



THE ROLE OF ETHICS AND VALUES EDUCATION IN THE IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN THE NIGERIAN EDUCATION SYSTEM



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Abstract

This paper discussed the role of Ethics and Values Education in the implementation of Artificial Intelligence (AI) in the Nigerian Education System. As AI technologies increasingly influence teaching, learning, and administrative processes, ethical considerations become essential to address issues related to privacy, fairness, transparency, and accountability. The paper explained the concepts of ethics education, values education, and AI, alongside the current state of AI integration in Nigerian education. It further emphasized the importance of embedding values education to shape responsible AI use and the need for curriculum development that incorporates ethical frameworks. Key ethical challenges such as data privacy, algorithmic bias, and equity in access are discussed. The paper also outlined strategies to promote ethical AI adoption, including the development of guidelines, educator training, stakeholder engagement, and robust data governance. The paper concluded that the integration of Artificial Intelligence (AI) into the Nigerian education system presents both opportunities and ethical challenges that must be carefully navigated. Amongst others, the paper suggested that policymakers should develop and enforce comprehensive ethical guidelines and regulations that govern AI use in education. These policies must address issues of data privacy, transparency, equity, and accountability to protect the rights of students and educators.

Keywords: Ethics Education, Values Education, Artificial Intelligence, Nigerian Education System

Introduction

The advancement of artificial intelligence (AI) has brought a new dimension to the global education landscape. In Nigeria, the gradual adoption of AI technologies in schools and tertiary institutions offers both opportunities and concerns. AI tools such as adaptive learning systems,



automated grading platforms, virtual teaching assistants, and intelligent content delivery are increasingly gaining attention as solutions to long-standing challenges in the Nigerian education system, including limited access to quality instruction, shortage of skilled teachers, and uneven resource distribution (Nwankwo, 2021). Moreover, the presence of AI-driven tools in education requires more than technical adaptation; it calls for deliberate ethical reflection and values-based guidance to shape its development and use. Ethics and values education is essential in ensuring that AI technologies promote equity, accountability, fairness, and respect for learners' rights within the Nigerian context.

Furthermore, the absence of clear ethical orientation in the implementation of AI could lead to biased decision-making, invasion of privacy, and reinforcement of existing social inequalities. These challenges underscore the need for embedding values education into the processes that govern AI integration in schools. In Nigeria, where educational policy is still developing in response to emerging technologies, the inclusion of ethics and moral instruction in teacher training, school curricula, and administrative decision-making is central to sustainable and responsible AI use (Okeke, 2022). Although AI may offer faster data analysis and efficiency in classroom management, the ethical implications of its decisions—especially in assessment and learner profiling—must be critically examined. These implications raise questions about how AI aligns with the moral standards expected in a culturally diverse and socially sensitive education system.

Moreover, values education serves as a foundation for critical thinking, empathy, justice, and civic responsibility—qualities that should inform both the development and application of AI in education. Nigerian learners and educators must be equipped to interrogate the ethical dimensions of AI tools they engage with. This becomes even more important in a society where digital literacy varies widely and trust in automated systems cannot be assumed (Yusuf & Afolabi, 2020). In addition, teachers and education policymakers must understand that AI systems are built on human-designed algorithms, and as such, they reflect the values, assumptions, and limitations of their creators. A failure to address this reality through targeted ethics and values education may result in the passive acceptance of technologies that contradict democratic and humanistic educational goals.

Furthermore, as AI continues to shape the future of education in Nigeria, the role of ethics and values cannot be regarded as optional or secondary. It is a necessary framework that guides the moral compass of innovation and ensures that technological progress aligns with the broader goals of human development. Ethics and values education is not only about identifying right and wrong; it also cultivates a reflective mindset that enables learners, teachers, and administrators to make decisions that are just, inclusive, and socially responsible in the age of intelligent machines (Adebayo, 2023). Therefore, in the context of AI implementation in Nigerian schools, ethics and values education must be understood as a foundational requirement, not an afterthought.

Theoretical Underpin

The paper is underpinned on Diffusion of Innovations Theory propounded by Everett Rogers in 1962, cited in Baskerville et al. (2014).

Diffusion of Innovations Theory

Diffusion of Innovations Theory, originally developed by Everett Rogers in 1962, provides a useful framework for understanding how new ideas, technologies, or practices spread within a social system over time, and it remains relevant in analyzing how educational innovations such as artificial intelligence (AI) are adopted within the Nigerian education system (Baskerville et al., 2014). The theory outlines five categories of adopters—innovators, early adopters, early majority, late majority, and laggards—each influenced by their perception of the innovation's advantage, compatibility with existing values, complexity, trialability, and observability. Furthermore, the adoption process is shaped by communication channels, social systems, and the nature of the innovation itself. In the context of this study, AI as an educational tool represents a complex and value-laden innovation that requires careful examination of ethical foundations and moral instruction to ensure its meaningful integration in Nigerian schools. The theory helps explain why some institutions embrace AI tools quickly while others delay or resist adoption due to lack of awareness, infrastructure, or ethical preparedness.



Moreover, Rogers' theory emphasizes that the rate and success of innovation adoption are not only technical matters but are also tied to cultural readiness, leadership, peer influence, and value systems within educational settings. This reinforces the importance of ethics and values education as part of the social and institutional context in which AI is being introduced. While AI may promise efficiency in grading, resource planning, and content personalization, the absence of ethical awareness among teachers, students, and policymakers may lead to misuse, data bias, exclusion, or violations of learner rights. Therefore, the diffusion process in this study must not be limited to technological readiness but must incorporate a parallel diffusion of ethical literacy and values-based reasoning. In addition, the theory supports the need for early adopters such as school leaders and innovative educators—to model responsible AI use, grounded in clear ethical principles, which can then influence the broader educational system.

Furthermore, applying this theory to the Nigerian context highlights the uneven pace of AI adoption across regions and institutions, particularly due to disparities in digital infrastructure, teacher capacity, and curriculum design. Ethics and values education can act as a mediating factor that prepares the system not only to receive AI technologies but to engage with them critically and responsibly. In this sense, Diffusion of Innovations Theory does not merely describe how AI spreads but offers a lens to identify where and why ethical education must be embedded in the diffusion process for it to be sustainable, inclusive, and aligned with national educational goals.

Concept of Ethics Education

Ethics involves the study and application of moral principles that guide behavior in determining what is right or wrong in various contexts. Ethics education refers to the formal or informal teaching of moral principles that guide individuals in distinguishing right from wrong and acting responsibly in diverse contexts. It aims to cultivate moral reasoning, empathy, integrity, and respect for others, fostering individuals who can make ethical decisions that benefit both themselves and society (Lickona, 2016). In the educational setting, ethics education extends beyond theoretical knowledge to include character development and the practical application of ethical principles in everyday school life. This form of education supports the development of responsible citizens who contribute positively to social cohesion and democratic governance. Furthermore, ethics education is crucial in guiding behaviour in complex environments, especially as technology and globalization introduce new moral challenges.

In recent years, ethics education has gained importance due to the rapid integration of advanced technologies like artificial intelligence (AI) in learning environments. Ethics education equips learners and educators with the critical thinking skills necessary to navigate issues such as privacy, fairness, bias, and accountability, which emerge with AI adoption (Nguyen et al., 2022). Moreover, ethics education is essential in promoting respect for human dignity and ensuring that technology enhances learning without compromising fundamental rights. Research suggests that embedding ethics into educational curricula contributes to better decision-making and reduces unethical behaviours, such as cheating or discrimination (Berkowitz & Bier, 2015). This education also emphasizes social responsibility and professional integrity, encouraging students to recognize the broader impact of their actions on communities and society at large.

Furthermore, ethics education fosters a culture of reflection and dialogue, which is important for addressing moral dilemmas that arise in diverse and pluralistic societies. It supports learners in understanding different cultural and moral perspectives, enhancing tolerance and empathy. In contexts such as Nigeria, where cultural and religious diversity is prominent, ethics education can play a unifying role by promoting shared values that transcend individual differences (Halstead & Taylor, 2020). Additionally, ethics education is closely linked to values education, where core values such as honesty, respect, and justice are explicitly taught and modeled. This relationship strengthens learners' moral compass, enabling them to confront contemporary challenges, including those posed by AI, with a well-grounded ethical framework (Thornberg, 2018). Ultimately, ethics education is foundational to the responsible and humane application of technology and knowledge in education.



Values Education

Values education refers to the intentional teaching and cultivation of moral principles and virtues that guide individuals' behavior and decision-making in both personal and social contexts. In educational settings, values education plays a critical role in shaping students' character and promoting ethical conduct essential for their development as responsible citizens. It involves imparting concepts such as honesty, respect, fairness, empathy, and social responsibility, which influence how learners interact with others and engage with societal challenges (Narvaez & Lapsley, 2008). The process encourages reflection on moral choices and supports the development of a value system that can guide actions in complex situations, including those involving technology use.

Furthermore, values education contributes to building a foundation for ethical reasoning and critical thinking, helping learners understand the implications of their actions beyond immediate consequences. Lovat and Toomey (2019) emphasize that effective values education integrates knowledge, attitudes, and behaviors, aiming to foster holistic moral development. This is especially important in the context of artificial intelligence (AI) integration, where students must be prepared to navigate ethical dilemmas related to privacy, fairness, and accountability. Teaching values creates awareness of social justice issues and encourages active participation in promoting equity within and beyond the classroom.

Moreover, values education supports the cultivation of digital citizenship, which encompasses responsible and ethical use of technology. As AI becomes embedded in educational systems, students equipped with strong values are more likely to critically assess AI-driven tools and resist uncritical acceptance of technology. This promotes a culture of accountability and respect for diversity in digital interactions (Kim & Kim, 2020). Educators also benefit from values education, as it equips them to guide students in developing sound ethical judgments when engaging with AI and other emerging technologies.

In addition, values education in Nigeria's diverse cultural context provides an opportunity to reinforce shared moral foundations while respecting pluralism. This approach fosters social cohesion and inclusion, essential qualities for an equitable education system. Integrating values education with AI literacy helps prepare students to become ethically aware users and creators of technology, ultimately contributing to a more just and humane society (Hicks & Holden, 2017). The curriculum and teaching methods must therefore be designed to promote both cognitive understanding and practical application of values in real-life scenarios, including those involving AI.

Artificial Intelligence

Artificial Intelligence (AI) refers to computer systems designed to perform tasks that typically require human intelligence, such as learning, reasoning, problem-solving, and decision-making. AI technologies in education include adaptive learning platforms, automated grading systems, natural language processing, and intelligent tutoring systems that personalize instruction and improve learning outcomes. Russell and Norvig (2021) define AI as the study and design of intelligent agents that perceive their environment and take actions to maximize their chances of achieving specific goals. This ability to simulate human cognitive functions allows AI to transform traditional education by offering customized learning experiences tailored to individual student needs.

Moreover, AI's capacity to analyze vast amounts of educational data enables educators and institutions to make evidence-based decisions, monitor student progress in real-time, and identify learning gaps efficiently. This enhances the quality of teaching and helps optimize resource allocation (Woolf, 2020). Despite these benefits, the implementation of AI in education requires careful consideration of ethical issues such as data privacy, transparency, and algorithmic fairness. As AI systems become more autonomous, concerns arise regarding accountability and the potential loss of human oversight in critical educational decisions (Siau & Wang, 2020).

Additionally, AI's impact extends beyond learning and assessment to include administrative functions like scheduling, student enrollment management, and predictive analytics for dropout prevention. The integration of AI thus presents an opportunity to improve both pedagogical and operational aspects of education systems. However, these advances demand that educators acquire new



skills to effectively collaborate with AI tools and interpret their outputs (Chen et al., 2021). The success of AI in education hinges on blending technological innovation with human judgment to foster environments that enhance learning while safeguarding ethical standards.

In the Nigerian education system, AI offers the potential to address challenges such as large class sizes, limited instructional resources, and disparities in teacher quality. Yet, its application must be adapted to local contexts, taking into account infrastructural limitations and cultural values. Incorporating AI literacy into educational programs is essential to prepare students and teachers to engage critically with AI technologies and understand their broader societal implications (Salmon et al., 2019). Thus, AI represents both a technological advancement and a call for comprehensive educational strategies that balance innovation with responsibility.

Nigerian Education System

The Nigerian education system is structured to provide formal education from early childhood through tertiary levels, with a focus on national development and individual empowerment. It consists of six years of primary education, three years of junior secondary, three years of senior secondary, and tertiary institutions offering undergraduate and postgraduate programs. The system is overseen by the Federal Ministry of Education, which sets educational policies and curricular standards aimed at promoting literacy, skill acquisition, and national unity (Federal Ministry of Education, 2013). Despite these goals, the Nigerian education system faces numerous challenges that impact access, quality, and equity across different regions and socioeconomic groups.

Infrastructural deficits, insufficient funding, overcrowded classrooms, and a shortage of qualified teachers undermine educational outcomes in many public schools, especially in rural and underserved areas (Okebukola, 2020). Furthermore, disparities in resource allocation contribute to regional inequalities, with northern Nigeria generally lagging behind the southern regions in educational indicators such as enrollment and completion rates. Socioeconomic factors also play a role, as poverty and cultural barriers can limit school attendance, particularly for girls. Additionally, the curriculum has been criticized for being outdated and not adequately aligned with modern technological and societal demands (UNESCO, 2021).

Moreover, the Nigerian education system is currently undergoing reforms to integrate digital technologies and innovations such as artificial intelligence (AI) to enhance teaching and learning processes. These efforts aim to improve educational delivery, personalized learning, and administrative efficiency. However, the lack of digital infrastructure and limited ICT skills among educators present significant barriers to effective technology adoption. In addition, ethical concerns related to AI, including data privacy, algorithmic bias, and equitable access, must be addressed to ensure that technological advancements do not exacerbate existing inequalities or infringe on learners' rights. Furthermore, Nigeria's diverse cultural, linguistic, and religious landscape requires an education system that promotes inclusion, tolerance, and shared national values. Values education is therefore integral to the system, aiming to foster respect, integrity, and social cohesion among students. To meet contemporary challenges, the Nigerian education system must balance traditional educational goals with innovations and ethical considerations, ensuring that all learners benefit from quality education that prepares them for the demands of the 21st century.

Overview of AI Integration in the Nigerian Education System

Artificial Intelligence (AI) is increasingly influencing the Nigerian education system, though its adoption remains uneven due to infrastructural and policy challenges. AI applications such as adaptive learning platforms, automated administrative tools, and intelligent tutoring systems are gradually being introduced in select Nigerian schools, especially in urban and private institutions. These technologies aim to enhance personalized learning and improve educational management efficiency. According to Johnson et al. (2020), AI in education can support differentiated instruction by adapting to individual student learning styles and progress, which is particularly valuable in resource-constrained environments like Nigeria. However, large-scale AI integration faces obstacles including unreliable internet access, inadequate power supply, and limited teacher capacity in digital literacy.



Moreover, the digital divide between urban and rural areas threatens to exacerbate educational inequality as AI becomes more prevalent. Rural schools, often lacking basic digital infrastructure, risk being left behind unless deliberate efforts are made to bridge this gap. Adekunle and Ojo (2021) opined that the uneven distribution of technological resources in Nigerian schools may widen disparities unless policy frameworks prioritize inclusive AI deployment. Furthermore, ethical considerations regarding AI's impact on data privacy, fairness, and transparency have yet to receive adequate attention in Nigerian education discourse. As AI systems increasingly influence student assessments and learning pathways, it is critical to ensure these tools do not reinforce biases or reduce human oversight (Eze et al., 2022).

In addition, Nigeria's policy environment for AI in education is still emerging. There is an urgent need for coordinated strategies involving government agencies, educational institutions, and technology providers to create standards, guidelines, and training programs for ethical AI use. Such coordination would enable systematic adoption and evaluation of AI initiatives in education. UNESCO's (2020) framework for AI integration emphasizes policy coherence, stakeholder collaboration, and capacity building as essential pillars for success. Without such alignment, Nigeria risks fragmented AI efforts that fail to maximize benefits or address risks effectively.

AI offers transformative potential for Nigerian education, but realizing this requires addressing infrastructural challenges, bridging digital divides, and embedding ethical safeguards. The development of inclusive policies and professional development for educators are critical steps toward harnessing AI's capabilities while ensuring equity and accountability in Nigeria's education system.

The Role of Values Education in Shaping Responsible Artificial Intelligence Use

Values education is essential for guiding the responsible use of artificial intelligence (AI) within Nigerian educational contexts. It provides students with the ethical frameworks and moral awareness necessary to critically engage with AI technologies, which increasingly affect learning processes and outcomes. Teaching core values such as fairness, respect, accountability, and empathy helps learners understand the human impact of AI decisions and the importance of using these tools in ways that promote social good. According to Narvaez and Lapsley (2018), values education fosters moral reasoning skills that enable individuals to reflect on ethical challenges and make informed decisions, which is vital as AI becomes a central part of educational environments.

Furthermore, AI systems can perpetuate biases, threaten data privacy, and create dependency on automated decision-making unless users are equipped with a strong ethical compass. Values education empowers students to recognize and challenge unfair or harmful practices embedded in AI tools. This critical perspective helps prevent unreflective acceptance of technology and encourages active participation in shaping AI applications that align with social justice and human rights. Mills and Allen (2019) pointed out the importance of integrating ethics training with digital literacy to promote responsible AI use, especially in countries experiencing rapid technological change like Nigeria.

Moreover, Nigeria's cultural diversity makes values education a powerful tool for fostering inclusivity and mutual respect as AI is adopted. It helps create environments where differences are respected and technology is used to enhance equitable learning opportunities. Teachers, as moral guides, play a crucial role in modeling and reinforcing values related to AI use. Their understanding of both ethical issues and AI functionalities is essential for embedding these values into everyday classroom interactions (Scherer et al., 2020).

In addition, values education nurtures digital citizenship, preparing students to participate thoughtfully in an AI-mediated world. This involves not only responsible use but also advocacy for ethical policies and transparency in AI systems. As AI shapes more aspects of education, embedding values in the curriculum ensures that learners develop both the skills and the conscience necessary for ethical technology engagement in Nigeria's evolving educational landscape (Fisher & Kettler, 2021).

Curriculum Development for Ethics and Artificial Intelligence in Nigeria

Curriculum development that integrates ethics and artificial intelligence (AI) is crucial for preparing Nigerian students to navigate the challenges and opportunities of a technology-rich future.



Designing such a curriculum involves incorporating both the technical aspects of AI and the ethical considerations surrounding its use, enabling learners to understand how AI works and how it impacts society. This dual focus helps students build critical thinking skills and moral awareness necessary for responsible AI engagement. According to Agboola and Akintola (2021), embedding AI and ethics in Nigeria's curriculum requires interdisciplinary approaches that connect computer science, social studies, and philosophy to provide a holistic educational experience.

Furthermore, the curriculum must be culturally relevant and contextually adapted to Nigeria's diverse educational settings. It should address issues such as algorithmic bias, data privacy, digital rights, and the societal implications of AI technologies, using local examples where possible. This relevance enhances student engagement and allows learners to relate ethical questions to their lived experiences. A study by Oladele and Ibitoye (2022) emphasizes the importance of integrating ethical inquiry with practical AI applications to foster critical reflection and problem-solving skills in Nigerian students.

Moreover, teacher preparation is a critical component of successful curriculum implementation. Educators need professional development that equips them with knowledge about AI and ethics as well as effective pedagogical strategies. Without this support, curriculum goals risk being undermined by gaps in teacher capacity. As noted by Chukwuma and Adebayo (2020), continuous teacher training and resource provision are necessary to empower instructors to confidently teach AI ethics and facilitate meaningful discussions in the classroom.

In addition, curriculum development must align with national education policies and global best practices to ensure coherence and sustainability. Partnerships with technology firms, universities, and international organizations can provide expertise and resources for curriculum design, helping Nigeria keep pace with rapid technological advances. The Nigerian education system stands to benefit from such collaborations to create curricula that prepare learners not only for employment but also for ethical citizenship in a digital age (Ogunleye et al., 2021). Developing and implementing a curriculum that combines ethics and AI will equip Nigerian students with the knowledge, values, and critical thinking skills necessary for responsible participation in an increasingly AI-driven society.

Policy Implications and Regulatory Considerations

The integration of artificial intelligence (AI) in the education sector demands comprehensive policy frameworks and regulatory measures to ensure ethical, equitable, and effective implementation. Educational policies must address how AI technologies are introduced, monitored, and evaluated within learning environments to safeguard students' rights and promote inclusive access. Governments and education authorities have the responsibility to develop guidelines that balance innovation with protections against risks such as data misuse, privacy violations, and algorithmic bias (Cath et al., 2018). Clear policy direction is crucial to establish standards for AI applications that respect ethical norms while fostering trust among educators, learners, and stakeholders.

Moreover, regulatory considerations involve defining accountability mechanisms that specify who is responsible when AI systems cause harm or produce unfair outcomes. Establishing transparent protocols for data governance, consent, and user rights can prevent exploitation and discrimination, particularly in contexts with vulnerable populations. In Nigeria, where educational disparities are pronounced, regulations must prioritize equity to avoid reinforcing existing inequalities through biased AI algorithms or uneven technology distribution (Heaven, 2020). Policies should also promote capacity-building among educators and policymakers to understand AI's potentials and limitations, enabling informed decision-making.

Additionally, regulatory frameworks need to address issues related to intellectual property, interoperability, and data security in AI applications. Governments must collaborate with technology developers, researchers, and educational institutions to create adaptable policies that can evolve with rapid technological advancements (Wagner, 2021). Monitoring compliance with these regulations will require establishing dedicated bodies or committees equipped to oversee AI use in schools, ensuring adherence to ethical and legal standards.



Furthermore, policy approaches should incorporate public consultation and stakeholder engagement to reflect diverse perspectives and cultural contexts in AI governance. This participatory process enhances legitimacy and responsiveness to local educational needs. In Nigeria, integrating community values into regulatory frameworks will strengthen acceptance and responsible AI use (James & Taylor, 2022). Educational policies must also promote transparency in AI algorithms, ensuring that decisions affecting learners are explainable and contestable.

Ethical Challenges in Artificial Intelligence Implementation in Nigeria Educational system
Artificial Intelligence (AI) offers great potential to improve the Nigerian education system, but ethical challenges must be addressed to ensure fair and responsible implementation. These challenges include protecting privacy, avoiding bias, ensuring transparency, respecting teacher roles, and guaranteeing equal access to AI technologies.

Data Privacy and Security

Protecting student data is a major ethical concern when implementing AI in Nigerian education. AI systems gather extensive personal and academic information, which must be safeguarded against unauthorized access or misuse. The lack of robust data protection policies and cyber-security infrastructure in many Nigerian schools increases the risk of breaches. Transparency about data collection practices and ensuring informed consent from students and guardians is essential. Implementing strong data governance frameworks will promote trust and protect learners' privacy in AI applications (Floridi et al., 2018)

Algorithmic Bias and Discrimination

AI systems can unintentionally reinforce existing social biases if their training data is unrepresentative or skewed. In Nigeria's diverse educational landscape, biased AI could disadvantage marginalized groups such as students from rural areas or lower socioeconomic backgrounds. This may lead to unfair assessments or limited access to educational resources. Regular audits of AI algorithms and inclusive data collection practices are necessary to minimize bias and ensure that AI promotes equity in education (Boddington, 2017).

Accountability and Transparency

Many AI systems operate opaquely, making it difficult to understand how decisions impacting students are made. This lack of transparency reduces accountability, as it becomes unclear who is responsible when AI leads to errors or harm. Clear regulations requiring explainable AI and mechanisms for accountability must be developed. Educators, students, and policymakers need accessible information about AI decision processes to build confidence and allow for challenge or appeal (Nguyen et al., 2022).

Impact on Teacher Autonomy and Professional Integrity

The increasing use of AI in education may limit teachers' professional autonomy by dictating instructional or assessment methods. Teachers risk becoming passive operators rather than active educators shaping learning experiences. This shift could undermine their professional judgment and ethical responsibility. Supporting teachers through training and involving them in AI design will help maintain their autonomy and ensure that AI enhances rather than replaces their professional role.

Equity and Access

Access to AI technologies in Nigerian education is uneven due to disparities in infrastructure, such as electricity and internet connectivity. Rural and disadvantaged students often face barriers that prevent them from benefiting equally from AI-enhanced learning. Ethical implementation requires policies that promote inclusive access and bridge digital divides. Without deliberate efforts, AI risks increasing educational inequalities rather than reducing them (Holmes, Bialik, & Fadel, 2019)



Strategies for Promoting Ethical Artificial Intelligence (AI) Adoption in Education

The adoption of Artificial Intelligence (AI) in education offers many opportunities to enhance learning and administration. However, ethical challenges must be addressed to ensure AI technologies benefit all stakeholders fairly and responsibly. Nigeria's education system requires deliberate strategies to promote ethical AI use that aligns with educational values and human rights. These strategies include developing clear ethical guidelines, building capacity among educators, engaging stakeholders, protecting data privacy, and establishing ongoing evaluation. Implementing such measures fosters trust, accountability, and inclusiveness, which are essential for sustainable AI integration

Development of Ethical Guidelines and Frameworks

Creating well-defined ethical guidelines is crucial for the responsible adoption of AI in Nigeria's education sector. Such frameworks serve as a foundation for ensuring that AI applications respect principles like fairness, transparency, accountability, and privacy. These guidelines help policymakers, educators, and technology developers understand their roles and responsibilities in preventing misuse or harmful consequences. Tailoring these ethical standards to Nigeria's cultural, social, and economic realities makes them more effective. Furthermore, ethical frameworks can guide the design and implementation of AI systems to ensure they promote inclusivity and human dignity. When clear ethical boundaries are established, AI tools are more likely to support equitable education, avoiding biases that could disadvantage vulnerable student groups. This foundational step provides a shared reference point for all actors involved in AI adoption, ensuring alignment with the country's educational goals and values (Cath et al., 2018).

Capacity Building and Training for Educators

Educators play a critical role in the ethical adoption of AI, making capacity building and training essential components of any strategy. Teachers need comprehensive understanding of AI technologies, including their benefits, limitations, and ethical implications, to use them effectively in classrooms. Professional development programs can equip educators with AI literacy skills, enabling them to critically evaluate AI tools before integrating them into instruction. Additionally, training can raise awareness about potential ethical issues such as data privacy, algorithmic bias, and the importance of maintaining professional autonomy. When teachers are knowledgeable and confident, they can better protect students' rights and serve as role models for responsible AI use. Moreover, ongoing training helps educators stay updated with rapid technological changes, allowing them to adapt teaching methods while preserving educational integrity (Rodríguez & Mañas, 2020).

Inclusive Stakeholder Engagement

Meaningful and inclusive stakeholder engagement is vital for ensuring ethical AI adoption in Nigeria's educational system. Stakeholders include not only policymakers and educators but also students, parents, community leaders, and technology developers. Engaging diverse groups in decision-making processes ensures that different perspectives and concerns are heard, which helps to identify potential ethical risks and social impacts early. This participatory approach enhances transparency, trust, and collective ownership of AI initiatives. Furthermore, it supports the development of culturally relevant and context-sensitive AI tools that better meet the needs of Nigeria's diverse learners. Inclusive engagement also helps to address equity issues by incorporating voices from marginalized or underserved communities, ensuring that AI adoption does not exacerbate existing inequalities but rather promotes access and fairness (Whittaker et al., 2018).

Robust Data Governance and Privacy Protection

Ensuring robust data governance and privacy protection is a core strategy for ethical AI adoption in education. AI systems rely heavily on the collection and processing of personal and academic data, making it essential to safeguard this information against misuse, breaches, or unauthorized access. Nigeria's education sector must implement clear policies that specify how data is collected, stored, shared, and consented to by students and parents. Strong technical infrastructure,



including encryption and secure servers, should be prioritized to protect sensitive data. Furthermore, aligning data governance with international standards helps build confidence among users and promotes transparency. Protecting privacy not only complies with legal obligations but also upholds students' dignity and autonomy, fostering trust in AI applications and encouraging their wider acceptance (Van Wynsberghe, 2021).

Regular Monitoring and Evaluation

Continuous monitoring and evaluation of AI systems in education are necessary to maintain ethical standards and ensure effective outcomes. AI technologies can evolve or produce unintended effects over time, such as reinforcing biases or producing inaccurate assessments. Establishing regular review mechanisms helps detect and address these issues promptly. Involving educators, students, and other stakeholders in evaluation processes provides valuable feedback to improve AI systems' performance and ethical compliance. Furthermore, transparent reporting of evaluation findings promotes accountability and allows policymakers to make informed decisions regarding AI's role in education. Regular assessment also supports iterative improvements, ensuring that AI tools remain aligned with educational objectives and ethical principles as technology and societal contexts change (Williams et al., 2020).

Conclusion

The integration of Artificial Intelligence (AI) into the Nigerian education system presents both opportunities and ethical challenges that must be carefully navigated. Ethics and values education play a vital role in guiding the responsible adoption and use of AI technologies, ensuring that they support fairness, transparency, privacy, and accountability. Promoting ethical literacy among educators and students helps safeguard human dignity and equity while maximizing the benefits of AI in learning and administration. Furthermore, developing clear ethical frameworks, providing continuous capacity building, involving diverse stakeholders, protecting data privacy, and establishing ongoing monitoring are essential strategies for embedding ethical AI practices in education. Addressing these ethical concerns is particularly important in Nigeria's diverse and resource-constrained context to prevent deepening inequalities and to foster an inclusive, just, and effective educational environment. Consequently, ethics and values education must remain central in policy formulation and implementation as AI continues to shape the future of Nigerian education.

Suggestions

Based on the literature review the following suggestions were made:

Policymakers should develop and enforce comprehensive ethical guidelines and regulations that govern AI use in education. These policies must address issues of data privacy, transparency, equity, and accountability to protect the rights of students and educators.

Educational Institutions should integrate ethics and values education into their curricula, ensuring that both educators and students understand the moral implications of AI technologies. Institutions should also invest in continuous professional development to equip teachers with the knowledge and skills required for responsible AI use.

Teachers and Educators should actively engage in capacity-building programs to improve their AI literacy and ethical awareness. They should serve as role models, demonstrating ethical AI use and guiding students to critically evaluate AI tools, fostering responsible digital citizenship.

Technology Developers should design AI systems that are transparent, fair, and culturally sensitive. Collaboration with educators and policymakers can help ensure that AI tools meet the specific needs of Nigeria's diverse educational landscape while minimizing bias and unintended harm.

Parents and Communities should be involved in discussions and decisions about AI adoption in schools. Their engagement promotes trust, supports students' rights, and ensures that AI implementation aligns with societal values and expectations.



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