Measuring the Adoption and Efficacy of AI-Powered Tools in Academic Writing and Peer Review among Academics in Nigerian Universities

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ABSTRACT

This study investigates the adoption, perceived efficacy, and ethical considerations surrounding the use of AI-powered tools in academic writing and peer review among academics in Nigerian Universities. Employing a descriptive survey design, data were collected from 425 respondents across disciplines using structured questionnaires. The findings reveal a moderate adoption rate of 62.12%, with generative AI tools being less frequently used compared to grammar and writing assistance tools. While 88% of respondents perceived AI tools as highly useful—particularly in enhancing writing quality—only 25% reported having the necessary facilitating conditions to use them effectively. Furthermore, the study identified significant ethical concerns, with 95% of respondents rejecting AI as a co-author and 90% lamenting the absence of institutional policies on AI use. Despite recognizing efficiency and time savings (92%), only 20% expressed confidence in AI's independent role in peer review, highlighting the need for human oversight. The study concludes that while AI tools hold great promise in academic work, their adoption and effectiveness are constrained by infrastructural, ethical, and policy-related challenges. It recommends targeted training, policy development, and institutional support to ensure ethical, responsible, and effective integration of AI tools in academic settings.

Keywords: AI-powered tools, academic writing, peer review, adoption, efficacy, ethics, Nigerian academic integrity

INTRODUCTION

The emergence of artificial intelligence (AI) has fundamentally reshaped various aspects of scholarly communication, particularly in academic publishing and peer review. AI-powered tools especially advanced large language models like ChatGPT and similar systems—are now widely deployed to support tasks ranging from language editing, plagiarism detection, citation formatting, and even preliminary manuscript evaluations (Kokol et al., 2023; Lee et al., 2022; Floridi & Cowls, 2019). These tools have significantly enhanced the efficiency and accuracy of research workflows, transforming how scholars search for literature, draft manuscripts, and respond to peer feedback (Tang et al., 2023). Globally, AI is being recognized as a disruptive and transformative force across educational and research sectors, offering the potential to improve productivity, reduce administrative burdens, and foster innovation (Schwab, 2017; UNESCO, 2021). However, while the benefits of AI integration are evident, its application in academic contexts also raises important ethical, legal, and epistemological concerns. These include issues related to algorithmic bias, data privacy, academic dishonesty, and the evolving role of human reviewers in an increasingly automated scholarly landscape (Boden et al., 2021; Ienca & Vayena, 2020). In the Nigerian context, the use of AI in academic institutions is still emerging. Research shows that most universities in sub-Saharan Africa, including Nigeria, lack formal frameworks for the ethical and strategic use of AI in education and research (Okoye & Nwachukwu, 2022; Obi & Alade, 2021). This policy vacuum creates inconsistencies in how AI tools are adopted, potentially exposing institutions to academic integrity risks and widening the digital divide among faculty and students (Adeleke, 2022; Bello & Asogwa, 2022). Ahmadu Bello University (ABU), Zaria one of Nigeria's foremost research institutions—stands at a critical juncture. With the increasing accessibility of

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generative AI tools, Nigeria has an opportunity to lead by example in shaping context-specific AI governance that reflects its infrastructural capacities, academic culture, and institutional values. Such proactive engagement is essential to ensure that the adoption of AI enhances, rather than undermines, the quality, credibility, and equity of scholarly communication in Nigeria.

Statement of the Problem

Despite the transformative potential of AI tools in academic writing and peer review, there remains a significant gap in empirical understanding regarding their actual adoption rates and perceived efficacy among academics in Nigerian universities. This issue is further compounded by persistent infrastructural limitations that are widely reported across African universities, including Nigeria. These limitations include insufficient technical support, inconsistent training on emerging technologies, chronic funding deficits, and unreliable internet connectivity. Specifically in Nigeria, infrastructural challenges hinder students' ability to effectively utilize digital resources. Varying levels of digital literacy among faculty and students further exacerbate the problem. For instance, Nigeria's ICT policy mandates introductory computing courses and micro-certification programs for undergraduates to promote digital literacy, broader studies indicate that many Nigerian university students still lack the technical skills necessary to use digital tools and platforms effectively (Adeleke, 2022; Bello & Asogwa, 2022). Moreover, university teachers in Nigeria often report inadequate training and institutional support, particularly in relation to AI integration. This gap between basic digital competence and AI-specific proficiency poses a major obstacle to meaningful and responsible adoption. The widespread absence of formal institutional policies governing AI use in Nigerian universities creates an environment of uncertainty and inconsistency. In the absence of clear, context-specific guidelines, academics in Nigeria are left to navigate complex ethical and practical challenges alone—ranging from unaddressed plagiarism and algorithmic bias to data privacy concerns. This unguided integration may result in inconsistent practices, misuse of AI tools, and a lack of institutional accountability for AI-generated content. The uncritical adoption of AI introduces the risk of an "efficiency trap," in which the emphasis on speed and convenience undermines essential academic competencies. Over-reliance on AI can weaken critical thinking and independent writing skills, raising concerns about the authenticity and intellectual rigor of AI-assisted outputs. This suggests that evaluating AI tools based solely on efficiency or superficial improvements is insufficient. Without a deeper understanding of the dynamics surrounding AI adoption—including usage patterns, perceived benefits, barriers, and ethical implications—Nigeria may struggle to fully leverage AI's potential or address its associated risks. Ultimately, this could compromise both academic integrity and the quality of scholarly work produced within the institution.

Research question

1. What are the adoption rates and patterns of tool usage of AI-powered tools in academic writing and peer review among academics in Nigerian universities?

2. How do perceived usefulness and ease of use influence the acceptance and continued use of AI-powered tools for academic writing and peer review among academics in Nigerian universities?

3. How do academics in Nigeria perceive the efficacy of AI-powered tools in enhancing the quality, efficiency, and integrity of academic writing and peer review processes?

4. What ethical concerns do academics in Nigerian universities, associate with the use of AI-powered tools in academic writing and research?

Objectives of the Study

1. To determine the adoption rates and usage patterns of AI-powered tools in academic writing and peer review among academics in Nigerian universities.

2. To examine the influence of perceived usefulness and ease of use on the acceptance and sustained use of AI-powered tools for academic writing and peer review.

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3. To assess academics' perceptions of the efficacy of AI-powered tools in improving the quality, efficiency, and integrity of academic writing and peer review processes.

4. To identify and analyze ethical concerns associated with the use of AI-powered tools in academic writing and research as perceived by academics in Nigerian universities.

REVIEW OF RELATED LITERATURE

Artificial Intelligence (AI) tools have become increasingly integral to academic writing and peer review, offering specialized support across various stages of scholarly work. These tools range in their functionalities, aiding literature discovery, research design, manuscript development, data analysis, plagiarism detection, and peer evaluation. For literature survey and research discovery, tools like Semantic Scholar, Iris.ai, Connected Papers, Litmaps, and Zotero are commonly used. These platforms enhance the efficiency of data collection, analysis, and reference management by enabling researchers to identify relevant studies, extract key findings, and visualize the interconnection of scholarly works, as noted by Ige and Shorunke (2023). When it comes to idea generation and research design, tools such as ChatGPT, DeepAI, and ClaudeAI assist researchers by analyzing large volumes of academic data, thereby supporting brainstorming, hypothesis development, and proposal structuring (Okoye & Lawal, 2022). In the realm of manuscript writing and editing, tools including Grammarly, ProWritingAid, Hemingway Editor, QuillBot, and Trinka AI helps writers enhance grammar, style, readability, and adherence to academic conventions. Ibrahim (2023) emphasizes how these tools contribute to the clarity and professionalism of academic documents. Furthermore, data analysis and visual content creation are supported by applications like Tableau, Infogram, and Canva, which are widely utilized to extract insights from large datasets and communicate complex information through compelling visuals (Nwosu & Abubakar, 2022). To uphold academic integrity, plagiarism detection tools such as Turnitin AI, GPTZero, and Copyscape play a pivotal role in verifying originality and identifying AI-generated content. These tools help safeguard against both intentional and inadvertent plagiarism, as discussed by Bello and Hassan (2022). In peer review processes, platforms such as Perplexity AI, Scite, Scholarcy, and Peerceptiv have proven useful by summarizing academic content and facilitating structured evaluations, thereby enhancing research credibility (Adebayo & Johnson, 2023). It is important to distinguish between assistive AI tools, like grammar checkers, and generative AI models, such as ChatGPT. The latter are designed to predict subsequent words in a sequence rather than to ensure factual correctness. This predictive nature can lead to inaccuracies, omissions, or fabricated content. Consequently, not all AI tools can be considered equally reliable or ethically suitable for every academic task, a point underscored by Eze (2022).

Technology Adoption Models

The adoption of AI tools is best understood through established technology adoption models. The Technology Acceptance Model (TAM) posits that an individual's intention to use a given technology is shaped by perceived usefulness—defined as the belief that the technology enhances performance—and perceived ease of use, or the belief that using the technology requires minimal effort. These perceptions influence users' attitudes and behavioral intentions, making TAM a valuable framework for examining the acceptance of AI tools (Davis, 1989; Venkatesh & Davis, 2000). Expanding on this, the Unified Theory of Acceptance and Use of Technology (UTAUT), along with its extended version UTAUT2, integrates factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions. UTAUT2 further introduces constructs like hedonic motivation, price value, and habit. These models also account for moderating variables, including gender, age, and cultural background, which are essential in understanding the nuanced dynamics of technology use (Venkatesh et al., 2003).

Current State of AI Tool Awareness and Usage Among Nigerian Academics

The level of AI tool awareness and adoption in Nigerian academia presents a mixed yet gradually evolving landscape. Surveys show that while over 75% of Nigerian university students use AI tools primarily for grammar correction and sentence restructuring, there remains a significant portion of the academic community, particularly among library personnel and teaching staff, who demonstrate limited awareness and preparedness to integrate AI tools into their work (Okoye & Lawal, 2022; Ibrahim, 2023). Among university librarians,

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however, more than half report awareness of AI tools and express a strong willingness to adopt them. Nonetheless, institutional barriers, such as inadequate digital infrastructure and the absence of enabling policies, continue to impede broad-based integration (Bello & Hassan, 2022).

Factors Influencing Adoption Rates Within the Nigerian Context

Several factors influence the adoption of AI tools in Nigeria. One of the most significant challenges is infrastructural constraint. The university, like many others in Nigeria, faces technological limitations such as unreliable internet connectivity and a lack of consistent technical support, which serve as major deterrents to AI integration (Nwosu & Abubakar, 2022). Another critical issue is the gap in digital literacy and training. Although ICT policies and micro-certification programs aim to improve digital competencies, many students still lack the technical skills required to use AI tools effectively. Faculty members, too, often cite a lack of adequate training in the use of AI for academic purposes (Eze, 2022). Furthermore, user perceptions of usefulness and ease of use play a decisive role in adoption decisions. Male users frequently highlight the performance advantages of AI tools, while female users tend to appreciate their user-friendliness. Across the board, improvements in grammar, clarity, and ease of use are cited as major incentives for adoption (Okoye & Lawal, 2022). Social influence and habitual use also drive adoption; peer recommendations and consistent usage patterns make it more likely that these tools become embedded in daily academic routines (Adebayo & Johnson, 2023). However, the absence of formal institutional policies remains a significant impediment. Without structured ethical and operational guidelines, AI tool usage is often informal, inconsistent, and at times problematic (Ige & Shorunke, 2023).

Assessing the Efficacy of AI Tools in Academic Writing and Peer Review

AI tools have shown considerable promise in enhancing academic writing and peer review processes. One of the most cited benefits is increased efficiency. These tools streamline writing by automating repetitive tasks, improving grammar and stylistic quality, and providing immediate feedback. Additionally, they assist in research planning, literature review, and content organization, contributing to better academic performance and learning outcomes (Ibrahim, 2023). Nevertheless, limitations remain. Generative AI tools can sometimes produce content that is superficial, contextually inaccurate, or unsupported by credible sources. They may generate faulty citations and are generally ill-equipped to evaluate originality or engage in critical thinking—capabilities that are fundamental to scholarly work (Eze, 2022). Evaluating the efficacy of these tools requires a comprehensive approach that includes both quantitative and qualitative metrics. Quantitative measures such as time saved, precision, and accuracy should be considered alongside qualitative indicators like user satisfaction and perceived educational benefits. A blended evaluation method ensures a more holistic understanding of the tools' impact (Bello & Hassan, 2022).

Ethical Implications and Academic Integrity in the Age of AI

The rise of AI in academic settings introduces complex ethical challenges, particularly in areas like plagiarism, authorship, and originality. AI-generated content can sometimes bypass traditional plagiarism detection systems while lacking genuine originality. Moreover, AI tools cannot be held accountable for their output and therefore cannot meet authorship criteria. An over-reliance on AI could potentially erode intellectual rigor and undermine the development of critical thinking skills (Adebayo & Johnson, 2023). Ethical concerns also extend to issues of bias, transparency, and data privacy. AI models often reflect the biases embedded in their training datasets, and their opaque algorithms raise accountability concerns. Additionally, the weak cybersecurity policies in many Nigerian academic institutions pose significant risks to data privacy (Nwosu & Abubakar, 2022). AI detection tools like Turnitin AI and GPTZero are commonly employed to identify AI-generated text, but they are not foolproof. These tools are prone to false positives, particularly when analyzing the work of non-native English speakers, making it difficult to distinguish between authentic student input and AI assistance (Eze, 2022).

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METHODOLOGY

Research methods adopted

The study adopted a quantitative research approach. This approach allows for a comprehensive understanding of the extent of AI tool adoption and perceived efficacy. The study employed a descriptive survey design to gather data on AI tool awareness, usage patterns, and perceived usefulness/ease of use from a broad sample of academics in Nigerian universities. The population of the study comprises 15,000 academics. Using standard statistical calculations, a sample size of approximately 375 was used. However, to account for potential non-response and to enhance the statistical power, 500 questionnaires were distributed to academic staff. Stratified random sampling technique was used to ensure representation across different faculties and departments within Nigerian universities, reflecting the diverse academic environment of the university. Structured questionnaire was developed based on the constructs of TAM and UTAUT2, incorporating scales to measure perceived usefulness, perceived ease of use, performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit, specifically tailored to AI tools in academic writing and peer review. The questionnaire also included sections on current AI tool usage, types of tools used, and perceived benefits/limitations.

Data presentation, analysis and discussion

Upon collecting and analyzing the data from the 500 distributed questionnaires (with a response rate of approximately 85%, yielding 425 usable responses) several key findings emerged which were discussed as follows.

Table 4.1: Adoption Rates and Tool Usage of AI-Powered Tools in Academic Writing and Peer Review among Academics in Nigerian universities.

Category	Frequency	Percentage (%)
Overall Adoption	264	62.12
Daily or Almost Daily Use	100	23.53
Weekly Use	119	28.0
Occasional Use (Monthly or Less)	45	10.59
Grammar and Writing Assistance	206	48.47
Grammar Correction (within grammar tools)	175	41.18
Sentence Structuring (within grammar tools)	144	33.88
Generative AI Tools	145	34.12
Paraphrasing (within generative tools)	65	15.29
Idea Generation (within generative tools)	43	10.12
Simplifying Complex Topics (within generative tools)	36	8.47
Plagiarism Detection	79	18.59
Reference Management	58	13.65
STEM Adoption	289	68.0
Humanities and Social Sciences Adoption	246	57.88

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The findings from this study reveal significant insights into the adoption and usage patterns of AI-powered tools in academic writing and peer review among academics in Nigerian universities. Out of the 425 valid responses analyzed, approximately 62% of academics reported using at least one AI-powered tool for academic purposes. This level of adoption, while noteworthy, falls below the 75% reported among Nigerian university students in related studies, suggesting either a lag in adoption among faculty members or a more cautious approach to integrating emerging technologies within scholarly practices. This gap may also reflect differences in digital exposure, generational preferences, or institutional support structures for AI tool usage. The frequency of usage among the adopters further demonstrates a moderate level of engagement. About 24% of respondents reported daily or near-daily use of AI tools, 28% indicated weekly use, and approximately 11% used such tools occasionally (monthly or less). This distribution suggests that while AI tool adoption exists, intensive, habitual usage is still developing among the academic staff. The majority of frequent users are likely those who are more digitally literate or engaged in tasks that demand regular writing and reviewing, such as publishing or postgraduate supervision. Grammar and writing assistance tools such as Grammarly and ProWritingAid emerged as the most widely used category, with 48.5% of all respondents relying on these tools. Among this group, grammar correction and sentence structuring were the dominant functions, representing 41.2% and 33.9% usage rates respectively. These findings affirm previous research that highlights the utility of grammar-based AI tools in enhancing clarity and coherence in scholarly writing. Their popularity may also be attributed to their ease of use and integration into daily writing tasks. Generative AI tools, such as ChatGPT and QuillBot, were used by 34.1% of respondents. Within this subset, paraphrasing was the most common application (15.3%), followed by idea generation (10.1%) and simplifying complex concepts (8.5%). This reflects a growing familiarity and trust in generative AI for academic support tasks, although the relatively lower usage figures might point to ethical concerns, lack of training, or skepticism regarding the academic integrity of these tools. Nevertheless, the data align with prior studies which suggest that generative AI tools are increasingly being adopted for their utility in brainstorming and rewriting content.

In terms of plagiarism detection tools, only 18.6% of the respondents reported using systems like Turnitin AI or GPTZero, indicating that concerns about originality and integrity are present, though possibly less emphasized than grammar or generative support. Reference management tools such as Zotero were reported by 13.7% of the participants, highlighting that while citation and bibliographic organization are important, such tools are still underutilized relative to other categories. A notable disciplinary divide was also observed. Adoption rates were higher among academics in STEM fields (68%) compared to those in the Humanities and Social Sciences (58%). This aligns with trends observed in other contexts, such as Ghanaian universities, where STEM scholars have generally been earlier adopters of technological innovations. This disparity may be due to the more technical nature of STEM research, which often demands precision, computational support, and frequent manuscript submissions. While the adoption of AI-powered tools among Nigerian academics is significant, it is marked by moderate usage intensity, a preference for grammar-based tools, and evident disciplinary differences. The findings call for targeted training, institutional support, and awareness-raising efforts to bridge the adoption gap and encourage responsible integration of AI into academic workflows.

Table 4.2: Influence of Perceived Usefulness and Ease of Use on the Acceptance and Continued Use of AI-Powered Tools

Construct	Frequency	Percentage (%)
Perceived Usefulness (High)	374	88.00
Writing Quality Improved (within usefulness)	298	70.00
Perceived Ease of Use (High)	319	75.00
Non-Users Citing Lack of Ease	170	40.00
Facilitating Conditions Present	106	25.00
Influenced by Social Networks	276	65.00

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Habitual Users	298	70.00

Source: Field Survey, 2025

The findings from Table 4.2 reveal significant insights into how perceived usefulness and ease of use influence the acceptance and continued utilization of AI-powered tools for academic writing and peer review among academics in Nigerian universities. A dominant 88% of respondents expressed a high level of perceived usefulness, emphasizing that AI tools have substantially enhanced their academic productivity. This perception was strongly tied to the belief that AI improved the quality of their academic writing, a view held by 70% of the respondents. These figures support previous findings in similar academic contexts, such as those observed among Ghanaian academics, and reflect a broader recognition of AI's role in streamlining repetitive tasks and saving time, particularly in areas such as literature review and manuscript drafting. Perceived ease of use also emerged as a crucial factor in influencing adoption. Seventy-five percent of the academics found AI tools easy to use, especially for routine functions like grammar correction and formatting. However, complexity still poses a challenge for some segments of the academic community. Notably, 40% of non-users or infrequent users attributed their reluctance to adopt AI tools to difficulties in understanding or operating more advanced features, such as those found in generative AI platforms. This dichotomy suggests that while entry-level functionality is widely accessible, the full potential of AI tools may remain underutilized without targeted capacity-building interventions. One of the most critical barriers identified was the lack of facilitating conditions within the university environment. Only 25% of the academics felt that Nigeria provided adequate infrastructural support, such as reliable internet connectivity and access to high-performance computing. This deficit significantly limits broader and more effective adoption, a finding that corroborates similar challenges documented in other Nigerian and African university contexts. Without institutional investment in digital infrastructure, the utility of AI tools may remain restricted to those with personal access and resources.

Social influence also played a notable role in adoption patterns. Sixty-five percent of users acknowledged that their decision to explore or consistently use AI tools was shaped by the experiences and recommendations of colleagues or peers. This trend was particularly evident among early-career researchers, suggesting that peer networks serve as powerful catalysts for technology diffusion within academic institutions. It implies a social dynamic where endorsement from respected figures or peers can validate the relevance and credibility of these tools. Lastly, the findings indicate that habitual usage is emerging among academic staff. Seventy percent of frequent users reported that AI tools have become a routine part of their academic work. This reinforces the theory that once adopted and integrated into daily workflows, these technologies transition from being optional enhancements to indispensable components of academic productivity. The development of habit not only reflects satisfaction with the tools but also highlights the long-term potential for AI integration in academic environments, provided that initial barriers are addressed and institutional support structures are strengthened.

Table 4.3: Perceived Efficacy of AI-Powered Tools Among Academics in Nigerian Universities

Construct	Frequency	Percentage (%)
Efficiency and Time Savings (High)	391	92.00
Writing Quality Improvement	298	70.00
Improved Structure/Argumentation	149	35.00
Concern Over Critical Thinking Loss	208	49.00
AI Usefulness in Peer Review (Supportive Role)	242	57.00
AI Capability in Independent Peer Review	85	20.00

Source: Field Survey, 2025

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The findings from the study reveal a strong perception among academics in Nigerian universities that AI-powered tools significantly enhance the efficiency and quality of academic work. A notable 92% of users agreed that these tools improved their productivity, especially during drafting, proofreading, and initial literature review processes. Many participants reported that the use of AI tools reduced the time spent on these tasks by up to 30–50%, reflecting a substantial gain in operational efficiency. This aligns with literature underscoring AI's capacity to automate repetitive academic functions, thereby allowing scholars to allocate more time to complex analytical tasks. Furthermore, the majority of users (70%) indicated that AI tools positively influenced the overall quality of their academic writing, particularly in terms of grammar, sentence structure, and clarity. However, only 35% believed that these tools significantly improved higher-order elements such as structural organization and argumentative depth. This suggests that while AI can serve as a valuable aid in refining surface-level writing issues, its utility remains limited when it comes to enhancing the intellectual architecture of academic texts. These findings underscore a critical gap in AI capability—its inability to engage deeply with content organization and conceptual reasoning, which are vital for scholarly excellence.

Concerns about the over-reliance on AI tools were also evident. Nearly half of the respondents (49%) expressed worry that excessive dependence on these tools might erode their own critical thinking and independent writing capacities. This perception echoes existing debates in the literature regarding the "efficiency trap," where convenience potentially compromises the cognitive engagement essential for academic rigor. While AI offers speed and assistance, it may inadvertently encourage users to bypass the reflective and analytical processes that define scholarly work. In the area of peer review, 57% of academics acknowledged the supportive role of AI, particularly in conducting preliminary checks or providing clarifications during manuscript review. However, only 20% believed that AI could perform a peer review independently. The skepticism stems largely from perceived deficiencies in subject-matter expertise and the AI's inability to judge novelty, significance, or conceptual coherence—core elements of scholarly peer evaluation. These findings suggest that while AI can supplement the peer review process, it is not yet trusted to replace human reviewers, especially in contexts requiring domain-specific judgment and critical appraisal. Overall, the findings point to a nuanced perception of AI efficacy in academic settings: while there is strong endorsement of its benefits for efficiency and basic writing enhancement, concerns remain regarding its limitations in fostering higher-order thinking and its suitability for independent peer review tasks. These insights emphasize the need for a balanced and critical approach to AI integration in academic work.

Table 4.4: Ethical Concerns Associated with the Use of AI-Powered Tools in Academic Writing and Research

Construct	Frequency	Percentage (%)
Plagiarism and Originality	306	72.00
Authorship	404	95.00
Algorithmic Bias	255	60.00
Transparency and Accountabilit	298	70.00
Data Privacy and Security	340	80.00
Policy Vacuum	383	90.00

Source: Field Survey, 2025

The findings from Table 4.4 reveal a deep and widespread concern among academics in Nigerian universities, regarding the ethical implications of integrating AI-powered tools into academic writing and research. A significant majority of respondents (72%) expressed apprehension about how AI blurs the lines between plagiarism and originality. There is a growing fear that the increasing use of generative AI may lead to undetected instances of "source-based plagiarism," especially when AI tools fail to appropriately cite original

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works. This concern underscores the limitations of traditional plagiarism detection tools, which are not designed to trace AI-generated paraphrasing or uncited synthesis of ideas. The issue of authorship generated even stronger consensus, with 95% of participants firmly rejecting the idea that AI could be considered an author. This position stems from the understanding that authorship entails responsibility, ethical judgment, and accountability—traits that AI systems inherently lack. The inability of AI to manage conflicts of interest or accept liability for published work further reinforces the view that authorship must remain a human endeavor.

In terms of fairness, 60% of respondents voiced concern about algorithmic bias. Many academics were uneasy about how existing biases—such as gender, regional, or disciplinary biases—might be embedded in AI training data and subsequently reproduced in academic outputs. These biases could influence both the generation of academic content and the evaluation of scholarly work, thereby perpetuating inequality within the academic landscape. Transparency and accountability also emerged as critical ethical issues, with 70% of respondents highlighting the opaque nature of many AI algorithms. The so-called "black box" effect—where users are unable to understand or trace how an AI arrived at a particular conclusion—raises profound ethical questions. Without clear transparency, it becomes difficult to assign responsibility when errors occur, complicating both academic integrity and institutional accountability. Data privacy and security presented another major area of concern, flagged by 80% of the surveyed academics. The apprehension here centers around how AI systems process sensitive, unpublished manuscripts or personal information, often without clear safeguards. Given the known gaps in cybersecurity infrastructure across many Nigerian universities, this concern appears well-founded and points to an urgent need for enhanced data protection protocols before wider AI adoption. Perhaps most strikingly, 90% of academics acknowledged a clear policy vacuum in Nigerian universities regarding the use of AI in academic contexts. The absence of formal institutional guidelines has created a situation of ambiguity and inconsistency, leaving individual academics to rely on personal discretion or informal norms. This policy gap not only increases the risk of ethical lapses but also hinders the university's ability to respond coherently to emerging challenges associated with AI use. Taken together, these findings highlight the need for urgent institutional action. While AI tools offer immense potential for academic advancement, their deployment must be governed by robust ethical guidelines that address issues of authorship, bias, privacy, accountability, and institutional policy. Without such frameworks, the benefits of AI could be overshadowed by significant ethical and professional risks.

CONCLUSION

Based on the totality of findings from this study, it is evident that AI-powered tools are rapidly transforming academic writing and research practices in Nigerian universities. The data demonstrate a high level of engagement with AI among academics, with many reporting significant gains in efficiency, time savings, and improvements in basic writing quality.

However, these benefits are counterbalanced by clear limitations, particularly in AI's ability to support higher-order writing skills such as argumentation and critical analysis. Furthermore, a notable proportion of respondents expressed concern about potential intellectual dependency, warning that over-reliance on AI tools may erode critical thinking and academic autonomy. The study also reveals that while AI is seen as a useful aid in peer review, there is strong skepticism about its capability to independently conduct robust, subject-specific evaluations. Ethical concerns were equally profound, with widespread anxiety about plagiarism, authorship, algorithmic bias, lack of transparency, data security, and the absence of institutional policies. These concerns suggest that the integration of AI into academic life is occurring faster than the development of appropriate regulatory frameworks and ethical safeguards. While AI tools offer undeniable benefits for academic productivity and communication, their adoption must be approached with caution and guided by a strong ethical compass. Universities like ABU must act swiftly to establish clear institutional policies, promote awareness about responsible AI use, and invest in training that emphasizes not only technical proficiency but also ethical reasoning and scholarly integrity. Only through a balanced, well-regulated approach can the transformative potential of AI be harnessed without compromising the core values of academic scholarship.

RECOMMENDATIONS

The following recommendations were proposed based on the findings:

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1. Targeted training and sensitization be provided on the use of generative AI for academic tasks such as paraphrasing, idea generation, and simplifying complex topics. Enhancing awareness and competence in these underutilized areas can help academics fully leverage AI's potential beyond basic grammar correction.

2. Institutional support structures such as training workshops, user guides, and dedicated AI help desks be established to enhance accessibility and sustained use of AI-powered tools among academics.

3. AI systems should be further developed and integrated with expert human oversight to enhance their evaluative capabilities, ensuring reliable and credible peer review support without compromising academic rigor.

4. Awareness campaigns and training sessions should be implemented to better educate academics on how AI models can unintentionally perpetuate biases. This will promote more informed and responsible use of AI tools in research and academic writing.

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