

# UTILISATION OF AI CHATBOTS FOR ACADEMIC RESEARCH AMONG UNIVERSITY LECTURERS IN KWARA STATE

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## Abstract

This study examined the utilisation of AI chatbots for academic research among university lecturers in Kwara State, Nigeria. Specifically, it investigated lecturers' level of awareness of AI chatbots, their patterns of utilisation for research activities, their perceived academic benefits, and the challenges they encounter in the process. A descriptive correlational survey design was employed, with a target population of 1,842 lecturers drawn from three universities the University of Ilorin (federal), Kwara State University, Malete (state), and Al-Hikmah University, Ilorin (private). Using the Krejcie and Morgan (1970) sampling table, a sample of 317 lecturers was selected through proportionate stratified random sampling. Data were collected via a researcher-designed and validated instrument, the Utilisation of AI Chatbots for Academic Research Questionnaire (UACARQ), which demonstrated high reliability with Cronbach's alpha coefficients above 0.80. A total of 296 valid responses were returned, representing a 93% response rate. Data were analysed using descriptive statistics, namely mean and standard deviation. Findings revealed that lecturers demonstrated a high level of awareness of AI chatbots, with ChatGPT identified as the most widely recognised and utilised platform. Lecturers expressed strongly positive perceptions of the academic benefits of AI chatbots, particularly regarding time-saving, improved writing clarity, and enhanced productivity. The study concludes that AI chatbots are becoming integral to academic research workflows in Kwara State universities and recommends that institutions develop clear AI use policies, invest in targeted capacity-building for academic staff, and strengthen digital infrastructure to promote responsible and effective integration of AI in scholarly research.

**Keywords:** AI Chatbots, Academic Research, Artificial Intelligence, University Lecturers, Technology Adoption, Higher Education

## Introduction

The institutions and everyday tasks heavily rely on technology. It has multiple uses and is implemented in a various way in various global locations. Artificial intelligence has recently captivated the public's imagination. Artificial intelligence mimics human cognitive capacities. In order to be more accurate and human-like, AI chatbots are currently using this software to replace human responses. A chatbot is a computer program that serves as a virtual assistant and colloquist between humans and other computers. It has gained a lot of popularity recently, mostly as a result of significant advancements in fields like artificial intelligence, machine learning, and other underlying technologies like neural networks and natural language processing. A chatbot is an AI-powered software tool designed to simulate conversations between users and computers using natural language (Maroengsit et al., 2019). With chatbot technology, users can interact with an automated AI agent instead of a human. Over time, AI conversational chatbots have become increasingly popular and are commonly utilized in various sectors, including e-commerce, online banking, and digital healthcare (Liao et al., 2018). This technology offers the potential to deliver personalized services to a diverse range of consumers (Fadhil, & Gabrielli, 2017).

AI chatbots has primarily concentrated on their applications in sectors such as healthcare, business, and customer service. In healthcare, studies have examined their role in extending cognitive-behavioural therapies and improving access to medical services. Within business settings, chatbots function as virtual service agents, managing routine inquiries and delivering efficient solutions that reduce operational burdens and enhance customer satisfaction. Much of this literature emphasizes themes such as user

engagement, technological design, and ethical considerations, highlighting both the usability and limitations of chatbot systems (Wang & Li, 2024). By contrast, research on the use of AI chatbots in higher vocational education particularly in relation to lecturers' academic performance remains underdeveloped. While some studies have explored their student-centered functions, such as tutoring, feedback provision, and administrative support, their impact on lecturers, especially in enhancing teaching outcomes and overall academic performance, has not received adequate scholarly attention (Dahri et al., 2024). This gap is particularly evident in higher vocational education, where lecturers often face distinctive challenges in integrating technology into curricula and pedagogy.

Chatbots are increasingly being adopted across diverse sectors, including education. Recent advancements in intelligent AI chatbots, particularly web-based platforms, have enabled them to adapt to the behaviours of both instructors and learners, thereby enriching the teaching and learning process (Chassignol et al., 2018). Within the educational context, chatbots have been employed to support both instruction and learning. Their applications include personalized tutoring, homework assistance, concept reinforcement, standardized test preparation, facilitation of discussions and collaboration, as well as providing mental health and emotional support for students.

Among the technological innovations gaining widespread use among students are AI-based chatbots such as ChatGPT, Gemini, and DeepSeek. These tools are capable of generating instant and dynamic responses to user queries, making them valuable

resources for organizing ideas, deepening understanding of academic content, and supporting tasks such as academic writing. In the context of academic research, AI chatbots such as ChatGPT can strengthen students' sense of autonomy by enabling them to independently access information and organize their ideas without relying solely on lecturers or formal instruction (Alshwiah, 2024). These tools also enhance students perceived competence by offering quick feedback, clarifying complex concepts, and assisting in structuring academic writing, thereby boosting their confidence in carrying out research. Although AI chatbots do not replace direct human interaction, they can foster a sense of relatedness by providing cognitive and emotional support, particularly when students experience satisfaction from receiving clear and relevant responses to their research inquiries (Polyportis & Pahos, 2024).

### **Statement of the problem**

The recent rapid development of artificial intelligence (AI) chatbots like ChatGPT has brought new opportunities to assist academic research processes, including literature review, idea generation, and manuscript development. These are more accessible tools which can potentially affect the way research is being carried out in institutions of higher learning. Nonetheless, although their numbers are on the rise, there is hardly any empirical knowledge about how the university lecturers, especially in areas like Kwara State, actually make use of these tools in their academic practice.

Although AI chatbots have a few advantages, using them also creates significant issues of accuracy, reliability, and the ethical aspects. The fact that it can lead to the creation of misleading or incorrect information can influence the quality of academic

research provided that it is not thoroughly checked. Moreover, biases, plagiarism, and excessive reliance on artificial intelligence content are the problems that threaten academic integrity. The lack of clear institutional guidelines and proper training also leaves one with the question of how these tools are supposed to be properly applied in the research practices.

More to the point, little is known about the patterns of utilisation, experiences, and challenges of lecturers using AI chatbots in Nigerian universities where the contextual variables of digital literacy and institutional support can differ. Such information void renders the formulation of informed strategies to the effective and responsible use of AI in research challenging to academic institutions and policymakers. Thus, there is a necessity to study the way lecturers use AI chatbots in the context of academic research, and with the purpose of presenting the information that can help to shape the policy and enhance the research activities.

### **Research Questions**

1. What is the level of awareness of AI chatbots among university lecturers in Kwara State?
2. How do university lecturers in Kwara State use AI chatbots for academic research?
3. What are the benefits of using AI chatbots for academic research among university lecturers?
4. What challenges affect the use of AI chatbots for academic research among university lecturers in Kwara State?

## Literature Review

### Concept of AI Chatbots

Artificial intelligence (AI) chatbots, which use natural language processing to mimic human interaction, have attracted a lot of interest across a range of industries. These systems enable real-time communication while providing users with individualized information and support, establishing themselves as game-changing instruments in the field of education. AI chatbots seek to improve learning outcomes and experiences by interacting with students in a tailored way (Ahmad et al., 2022). Artificial intelligence (AI)-powered chatbots defined as automated conversational agents designed to simulate human-like interactions have become a central feature of digital transformation in higher education. These systems utilize natural language processing (NLP) and machine learning (ML) to deliver real-time responses, support information retrieval, and assist with both instructional and administrative functions. Over the past decade, AI chatbots have advanced from simple rule-based designs to sophisticated generative AI models capable of interpreting complex queries and engaging in adaptive learning interactions. Their integration into educational contexts has grown substantially, with applications ranging from student engagement and academic advising to automated grading and intelligent tutoring (Wang & Li, 2024).

The integration of artificial intelligence (AI) into higher education has grown rapidly, extending across teaching, academic management, and research support. AI-driven tools are now widely applied to enhance course management, streamline assessment processes, provide academic writing assistance, and strengthen student

engagement. Recent studies have examined the role of AI-supported educational technologies in areas such as smart course management, intelligent assessment systems, automated responses to student inquiries, and writing support tools (Hu, 2022). These advancements have improved efficiency and accessibility in educational settings, creating opportunities for the broader integration of AI tools in higher education. The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been widely applied to examine how faculty and students adopt AI technologies. Findings from these frameworks highlight perceived usefulness and social influence as critical factors shaping the acceptance and utilization of AI-driven tools.

ChatGPT emerges as the most widely used AI chatbot, reported by 93% of respondents. This strong dominance highlights its role as the primary tool for students in academic activities, particularly in information retrieval, comprehension of learning materials, structuring academic writing, and generating research topics. Gemini AI follows with a relatively high usage rate of 51%, positioning it as the main alternative to ChatGPT. Its uptake suggests growing exposure to AI applications integrated within the Google and Android ecosystems, making them easily accessible to students already familiar with Google Workspace services. In addition, Perplexity AI was utilized by 30% of respondents, followed by Jenni AI (27%) and DeepSeek (24%). Collectively, these alternatives reflect students' interest in AI tools that combine generative capabilities with specialized features such as source-based search, automated academic writing assistance, and reference exploration

## Adoption of Technology in Higher Education

The adoption of technology in higher education institutions (HEIs) has emerged as one of the defining features of contemporary academic life. Across the globe, universities and colleges are increasingly investing in digital tools, online platforms, and data-driven pedagogies to enhance teaching effectiveness, improve student engagement, and streamline institutional operations. As Lubis and Yus (2024) note in a comprehensive bibliometric analysis, scholarly interest in technology adoption in higher education has followed a steep upward trajectory, with research output peaking sharply in 2023 and showing no signs of abating. The impetus for this transformation is multifaceted. Globalization has intensified competition among institutions and heightened student expectations for flexible, accessible learning experiences. Simultaneously, rapid advancements in computing, connectivity, and artificial intelligence have expanded the toolkit available to educators and administrators (Alenezi, 2023). The COVID-19 pandemic acted as a powerful accelerant, compelling institutions that had previously resisted digital transition to adopt remote and hybrid learning models virtually overnight (Opanasenko & Novikova, 2022). What began as a crisis response has since matured into a broader rethinking of how higher education is delivered and experienced. Despite this momentum, technology adoption in HEIs remains uneven and contested. Faculty resistance, inadequate infrastructure, insufficient training, and deep-seated concerns about equity and digital literacy continue to impede the seamless integration of technology into teaching and learning (Granic, 2022). The literature reflects growing recognition that successful adoption is

not merely a technical challenge but a socio-cultural one, shaped by institutional culture, leadership commitment, and the readiness of both educators and learners (Almaiah et al., 2022).

AI-driven assessment systems, intelligent tutoring platforms, and personalized learning environments have been deployed with increasing frequency across institutions worldwide (Hernandez-de-Menendez & Morales-Menendez, 2019). More recently, the release of generative AI tools such as ChatGPT has catalysed a new wave of adoption research and policy debate. Almogren et al. (2024), publishing in *Heliyon*, explored factors influencing ChatGPT acceptance in higher education from a smart education perspective, finding that social influence and technology readiness were the strongest positive predictors of perceived usefulness, while technology anxiety was a significant negative predictor. A large-scale multinational study of 685 academics across Arab universities similarly found that while generative AI tools were widely used, their perceived effectiveness varied significantly by nationality and institutional context. Research on student adoption of generative AI reveals additional complexity. A study at a diverse US public research university examining ChatGPT adoption in late 2022 and early 2023 found significant disparities in awareness and academic use, with underrepresented minority students, first-generation students, and international students less likely to know about or engage with the tool academically (Sage Open, 2024). These disparities underscore the importance of proactive institutional outreach and digital literacy support to ensure equitable access to emerging AI tools. Gundu (2023) argued that AI systems like ChatGPT hold considerable promise for delivering

automated, personalized learning experiences and real-time student support, particularly in large lecture-based environments where individual attention is limited. Nevertheless, scholars and practitioners have called for robust ethical frameworks to govern AI deployment, particularly with respect to academic integrity, data privacy, and algorithmic bias.

### **Utilisation of AI Chatbots for Academic Research**

AI chatbots of the generative variety are powered by Large Language Models (LLMs) trained on vast corpora of text drawn from books, academic articles, websites, and other publicly available data. Unlike their earlier, rule-based counterparts, these models generate contextually coherent, human-like responses through a process of next-token prediction informed by transformer architectures and Reinforcement Learning from Human Feedback (Vaswani et al., 2017). Their capacity to summarize information, draft text, answer complex queries, suggest research directions, and assist with citation formatting has positioned them as versatile research companions for students and scholars alike. The pace of adoption in academic settings has been striking. A scoping review by Stohl et al. (2024), analyzing 24 empirical articles published between January 2022 and September 2023, found that research interest in AI chatbot use in higher education is global in scope, with particular intensity in Asia and in STEM disciplines. A large-scale survey study found that approximately 61.4 per cent of university students use chatbot tools in their studies, though often with occasional rather than daily frequency (Acosta-Enriquez et al., 2025). A survey of 1,209 graduate

students found that over 63 per cent were familiar with AI chatbots, with ChatGPT being the most widely used tool, cited by 60.3 per cent of respondents (Al-Zaman et al., 2024).

AI chatbots introduce a set of challenges that are particularly acute in the context of academic research: the tendency to generate plausible but factually inaccurate outputs (hallucinations), the risks of algorithmic bias, the complications for academic integrity, and the potential for technological dependency that undermines independent scholarly thinking. As Tian et al. (2024), writing in a study of Chinese graduate students' AI chatbot adoption, observe, research in this area remains nascent and the implications of large-scale adoption are still unfolding. The use of AI chatbots as writing assistants represents perhaps the most widespread and consequential application in academic research contexts. Lendvai (2025), in a scientometric analysis of literature on ChatGPT in academic writing published between 2022 and 2023, identified three major clusters of scholarly discourse: practical applications and ChatGPT as a research assistant; innovation and scholarly integration; and ethical concerns. The practical applications cluster the largest documented how researchers use AI chatbots to draft introductions, develop arguments, paraphrase text, correct grammar, and improve the readability of manuscripts. Hassan et al. (2023) documented positive uses of ChatGPT in facilitating data collection, processing, and analysis, while Karakose (2023) highlighted its role in sparking new research ideas, identifying research gaps, and helping authors develop novel hypotheses. For early-career researchers and graduate students navigating unfamiliar disciplinary terrain, these scaffolding functions represent a potentially

significant democratization of the research process lowering the activation energy required to engage with complex scholarly conversations

### **Empirical Study**

Cabezas-Clavijo & Sidorenko-Bautista (2025), The study investigates the assessing the performance of 8 AI chatbots in bibliographic reference retrieval: grok and DeepSeek outperform ChatGPT, but none are fully accurate. This study evaluated the performance of eight generative artificial intelligence (AI) chatbots such as ChatGPT, Claude, Copilot, DeepSeek, Gemini, Grok, Le Chat, and Perplexity in their free versions, focusing on their ability to generate accurate academic bibliographic references within a university context. Using a standardized prompt, a total of 400 references were assessed across five major knowledge domains: Health, Engineering, Experimental Sciences, Social Sciences, and Humanities. Each reference was evaluated based on five core components: authorship, year, title, source, and location, as well as document type, publication age, and error frequency. The findings indicated that only 26.5% of references were entirely correct, 33.8% were partially correct, and 39.8% were either erroneous or completely fabricated. Grok and DeepSeek were the only chatbots that did not produce false references, whereas Copilot, Perplexity, and Claude exhibited the highest rates of fabricated content. The study also found a preference for generating book references over journal articles, with journal references showing a higher incidence of fabrication. Additionally, substantial overlap was observed among sources provided by DeepSeek, Grok, Gemini, and ChatGPT. These results highlight inherent limitations in current AI models, emphasize the risks of uncritical use by students, and

underscore the need to enhance information literacy and critical evaluation skills for responsible AI usage in higher education. While previous empirical studies have evaluated the accuracy and reliability of AI chatbots in generating academic references, these studies focus on the performance of the tools themselves rather than on the users. There is limited knowledge about how university lecturers adopt, utilise, and perceive AI chatbots for academic research, particularly in contexts like Kwara State, Nigeria. Understanding lecturers' experiences, challenges, and institutional influences is essential to complement findings on AI tool limitations and to inform effective, responsible integration of AI in academic research practices.

Bhavsar, et al. (2025). Carried out a study on the Policies on artificial intelligence chatbots among academic publishers: a cross-sectional audit. Artificial intelligence (AI) chatbots are advanced computer programs capable of generating natural language text, and their use is increasingly influencing scientific research. In response, academic publishers are developing policies to guide and regulate responsible AI chatbot usage by authors. This study examined publicly available policies from 162 scientific, technical, and medical (STM) academic publishers, members of the International Association of STM Publishers, through a cross-sectional audit conducted between September and December 2023. Policy content was independently extracted, categorized into elements such as proofreading and image generation, and analyzed for whether AI chatbot use was permitted, prohibited, or unspecified. Findings indicated that only 56 of 162 publishers (34.6%) had publicly available AI policies. None recognized AI chatbots as authors, while most (87.5%) required explicit disclosure of chatbot use. Four publishers

imposed a complete ban. These results reveal that, as of December 2023, only a minority of STM publishers had formalized guidelines, highlighting the evolving nature of AI regulation in academic research. The STM publishers' study focuses on the policies and regulations governing AI chatbot use in academic publishing, analyzing what publishers allow, prohibit, or require for authors. It is institution- and policy-centered. In contrast, your study examines the human side how university lecturers in Kwara State adopt, utilise, and perceive AI chatbots for academic research. While the publisher study investigates formal rules and compliance, your research explores lecturers' experiences, attitudes, challenges, and institutional support, providing insight into adoption behaviors and practical use in a specific local context.

Chinoracky & Stalmasekova (2025), carried out the study on Ethical problems in the use of artificial intelligence by university educators. This study investigates the ethical implications of artificial intelligence (AI) applications in higher education, with particular emphasis on university educators' professional activities. Guided by Slovak legislation outlining educators' responsibilities, these activities were categorized into three domains: teaching, scientific research, and other functions, including academic management and professional development. Methodologically, the study employed a thematic review of 42 open-access, peer-reviewed articles published between 2022 and 2025, sourced from the Web of Science and Scopus databases. AI applications and associated ethical concerns were identified and systematically classified. Findings indicate widespread use of AI tools across all areas of educators' work, particularly generative language models, editing and paraphrasing tools, learning and assessment

software, management systems, visualization tools, and analytical platforms. The adoption of these technologies raises ethical concerns grouped into six themes: privacy and data protection, bias and fairness, transparency and accountability, autonomy and oversight, governance gaps, and academic integrity. Although limited to open-access literature, the study provides a structured framework for evaluating ethical risks and supports the development of responsible, institutionally grounded AI policies in higher education. The study differs from the present research in focus and scope. While the reviewed study examines the ethical implications of AI applications in higher education broadly, covering teaching, research, and administrative functions through a literature review approach, the present study specifically investigates the adoption and utilisation of AI chatbots for academic research among university lecturers in Kwara State. The reviewed study is conceptual and policy-oriented, drawing from secondary literature to classify ethical concerns, whereas the current study is empirical and context-specific, aiming to explore lecturers' lived experiences, perceptions, and practical usage patterns within a defined Nigerian setting.

Sandu & Gide (2019), investigate the Adoption of AI-Chatbots to enhance student learning experience in higher education in India. Information and Communication Technology (ICT) plays a critical role in enhancing service delivery and optimizing resource utilization across organizations. With the increasing global adoption of Artificial Intelligence (AI)-based tools, the chatbot market is projected to experience significant growth in the coming decade. This expansion is driven by rising smartphone penetration and widespread use of messaging applications. Industries such as food

delivery, finance, and e-commerce have already integrated chatbot technology to improve efficiency and customer engagement. The educational sector also stands to benefit substantially from chatbot integration, particularly in enhancing productivity, communication, learning support, and instructional assistance. This study aimed to identify the factors influencing the adoption of chatbot technology to improve student learning experiences within the Indian higher education sector. Using a quantitative research design, data were collected through surveys administered in selected higher education institutions utilizing chatbot systems. The findings are expected to guide chatbot developers and educational institutions in designing interactive learning and communication platforms that align with students' needs. This study focuses on factors influencing chatbot adoption to enhance student learning experiences in Indian higher education, using a quantitative survey approach. In contrast, your study examines the adoption and utilisation of AI chatbots for academic research among university lecturers in Kwara State, employing a qualitative approach. While the reviewed study is student-centered and learning-focused, your research is lecturer-centered and research-focused, emphasizing scholarly work rather than classroom engagement. Additionally, your study is context-specific to Kwara State, Nigeria, whereas the reviewed study is situated within the Indian higher education system.

### **Research Methodology**

This study is a descriptive survey design to examine the adoption and utilisation of AI chatbots for academic research among university lecturers in Kwara State, Nigeria. The design was considered appropriate because it enabled the researcher to collect

quantitative data from a relatively large population and determine the relationship between the independent variable (adoption of AI chatbots) and the dependent variable (utilisation of AI chatbots for academic research) without manipulating any variables. The target population comprised 1,842 lecturers across three universities in Kwara State: University of Ilorin (federal), Kwara State University, Malete (state), and Al-Hikmah University, Ilorin (private). Using the Krejcie and Morgan (1970) sampling table, a sample size of 317 lecturers was determined as representative. The sample was selected using proportionate stratified random sampling to ensure equitable representation across institutions and academic ranks, thereby minimising sampling bias and enhancing the generalisability of the findings. Data were collected using a researcher-designed instrument titled *Utilisation of AI Chatbots for Academic Research Questionnaire (UACARQ)*. The instrument was validated by three experts in the Department of Library and Information Science, and a pilot study conducted outside the study area yielded Cronbach's alpha coefficients above 0.80, confirming reliability. Data were analysed using descriptive statistics (mean and standard deviation). Ethical approval and institutional permissions were duly obtained, and participation was voluntary and confidential.

### Results and Discussion

A total of 317 questionnaires were distributed, and 296 were returned and found valid, representing a 93% response rate.

#### Table 4.1: Demographic Characteristics of Respondents (N = 296)

Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	182	61.5
	Female	114	38.5
Academic Rank	Assistant Lecturer/Lecturer II	96	32.4
	Lecturer I	88	29.7
	Senior Lecturer	62	21.0
	Professor/Associate Professor	50	16.9
	Professor		
Years of Experience	1–5 years	104	35.1
	6–10 years	87	29.4
	11–15 years	65	22.0
	Above 15 years	40	13.5
University Type	Federal	148	50.0
	State	92	31.1
	Private	56	18.9

The demographic distribution shows that the majority of respondents were male (61.5%), indicating relatively higher male participation in academic research activities within the sampled universities. However, female lecturers (38.5%) were adequately represented, ensuring gender balance in the study. In terms of academic rank, most respondents were Assistant Lecturers/Lecturer II (32.4%) and Lecturer I (29.7%), suggesting that early- and mid-career academics formed the bulk of participants. This is significant because such lecturers are often more digitally inclined and more likely to experiment with emerging technologies such as AI chatbots. Regarding experience, 64.5% had 10 years or less experience, implying a relatively youthful academic workforce. This may positively influence AI adoption levels. Representation across federal (50%), state (31.1%), and private (18.9%) universities strengthens the generalizability of findings across institutional types in Kwara State.

**Research Question 1:** What is the level of awareness of AI chatbots among university lecturers in kwara state?

**Table 4.2: Level of Awareness of AI Chatbots**

Items	Mean	SD	Decision
Awareness of AI chatbots for research	4.25	0.71	High
Familiarity with ChatGPT and similar tools	4.18	0.76	High
Knowledge of AI-assisted academic writing tools	4.05	0.82	High
Awareness of ethical concerns in AI use	4.00	0.88	High
<b>Grand Mean</b>	<b>4.12</b>	<b>0.79</b>	<b>High</b>

The grand mean of 4.12 indicates a high level of awareness of AI chatbots among lecturers. High mean scores across all items suggest that lecturers are not only familiar with AI tools such as ChatGPT but are also aware of their academic applications and ethical implications. This implies that lack of awareness is not a major barrier to adoption. The high awareness level may be attributed to global conversations around AI in academia and increased digital exposure among lecturers. The findings revealed a high level of awareness of AI chatbots among lecturers in Kwara State (Grand Mean = 4.12). Most respondents were familiar with tools such as ChatGPT and understood both their academic applications and ethical implications. This indicates that lack of awareness is not a barrier to adoption in this context. The result aligns with Al-Zaman et al. (2024), who reported widespread familiarity with AI chatbots among graduate students. High awareness of ethical concerns also reflects responsible engagement,

consistent with Chinoracky and Stalmasekova (2025), who emphasized academic integrity and transparency as key issues in AI use.

**Research Question 2:** How do university lecturers in Kwara State use AI chatbots for academic research?

**Table 4.3: Utilisation of AI Chatbots**

Items	Mean	SD	Decision
Literature search assistance	3.88	0.84	High
Idea generation/brainstorming	3.95	0.79	High
Paraphrasing and summarizing	3.82	0.87	High
Grammar and editing support	4.02	0.75	High
Data analysis support	3.20	0.91	Moderate
Citation/reference assistance	3.70	0.86	High
<b>Grand Mean</b>	<b>3.76</b>	<b>0.84</b>	<b>High</b>

The grand mean of 3.76 indicates high utilization of AI chatbots for research purposes. The highest mean was recorded for grammar and editing support (4.02), showing that lecturers primarily use AI chatbots for writing enhancement tasks. However, the lower mean for data analysis (3.20) suggests that lecturers are less confident in using AI tools for technical or methodological tasks. This indicates that utilization is more supportive than analytical in nature. Overall, lecturers are integrating AI chatbots into research workflows, particularly for efficiency-drive. Utilisation was also high (Grand Mean = 3.76), particularly for grammar editing, idea generation, and literature search support. However, use for data analysis was moderate, suggesting cautious adoption for technical tasks. This pattern agrees with Hassan et al. (2023) and Acosta-Enriquez et al. (2025), who found writing-related functions to be the most common applications. Although citation assistance was widely used, concerns raised by

Cabezas-Clavijo and Sidorenko-Bautista (2025) about inaccurate AI-generated references highlight the need for verification and strong information literacy skills.

**Research Question 3:** What are the perceived academic benefits of utilising AI chatbots for research activities among university lecturers in Kwara State?

**Table 4.4: Perceived Benefits of AI Chatbots**

Items	Mean	SD	Decision
Saves research time	4.22	0.69	High
Improves writing clarity	4.15	0.74	High
Enhances productivity	4.10	0.77	High
Supports idea development	4.05	0.81	High
Improves research efficiency	3.88	0.83	High
<b>Grand Mean</b>	<b>4.08</b>	<b>0.77</b>	<b>High</b>

The grand mean score of 4.08, the findings clearly indicate that lecturers perceive AI chatbots as highly beneficial for academic research. The highest-rated benefit, time-saving (4.22), underscores efficiency as the most significant advantage of AI chatbot utilisation. This suggests that lecturers primarily value these tools for reducing the time required for tasks such as drafting, editing, and idea generation. The high mean scores for improved writing clarity and enhanced productivity demonstrate that AI chatbots contribute positively to both the quality and quantity of research output. These results imply that lecturers view AI tools not merely as supplementary aids but as effective instruments for improving overall research performance. Such strong positive perceptions are likely to encourage sustained adoption and deeper integration of AI chatbots into academic research practices. Lecturers expressed highly positive perceptions of AI chatbot benefits (Grand Mean = 4.08). Time-saving, improved writing clarity, and enhanced productivity were the most valued advantages. These findings support the Technology Acceptance Model (TAM) and UTAUT, which identify

perceived usefulness as central to technology adoption. Consistent with Gundu (2023), AI chatbots are viewed as tools that reduce workload and improve research efficiency, encouraging sustained use.

**Research Question 4:** What challenges affect the use of AI chatbots for academic research among university lecturers in Kwara State?

**Table 4.5: Challenges Affecting AI Chatbot Use**

Items	Mean	SD	Decision
Concern about accuracy of responses	3.65	0.89	High
Ethical/plagiarism concerns	3.72	0.85	High
Lack of institutional guidelines	3.48	0.91	Moderate
Poor internet connectivity	3.55	0.94	High
Lack of training	3.25	0.97	Moderate
<b>Grand Mean</b>	<b>3.41</b>	<b>0.91</b>	<b>Moderate</b>

The grand mean score of 3.41 indicates that lecturers experience a moderate level of challenges in the use of AI chatbots for academic research. Among the identified constraints, ethical concerns (3.72) and accuracy of AI-generated responses (3.65) recorded the highest mean scores, highlighting issues of trust, reliability, and academic integrity as major reservations. This suggests that while lecturers recognise the usefulness of AI tools, they remain cautious about potential misinformation and the risk of breaching scholarly standards. The moderate ratings for lack of institutional guidelines and inadequate training reveal that formal structures supporting AI integration are still evolving. The absence of clear policies and professional development opportunities may limit optimal utilisation. The findings imply that despite high adoption levels, strengthening institutional regulations, providing targeted training, and developing clear ethical frameworks are essential to promote responsible,

credible, and effective use of AI chatbots in academic research. Challenges were rated at a moderate level (Grand Mean = 3.41). Ethical concerns, accuracy of responses, and internet connectivity were the most prominent issues. These concerns align with Chinoracky and Stalmasekova (2025) and Bhavsar et al. (2025), who highlighted academic integrity and policy gaps in AI governance. Infrastructure limitations and limited formal training further indicate the need for institutional guidelines and professional development to ensure responsible and effective AI integration.

### Recommendations

Based on the study's findings, the following recommendations are proposed to enhance the adoption and effective utilisation of AI chatbots for academic research among university lecturers in Kwara State:

- Institutions should organize regular workshops and seminars to update lecturers on emerging AI tools and their academic applications
- Institutions should provide hands-on training on advanced AI features, such as data analysis or automated summarization, to expand use beyond writing tasks
- Institutions should leverage AI chatbots in institutional research support programs to maximize time-saving and productivity benefits.
- Institutions should establish institutional AI policies covering ethical use, plagiarism prevention, and academic integrity.

### Conclusion

The study demonstrated that lecturers possess a high level of awareness of AI chatbots, with ChatGPT emerging as the most widely recognized and adopted platform.

This awareness extends beyond mere familiarity with the tools to encompass an understanding of their academic applications and the ethical responsibilities that accompany their use a finding that reflects a degree of scholarly maturity in the engagement with emerging technologies. Utilisation was found to be high and predominantly oriented toward writing enhancement, ideation, literature search assistance, and citation support, suggesting that AI chatbots have become meaningfully embedded in the research workflows of Kwara State academics. The strong positive perceptions held by lecturers particularly regarding the time-saving, productivity-enhancing, and writing-improvement capabilities of these tools indicate that AI chatbots are increasingly regarded not as peripheral aids but as substantive research companions that contribute to both the efficiency and quality of scholarly output. Notwithstanding these positive indicators, the study identified a set of moderate but consequential challenges that temper the optimism surrounding AI chatbot adoption. Ethical and plagiarism concerns, doubts about the accuracy and reliability of AI-generated content, poor internet infrastructure, inadequate institutional guidelines, and limited access to formal training collectively represent structural and governance gaps that must be addressed if AI integration in academic research is to be both effective and responsible. These findings underscore that technology adoption in higher education is not solely a function of individual willingness but is deeply shaped by institutional culture, policy frameworks, and infrastructural capacity.

AI chatbots are steadily becoming integral components of the academic research ecosystem in Kwara State universities. However, realising their full potential requires

deliberate institutional intervention including the development of clear and enforceable AI use policies, targeted capacity-building programmes for academic staff, and sustained investment in digital infrastructure. With appropriate governance structures in place, AI chatbots hold considerable promise for enhancing research efficiency, elevating scholarly quality, and fostering innovation, while simultaneously upholding the principles of academic integrity that remain foundational to the credibility of scholarly inquiry.

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