

International Journal of Multidisciplinary Research and Growth Evaluation.



Leveraging Artificial Intelligence for Effective Social Work Practice and Primary School Administration in Nigeria: Emerging Issues and Mitigation Strategies

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Article Info

ISSN (Online): 2582-7138 Impact Factor (RSIF): 7.98

Volume: 06 Issue: 06

November - December 2025 Received: 07-09-2025 Accepted: 09-10-2025 Published: 01-11-2025

Page No: 83-90

Abstract

Education remains a fundamental pillar for national development, yet the administration of primary education in Nigeria continues to face persistent challenges, including inadequate funding, poor infrastructure, insufficient professional social workers, and limited technological integration. These constraints have significantly impeded administrative efficiency and the holistic development of learners. This study examines the potential of leveraging Artificial Intelligence (AI) to transform primary education administration by enhancing data-driven decision-making, automating administrative processes, and supporting social work practices through early detection of students' psychosocial needs. The paper emphasizes that successful AI adoption requires deliberate efforts to address infrastructural deficits, bridge the digital divide, strengthen data security, and manage resistance to technological change among educators. Its further advocates for government investment in digital infrastructure, continuous capacity building for teachers and administrators, and the establishment of ethical frameworks for responsible AI use. It concludes that when effectively implemented, AI can serve as a powerful catalyst for achieving sustainable educational administration, improved social work service delivery, and holistic development in Nigeria's primary education system. It recommended that continuous professional development programs should be organized for school administrators, teachers, and social workers to enhance their digital literacy and technical competence in integrating AI applications into teaching, learning, and administrative processes.

Keywords: Artificial Intelligence, Primary Education Administration, Digital Infrastructure, Social Work Practice, Educational Management

Introduction

Education is globally viewed as a tool for social-political and economic development. The education system in Nigeria is classified into: Early Childhood Education (pre-primary), Primary

Education, Secondary Education, Tertiary Education, and Adult and Non-formal Education (Iyaji *et al.*, 2024; Federal Republic of Nigeria, 2013) [24, 21]. The importance of education lies in its focus on equipping learners with fundamental literacy, essential life skills and competencies for personal growth, productive living, and national development (Difoni *et al.*, 2025; Obona *et al.*, 2024; Olofinkua *et al.*, 2025; Amagboruju *et al.*, 2025; Iwogbe *et al.*, 2025) [15, 35, 39, 9, 25]. However, despite its role in individual, economic and nation building, many educational institutions lack trained social workers. Others face challenges in terms of funding, technology, and administration, which has overtime impeded the attainment of set goals.

One significant challenge facing social work practice in Nigerian education is the shortage of trained professional social workers integrated into school systems, which results in inadequate provision of student welfare, counselling and psychosocial support services (Abiola & Babatunde, 2022) [2].

Literature has focused attention on issues of policies, investment, infrastructure and instructional facilities that are grossly inadequate and students" poor performance but not on the psychosocial wellbeing of the students (Ogundare, 2018) [36]. On their part, Adelana and Akinyemi (2021) [4] noted that the Nigerian school system continues to face substantial challenges in areas such as administration, resource distribution, performance evaluation, and effective decision-making. Ughenu et al. (2025) [49] further observed that most school management practices still rely heavily on traditional approaches characterized by manual recorddata tracking, keeping, inconsistent and administrative responses—factors that hinder the efficient functioning of schools. Likewise, Willie et al. (2025) [52] identified poor teacher commitment and negative work attitudes as major obstacles confronting public schools. Thus, the Nigerian primary education sector faces challenges such as inadequate funding, insufficient qualified teachers, poor infrastructure, and regional disparities in enrolment and learning outcomes, which continue to affect the overall quality of education delivery in the country. These gaps limit effective intervention in students' behavioural, emotional, and social problems, thereby affecting overall school discipline, student welfare, and academic performance. To safeguard the future of education, it is crucial that these deficiencies are urgently addressed.

In the contemporary era of educational management, the adoption of technology has become essential for enhancing administrative efficiency, ensuring transparency, and facilitating evidence-based decision-making (Iwogbe et al., 2025) [25]. Among these innovations, Artificial Intelligence (AI) stands out as a transformative tool capable of revolutionizing school administration by promoting datadriven practices, improving responsiveness, and fostering accountability (Iwogbe et al., 2025) [25]. Premised on this therefore, the present study, aims to explore how leveraging Artificial Intelligence (AI) can enhance effective social work practice and school administration. It examines key concepts and the role of AI-powered tools in improving administrative processes. In addition, the study identifies challenges to AI adoption and proposes mitigation strategies. The study is focused on providing key insights for school administrators, educators, and other stakeholders in the Nigerian education sector.

Meaning of Artificial Intelligence (AI)

Artificial Intelligence (AI) refers to computer-based systems designed to perform tasks that exhibit characteristics of human intelligence. It is a field of computer science that applies algorithms, programs, and large data sets to create intelligent systems capable of simulating cognitive functions. The term "artificial intelligence" literally signifies a form of intelligence that is man-made rather than naturally occurring, mirroring human thought processes through computational means. This aligns with Alagbe (2023) [7], who defines AI as a machine's ability to imitate cognitive processes typically associated with human reasoning and decision-making. Similarly, Halaweh (2023) [22] describes AI as an outcome of continuous scientific and technological evolution, while Igbokwe in Iyaji et al. (2024) [24] defines it as an advanced technology that reproduces human cognitive abilities through machine learning algorithms, neural networks, and natural language processing. Lin (2024) [27] further conceptualizes AI as the design of machines that can execute tasks ordinarily

requiring human intelligence. Ogunode (2023) describes AI as computer programs embedded in robots and other devices that replicate intelligent behavior and contribute to social, economic, and political advancement. Likewise, Igbokwe (2024) [23] portrays AI as a sophisticated innovation that emulates human cognitive abilities using tools such as machine learning, neural networks, and natural language processing (NLP).

In recent years, AI has emerged as a transformative force in education, offering significant potential across diverse disciplines. AI systems are capable of learning, reasoning, and problem-solving—activities traditionally performed by humans (Krogh, as cited in Mohd Amin & Ismail, 2025) [28]. These include drawing inferences from past experiences or data, identifying patterns and objects, comprehending language, and making rational decisions that resemble human thought processes. AI draws upon knowledge and technologies from multiple fields to enhance efficiency, innovation, and adaptability (Lin, 2024) [27]. As noted by Jain et al. in Khan et al. (2023) [26], the impact of AI on education is both extensive and profound. By employing complex algorithms and vast data sets, AI technologies can autonomously identify patterns, predict outcomes, and optimize learning processes—thereby minimizing reliance on direct human intervention while improving decisionmaking and performance outcomes.

Educational administration

Within the context of this study, administration refers to the purposeful process of planning, organizing, coordinating, and managing both human and material resources to achieve the desired educational objectives of primary schools. School administration is a continuous and dynamic process that integrates all aspects of school operations-policies, personnel, materials, and activities—to achieve institutional objectives. The administration of education in Nigeria plays a pivotal role in enhancing the quality of teaching and learning. Akinwumi and Jayeoba (2004) [6] describe it as the systematic organization and utilization of resources and programs in a scientific manner to attain educational goals. In the same vein, Iwogbe et al. (2025) [25] define administration as the strategic deployment of institutional accomplish predetermined objectives. resources to According to Akinola, as cited in Nwannunu et al. (2024) [31], the effectiveness of school administration is assessed by the degree to which educational goals are realized.

Educational administration encompasses several critical functions, including curriculum management, staff supervision, policy implementation, and the prudent allocation of financial and infrastructural resources. Ngene and Obona (2024) [35] emphasize that efficient school management enhances instructional quality and strengthens student learning outcomes, while Sule et al. (2013) [45] highlight the administrator's central role in coordinating finance, facilities, personnel, instructional programs, and community relations—acting as a vital link between educational policies and classroom practices. Difoni et al. (2025) [16] identify effective administration as the bedrock of a successful secondary education system. Similarly, Osiesi (2023) [40] asserts that the realization of educational goals is largely dependent on systematic planning and effective administrative practices. Ughenu et al. (2025) [49] further that administration involves coordinated management, supervision, and continuous monitoring and evaluation to achieve set goals. Likewise, Nanbak, as cited in Ughenu *et al.* (2025) [49], views educational administration as the leadership process that propels school development through the optimal use of human, material, and physical resources. This perspective underscores the indispensable role of effective administration in realizing the objectives of primary education in Nigeria. It serves as a cornerstone for improving educational quality, ensuring efficiency, promoting transparency and accountability, and facilitating the successful implementation of educational reforms, innovations, and policies that advance the interests of students, teachers, and society at large.

Primary Education in Nigeria

Primary education in Nigeria represents the bedrock of the entire educational system and serves as the foundation upon which all other levels of learning are built. It is the initial stage of formal education designed to equip children with essential literacy, numeracy, communication, and life skills required for personal growth and national development. This stage typically lasts for six years, beginning around the age of six and culminating in the Primary Six Certificate Examination, which qualifies pupils for admission into junior secondary school. According to the National Policy on Education (Federal Republic of Nigeria, 2013) [21], the objectives of primary education include the inculcation of permanent literacy and numeracy, the development of effective communication skills, the promotion of moral and civic values, and the ability to adapt to changing environments. In line with these objectives, the Universal Basic Education (UBE) Programme was introduced to make primary education free and compulsory, thereby promoting access, equity, and quality across Nigeria's basic education sector.

The importance of primary education in Nigeria cannot be overstated, as it plays a critical role in shaping children's intellectual, moral, and social development. It occupies a central position in the nation's educational hierarchy, serving as the foundation for secondary and tertiary education, and forming the cornerstone for lifelong learning and sustainable national progress. As observed by Tatbotndip (as cited in Ughenu et al., 2025) [49], primary education constitutes the most critical stage that prepares learners for higher levels of learning. Its goals encompass ensuring lasting literacy and numeracy, instilling moral discipline, promoting citizenship education, imparting foundational knowledge, and preparing pupils for secondary education. Furthermore, it seeks to develop effective communication skills, enhance national awareness, and cultivate cooperation, tolerance, and appreciation among learners (Federal Republic of Nigeria, 2008; Obona & Etete, 2019) [19, 34].

Primary education in Nigeria is strategically established to achieve specific developmental and educational goals. These include instilling civic responsibility, moral uprightness, and a sense of national identity, as well as fostering early interest in learning, problem-solving, and critical thinking (Amagboruju *et al.*, 2025) [9]. Etor *et al.* (2018) [17] further assert that the attainment of primary education goals is reflected in learners' acquisition of knowledge and measurable teaching and learning outcomes, which

collectively contribute to the nation's human capital development and educational advancement.

Social work practice

Social work practice is a professional and evidence-based discipline focused on improving the well-being of individuals, families, and communities through advocacy, empowerment, and support services. It applies relevant theories and principles to address social and personal challenges such as poverty, discrimination, abuse, and mental health concerns across various institutional settings including schools, hospitals, and community agencies. According to Abiola and Babatunde (2022) [2], the inclusion of social workers in school environments helps students manage psychosocial challenges that affect their learning. Guided by professional ethics and human rights, social workers perform diverse roles such as counseling, case management, community development, and policy advocacy to promote social justice and human development.

Within schools, social work practice—known as school social work—plays a critical role in fostering students' academic, social, and emotional growth. It involves collaboration among students, teachers, parents, and administrators to promote positive behavior, academic success, and mental well-being (School Social Work Association of America, 2022; Abiola & Babatunde, 2022) [43, 2]. In the Nigerian context, where students often face social vices, neglect, and abuse, school social workers intervene by developing culturally sensitive strategies to address these challenges (Ugbodaga, 2016) [48]. They employ counseling, group therapy, and family interventions while liaising with school staff and external agencies to ensure effective service delivery (Amadi, 2014) [8]. Overall, social work practice seeks to empower individuals, build strong community structures, and facilitate sustainable social transformation.

Leveraging Artificial Intelligence for Primary Education Administration

The integration of Artificial Intelligence (AI) into primary education administration provides innovative means to enhance efficiency, streamline decision-making, and personalize learning experiences, thereby transforming school management and goal attainment. AI applications in education include intelligent tutoring systems, predictive analytics, and automated administrative tools (Nwoye et al., 2024) [33]. These technologies promote knowledge acquisition, support online learning (Srinivasa et al., 2022) [44], and contribute to multiple areas such as academics, security, and health management (Abayomi et al., 2021; Sanusi et al., 2022; Falode et al., 2021; Anazodo et al., 2022; Muhammad et al., as cited in Ughenu et al., 2025) [1, 42, 18, 10, ^{49]}. Beyond problem-solving, AI performs complex administrative functions such as planning, organizing, and executing tasks that traditionally require human intelligence. In school settings, AI enhances productivity by automating processes like student recruitment, course advising, enrolment, record management, attendance tracking, and timetable generation (Sanusi et al., 2022; Arya, 2024) [42, 11]. As noted by Mureşan (2023) [29], AI-driven systems reduce administrative workload and enable educational

administrators to focus on more strategic and developmental responsibilities.

- 1. AI-Powered Analytics: In social work practice, AIpowered analytics can help identify vulnerable individuals or communities by analyzing behavioral and demographic data, allowing social workers to predict risks such as abuse, neglect, or mental health crises and intervene proactively. This enhances data-driven decision-making and targeted service delivery. Artificial Intelligence enhances educational administration through the use of predictive analytics. By utilizing machine learning techniques, schools can examine student records to forecast academic achievement, identify learners requiring additional assistance, and predict enrollment patterns for effective planning (Chen, as cited in Ughenu et al., 2025) [49]. AI technologies further support forecasting in areas such as staffing and budgeting (Ajuwon et al., 2024) [5] and allow comparisons of educational outcomes across institutions to highlight effective practices (Olatunde-Aiyedun, 2024) [38]. Additionally, AI-based data visualization simplifies interpretation, helping administrators make sound, evidence-based decisions. In Nigeria, this innovation can guide policymakers in efficiently distributing limited resources and strengthening institutional performance.
- 2. AI-Enabled Automated Grading Systems: Automated evaluation tools can be adapted in social work training and supervision to assess case reports or client feedback objectively, reducing bias and saving time for social workers to focus on client engagement and intervention strategies. In educational administration, Artificial Intelligence simplifies assessment by automating the grading of tests and assignments, promoting impartiality and decreasing teachers' workload (Bali et al., 2024; Sanusi et al., 2022; Srinivasa et al., 2022) [13, 42, 44]. Automated feedback mechanisms enable students to receive instant evaluations, encouraging quicker learning and allowing teachers to focus more on instruction and mentorship. In the Nigerian context, where teachers often manage overcrowded classrooms, AI-assisted grading can greatly improve administrative efficiency and overall teaching quality.
- 3. AI-Driven Tutoring and Scheduling Systems: AI can be applied in social work education and field practice to create personalized learning modules for trainees and to optimize client appointment schedules, ensuring that social workers manage their caseloads effectively and provide timely, individualized support. Moreso, AI personalizes learning by adapting instructional content to suit each learner's strengths, weaknesses, and learning preferences (Arya, 2024; Fullan, 2023) [11, 20]. Adaptive learning technologies analyze performance data to develop individualized learning routes that enhance student participation and achievement. Additionally, AI improves administrative operations by creating optimized class schedules that align teacher timetables with classroom availability (Pope, 2020) [41]. This approach can help Nigerian schools manage scarce resources effectively while addressing diverse student learning needs.
- **4. AI-Enabled Student Information Management Systems:** In social services, AI-driven information systems can manage client data efficiently by automating record updates, tracking case progress, and ensuring data accuracy,

- which enhances accountability, confidentiality, and service coordination. AI improves school record management by automating updates on grades, attendance, and progress reports. The integration of biometric and facial recognition systems strengthens attendance tracking accuracy and minimizes manual errors (Ajuwon *et al.*, 2024) ^[5]. For Nigerian institutions, such systems help reduce administrative bottlenecks and ensure the availability of credible data for strategic decision-making.
- 5. AI-Enhanced Teacher Support: Artificial Intelligence educators in lesson planning, assists curriculum development, and student assessment. It also provides analytic feedback that identifies professional growth opportunities (Bali et al., 2024) [13]. Learning Management Systems (LMS) supported by AI facilitate continuous communication between teachers and learners, leading to improved engagement and retention (Fullan, 2023) [20]. Moreover, AI can produce instructional materials, including digital textbooks and interactive learning resources, using natural language processing (Culican, 2024) [14]. In Nigeria, these innovations can help reduce teachers' workload, enhance instructional quality, and encourage creative teaching practices. For social workers, AI tools can provide case management support, generate assessment reports, and recommend evidence-based interventions. These systems can also suggest relevant training or resources for professional development and improve client communication through digital platforms.
- **6. AI-Powered Student Support:** In social work practice, AI-driven chatbots and virtual assistants can offer 24/7 support to clients, providing information, counseling, and crisis response. They can also help identify at-risk individuals by monitoring behavioral patterns, ensuring early intervention and better client outcomes. Through chatbots and virtual assistants, AI delivers real-time academic and administrative support to students. It also plays a vital role in areas such as mental health monitoring, career guidance, and early detection of learners at risk of failure or dropout (Ajuwon *et al.*, 2024; Tahir, 2024) ^[5, 46]. By facilitating accessible, flexible learning experiences, AI ensures that students in Nigeria—particularly in remote or underserved communities—receive timely help and intervention, which contributes to better retention and success rates.
- 7. AI-Driven Infrastructure Management: AI contributes to efficient management of school facilities and resources by employing smart sensors and automated systems that regulate energy consumption, schedule maintenance, and optimize space utilization. It also strengthens school security by safeguarding networks and student information, while improving transportation logistics for safety and cost reduction (Ughenu et al., 2025) [49]. In the Nigerian education system, integrating AI in infrastructure management can lower operational expenses, enhance campus safety, and promote sustainable institutional development. AI can improve the management of social service facilities through automated systems that monitor safety, manage resources, and protect sensitive client data. This ensures safer environments for both clients and practitioners while promoting operational efficiency and sustainability in social welfare organizations.

Emerging Issues in the Adoption of Artificial Intelligence for Primary Education Administration

- 1. Infrastructural Deficiencies: A major challenge hindering the integration of Artificial Intelligence (AI) in Nigeria's educational administration is the lack of adequate infrastructure. Many primary schools still lack essential digital tools such as computers, tablets, and smart devices needed for deploying AI applications. In addition, erratic power supply and weak internet connectivity in several parts of the country significantly limit the effective utilization of AI technologies. These infrastructural constraints negatively affect students' learning experiences and reduce administrative productivity across schools.
- 2. Resistance to Change: Resistance from teachers and school administrators also poses a serious barrier to the successful adoption of AI in education. Some educators are skeptical about the efficiency of AI tools, often perceiving them as complex technologies that may increase workload or even threaten job security. Arya (2024) [11] observed that many teachers are inadequately prepared to incorporate AI into teaching and administrative practices. This challenge is worsened by limited training opportunities and lack of familiarity with AI applications, leading to hesitation in their use. Without consistent orientation and capacity-building programs, educators' reluctance to embrace AI could slow its effective integration in Nigerian schools.
- **3. Data Privacy and Security Concerns:** Safeguarding data remains a key concern in the use of AI within educational settings. The deployment of AI technologies requires handling large volumes of sensitive information about students and staff, including academic, behavioral, and personal records. This raises fears of data breaches and misuse. Adherence to global data protection standards such as the GDPR and FERPA requires robust measures, including encryption, secure data storage, and restricted system access (Cummings *et al.*, cited in Ughenu *et al.*, 2025; Igbokwe *et al.*, 2024) [49, 23]. In Nigeria, where digital data protection laws are still developing, ensuring the privacy and ethical use of AI-based systems presents a significant challenge to educational administrators.
- 4. Accessibility and Lack of Training: Limited access to digital tools and inadequate training among teachers and students also hinder AI adoption. Many learners, particularly those in rural or low-income areas, lack smartphones, computers, or stable internet connectivity, making it difficult to engage with AI-driven learning platforms (Awofiranye, 2024) [12]. This digital divide exacerbates educational inequality, as students with access benefit more than those without. Similarly, Nwogbo et al. (2024) [32] found that school management promotes AI integration only to a minimal extent. Udeani (2019) [47] further noted that the rising social issues in Nigeria, without a proportional increase in qualified social workers, underscore the urgent need for properly trained professionals. Many individuals currently acting as school social workers lack adequate training or come from unrelated fields, highlighting a broader issue of insufficient professional development and digital readiness.
- **5. Dehumanizing the Learning Experience:** Another concern surrounding AI integration is the potential dehumanization of the learning process (Ughenu *et al.*, 2025)

- [49]. While AI can automate administrative tasks and personalize instruction, it cannot replace the essential human qualities of empathy, mentorship, and moral guidance that teachers provide. Overreliance on AI may weaken the interpersonal relationships crucial for students' emotional and social growth (Adlawan, 2024) [3]. Therefore, a balanced approach that integrates AI while preserving meaningful human interaction is vital for holistic education (Kacheru, 2025)
- 6. High Cost of Implementation: The high financial cost associated with AI adoption represents one of the most significant challenges in Nigerian education. The initial expenses for acquiring AI software, hardware, and infrastructure are often beyond the financial capacity of most schools (Ughenu et al., 2025) [49]. Additionally, there are recurring costs for maintenance, software upgrades, and continuous training of teachers and administrators to keep up with evolving technologies. Unegbu et al. (2024) [50] reported a general reluctance toward AI utilization due to these financial limitations. Given tight budgets and competing educational priorities, many schools struggle to sustain AI investments, thereby hindering its widespread implementation.

Mitigation Strategies

Addressing infrastructural gaps, strengthening data security, providing adequate funding, and investing in capacity building are essential for harnessing the full potential of AI to improve both teaching and administrative efficiency.

- To bridge infrastructural gaps, the government and relevant stakeholders should prioritize investment in digital infrastructure such as stable internet connectivity, personal computers, and smart devices for schools. Additionally, adopting renewable energy solutions like solar-powered systems can mitigate electricity shortages and ensure the continuous operation of AI tools in the education sector.
- 2. Resistance to AI adoption can be minimized through sustained professional development and sensitization initiatives. Teachers, social workers and administrators should participate in structured training workshops designed to build competence and confidence in using AI applications. Awareness campaigns emphasizing that AI is a supportive rather than a replacement tool can help dispel fears of job loss. Moreover, mentorship programs where early adopters support their peers can foster positive attitudes and smoother transitions toward AI integration.
- 3. Formulating and enforcing strong data protection policies is vital to safeguard sensitive educational information. Schools should adopt robust cybersecurity measures, including data encryption, password-protected systems, and role-based access controls. Aligning with national standards such as the Nigeria Data Protection Regulation (NDPR) will further ensure ethical AI use. Additionally, administrators should receive training on cybersecurity protocols to promote compliance and prevent data breaches.
- 4. To promote inclusivity, government and school authorities should implement digital equity initiatives such as subsidized internet access and affordable smart devices for disadvantaged students. Establishing AIenabled digital resource centers within schools will also

- enhance access. Furthermore, integrating digital literacy into the curriculum will equip both teachers and students with the skills needed to effectively utilize AI tools, thereby reducing the risk of digital exclusion.
- 5. AI implementation in education should enhance, not replace, the human dimension of learning. Policies should support blended learning models where AI automates administrative and instructional tasks while teachers focus on mentoring, emotional support, and moral development. Clear institutional guidelines should emphasize the irreplaceable role of teachers in fostering character formation and holistic student growth, ensuring a balanced integration of technology and human interaction.
- 6. Governments should establish special intervention funds and grants to aid public schools in AI adoption. Likewise, collaborations with technology firms can provide discounted services and pilot projects.

Conclusion

Education remains the cornerstone of social, political, and economic development in Nigeria, serving as a vital instrument for nurturing human capital and promoting national progress. However, the effectiveness of primary education administration continues to be hindered by systemic challenges such as inadequate funding, poor infrastructure, lack of professional social workers, and limited technological integration. These deficiencies have negatively impacted administrative efficiency, student welfare, and overall learning outcomes. In the contemporary educational landscape, leveraging Artificial Intelligence (AI) presents a transformative opportunity to address these challenges by enhancing data-driven decision-making, automating routine administrative tasks, improving efficiency, and supporting social work practice through early detection of students' psychosocial needs. Nevertheless, the successful adoption of AI in Nigerian primary education requires deliberate efforts to overcome infrastructural deficits, ensure data privacy, manage resistance to change, and bridge the digital divide. It is therefore imperative for the government, policymakers, and educational stakeholders to prioritize investment in digital infrastructure, teacher training, and ethical AI policies that balance technological innovation with the human elements of empathy, mentorship, and moral guidance. When effectively implemented, AI can serve as a powerful catalyst for achieving sustainable educational administration, improved social work service delivery, and holistic development in Nigeria's primary education system.

Recommendations

Arising from the findings, the study recommends thus:

- 1. The government should allocate adequate funds for the provision of reliable internet access, electricity, and digital devices in primary schools to support the effective deployment and utilization of Artificial Intelligence (AI) tools for educational administration.
- 2. Continuous professional development programs should be organized for school administrators, teachers, and social workers to enhance their digital literacy and technical competence in integrating AI applications into teaching, learning, and administrative processes.
- 3. The Ministry of Education, in collaboration with relevant stakeholders, should develop clear policies and ethical

- guidelines to ensure data privacy, transparency, and accountability in the use of AI systems in primary education administration.
- 4. Educational administrators should adopt AI-driven systems that can complement social work practices by identifying students' psychosocial challenges early, thereby promoting timely interventions that enhance learners' welfare and academic performance.

References

- 1. Abayomi OK, Adenekan FN, Abayomi AO, Ajayi TA, Aderonke AO. Awareness and perception of artificial intelligence in the management of university libraries in Nigeria. J Interlibr Loan Doc Deliv Electron Reserve. 2021;29(1-2):13-28.
- Abiola AO, Babatunde AF. School social work practice and its challenges in public senior secondary schools in Nigeria [Internet]. Ibadan: Ibadan Adult Education Journals; 2022 [cited 2025 Nov 7]. Available from: https://ibadanadulteducationjournals.com.ng/media/202 2/12/School-Social-Work-Practice-and-Its-Challengesin-Public-Senior-Secondary-Schools-in-Nigeria.pdf
- 3. Adlawan D. The pros and cons of AI in education and how it will impact teachers in 2024 [Internet]. 2024 [cited 2025 Nov 7]. Available from: https://www.classpoint.io/blog/the-pros-and-cons-of-ai-in-education
- Adelana OP, Akinyemi AL. Artificial intelligence-based tutoring systems utilization for learning: a survey of senior secondary students' awareness and readiness in Ijebu-Ode, Ogun State. UNIZIK J Educ Res Policy Stud. 2021;9(1):16-28.
- 5. Ajuwon OA, Animashaun ES, Chiekezie NR. Integrating AI and technology in educational administration: improving efficiency and educational quality. Open Access Res J Sci Technol. 2024;11(2):116-27. doi: https://doi.org/10.53022/oarjst.2024.11.2.0102
- Akinwumi FS, Jayeoba FI. Principles and practice of school administration. Ibadan: Bash-Moses Printing Company; 2004.
- Alagbe J, Awodele O, Ayorinde I. Is Nigeria ready for artificial intelligence in schools? Punch Nigeria [Internet]. 2021 [cited 2025 Nov 7]. Available from: https://punchng.com/is-nigeria-ready-for-artificialintelligencein-schools/
- 8. Amadi MN. Organisation and management of schools in Nigeria: past and present. Lagos: Vitaman Educational Books: 2014.
- 9. Amagboruju V, Achunekang SI, Maxwell D, Obona EE, Uche CV-A. Head teachers' motivational practices and teachers' work attitude: a contextual analysis of public primary schools in Calabar Metropolis, Cross River State, Nigeria. Int J Educ Manag Sci Prof Stud. 2025;1(2):443-56. Available from: https://journals.iempsglobal.org/index.php/IJEMPS
- 10. Anazodo UC, Adewole M, Dako F. AI for population and global health in radiology. Radiol Artif Intell. 2022;4(4):23-34.
- 11. Arya S. Adoptions of AI in education: a systematic literature review [Internet]. 2024 [cited 2025 Nov 7]. doi: https://doi.org/10.21203/rs.3.rs-3978368/v1
- 12. Awofiranye M. The challenges of using AI in education [Internet]. 2024 [cited 2025 Nov 7]. Available from:

- https://www.afterschoolafrica.com/78994/the-challenges-of-using-ai-in-education/
- Bali B, Garba EJ, Ahmadu AS, Takwate KT, Malgwi YM. Analysis of emerging trends in artificial intelligence for education in Nigeria. Discov Artif Intell. 2024;4(1). doi: https://doi.org/10.1007/s44163-024-00163-y
- 14. Culican J. The impact of AI on educational content creation: shaping the future of learning materials [Internet]. 2024 [cited 2025 Nov 7]. Available from: https://www.linkedin.com/pulse/impact-ai-educational-content-creation-shaping-futurejamie-culican-o7n
- 15. Difoni NN, Imeh AA, Osha MI, Obona EE. Assessing the relationship between principals' instructional supervisory strategies and teachers' job performance in public secondary schools. Unizik J Educ Laws Leadersh Stud (UNILAWS). 2025;1(1).
- 16. Difoni NN, Iwogbe EC, Nwokonko RN, Obona EE. Headteachers' instructional supervisory practices and teachers' professional effectiveness in private primary schools. UNIAFRICA J Educ. 2025;4(1):135.
- 17. Etor CR, Obeten RB, Obona EE. Management of skill-oriented subjects and goal attainment in private secondary schools in Ikom Education Zone, Cross River State, Nigeria. Glob J Educ Res. 2019;18(1):27-34. doi: https://doi.org/10.4314/gjedr.v18i1.4
- 18. Falode AJ, Faseke BO, Ikeanyichukwu C. Artificial intelligence: the missing critical component in Nigeria's security architecture. LASU J Hist Int Stud (LAJOHIS). 2021;3(1):18-37.
- 19. Federal Republic of Nigeria. National policy on education. Lagos: NERDC Press; 2008.
- Fullan M, Azorín C, Harris A, Jones M. Artificial intelligence and school leadership: challenges, opportunities and implications. Sch Leadersh Manag. 2023;1(1):56-67. doi: https://doi.org/10.1080/13632434.2023.2246856
- 21. Federal Republic of Nigeria. National policy on education. 6th ed. Abuja: Nigerian Educational Research and Development Council (NERDC); 2013.
- 22. Halaweh M. ChatGPT in education: strategies for responsible implementation. Contemp Educ Technol. 2023;15(2):ep421. doi: https://doi.org/10.30935/cedtech/13036
- 23. Igbokwe IC. Application of artificial intelligence (AI) in educational management. Int J Sci Res Publ. 2023;13(3):300-7. doi: https://doi.org/10.29322/IJSRP.13.03.2023.p13536
- 24. Iyaji M, Ebele CI, Obona EE. Application of artificial intelligence to record management in tertiary institutions in Cross River State. NAEAP J Stud Educ Adm Manag. 2024;4(1):263.
- 25. Iwogbe EC, Chigbo-Obasi TU, Ezeanwu MC, Obona EE. Educational management information system (EMIS), a strategic tool for promoting primary education administration: emerging challenges and sustainable solutions. Int'l J Educ Res Sci Dev. 2025;8(1):1-10. Available from: https://ijresd.net/index.php/ijresd/article/view/231
- 26. Khan MMRR, Bin Habib S, Tasnim ST, *et al.* Educational AI and ethical growth: exploring the effects of ChatGPT on student learning strategies, critical thinking, and academic ethics from a Bangladeshi academic perspective. In: Proceedings of the 2023 26th

- International Conference on Computer and Information Technology (ICCIT); 2023. p. 1-6. doi: https://doi.org/10.1109/iccit60459.2023.10441564
- 27. Lin Y. Adapting to the AI era: higher education's opportunities and challenges with ChatGPT. In: Proceedings of the 2nd International Conference on Social Psychology and Humanity Studies; 2024. doi: https://doi.org/10.54254/2753-7048/40/20240734
- 28. Mohd Amin MR, Ismail I. Revolutionizing education with artificial intelligence (AI): challenges and implications for open and distance learning (ODL). Soc Sci Humanit Open. 2025;12:101308. doi: https://doi.org/10.1016/j.ssaho.2025.101308
- 29. Mureşan M. Impact of artificial intelligence on education. Res Assoc Interdiscip Stud. 2023;2(1):24-34. doi: 10.5281/zenodo.8132828
- 30. Ngene AN, Obona EE. The relationship between education management information systems (EMIS) and administrative effectiveness in public secondary schools in Cross River State, Nigeria. Niger J Educ Leadersh Manag. 2024;8(2):94.
- 31. Nwannunu BI, Madukwe EC, Obona EE. Utilization of education management information system (EMIS) and principals' administrative effectiveness in secondary schools in Ikom Education Zone, Cross River State, Nigeria. J Assoc Educ Manag Policy Pract (JAEMPP). 2024;6(1). Available from: https://journals.aemapp.org
- 32. Nwogbo VN, Agogbua VU, Anierobi EI. Extent of integration of artificial intelligence in teaching and learning in public universities in Anambra state. UNIZIK Orient J Educ. 2024;12(1):99-107.
- 33. Nwoye CO, Nwosu KC, Okoroji NO. Artificial intelligence and transformation of the education sector: a study of public secondary schools. Int J Acad Appl Res (IJAAR). 2024;8(10):77-83. Available from: www.ijeais.org/ijaar
- 34. Obona EE, Sampson MAE. Performance appraisal and staff commitment in secondary schools in Calabar Municipality, Cross River State, Nigeria. Int J Educ Adm Plan Res. 2019;11(2):26-39. doi: https://doi.org/10.5281/zenodo.5234895
- 35. Obona EE, Okonkwo CO, Ejom SI. Management of educational resource wastage as a predictor of administrative effectiveness in public universities. Sch J Contemp Issues Educ (SJCIE). 2024;5(1):127.
- 36. Ogundare T. In Lagos, public schools grow, teachers, students groan [Internet]. 2018 [cited 2025 Nov 7]. Available from: https://tribuneonlineng.com/in-lagos-public-schools-grow-teachers-students-groan/
- 37. Olaleye YL, Olusa R. Highlighting the role of academic advisers in creating positive learning environment for vulnerable students in Nigeria [Internet]. 2021 [cited 2025 Nov 7]. Available from: https://www.researchgate.net/publication/350241214
- 38. Olatunde-Aiyedun TG. Artificial intelligence (AI) in education: integration of AI into science education curriculum in Nigerian universities. Int J Artif Intell Digit. 2024;1(1):14-24.
- 39. Olofinkua VK, Onafowope MA, Oweikpodor VG, Obona EE. Utilization of digital resources and academic staff job effectiveness in University of Calabar, Nigeria. Int Nexus Multidiscip Res J. 2025;1(1):136. Available from: https://journals.classicmultilinks.com
- 40. Osiesi MP. Emerging issues in educational planning and

- management in Nigeria: implications for educational evaluators. Int J Acad Appl Res (IJAAR). 2023;7(2):60-4. ORCID: https://orcid.org/0000-0002-7660-6127
- 41. Pope N. AI-based scheduling systems: enhancing educational efficiency. Educ Technol Res Dev. 2020;68(2):351-68. doi: https://doi.org/10.1007/s11423-019-09728-0
- 42. Sanusi IT, Olaleye SA, Agbo FJ, Chiu TKF. The role of learners' competencies in artificial intelligence education. Comput Educ Artif Intell. 2022;3(1):34-45. doi: https://doi.org/10.1016/j.caeai.2022.100098
- 43. School Social Work Association of America. Role of school social worker [Internet]. 2022 [cited 2025 Nov 7]. Available from: https://www.sswaa.org/school-social-work
- 44. Srinivasa KG, Kurni M, Saritha K. Harnessing the power of AI to education. In: Learning, teaching, and assessment methods for contemporary learners: pedagogy for the digital generation. Singapore: Springer Nature Singapore; 2022. p. 311-42.
- 45. Sule MA, Adetoro JA, Elueme CL. The role of administrators in the management of secondary schools in Nigeria. Int J Acad Res Prog Educ Dev. 2013;2(1):411-7.
- 46. Tahir M, Hassan FD, Shagoo MR. Role of artificial intelligence in education: a conceptual review. World J Adv Res Rev. 2024;22(1):1469-75. doi: https://doi.org/10.30574/wjarr.2024.22.1.1217
- 47. Udeani CC. Social work in contemporary Nigerian society: challenges and prospects. J Soc Work Dev Soc. 2019;1(1):1-16.
- 48. Ugbodaga K. Lagos decries shortage of social workers in schools [Internet]. 2016 [cited 2025 Nov 7]. Available from: https://pmnewsnigeria.com/2016/12/12/lagos-decries-shortage-of-social-workers-inschools/
- 49. Ughenu NP, Ukandu CJ, Okeke UN, Akpulue CE, Ughamadu U. Leveraging artificial intelligence in educational planning and management of secondary schools in Nigeria. World J Innov Mod Technol. 2025;9(4):62-73. doi: https://doi.org/10.56201/wjimt.v9.no4.2025.pg62.73
- 50. Unegbu PI, Okafor OA, Asuzu E-M. Level of awareness and utilization of artificial intelligence in the teaching of business education in colleges of education in Anambra state. J Cent Tech Vocat Educ Train Res (JOCETVETAR). 2024;6(1):206-10.
- 51. UNICEF. Situation of women and children in Nigeria: challenges faced by women and children in Nigeria [Internet]. 2022 [cited 2025 Nov 7]. Available from: https://www.unicef.org/nigeria/situation-women-and-children-nigeria
- 52. Willie TB, Undie LI, Obona EE, Nsien EC. Motivational practices and teachers' attitude to work in public secondary schools in Calabar South Local Government Area, Cross River State. Sk Int Res Dev J. 2025;2(1):79-95. Available from: https://skirj.ijresd.net/index.php/skerji/article/view/51
- 53. Kacheru N, Arthan N, Bajjuru R. A machine learning-based device for automating testing in software development. German Utility Model DE2025100534U1. 2025 Feb 3.

How to Cite This Article

Uchenna OJ, Offor NM, Folake LA. Leveraging artificial intelligence for effective social work practice and primary school administration in Nigeria: Emerging issues and mitigation strategies. Int J Multidiscip Res Growth Eval. 2025;6(6):83-90.

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