Ethical Implications of Artificial Intelligence in Education: Safeguarding Plagiarism, Academic Integrity, and Data Privacy in Nigerian Universities

Nathaniel SAMUEL, Ph.D.
Department of Educational Technology, Faculty of Specialised and Professional Education, Emmanuel Alayande University of Education Oyo, Oyo State, Nigeria
nathanielsamuel09@yahoo.com/samueln@eauedoyo.edu.ng
https://orcid.org/0000-0003-4648-2706

DOI : https://doi.org/10.5281/zenodo.17272660

Abstract

Artificial Intelligence (AI) is rapidly transforming higher education in Nigeria, creating opportunities for efficiency, personalization, and innovation while introducing significant ethical risks. Generative AI tools such as ChatGPT, Grammarly, and Quillbot, alongside plagiarism detectors and automated grading systems, have intensified persistent issues of academic dishonesty, contract cheating, and weak enforcement of integrity standards. Equally, reliance on vast educational data heightens concerns about privacy and sovereignty, especially given poor institutional compliance with the Nigeria Data Protection Act (2023). Global ethical frameworks from UNESCO and Globethics remain insufficiently contextualized to Nigeria's socio-cultural and infrastructural realities, exposing policy gaps that hinder responsible integration. This study proposes a stakeholder-centered conceptual framework that aligns AI adoption with processes of governance, safeguards, and accountability, emphasizing academic integrity, privacy protection, and institutional credibility. Findings underscore the urgency of proactive interventions to strengthen assessment systems, embed privacy-by-design practices, and enhance AI literacy for faculty and students. Recommendations call for contextualized ethical policies, strengthening integrity systems, collaborative regulation, and alignment of AI adoption with Nigeria's digital economy agenda and Sustainable Development Goals. Responsible integration of AI is vital to sustaining institutional trust, enhancing global competitiveness, and advancing Nigeria's human capital development.

Keywords: Academic Integrity, Ethical AI Governance, Data Privacy, Nigerian Higher Education, Sustainable Development Goals (SDGs)

Introduction

Artificial Intelligence (AI) is transforming higher education globally, reshaping teaching, learning, research, and administration. Tools such as intelligent tutoring systems, automated grading platforms, and generative AI (GenAI) applications including ChatGPT, Grammarly, and Quillbot offer efficiency, personalization, and innovative modes of engagement (UNESCO, 2021). In Nigeria, the uptake of these tools is growing rapidly, with students and lecturers increasingly relying on plagiarism detection systems, essay generators, and proofreading applications (Yusuf, 2024). While this trend signals progress toward digital transformation, it simultaneously raises critical ethical concerns around academic integrity, plagiarism, and data privacy.

Academic integrity is perhaps the most immediate concern, as Nigerian universities have long be grappled with issues of plagiarism, contract cheating, and examination malpractice, often exacerbated by weak enforcement mechanisms and poor academic culture. The advent of GenAI intensifies these challenges, as it produces outputs that can evade

conventional plagiarism detection systems (Sozon, Kankia, & Popov, 2024). Scholars warn that GenAI facilitates subtle and undetectable forms of "AI-assisted plagiarism" (Bittle, 2025), with emerging evidence suggesting that students are increasingly outsourcing intellectual tasks to machines, thereby undermining authentic learning and eroding the culture of independent scholarship as posited by *World Journal of Advanced Research and Reviews* (WJARR, 2025).

Equally pressing are data privacy concerns. AI systems depend on vast quantities of personal and institutional data, raising issues of surveillance, consent, and potential misuse. Although the Nigeria Data Protection Act (FGN, 2023) provides a legal framework, enforcement remains weak within universities, largely due to inadequate technical capacity and poor institutional awareness (Hogan Lovells, 2023; KPMG, 2023). These gaps expose students and faculty to risks of data breaches and unauthorized exploitation of sensitive information, creating vulnerabilities that undermine trust in AI-driven educational systems.

Policy preparedness further complicates the landscape. While UNESCO (2021) has emphasized the need for transparency, accountability, and oversight in the ethical use of AI, Nigerian universities have not adequately contextualized such frameworks. Globethics (2024) cautions that directly importing global models without adaptation risks misalignment with Nigeria's socio-cultural norms, infrastructural limitations, and governance practices. Challenges such as erratic internet connectivity, chronic underfunding, and limited AI expertise hinder the development of robust institutional safeguards. This underscores a research gap in tailoring global ethical principles to Nigeria's higher education system.

The implications of these gaps extend beyond ethics and regulation to institutional credibility and national development. Universities, as custodians of knowledge, need to balance the promise of AI-driven innovation with the responsibility of protecting academic standards. Failure to do so could compromise the credibility of qualifications, diminish the value of scholarship, and damage the international reputation of Nigerian higher education (Globethics, 2024). Moreover, Nigeria's aspirations for digital transformation and a knowledge-driven economy depend on cultivating graduates with creativity, critical thinking, and ethical responsibility. If AI fosters dependency rather than intellectual growth, it risks undermining the nation's human capital development (Yusuf, 2024).

Summing up these issues reveal a critical gap in scholarship and practice. Although international research has explored the risks of GenAI for academic honesty (Sozon et al., 2024; Bittle, 2025; Guardian, 2025) and documented Nigeria's evolving data protection landscape in the Nigeria Data Protection Act 2023 (FGN, 2023; Hogan Lovells, 2023; Klynyeld Peak Marvick Goerdeler, KPMG, 2023), little empirical evidence addresses the intersection of plagiarism, academic integrity, and AI governance in Nigerian universities. Similarly, while global ethical frameworks are widely available (UNESCO, 2021; Globethics, 2024), their contextualization to Nigeria's higher education realities remains limited. Addressing this gap is therefore essential to safeguarding academic integrity, protecting data privacy, and ensuring that AI adoption in Nigeria's universities aligns with both global best practices and national developmental priorities.

Stakeholder-Centered Imperatives for Ethical AI Integration in Nigerian Higher Education

Ethical AI integration in Nigerian higher education is urgent, as it will safeguards academic integrity, protects data sovereignty, sustains global competitiveness, and channels the nation's vast youth potential into innovation. Proactive governance, aligned with the Sustainable Development Goals, ensures that AI adoption strengthens credibility, development, and

international recognition rather than eroding them. The followings are further discussed to exemplify the imperativeness for ethical AI integration in Nigerian Higher Education.

1. Preventing Erosion of Academic Integrity: Safeguarding academic integrity is central to sustaining the credibility of Nigerian higher education in the AI era. For faculty, strong safeguards preserve the fairness of assessment practices and protect professional standards from being diluted by unchecked AI misuse. For students, these measures ensure that their degrees maintain global recognition, positioning them as credible candidates in international academic and professional spaces. Employers, in turn, continue to trust Nigerian graduates as competent and ethically responsible professionals, rather than viewing their qualifications with suspicion due to rampant AI-enabled plagiarism or contract cheating.
2. Safeguarding Data Privacy and Sovereignty: AI adoption in universities cannot be divorced from issues of privacy and data protection. Institutions that comply with the Nigeria Data Protection Act (NDPA, 2023) shield themselves from reputational and legal risks associated with breaches. For students and staff, ethical AI use safeguards sensitive academic and personal information from exploitation, both domestically and internationally. For regulators, embedding data governance in AI use strengthens Nigeria's digital sovereignty, ensuring that national educational data is not vulnerable to foreign platforms or predatory actors.
3. Global Competitiveness and Relevance: Embedding AI within ethical safeguards also speaks to Nigeria's ability to remain competitive globally. For graduates, ethical integration guarantees employability and adaptability in an increasingly AI-driven global economy. Universities that adopt responsible practices are better positioned within international academic networks, gaining opportunities for exchange, funding, and collaboration. At the governmental level, ethical adoption reinforces Nigeria's competitiveness in the Fourth Industrial Revolution, ensuring the country is not left behind as other nations advance rapidly with AI-enabled education.
4. Youth Population and Innovation Drive: Nigeria's large youth population makes urgent attention to AI ethics even more pressing. For students, structured guidance transforms curiosity into creative and ethical innovation, preventing misuse from escalating into systemic malpractice. Lecturers benefit from reduced classroom misuse while simultaneously harnessing AI as a tool for enhanced teaching and learning. For policymakers, regulating AI use strategically allows the country to channel its demographic dividend into digital innovation, positioning Nigeria as a hub of ethical and youthful technological advancement.
5. Timely Policy Intervention over Crisis Management: The cost of inaction is far greater than proactive governance. For government, early regulation of AI avoids expensive lawsuits, scandals, and loss of trust in the higher education system. Universities that adopt ethical standards early prevent academic malpractice from becoming embedded in institutional culture. For society at large, timely intervention safeguards Nigeria's global reputation and ensures that education remains a tool for genuine human capital development, rather than one undermined by compromised academic practices.
6. Alignment with Sustainable Development Goals (SDGs): urgent attention ensures alignment with international commitments such as the Sustainable Development Goals. For policymakers, ethical AI adoption demonstrates Nigeria's commitment to SDG 4 on Quality Education and SDG 9 on Innovation and Infrastructure. Institutions benefit by integrating AI adoption with both global ethical standards and developmental priorities, creating a framework for sustainable growth. International partners are more inclined to collaborate and invest when Nigeria demonstrates alignment with global

best practices, thus unlocking funding opportunities and cross-border partnerships that reinforce the ethical use of AI in education.

In essence, the urgency of ethical AI integration in Nigerian universities lies in its multi-stakeholder impact: protecting integrity for faculty and students, safeguarding data for institutions and regulators, boosting competitiveness for graduates and the nation, channeling youth potential into innovation, pre-empting crises through early policy, and aligning with global development goals.

Conceptual Framework

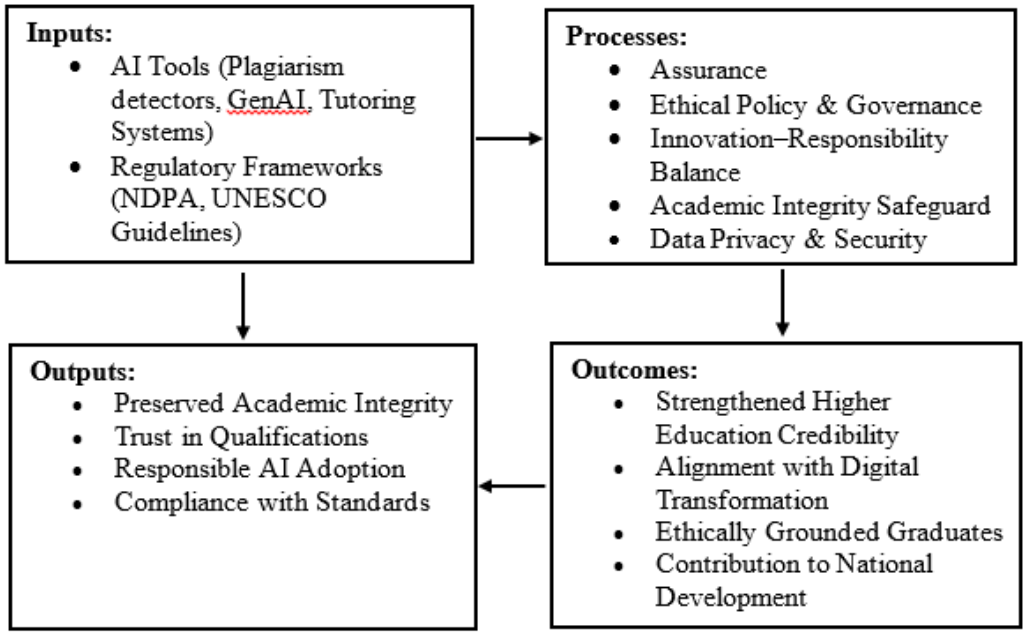

Figure 1: Ethical Implications of AI in Nigerian Universities

The conceptual framework in Figure 1 illustrates the interconnected processes through which Artificial Intelligence (AI) adoption in Nigerian higher education can be ethically harnessed to safeguard academic integrity, data privacy, and institutional credibility. It is structured around four interdependent components: Inputs, Processes, Outputs, and Outcomes, which function synergistically to align AI integration with global best practices while contextualizing it to Nigeria's unique educational realities.

Inputs: The framework begins with AI tools such as plagiarism detectors, generative AI platforms, and tutoring systems—alongside regulatory frameworks like the Nigeria Data Protection Act (2023) and UNESCO's AI ethics guidelines. These inputs represent both technological enablers and normative safeguards essential for responsible deployment. While global universities embed such tools to enhance personalization, efficiency, and integrity (UNESCO, 2021), Nigeria's rapid adoption highlights a regulatory lag, underscoring the need for strong ethical oversight to complement technological integration.

Processes: These mechanisms translate inputs into meaningful outcomes by embedding safeguards, governance, and accountability into AI use. They involve institutional assurance, ethical policy contextualized to Nigeria's realities, and a balance between innovation and responsibility to prevent misuse. Central to these processes are protecting academic integrity, curbing AI-enabled plagiarism, and ensuring data privacy through compliance with the Nigeria Data Protection Act (FGN, 2023) and global standards. Aligned with global best practices of transparency, fairness, and accountability, these processes offer Nigerian universities a roadmap to overcome weak governance, lax enforcement of integrity policies, and limited data security capacity.

Outputs: The outputs reflect the immediate gains of embedding AI within ethical safeguards, including preserved academic integrity, sustained trust in qualifications, responsible adoption of AI, and compliance with both national and international standards. These benefits emerge from effective processes where strong governance and data privacy frameworks reinforce qualification credibility, while integrity safeguards ensure AI enhances rather than erodes educational ethics.

Outcomes: At the macro level, the framework projects strengthened credibility of Nigerian higher education, alignment with digital transformation, ethically grounded graduates, and meaningful contributions to national development. These outcomes not only reflect global priorities such as SDG 4 and UNESCO's call for ethical AI integration but also address Nigeria's local challenges, ensuring that AI fosters human capital development while curbing malpractice and reinforcing institutional trust.

Synergistic Relationships

The framework operates as a cyclical system where inputs such as AI tools and regulatory standards are transformed into meaningful outputs through structured processes of governance, assurance, safeguards, and oversight. Technology alone cannot guarantee positive outcomes; it must be mediated by policy, pedagogy, and human accountability to ensure AI strengthens rather than undermines learning. These processes act as the engine that turns potential into performance: governance sets norms, assurance enforces them, integrity measures guide behaviour, and privacy protections secure data. Together they generate outputs like trust, compliance, and responsible adoption, which mature into broader outcomes - credible institutions, ethical graduates, and alignment with digital development goals. Outcomes then feedback, reinforcing inputs by shaping regulation, attracting partnerships, and boosting stakeholder confidence. The synergy between inputs, processes, outputs, and outcomes creates a self-reinforcing cycle that ensures ethical, resilient, and transformative use of AI in universities.

This conceptual framework aligns with global best practices by emphasizing transparency, accountability, innovation, and responsibility in AI adoption. At the same time, it contextualizes these principles to Nigeria's higher education environment, where academic integrity crises, weak policy enforcement, and data privacy vulnerabilities remain pressing challenges. By illustrating the synergistic relationships among inputs, processes, outputs, and outcomes, the framework provides a roadmap for Nigerian universities to adopt AI in a way that safeguards ethical values, reinforces credibility, and contributes meaningfully to national development.

Conclusion

This study examined the ethical implications of Artificial Intelligence (AI) integration in Nigerian higher education, highlighting both its transformative potential and associated risks. While AI tools such as generative platforms, plagiarism detectors, and automated grading systems offer efficiency and innovation, they simultaneously intensify challenges of academic dishonesty, weak integrity enforcement, and rising concerns over data privacy and sovereignty. The gaps in institutional compliance with the Nigeria Data Protection Act (FGN, 2023) and the limited contextualization of global ethical frameworks further underscore Nigeria's unpreparedness for responsible AI adoption. The stakeholder-centered conceptual framework developed in this study demonstrates how AI adoption can be ethically aligned through processes of governance, safeguards, and accountability. Findings stress the urgency of proactive interventions, thereby strengthening integrity systems, embedding privacy-by-design, developing contextualized ethical policies, and fostering AI literacy among students and faculty. In conclusion, responsible AI integration is not optional but essential for protecting

academic standards, sustaining institutional credibility, and advancing Nigeria's digital transformation. By embedding ethics, collaboration, and alignment with national and global goals, Nigerian universities can harness AI as a catalyst for innovation and human capital development rather than a threat to educational integrity.

Recommendations

The following recommendations are suggested in alignment with global best practices on transparency, accountability, innovation, and responsibility in AI adoption.

1. Stakeholders in Nigerian higher education should be encouraged to redesign assessment policies to emphasize creativity, critical thinking, and oral defenses, while complementing these with AI-detection tools and faculty training. This will enable instructors to uphold credible evaluation practices and ensure that students earn legitimately recognized qualifications trusted by employers.
2. Nigeria's Data Protection Commission should strengthen the enforcement of Nigeria Data Protection Act (FGN, 2023) compliance by mandating the appointment of Data Protection Officers and embedding privacy-by-design in AI deployments. This will help institutions avoid legal and reputational risks, ensure students and staff retain control over personal data, and enable regulators to assert digital sovereignty.
3. Nigeria's tertiary education regulatory commissions, particularly the National Universities Commission (NUC), should adapt UNESCO and Globethics principles to Nigeria's socio-technical realities. They should also mandate university ethics boards to oversee AI use, thereby providing workable governance for administrators, clear rules for faculty and students, and a practicable enforcement framework for policymakers.
4. University administrators in Nigeria should implement continuous professional development in AI literacy and digital pedagogy for lecturers, while embedding AI ethics into student curricula and orientation, to produce ethically conscious instructors and graduates equipped for the digital economy.
5. Multi-stakeholder engagement should be promoted through the creation of university consortia that share infrastructure and detection tools, while actively involving regulators, employers, and civil society in governance dialogues. This approach will reduce institutional costs, strengthen employer confidence in graduates, and ensure inclusive and adaptive oversight.
6. Nigeria should align AI integration with both national and global goals by linking adoption to its digital economy agenda and the Sustainable Development Goals (particularly SDG 4 and SDG 9). This requires pursuing international partnerships that respect data sovereignty, while securing funding and collaborations that enhance institutional capacity and strengthen graduate relevance.

References

Bittle, K. (2025). Generative AI and academic integrity in higher education: A systematic literature review. *Information, 16*(4), 296. https://doi.org/10.3390/info16040296

Globethics. (2024). *AI and Ethics, Academic Integrity and the Future of Quality Assurance in Higher Education.* Globethics Repository. https://repository.globethics.net/bitstream/handle/20.500.12424/4321209/Volume%203-AI%20and%20Quality%20Higher%20Education%20Handbook-January%202025.pdf

Hogan Lovells International LLP. (2023). *Key changes brought by the Nigerian Data Protection Act 2023*. Hogan Lovells. https://www.hoganlovells.com/en/publications/key-changes-brought-by-the-nigerian-data-protection-act-2023

Klynyeld Peak Marvick Goerdeler (KPMG) Nigeria. (2023). *The Nigeria Data Protection Act, 2023.* KPMG. https://assets.kpmg.com/content/dam/kpmg/ng/pdf/the-nigeria-data-protection-act-2023.pdf

Sozon, M., & colleagues. (2024). *Cheating and plagiarism in higher education institutions: AI tool (ChatGPT) is a potential threat to academic integrity. Journal / PubMed Central.* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11489843/

The Guardian. (2025, June 15). Revealed: Thousands of UK university students caught cheating using AI. *The Guardian.* https://www.theguardian.com/education/2025/jun/15/thousands-of-uk-university-students-caught-cheating-using-ai-artificial-intelligence-survey

UNESCO. (2021). *Recommendation on the ethics of artificial intelligence*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000386693

World Journal of Advanced Research and Reviews (WJARR). (2025). The ethical use of generative AI in the Nigerian higher education context. *World Journal of Advanced Research and Reviews, 18*(2), 415–423. https://journalwjarr.com/sites/default/files/fulltext_pdf/WJARR-2025-0789.pdf

Yusuf, A. (2024). Generative AI and the future of higher education: A threat to academic integrity or an opportunity for innovation? *International Journal of Educational Technology in Higher Education, 21*(18), 1–14. https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-024-00453-6

Federal Republic of Nigeria. (2023). *Nigeria Data Protection Act, 2023* (Act No. 37). Official Gazette, 119(110), 1 - 43. https://cert.gov.ng/ngcert/resources/Nigeria_Data_Protection_Act_2023.pdf