Adv Mobile Learn Educ Res, 2024, 4(2): 1149-1159
DOI: 10.25082/AMLER.2024.02.009

RESEARCH ARTICLE

Redefining student assessment in Nigerian tertiary institutions: The impact of AI technologies on academic performance and developing countermeasures

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Received: August 24, 2024;
Accepted: November 1, 2024;
Published: November 6, 2024.

Citation: Abubakar, U., Falade, A. A., & Ibrahim, H. A. (2024). Redefining student assessment in Nigerian tertiary institutions: The impact of AI technologies on academic performance and developing countermeasures. *Advances in Mobile Learning Educational Research*, 4(2), 1149-1159.
https://doi.org/10.25082/AMLER.2024.02.009

Abstract: Integrating artificial AI technologies in education has revolutionised teaching, learning, and assessment worldwide. In Nigerian tertiary institutions, students increasingly rely on AI tools for assignments, research, and exam preparation, raising concerns about the integrity of traditional assessment methods. This paper explores the impact of AI technologies on academic performance and the challenges they pose to accurately evaluating student capabilities. It argues for the urgent need to redefine assessment strategies in Nigerian higher education to preserve academic standards while harnessing the benefits of AI. The study highlights ethical concerns such as data privacy, access inequality, and over-reliance on AI tools, which can undermine critical thinking skills. It provides countermeasures and policy recommendations, including establishing AI usage guidelines, promoting equitable access to technology, and integrating assessments that prioritise critical thinking and problem-solving skills. By adopting these innovative policies, Nigerian tertiary institutions can enhance the quality of education and ensure that students develop genuine skills and academic excellence. This paper calls for immediate action to align education with the realities of the AI age, ensuring sustainable and authentic student outcomes.

Keywords: AI technologies, academic performance, student assessment, academic integrity

1 Introduction

The rapid integration of artificial intelligence (AI) technologies in education has fundamentally altered traditional teaching, learning, and assessment methods worldwide. In Nigerian tertiary institutions, AI tools such as ChatGPT, Grammarly, and Turnitin have become essential parts of students' academic toolkits, providing substantial support in enhancing productivity and refining the quality of submissions (Bali, 2024). For example, students use ChatGPT to brainstorm ideas, develop essay structures, and generate complete drafts, saving time in the initial phases of writing (Lavidas et al., 2024). Grammarly has become invaluable in helping students refine their language use, ensuring their work is polished and grammatically accurate, which is especially beneficial for non-native English speakers. Meanwhile, Turnitin allows students to preemptively check for originality, enabling them to self-evaluate and avoid unintentional plagiarism. While these tools provide educational support, they also open avenues for misuse, as students can quickly generate responses with limited engagement in the learning process (Zhai et al., 2024).

However, while these AI tools are powerful resources, they also introduce challenges that impact the authenticity of the learning process (Salinas-Navarro et al., 2024). With ChatGPT, for instance, students may generate complete responses without fully understanding or engaging with the content, leading to a reliance on AI rather than developing their analytical skills (Aravantinos et al., 2024). Grammarly, though useful for editing, can encourage students to refrain from learning essential language skills, as it automatically corrects errors they may not learn to recognise on their own. Similarly, although Turnitin promotes academic honesty, it has also led some students to focus solely on passing plagiarism checks rather than genuinely understanding and internalising academic content (Sarwari & Mohd Adnan, 2024). These tools, while beneficial, can unintentionally reduce deep engagement in the learning process if used excessively (Alqahtani & Wafula, 2024). This integration brings challenges and opportunities,

necessitating a comprehensive understanding of AI's role in the educational landscape (Lampropoulos, 2023). While AI offers significant benefits, such as enhancing access to information and improving learning efficiency, it also presents unique challenges. One primary concern is how AI affects the integrity of academic assessments, raising questions about whether existing evaluation methods accurately reflect students' abilities. As AI becomes more prevalent, the urgency to redefine assessment strategies to preserve academic standards in Nigerian institutions continues to grow (Matthews & Volpe, 2023).

The reliance on traditional assessment methods, such as written examinations, assignments, and essays, is increasingly undermined by AI tools that generate sophisticated responses with minimal human input. Students can now use AI tools to produce well-written essays, summarise research articles, or even solve complex mathematical problems, often with minimal understanding of the content. As a result, educators need help to differentiate between work produced by students and that generated by AI (Dergaa et al., 2023). This raises concerns about academic integrity and the authenticity of student work. The ease with which students can access AI-generated content necessitates re-evaluating existing assessment strategies to ensure they accurately reflect students' knowledge and skills. Addressing these challenges is critical to maintaining the credibility and reliability of academic evaluations in Nigerian tertiary institutions (Niraula, 2024).

The challenges posed by AI technologies necessitate a move away from traditional assessments toward more innovative strategies that can counter AI's influence. This shift is not just a suggestion but a necessity because academic assessments should evaluate students' knowledge and ability to apply concepts in real-world situations. Current assessment models often need help, relying on rote memorisation and regurgitation of facts that AI tools can easily replicate. There is a compelling need for assessments emphasising problem-solving, creativity, and collaboration skills that are more difficult for AI to simulate (Muawiyah, 2024). Such innovative approaches are not just a possibility but a requirement to restore academic integrity and provide a more accurate reflection of student capabilities. Additionally, redefining assessment strategies goes beyond simply preventing AI misuse; it also involves mitigating its potential for misuse while harnessing AI's potential to improve education. Instead of viewing AI as a threat to academic integrity, Nigerian tertiary institutions could incorporate AI tools into the assessment process to enhance its effectiveness. For instance, AI can be used to develop adaptive testing systems that tailor questions to individual student abilities, offering a more personalised and accurate measure of performance (Nasution, 2023). With responsible AI adoption, institutions can innovate their assessment strategies and create more meaningful educational experiences for students.

Implementing countermeasures to AI misuse should involve a combination of technological tools and policy reforms. According to Tripathi and Thakar (2024), institutions should adopt AI detection systems to monitor student submissions and ensure originality. However, these technological solutions must be accompanied by clear academic policies that promote ethical behaviour and discourage over-reliance on AI (Newman & Mintrom, 2023). This study aims to explore the current assessment practices in Nigerian tertiary institutions, identify the gaps and limitations posed by AI, and propose effective countermeasures. By doing so, it seeks to contribute to developing robust assessment frameworks that can withstand the challenges brought about by AI advancements.

2 Statement of the problem

Maintaining academic integrity in Nigerian tertiary institutions is paramount in the era of artificial intelligence. AI tools have become integral to students' academic lives, aiding them in completing assignments, conducting research, and even preparing for exams. While these tools offer numerous advantages, they also present significant challenges for educators who must ensure that assessments genuinely reflect students' understanding and skills. As AI continues to evolve, educational institutions must adapt their assessment strategies to address these challenges while upholding the highest standards of academic integrity. This adaptation is particularly pressing in Nigerian tertiary institutions, where the impact of AI on education is rapidly growing.

The widespread use of AI tools by students for assignments and research has raised concerns about the reliability of traditional assessment methods. Traditional assessments, such as essays, quizzes, and exams, were designed in an era before AI became ubiquitous in education. Now, students can use AI to generate sophisticated answers, sometimes with minimal understanding of the underlying concepts. This development has led to a situation where grades may no longer

accurately reflect a student's knowledge or effort. Consequently, educators are grappling with ensuring that assessments remain fair, challenging, and representative of student performance in the AI era. The need for new assessment methods is clear, and understanding these challenges will serve as a foundation for their development and incorporation of more frequent, low-stakes testing to gauge student progress continuously.

This ensures that academic assessments remain robust and credible despite rapidly advancing technology. By adopting the strategies outlined in this research, Nigerian tertiary institutions can create an educational environment where AI enhances learning without compromising academic integrity. This proactive approach will benefit students by providing a more accurate reflection of their abilities and help maintain the trust and respect that academic qualifications command. In conclusion, redefining assessment strategies in response to AI's impact is essential for upholding education standards in the 21st century.

3 Conceptual clarification

Integrating AI technologies in education enhances academic performance and fosters critical thinking skills, drawing on insights from various scholars to ensure clarity and consistency in addressing these essential educational challenges. AI technologies are computer systems and algorithms that simulate human intelligence by performing problem-solving, learning, and decision-making tasks. According to Aytaç (2022), AI technologies in education encompass tools like chatbots, automated grading systems, and research aids that enhance learning efficiency. Bayly-Castaneda et al. (2024) note that these technologies significantly improve students' access to information and personalised learning experiences. However, Miller (2024) argues that the rise of AI in academic settings poses challenges, particularly in maintaining the integrity of student assessments, as it may encourage over-reliance on automated systems. Lin and Chen (2023) emphasise the need to balance AI technologies with human-centred approaches to ensure they complement rather than undermine critical thinking and academic performance. As AI technologies reshape academic environments, their impact on student performance becomes a pressing concern, necessitating a closer examination of how educational outcomes are measured.

Academic performance refers to the measurable outcomes of a student's learning process, typically assessed through grades, tests, or other evaluative methods. According to Tan et al. (2021), academic performance indicates how well students meet learning objectives and demonstrate mastery of the subject matter. Scherer and Beckmann (2014) expand this definition, emphasising that academic performance encompasses not only cognitive achievements but also the application of skills in problem-solving and critical thinking. In the context of AI integration, academic performance faces new challenges, as students' reliance on AI tools may distort traditional assessments, leading to inaccurate measures of their true abilities (Zhai et al., 2024). Thus, the evolving educational landscape calls for redefining how academic performance is evaluated in AI-enhanced learning environments. Hence, there is a growing recognition of the need to redefine student assessment methods to gauge academic achievement accurately in AI-enhanced educational settings.

Student assessment evaluates a learner's understanding, skills, and academic progress through exams, assignments, or other evaluation methods. According to Paolini (2015), student assessment is critical for measuring educational outcomes and determining whether students meet the set learning objectives. Nurjamin et al. (2023) added that practical assessment gauges student knowledge and encourages critical thinking and self-reflection. However, with the rise of AI technologies in education, traditional assessment methods are becoming less effective in capturing students' genuine capabilities. As students increasingly rely on AI tools, Xia et al. (2024) argue for a shift toward assessments emphasising creativity, problem-solving, and independent thinking to maintain the integrity of academic evaluations in the AI era. Maintaining academic integrity becomes crucial in adapting assessments to an AI-driven academic landscape.

Academic integrity refers to the ethical standards and principles that guide honesty, fairness, and responsibility in educational environments. Sefcik et al. (2020) state that academic integrity ensures students' work reflects their proper understanding and efforts, promoting trust and fairness in academic evaluations. Perkins and Roe (2024) highlight that maintaining academic integrity is crucial for upholding the credibility of educational institutions, especially in light of technological advancements like AI. However, Roe et al. (2023) state that with the increasing use of AI tools for assignments and research, there are growing concerns about academic dishonesty and misrepresenting students' abilities. Fatima et al. (2024) argue that redefining assessment strategies to minimise over-reliance on AI is essential to preserving academic integrity while fostering authentic learning experiences.

4 AI technologies on academic performance

The rise of AI technologies has profoundly impacted academic performance, reshaping how students learn, interact, and complete educational tasks. AI tools such as machine learning algorithms, chatbots, and virtual tutors have made learning more accessible and personalised (Vinay, 2023). For instance, a study by Swargiary (2024) involving 300 students at the EdTech Research Association Laboratory found that those using AI-driven personalised tutoring improved their academic performance by 25% compared to 85% who relied solely on traditional study methods. AI helps students understand complex concepts more efficiently by offering customised study plans, instant feedback, and intelligent tutoring systems, which can boost performance by deepening engagement with materials. However, Zhai et al. (2024) argue that while AI enhances learning opportunities, it can also diminish students' reliance on critical thinking and problem-solving skills as they depend more on AI for task completion.

Furthermore, the impact of AI on academic performance is only partially positive. Studies have documented cases where students used AI tools to complete assignments and exams, raising significant concerns about academic integrity. For example, the study conducted by Nagelhout (2024) at a U.S. university found that 60% of students admitted to using AI for assignments, with nearly half conceding that they relied heavily on AI-generated responses rather than conducting their analyses. This misuse inflates academic performance, leading to grades that may not accurately reflect students' knowledge or abilities.

Students' improper use of AI technologies has raised serious concerns about academic integrity, mainly when they rely on these tools to generate answers for their assignments, exams, and research. Zhai et al. (2024) contend that when used unethically, AI tools allow students to bypass essential learning processes, leading to inflated academic performance that may not accurately reflect their proper understanding or abilities. This creates a discrepancy between grades and actual knowledge, ultimately devaluing academic achievements. As AI becomes more integrated into education, educators and policymakers must take a proactive role in guiding students in the ethical use of AI to prevent this trend from eroding the credibility of academic performance metrics.

Additionally, there is concern that AI may widen academic performance gaps between students with varying levels of technology access. Students from more affluent backgrounds with access to advanced AI tools may benefit disproportionately, while those from less privileged backgrounds may struggle to compete. Empirical evidence from a study by Moore et al. (2018) found that 14% of students reported access to only one device at home, a limitation that can create challenges not faced by peers with multiple devices. This shows that students from higher-income backgrounds with access to advanced AI tools achieved higher grades than their less privileged peers. Bulathwela et al. (2024) point out that the unequal distribution of AI resources exacerbates educational inequalities, as students with access to AI-enhanced learning tools tend to perform better academically. This unequal distribution of AI resources exacerbates educational inequalities, raising ethical questions about fairness in academic assessments and calling for institutions to ensure equal AI access to level the academic playing field.

Despite these challenges, AI technologies can play a constructive role in academic performance when used responsibly. Sajja et al. (2023) suggest that AI can transform assessment methods by providing educators with more sophisticated data analysis tools, allowing for the identification of student learning patterns and the design of more targeted interventions. This data-driven approach could improve academic outcomes by enabling educators to identify struggling students earlier and implement personalised support strategies. However, balancing AI's benefits with its potential for misuse remains a critical challenge that educational institutions must address.

5 Need for redefined assessment strategies in the age of AI technologies

The rapid integration of AI tools into education has fundamentally transformed teaching and learning activities, necessitating an urgent re-evaluation of traditional assessment strategies. In Nigerian tertiary institutions, the reliance on conventional evaluation methods such as written exams, assignments, and research is increasingly challenged by students' widespread use of AI technologies (Eden et al., 2024). While these technologies offer enhanced learning opportunities, they also enable students to generate AI-assisted answers, raising concerns about the authenticity and integrity of current assessments. Ouyang et al. (2023) emphasise that traditional assessment

methods no longer accurately reflect student knowledge in this AI-driven educational context.

Limitations of conventional assessments are particularly evident in their inability to evaluate higher-order thinking skills. While AI tools can now complete tasks such as problem-solving and writing research papers, these assessments must capture students' ability to engage in critical thinking, creativity, and problem-solving independently. For example, in Singapore, alternative methods like digital portfolios and project-based assessments have proven effective in assessing these essential cognitive skills (Chua et al., 2023). Assessments must evolve to evaluate these essential cognitive skills rather than simply testing for rote memorisation or procedural knowledge. These methods, which emphasise analysis, synthesis, and application of knowledge, ensure a deeper engagement with the material and more accurately measure student understanding (Varsik & Vosberg, 2024).

Redefined assessment strategies are crucial for preserving academic integrity in AI-influenced education. With students able to use AI for responses, the risk of academic dishonesty increases, threatening the validity of grades and academic credentials. Abimbola et al. (2024) point out that institutions need to update assessments to account for AI to ensure institutions can produce graduates whose qualifications accurately reflect their capabilities. This misalignment between student performance and academic qualifications could have far-reaching consequences, affecting employment prospects and the overall reputation of educational institutions. For instance, Finland's education system has integrated formative assessments, including reflective essays, self-assessments, and ongoing project reviews, to foster a culture of honesty and continuous learning (Finland Education Hub, 2023). These formative assessments minimise the opportunity for AI misuse while supporting students' development over time.

To overcome these challenges, Nigerian institutions should consider implementing formative assessment strategies emphasising continuous, real-time evaluations, such as peer reviews, project-based learning, and reflective essays. This aligns with Chanpet et al. (2020), who argue that formative assessments, including peer reviews, project-based learning, and reflective essays, encourage deeper student engagement and reduce the chances of AI misuse. These methods also allow educators to provide timely feedback and support, helping students to improve their understanding and skills throughout the course rather than waiting until the end for final evaluations. Additionally, technology-enhanced assessments offer another potential solution. For example, as used in Arizona State University, AI-driven adaptive learning platforms dynamically adjust question difficulty based on student performance, creating a more personalised and accurate evaluation of student abilities (Tharalson et al., 2023). These advanced tools align with the demands of an AI-influenced learning environment by providing real-time feedback and reducing the reliance on rote memorisation.

In addition to formative assessments, integrating technology-enhanced assessment methods offers another potential solution. AI-based tools, when appropriately utilised, can assist educators in creating more complex, interactive, and adaptive assessments that go beyond traditional formats (Eden et al., 2023). For example, adaptive learning platforms can adjust the difficulty level of questions based on a student's performance, providing a more accurate measure of their knowledge and skills. According to Xia et al. (2024), these advanced assessment tools can help bridge the gap between traditional evaluation methods and the demands of an AI-influenced learning environment.

Nigerian tertiary institutions must redefine assessment strategies to remain relevant in evolving educational technologies. As Ali (2024) suggests, education's future lies in balancing AI's benefits with the need for authentic assessment. Institutions must adopt innovative strategies that both embrace AI and maintain academic rigour. By doing so, they can ensure that students are assessed on their ability to use AI and their true intellectual and practical capabilities, fostering a more meaningful and credible academic experience.

6 Countermeasures to address the impact of AI technologies in education

As AI technologies continue to shape education, developing effective countermeasures to address their impact on academic assessments becomes crucial (Karakose et al., 2022). One key strategy involves designing assessments focused on tasks that AI cannot easily complete. Koh et al. (2019) argue that assessments should move beyond simple fact-recall questions and instead emphasise critical thinking, creativity, and application-based tasks. For instance, case studies, problem-solving exercises, and open-ended questions requiring original responses can

help students actively engage with the material. Such assessments test students' knowledge and ability to think independently, making relying solely on AI-generated answers harder. However, implementing these assessments can be challenging, requiring more time and resources to develop and assess. Institutions can address this by investing in educators' training in innovative assessment design and streamlining grading processes to manage additional workloads.

Another critical countermeasure is enhancing academic integrity policies within Nigerian tertiary institutions. Strict regulations surrounding AI tools for academic work can help curb unethical behaviour. According to Eden et al. (2024), institutions should implement clear guidelines on acceptable uses of AI and enforce strict penalties for violations. These measures can include anti-plagiarism software that detects AI-generated content and enforced academic honour codes that stress the importance of honest, independent work. However, implementing these measures consistently across institutions presents logistical challenges. To address this, institutions can create standardised integrity policies, supported by regular training on AI ethics, ensuring clear understanding among students and staff alike.

Moreover, AI can be used to create more robust assessments. Educators can use AI-powered platforms to design adaptive assessments that adjust questions based on student responses. As Msayer et al. (2024) suggest, adaptive testing can challenge students at varying difficulty levels, ensuring a more accurate evaluation of their abilities. Educators can make assessments more individualised and comprehensive by integrating AI into the assessment process in a controlled and purposeful way. However, implementing adaptive assessments requires significant technological infrastructure and investment. Institutions could overcome this by partnering with educational technology companies for affordable adaptive testing software and gradually integrating these platforms on a trial basis before broader application.

Promoting digital literacy and ethical AI usage among students is another crucial measure (Tülübaş et al., 2023). Ihekweazu et al. (2024) emphasise the importance of teaching students how to use AI for academic purposes responsibly. Rather than altogether banning AI tools, educators should focus on helping students understand how AI can complement their learning without compromising academic integrity. For example, educators can incorporate AI tools as part of the learning process, where students use these technologies to assist in research or study tasks but must provide original analyses and interpretations in assessments. However, incorporating digital literacy into existing curricula may require more support from students accustomed to using AI freely and educators needing additional training. Overcoming this requires a phased approach: Institutions can begin by introducing optional workshops and gradually embedding ethical AI usage into courses, promoting a culture of responsible AI use.

Institutional support for educators is essential to effectively implementing these countermeasures. Professional development programs on AI integration, innovative assessment design, and related technological tools can keep educators ahead of AI advancements. Jafari and Keykha (2024) emphasise that well-prepared educators create academic environments that balance intellectual growth with integrity. Institutions, however, may need more support in providing ongoing training. They can address this by seeking external funding, utilising online professional development programs, and creating peer support networks to share best practices and resources.

7 Ethical considerations and challenges of AI technology in education

Integrating AI technologies in education presents significant ethical considerations, particularly regarding academic integrity. A major challenge is ensuring that students use AI tools ethically rather than relying on them to complete assignments or exams dishonestly. As Elkhatat et al. (2023) highlighted, AI-generated content can blur the line between original thought and machine-assisted output, making distinguishing genuine student effort from AI-driven generated content difficult. This raises concerns about the fairness of assessments and whether students are being evaluated on their abilities or the capabilities of the AI tools they use. To address this issue, institutions must promote academic honesty and establish clear guidelines on responsible AI use.

Data privacy is a critical ethical concern in integrating AI tools into education, as these tools require large amounts of data, including personal information from students, which, if not properly managed, can expose institutions to privacy risks (Ogunode et al., 2024). Collection and analysis of data by AI systems can lead to unintended consequences, such as data breaches or

misuse of sensitive information (Longpre et al., 2024). To mitigate these risks, Nigerian tertiary institutions should ensure that the AI tools adopted comply with data protection regulations and prioritise student privacy. Implementing best practices in data management, such as data minimisation and collecting only the essential data, limits the risk of excessive data storage. Additionally, encryption practices protect sensitive information by converting it into secure code, preventing unauthorised access (Smith & Brown, 2020). Regular data audits, which review stored data and access protocols, ensure compliance and security. Employing multi-factor authentication (MFA) for systems containing sensitive data further strengthens privacy by requiring additional identity verification for access (Ogbanufe & Baham, 2023). Clear data retention policies, with timelines for secure data deletion, reduce unnecessary exposure risks. Privacy education for students and staff fosters awareness and responsible data management, promoting a robust institutional culture of privacy.

The ethical challenge of equity in AI access and use must also be addressed. Not all students have equal access to AI tools or the technological infrastructure required to benefit from them entirely. Okoye et al. (2023) argue that this disparity could exacerbate existing educational inequalities, where students from disadvantaged backgrounds may struggle to compete with peers with greater access to AI resources. Institutions must consider policies ensuring equitable access to AI technologies and providing all students with the tools and training necessary to participate in AI-integrated learning environments. This could include offering technology grants or subsidised access to AI tools for underprivileged students.

Another area for improvement is the challenge of over-reliance on AI, which may diminish students' critical thinking and problem-solving skills. Calzada (2024) points out that while AI can assist with specific academic tasks, overdependence on these tools could undermine students' intellectual development by discouraging independent thought and creativity. Educators and institutions must strike a balance by designing assessments that challenge students to think critically and solve problems without AI assistance. This balance can foster deeper learning while ensuring that AI complements rather than replaces human intellectual engagement in education.

8 Recommendations for Nigerian tertiary institutions

Given the significant impact of AI technologies on education, Nigerian tertiary institutions must adopt comprehensive policies to address both the challenges and opportunities presented by AI. One crucial recommendation is the establishment of clear guidelines on the ethical use of AI in academic work, which should be prioritised within the next 0-6 months. As Rane et al. (2024) suggest, institutions should develop detailed policies outlining acceptable AI usage for assignments, research, and other academic tasks. These guidelines should be made widely accessible to students and educators, with specific examples of permissible and prohibited AI applications. Clear and well-communicated policies will help prevent misuse while encouraging the responsible use of AI technologies to enhance learning outcomes.

Furthermore, within 6-12 months, institutions should invest in robust training programs for educators and students on AI literacy and ethical considerations. Joseph and Uzondu (2024) emphasise that the effective integration of AI into education requires a deep understanding of how these tools work and how they can be used responsibly. Training programs for educators would focus on designing assessments that challenge students' critical thinking and originality while discouraging reliance on AI-generated answers. Similarly, students should be educated on the ethical use of AI, ensuring that they understand the risks of academic dishonesty and the importance of developing genuine intellectual skills.

Additionally, in the 12-18 month range, institutions should adopt technology-enhanced assessments to counterbalance the influence of AI on traditional evaluations. Institutions should utilise AI-driven tools to create adaptive assessments, project-based evaluations, and collaborative assignments resistant to automation. As Alruwais and Zakariah (2023) highlight, these innovative assessment methods can help educators gauge students' understanding and application of knowledge more accurately. By redesigning assessment frameworks to include AI-resistant tasks, institutions can maintain the integrity of academic evaluations while encouraging higher-order thinking and problem-solving skills.

A policy framework for enforcing academic integrity is essential, and it should be implemented in the 18-24 month range. This includes implementing AI detection tools, such as plagiarism checkers and content analysis software, which can identify AI-generated work. Ogunode et al. (2024) suggest that Nigerian tertiary institutions invest in these technologies to

ensure student submissions reflect their efforts and understanding. Furthermore, policies should mandate honour codes, encouraging students to commit to upholding academic integrity. By integrating AI detection technologies with a strong institutional culture of honesty, institutions can create a more credible academic environment.

Finally, policies should also focus on continuously monitoring and evaluating AI integration in educational settings. Miao et al. (2021) argue that policies should include regular reviews of AI's impact on teaching, learning, and assessment practices to ensure they remain relevant and practical. Institutions should establish committees or task forces responsible for evaluating AI's effects on academic performance and updating policies as needed. Nigerian tertiary institutions can ensure that their educational practices evolve alongside AI developments by maintaining flexibility in their policies and adapting to technological advancements.

9 Conclusion

Integrating AI technologies in Nigerian tertiary institutions necessitates re-evaluating traditional assessment methods. While AI tools offer significant benefits in enhancing learning and accessibility, they also challenge the integrity and fairness of academic evaluations. The ubiquitous use of AI tools in assignments, research, and exam preparation raises concerns about whether current assessment methods can accurately measure student abilities. Institutions must implement innovative assessment approaches to uphold academic standards, cultivating critical thinking and problem-solving skills that AI cannot replicate. This shift is crucial to maintaining the credibility of educational outcomes in the face of evolving technological landscapes.

Furthermore, addressing ethical concerns, such as data privacy and access inequalities, is vital to developing effective AI integration policies. Institutions must promote equitable access to AI tools and ensure responsible data management to protect students' privacy. Balancing the use of AI with strategies that discourage over-reliance will safeguard academic integrity. By adopting forward-thinking reforms tailored to Nigeria's unique educational context, tertiary institutions can harness the benefits of AI while preserving the integrity of their assessments and promoting authentic student learning.

Implementing these changes promises significant long-term benefits, including improved student outcomes and enhanced academic integrity. Institutions can cultivate students' problem-solving skills and creativity by prioritising critical thinking and innovative assessment methods, preparing them for future challenges in an AI-driven world. This shift enhances academic performance and equips students with adaptability and resilience for various professional settings. Additionally, promoting a culture of academic integrity through clear guidelines and AI detection tools ensures that achievements genuinely reflect student capabilities. Moreover, encouraging responsible AI use fosters ethical awareness, equipping students to address complex societal challenges. Ultimately, these changes are vital for ensuring Nigerian education thrives in the era of AI, leading to a capable and ethically grounded student population.

Conflicts of interest

The authors declare that they have no conflict of interest.

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