

# MANAGING THE INTERSECTION OF ARTIFICIAL INTELLIGENCE AND HUMAN JUDGEMENT IN NIGERIAN EDUCATION: CHALLENGES AND WAY FORWARD

Abdullahi Ibrahim

Department of Educational Foundation School of General Education, federal University of Education, Zaria

Shenu Ahmad

Ministry of Education, Kaduna State

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## Abstract

Integration of Artificial Intelligence (AI) within education systems is transforming the practice of teaching, learning, as well as decision-making at administrative levels globally. In Nigeria, adoption of AI technology promises vibrant opportunities and subtle challenges, significantly between human and machine intelligence. This article demystifies the dynamic interaction of AI-driven tools and human decision in Nigerian schools. It addresses the potential of AI in driving personalized learning, streamlining administrative tasks, and enabling data-informed policy-making. The article also sheds light on important issues such as ethical considerations, data privacy, digital inequalities, infrastructural deficits, and erosion of human agency in learning spaces. Based on empirical evidence, policy analysis, and international best practices, the paper highlights main obstacles to efficient AI integration and suggests a strategic framework for balancing AI potential with human-oriented education values. The research concludes by highlighting the imperative of context-aware policies, stakeholder participation, and capacity development to ensure that AI is an addition to, not a substitute for, intelligent human decision-making in Nigeria's education sector.

*Keywords:* Intersection, Artificial Intelligence, Human, Judgement, Education

## Introduction

The integration of Artificial Intelligence (AI) into education systems globally has sparked debates concerning the balance between technological advancements and human judgment. In Nigeria, this intersection presents unique challenges, given infrastructural, ethical, and socio-cultural realities. This paper explores the challenges posed by AI integration in Nigerian education, such as ethical dilemmas, teacher-student dynamics, digital literacy gaps, and socio-economic inequalities. It also proposes strategies to harmonize AI technologies with human-

centric educational values, ensuring that technological adoption enhances rather than diminishes educational outcomes. Artificial Intelligence (AI) is revolutionizing educational practices, offering new possibilities for personalized learning, administrative efficiency, and data-driven decision-making (Luckin et al., 2016). However, the reliance on AI raises concerns about the diminishing role of human judgment, especially in contexts where critical thinking, ethical reasoning, and empathy are vital. In Nigeria, where educational challenges already abound—ranging from underfunded schools to teacher shortages the integration of AI demands a cautious and contextualized approach. This paper examines how Nigeria can manage the intersection of AI and human judgment, ensuring the benefits of AI are realized without sacrificing the humanistic core of education.

### **Meaning of Artificial Intelligence**

Artificial intelligence (AI) is a rapidly evolving field encompassing the development of computer systems capable of performing tasks that typically require human intelligence. These tasks include learning, reasoning, problem-solving, perception, and natural language understanding. Instead of explicitly programming every action, AI systems learn from data, identifying patterns and making predictions based on this learned information. The core concept behind AI lies in the creation of algorithms and models that mimic human cognitive functions. Machine learning (ML), a subset of AI, is a prominent approach. ML algorithms allow computers to learn from data without explicit programming. They identify statistical patterns within datasets to build predictive models, enabling them to classify data, make predictions, or identify anomalies. For instance, an ML algorithm can learn to identify spam emails by analyzing the content and characteristics of many labeled examples.

Another key aspect of AI is deep learning (DL), a more advanced form of ML. DL uses artificial neural networks with multiple layers to analyze data, extracting increasingly complex features. This allows DL models to excel in tasks like image recognition, natural language processing, and speech recognition, surpassing traditional ML techniques in their accuracy and performance. The deep architecture enables the learning of hierarchical representations, capturing intricate patterns within data. AI's applications are vast and rapidly expanding. From self-driving cars and medical diagnosis to personalized recommendations and fraud detection, AI is transforming numerous industries. However, alongside its potential benefits, there are crucial ethical considerations surrounding AI. Bias in training data can lead to discriminatory outcomes, raising concerns about fairness and accountability. The potential displacement of human jobs

and the misuse of AI for malicious purposes are also significant challenges that require careful consideration and responsible development. Ultimately, the future of AI depends on navigating these challenges while harnessing its transformative power for the betterment of society.

### **Artificial Intelligence in Education**

Artificial intelligence (AI) is rapidly transforming numerous sectors, and education is no exception. Its integration promises to revolutionize the learning experience, offering personalized instruction, automated assessment, and enhanced accessibility, but also raises concerns about ethical implications and equitable access. One of the most significant benefits of AI in education is personalized learning. AI-powered platforms can analyse a student's strengths and weaknesses, adapting the curriculum and pacing to suit their individual needs. This adaptive learning approach can cater to diverse learning styles, ensuring that each student receives the support they require to succeed. Through intelligent tutoring systems, AI can provide immediate feedback and targeted practice exercises, addressing specific knowledge gaps and fostering deeper understanding. This individualized attention is difficult to achieve in traditional classroom settings with large class sizes.

Furthermore, AI can automate administrative tasks, freeing up educators' time for more meaningful interactions with students. Automated grading of objective assessments, such as multiple-choice tests, allows teachers to focus on providing personalized feedback on essays and projects, fostering critical thinking and creative expression. AI can also assist with scheduling, resource management, and communication with parents, streamlining administrative processes and improving efficiency. However, the integration of AI in education is not without challenges. Concerns exist regarding data privacy and security, particularly concerning the collection and use of student data. Bias in algorithms, reflecting existing societal biases, can perpetuate inequalities in education. The reliance on technology also raises concerns about the digital divide, potentially exacerbating disparities between students with access to technology and those without. Finally, the ethical implications of using AI to assess student performance and predict future success need careful consideration. Over-reliance on AI-driven assessments may neglect the development of crucial social-emotional skills and critical thinking abilities. AI applications in education include intelligent tutoring systems, automated grading, adaptive learning platforms, and administrative support tools (Holmes et al., 2019). AI promises efficiency, personalized learning experiences, and enhanced educational access. In conclusion, AI presents a significant opportunity to enhance the quality and accessibility of education.

However, its successful implementation requires careful planning, addressing ethical concerns, ensuring equitable access, and prioritizing human interaction in the learning process. A balanced approach, leveraging AI's potential while preserving the crucial role of human educators, is essential to harness the transformative power of AI in education for the benefit of all learners.

### **Human Judgment in Nigerian Education**

Human judgment in education involves empathy, ethical reasoning, emotional intelligence, and contextual decision-making (Biesta, 2010). It is essential in nurturing students' critical thinking, creativity, and socio-emotional development. Human judgment plays a pervasive and often problematic role in Nigeria's education system. From admissions to grading and beyond, subjective assessments heavily influence a student's trajectory, creating both opportunities and significant inequalities. While some level of human judgment is unavoidable in evaluating learning and potential, its application in Nigeria is frequently marred by biases and inconsistencies. One key area is admissions. Entrance exams, while ostensibly objective, often yield to informal networks and favouritism. Bribery and connections can override merit, leading to the admission of less-qualified candidates over more deserving ones. This undermines the integrity of the system and perpetuates inequality, favouring the wealthy and connected while disadvantaging those from less privileged backgrounds. Grading practices similarly suffer from the influence of subjective judgment. Teacher bias, based on factors like student personality or socioeconomic background, can significantly impact grades. The lack of standardized assessment tools and the reliance on subjective interpretations of essays or projects further exacerbates this issue. This inconsistency in grading not only affects individual students' academic progress but also hinders accurate comparisons of student performance across schools and regions.

Furthermore, the promotion of students often depends on subjective judgments regarding their overall "character" and "conduct," rather than solely academic performance. This can be especially detrimental to students who are bright but struggle with disciplinary issues or social conformity, potentially leading to their unfair dismissal or retention. The lack of transparency and clear guidelines in such decisions leaves room for arbitrary judgment and unfair treatment. Ultimately, while human judgment is inherent in education, its impact in Nigeria's context is amplified by systemic issues like corruption, resource scarcity, and lack of standardized procedures. Addressing this requires a multi-pronged approach – increased transparency and

accountability in admissions and grading processes, stricter adherence to standardized assessment protocols, and the fostering of a culture that prioritizes merit and fairness over subjective biases. Only then can Nigeria harness the full potential of its human capital through a truly equitable and effective education system.

### **Artificial Intelligence and Human Judgement in Nigerian Education**

AI adoption in Nigerian education is still in its infancy, with initiatives such as online learning platforms, smart classrooms, and digital libraries emerging slowly (Okonkwo & Ade-Ibijola, 2021). However, widespread infrastructural deficits and limited AI literacy among educators hinder effective implementation. Artificial intelligence (AI) presents both opportunities and challenges for the Nigerian education system, demanding a careful balance between technological advancement and the irreplaceable role of human judgement. While AI-powered tools offer potential solutions to some of the sector's persistent problems, their effective integration requires mindful consideration of cultural context and the limitations of technology. One significant area where AI can contribute is in personalized learning. AI-driven platforms can assess individual student strengths and weaknesses, tailoring educational content and pacing to optimize learning outcomes. This is particularly beneficial in a diverse nation like Nigeria, where students' learning styles and prior knowledge vary significantly. AI can also automate administrative tasks, freeing up teachers to focus on individualized instruction and mentoring. Automated essay grading and feedback systems can provide timely assessments, improving efficiency and allowing for more targeted interventions.

However, the over-reliance on AI poses serious risks. The ethical implications of algorithmic bias, particularly in assessment tools, are significant. AI systems trained on biased data can perpetuate existing inequalities, further disadvantaging already marginalized students. Furthermore, the lack of reliable internet access and digital literacy in many parts of Nigeria limits the accessibility and effectiveness of AI-powered educational tools. Simply introducing technology without addressing these infrastructural and digital literacy gaps will exacerbate existing educational disparities. The crucial element remains human judgement. Teachers possess the nuanced understanding of their students' emotional and social needs, which AI currently lacks. Their ability to foster critical thinking, creativity, and emotional intelligence is paramount, and cannot be replaced by algorithms. Effective integration of AI in Nigerian education requires a shift towards a collaborative model, where AI tools augment, but do not replace, the essential role of educators. Teachers need training to effectively utilize these tools,

understand their limitations, and critically evaluate the data they generate. Furthermore, policies must prioritize equitable access to technology and digital literacy initiatives to ensure that AI benefits all Nigerian students, not just a privileged few. Ultimately, the future of Nigerian education lies not in a binary choice between AI and human judgement, but in their synergistic collaboration.

### Challenges at the Intersection of AI and Human Judgment in Nigeria

1. **Digital Literacy Gap:** A major barrier is the low level of digital literacy among teachers and students (Oyelere et al., 2020). Many educators lack the skills to effectively integrate AI tools into pedagogy.
2. **Ethical and Cultural Concerns:** AI systems often lack the ethical sensitivity required for nuanced educational decisions, which can lead to culturally inappropriate content or biases (Floridi et al., 2018).
3. **Teacher-Student Relationship Erosion:** Overreliance on AI could weaken the personal interaction between teachers and students, reducing mentorship opportunities and emotional support critical for holistic education (Seldon & Abidoye, 2018)
4. **Socio-economic Inequalities:** AI technologies often exacerbate existing inequalities, as students in urban areas are more likely to access advanced digital tools than their rural counterparts (Aderounmu & Sodiya, 2019).
5. **Data Privacy and Security Risks:** There is a lack of robust data protection frameworks in Nigeria, raising concerns about students' personal data being mishandled (Olaoye & Adetunji, 2022).

### Way Forward: Managing the Intersection

1. **Teacher Training and Capacity Building:** Nigeria must invest heavily in digital literacy programs for educators. Teachers should be trained not just to use AI tools, but to critically evaluate their ethical implications (Okonkwo & Ade-Ibijola, 2021).
2. **Contextualized AI Solutions:** AI systems used in Nigerian education should be localized to respect cultural values and educational objectives, avoiding one-size-fits-all approaches imported from foreign contexts (Floridi et al., 2018).
3. **Human-in-the-Loop Systems:** Educational AI systems should be designed with human oversight as a core feature, ensuring that teachers retain ultimate responsibility for pedagogical decisions (Holmes et al., 2019).

4. **Bridging the Digital Divide:** Government and private stakeholders must collaborate to extend infrastructure to rural areas, providing affordable access to AI-powered educational resources (Aderounmu & Sodiya, 2019).
5. **Developing Ethical Guidelines:** National ethical standards for AI use in education must be developed, addressing data privacy, transparency, accountability, and fairness (Floridi et al., 2018).
6. **Encouraging Critical Thinking:** Educational reforms should focus on promoting critical thinking and ethical reasoning among students, so they can engage with AI tools thoughtfully rather than passively (Biesta, 2010).

## Conclusion

Managing the intersection of AI and human judgment in Nigerian education requires a balanced and context-sensitive approach. While AI offers promising solutions to some of Nigeria's educational challenges, unchecked adoption could undermine essential human values in education. By investing in teacher training, developing localized solutions, ensuring equitable access, and promoting ethical standards, Nigeria can harness the power of AI to enhance, rather than replace, human judgment in education.

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