:

What is the level of lecturer awareness of AI tools for research?

Item	Agree (1)	Strongly Agree (2)	Disagree (3)	Strongly Disagree (4)	Mean
1. I am aware of AI tools that can support academic research (e.g., data analysis, literature review).	13 (10.8%)	53(42%)	19(58%)	35(29.2%)	2.63
2. I can identify AI software relevant to my research field.	25(20.8%)	14(11.7%)	2.26	22(18.3%)	59(49.2%)
3. I keep up-to-date with new AI tools available for research.	10(8.3%)	0(0%)	1.67	50(41.7%)	60(50%)
4. I understand the potential benefits of using AI in academic research.	50(41.7%)	7(5.8%)	21(17.5%)	2.06	42(35%)
5. I am familiar with AI applications for plagiarism detection and reference management.	26(21.7%)	18(15%)	32(26.7%)	44(36.7%)	2.78
Average mean			2.28		

Table 4 above reveals that lecturers' awareness of the adoption of AI tools for research is generally low (average mean = 2.28), this indicated that lecturers are partially aware of some AI tools that can support academic research that is relevant to their research field. This aligns with Omobolanle (2024), who studied awareness, perception, and use of AI tools among Library and Information Science educators. Found growing awareness and moderate adoption of AI in academic research and teaching.

Research Question Two: What is the lecturers' technical competence in utilizing AI tools?

Table 5:

To assess lecturers' technical competence in utilizing AI tools.

Item	SA (4)	A (3)	SD (2)	D (1)	Mean
I can independently use AI tools for data analysis in my research.	20(16.7%)	15(12.5%)			
	85(70.8%)	0(20%)	2.29		
I can effectively use AI tools for literature search and review.	21(17.5%)	25(20.8%)			

74(61.7%)	0(0%)	2.15		
I can integrate AI tools into writing and publishing research papers.				
65(54.2%)	0(0%)	2.28	25(20.8%)	30(25%)
I can troubleshoot basic issues when using AI research tools.				
50(41.6%)	23(19.1%)	2.14	22(18.3%)	25(21)
I feel confident in training others on the use of AI in research.				
60(50)	13(10.8%)	2.23	22(18.3)	25(20.8)
Average mean				
2.21				

Table 5 above indicates that the lecturers' technical competence in utilizing AI tools is moderately low competence (average mean = 2.21). This suggests that most of the lecturers cannot use AI tools for data analysis in their research while some infrastructure exists, institutional backing for AI integration is weak. This align with Chiu et al. (2025) empirically show that teachers' AI competence is limited.

Research Question Three: what is the lecturer usage level of utilizing AI for research?

Table 6:

Institutional support for AI integration

Item	SA	A	SD	D	Mean
My institution provides regular training on AI tools for research.					
	25(25%)		20(20%)		2.40
There is reliable internet access and computing facilities to support AI use in research.					
	35(35%)		5(5%)	5(5%)	1.60
Institutional policies clearly guide the ethical use of AI in research.					
	15(15%)		15(15%)		2.00
My institution encourages collaboration with tech companies or organizations for AI research.					
	55(55%)		35(35%)	5(5%)	1.60
Leadership actively supports and promotes the integration of AI in research activities.					
	25(25%)		15(15%)	15(15%)	2.00
Average mean					
1.96					

Table 6 indicates that institutional support for AI integration is generally low, with the average mean = 1.96, which indicates that most institutions did not fully provides regular training on AI tools for research, there is no reliable internet access and computing facilities to support AI use, and no collaboration with tech institutions for AI research. This align with ETH Zurich (2025), which underscores that while infrastructure may exist, institutional backing for AI integration is frequently weak, leaving lecturers underprepared to leverage AI meaningfully in academic work.

Research Question Four: What are the main barriers and facilitators as perceived by lecturers?

Table 7:

Challenges affecting AI adoption.

Barrier	Not a Barrier (1)	Minor barrier (2)	Moderate barrier(3)	Major barrier (4)	Mean
Lack of training	12(12%)	8(8%)	35(35%)	45(45%)	3.13
Poor internet	16(16%)	14(14%)	45(45%)	25(25%)	2.79
Ethical concerns	16(16%)	14(14%)	45(45%)	25(25%)	3.13
Lack of policy	14(14%)	45(45%)	25(25%)	16(16%)	2.43
Limited access	18(18%)	12(12%)	25(25%)	45(45%)	3.17
Fear of replacement	12(12%)	8(8%)	35(35%)	45(45%)	3.13
Average mean					
3.5					

Table 7 reveals that the most significant challenges/barriers are a lack of training, fear of technology replacing intellectual input, and ethical concerns (M = 3.13). These findings highlight the need for targeted capacity-building and reassurance about AI's role as a supportive, not substitutive tool. The average mean = 3.5 further confirmed a generally high indicated that many

lecturers lack training on AI use, fear of technology replacement, and ethical concerns. This aligns with Maluleke (2025) who underscores that African higher education institutions often fail to provide adequate training and infrastructure, leaving lecturers underprepared

Summary of Findings

Lecturers have moderate awareness but limited access and usage of AI tools. Institutional support and encouragement are critically low. Motivation exists, but readiness is hindered by infrastructural and psychological barriers. Training and policy development are essential to improve adoption.

Conclusion

This study examined the readiness of lecturers in three public Colleges of Education in Kwara State to utilize artificial intelligence (AI) tools in academic research. The findings revealed that while there is moderate awareness and interest in AI tools, actual usage remains low due to limited access, inadequate institutional support, and significant barriers such as poor internet connectivity, lack of training, and absence of clear policies. Despite these challenges, lecturers expressed a willingness to adopt AI tools if provided with adequate training and resources. The study underscores the need for systemic interventions to bridge the gap between interest and implementation, ensuring that educators are equipped to harness the transformative potential of AI in research.

Recommendations

The study therefore recommended as follows:

1. Institutions should organize regular AI literacy workshops and hands-on training sessions to improve lecturers' digital literacy and competence in using AI tools for research.
2. Colleges of Education must invest in reliable internet access, modern computing facilities, and AI-enabled research platforms to support effective tool utilization.
3. Clear institutional policies should be developed to guide the ethical and strategic use of AI in academic work.
4. Colleges should partner with tech companies, universities, and research organizations to gain access to AI resources, mentorship, and collaborative research opportunities.
5. AI literacy should be embedded into postgraduate research methodology courses to prepare future educators and researchers for AI-driven academic environments.

Limitation

While this study provides valuable insights, several limitations must be recognized. As a descriptive survey, the findings rely on self-reported perceptions, which may be shaped by social desirability bias or limited understanding of AI tools. The scope and sample size also restrict generalizability, as results reflect the readiness of lecturers within a specific institution or region rather than across higher education more broadly. Moreover, the rapid pace of AI development means that lecturers' readiness levels may shift quickly, making the findings time sensitive. The study captures attitudes and competencies at a single point in time, without tracking longitudinal changes. Finally, differences in infrastructure and institutional support across universities may limit the applicability of results, since readiness is influenced not only by individual competence but also by systemic resources and support structures.

Ethical Considerations

This study is guided by key ethical principles designed to protect participants and uphold research integrity. Informed consent is paramount: lecturers are fully informed of the study's purpose, procedures, and their right to withdraw at any time without consequence. Confidentiality and anonymity are rigorously maintained, with individual responses kept private and findings reported only in aggregate form. Participation is strictly voluntary, and steps are taken to prevent any form of coercion or undue influence. Given the study's focus on AI adoption, the research team also recognizes and addresses ethical concerns related to technology use, such as fears of intellectual displacement and data privacy issues. Throughout, the study adheres to institutional and national ethical guidelines for research involving human participants, ensuring fairness, respect, and transparency in all procedures.

Knowledge contribution

Lecturer readiness for utilizing AI tools in research among Colleges of Education in Kwara State, Nigeria, reflects a growing awareness of the transformative potential of artificial intelligence but also reveals significant gaps in practical adoption. Many lecturers acknowledge the usefulness of AI applications such as plagiarism detection, automated data analysis, and AI-assisted literature review, yet their ability to fully integrate these tools into research practice is constrained by limited technical competence, inadequate training opportunities, and infrastructural challenges such as poor internet connectivity and insufficient access to digital resources. While institutional support remains uneven, the willingness of lecturers to embrace innovation suggests that readiness is more a matter of capacity building than resistance. This study contributes to knowledge by highlighting the distinction between awareness and actual utilization, situating lecturer readiness within the socio-economic realities of Nigerian higher education, and offering a framework for intervention through professional development, infrastructural investment, and supportive policy. Ultimately, it underscores that lecturer readiness is not merely an individual attribute but a systemic issue requiring coordinated efforts from institutions, government, and technology providers to bridge the gap between potential and practice.

References

- Adebowale, A. A., Adeyemi, A. O, Ogunleye, F. O & Akande, Y. O. (2019). Artificial intelligence in Nigerian higher education: Opportunities and challenges,” *Int. J. Adv. Res. Artif. Intell.*, vol. 3(9), pp. 31–37, 2019.
- Adepoju, S. A., & Ikuomola, A. D. (2022). Artificial intelligence education and the future of work in Nigeria. *Journal of Education and Technology*, 3(1), 45–57.
- Adesiji, T. T. (2024, November). Integrating Artificial Intelligence in Nigerian University Curricula: Challenges, Opportunities, and Future Prospects. In *2024 IEEE 5th International Conference on Electro-Computing Technologies for Humanity (NIGERCON)* (pp. 1-7). IEEE.
- Akindeyi L., Ahmed A.T., Yusuf O.I. , Jimoh A A., (2024). Challenges and opportunities of artificial intelligence integration into Nigerian University System: *International Journal of Artificial Intelligence for Digital* Volume 1 (5) <https://e-journal.antispublisher.id/index.php/IJAIFD>. [https:// doi.org/10.61796/IJAIFD.V1I5.267E](https://doi.org/10.61796/IJAIFD.V1I5.267E)-ISSN: 3047-2903
- Alawamleh, M., Alatout, R., & Awamleh, W. (2025). AI in Academia: An In-Depth Analysis of the Impact of AI on Undergraduate Studies. *Journal of Academic Ethics*. Link
- Alimi, A. E., Buraimoh, O. F., Aladesusi, G. A., & Babalola, E. O. (2021). University students’ awareness of, access to, and use of artificial intelligence for learning in Kwara State.
- Al-Zahrani, A. M., & Alasmari, T. M. (2025). A comprehensive analysis of AI adoption, implementation strategies, and challenges in higher education across the Middle East and North Africa (MENA) region. *Education and Information Technologies*, 1-51.
- Bouchrika, I. (2025). The role of AI in academic research: Benefits and ethical considerations. *Research. com*.
- Chiu, T. K., Ahmad, Z., & Çoban, M. (2025). Development and validation of teacher artificial intelligence (AI) competence self-efficacy (TAICS) scale. *Education and Information Technologies*, 30(5), 6667-6685.
- Cliniciu, R. A. (2023). Optimizing Educational Management: Strategies for Effective Learning Environments and Academic Excellence. *LOGOS, Universality, Mentality, Education, Novelty. Section Social Sciences*, 12(1), 77-89.
- Egere U. N, Nwokocha A.I, Ariwa R. N., (2025). From reform to reality: assessing teacher and institutional readiness for cybersecurity, ai, and programming in Nigeria’s 2025/2026 digital curriculum. DOI:10.70382/caijlser.v9i8.046
- Eke, E. O. (2024). Assessing the readiness and attitudes of Nigerian teacher educators towards adoption of artificial intelligence in educational settings. *Journal of Educational Technology*

- and Online Learning, 7(4-ICETOL 2024 Special Issue), 473-487.
- ETH Zurich (2025). AI Competence Framework for lecturers: by University of Zurich and ETH Zurich is licensed under CC BY-SA 4.0. <https://www.swissuniversities.ch/en/themen/digitalisierung/open-education-digital-competencies>
- Granić, A. (2025). Emerging Drivers of Adoption of Generative AI Technology in Education: A Review. *Applied Sciences*, 15(13), 6968.
- Adediran, E., Sakpere, W., & Ogunyinka, T. (2024). Artificial Intelligence in Nigeria: Challenges and Opportunities. Available at SSRN 5269530.
- Idika, D. O., Arikpo, E. B., Ekpo, E. E., Idika, C. I., & Okeke, S. U. (2025). Assessment Of Lecturers' Awareness And Utilization Of Ai Tools For Effective Teaching Of Research Methods In The University Of Calabar, Nigeria. *Global Journal of Pure and Applied Sciences*, 31(2), 323-341.
- Ikeda, O., & Binarkaheni, S. (2024). Leveraging Cultural-Historical Activity Theory (CHAT) in Education: Navigating the Globalized Digital Era. *International Journal of Studies in Social Sciences and Humanities (IJOSSH)*, 1(1), 18-31.
- Khan, W. N. (2024). Ethical challenges of AI in education: Balancing innovation with data privacy. *AI EDIFY Journal*, 1(1), 1-13.
- Maluleke, A. F. (2025). AI adoption in African higher education: A systematic review of benefits and ethical implications. *Interdisciplinary Journal of Education Research*, 7(2), a05-a05.
- Sánchez, E., Calderón, R., & Herrera, F. (2025). Artificial Intelligence Adoption in SMEs: Survey Based on TOE–DOI Framework, Primary Methodology and Challenges. *Applied Sciences*, 15(12), 6465.
- Tarisayi, K. S. (2024). A theoretical framework for interrogating the integration of artificial intelligence in education. *Research on Education and Media*, 16(1), 38-44.
- Uddin, M. K. S. (2024). A review of utilizing natural language processing and AI for advanced data visualization in real-time analytics. *Global Mainstream Journal*, 1(4), 10-62304.
- Ukala, C. C., & Ukala, A. N. (2024). Charting a strategic path: artificial intelligence in Nigerian education and implications for policy
- Yusuf Yakubu (2025). Assessment of lecturers' utilization of artificial intelligence tools for effective teaching and research methods in a Nigerian University.