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OPPORTUNITIES AND CHALLENGES OF INTEGRATING ARTIFICIAL INTELLIGENCE IN THE MANAGEMENT OF SECURITY IN SECONDARY SCHOOLS IN ANAMBRA STATE

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Abstract

The study investigated the opportunities and challenges of integrating artificial intelligence (AI) in managing security in secondary schools in Anambra State. Two research questions guided the study while two hypotheses were tested at the 0.05 significance level. A descriptive survey design was adopted. The population comprised 267 principals of public secondary schools in Anambra State, consisting of 159 males and 108 females. The entire population was studied. Data were collected using a validated self-structured questionnaire. Reliability was determined using Cronbach Alpha, yielding coefficients of 0.88 and 0.89 for Clusters 1 and 2, with an overall coefficient of 0.89. Mean, standard deviation and t-test were employed for data analysis. Findings revealed that AI integration offers opportunities such as real-time monitoring, predictive analysis and minimised human error in surveillance. Major challenges identified include high implementation costs, inadequate technical expertise, resistance to technology adoption, poor infrastructure and insufficient personnel training. Results further indicated a significant gender difference in principals' views on AI opportunities. The study concluded that AI provides substantial prospects for improving security management in secondary schools in Anambra State. It recommended increased government investment in security infrastructure to support AI-driven surveillance and protection systems.

Keywords: Artificial Intelligence (AI), Challenges, Management, Opportunities, Security

Introduction

Secondary education is an important level of education because of its position as the bridge between primary education and tertiary education (Onyekwelu, 2025). It also prepares learners for entry into the workforce. At this stage, young Nigerians are expected to acquire the knowledge, skills and values necessary for their personal development and for making meaningful contributions to national progress (Nanbak, 2020). As such, secondary education is fundamental to the development of human capital, economic advancement and national unity, as

it helps to produce a competent and self-reliant workforce critical to the country's socio-economic wellbeing. The Federal Government of Nigeria acknowledges the vital role of secondary education in fostering national development (Ossai, 2023). Agbajileke (2025) reported that this recognition is evident in recent policy reforms, including the introduction of twelve years of uninterrupted basic education, which encompasses both junior and senior secondary levels. The reform aims to harmonise the curriculum across the country, reduce school dropout rates and ensure students are equipped with both academic knowledge and vocational skills required for higher education and employment. Furthermore, the government is committed to aligning Nigeria's educational system with global standards to improve learning outcomes and enhance the nation's international competitiveness (Albashir, 2022). To support this, strategic plans and national minimum standards have been established to guide the effective administration and delivery of secondary education, with emphasis on quality assurance, infrastructure development and teacher training. However, the realisation of these objectives is increasingly being threatened by widespread insecurity affecting secondary schools throughout Nigeria, including those in Anambra State. Onuorah et al. (2020) stated that the goals of secondary education may remain unattainable due to the prevailing high level of insecurity in the country such as banditory and kidnapping among others.

The prevalence of kidnappings, violent attacks, cult-related activities and armed robberies have seriously disrupted educational activities and endangered the safety of both students and staff. Onuorah et al. (2020) highlighted the rising incidence of cult-related activities among secondary school students in the State, which has led to numerous arrests, injuries and even fatalities involving students engaged in criminal and cult-related acts within secondary schools. These security issues have led to falling attendance rates, psychological distress and in some cases, the closure of schools. The negative impacts also include a loss of educational personnel, rising costs in the education sector, damage to school infrastructure and an overall decline in the standard of education. Such challenges undermine the goals outlined in the National Policy on Education (Amaefule, 2021). This underscores the need for secondary school principals to ensure the effective management of school security.

Security is a multifaceted concept that has been defined in various ways by scholars in recent years. According to Afolabi (2015), security encompasses peace, safety and the protection of human and physical resources, facilitating societal development and progress. Onoja (2021) emphasized that security is not a one-size-fits-all model, highlighting the need for context-specific approaches to address security concerns effectively. Longley (2021) defined national security as the government's ability to protect its citizens, economy and institutions from various threats. Morgan (2021) distinguished security from safety by focusing on protection against external threats that may cause harm. Onuorah (2020) defined security as conditions that allow people to conduct their daily activities without threats to their lives or property. In the context of schools, security management involves strategies and practices to ensure a safe learning environment. Onuorah and Eziamaka (2020) defined school security management as a plan to protect stakeholders within the school from crime and accidents through well-drawn policies. Onuorah et al. (2020) noted a shift in security operations from reactive to proactive roles, with security officers actively promoting a safe environment. Ikogho (2015) emphasizes that security management practices aim to deter, detect, delay and reduce potential hazards in schools. Machii et al. (2021) emphasized that schools should prioritize not only the quality of instruction but also the maintenance of safety and security within the school environment. This highlights the need for principals to recognize the importance of implementing technological security management practices like integrating Artificial Intelligence (AI), to enhance school security.

Artificial intelligence (AI) is commonly understood by the general public as the capability of machines or computers to replicate human thinking and behaviour (Wartman & Combs, 2018). Mohammed and Watson (2019) defined AI as the proficient replication of human mental processes and actions through technological tools or software programmes. Machii et al. (2021) described artificial intelligence as the capability of a system to accurately interpret external information, learn from it and apply that knowledge to accomplish specific tasks and objectives through adaptable behaviour. This definition underscores the system's ability to learn and adjust to achieve set goals. Similarly, Bartneck (2021) characterised AI as the ability of machines or computers to demonstrate or mimic intelligent behaviour, with an emphasis on its

role in simulating human-like intelligence.

Additionally, AI can analyze data from various sources to identify patterns that may indicate potential security risks, allowing for proactive measures to prevent incidents. Binns (2023) underscores the dual nature of artificial intelligence (AI) in surveillance. One significant advantage is AI's capacity to swiftly process video feeds, enabling the rapid identification of unusual or suspicious behaviour and facilitating quicker responses compared to traditional surveillance methods. Furthermore, AI systems can analyse both historical and real-time data to predict potential security threats or criminal activities, allowing security teams to implement preventive measures and allocate resources more effectively. The efficiency of surveillance operations is also enhanced through AI, as routine monitoring tasks can be automated, reducing the reliance on constant human oversight and permitting personnel to focus on more complex security issues. Additionally, the integration of AI technologies with high-resolution cameras improves the quality and accuracy of evidence collection and analysis, which is crucial for thorough investigations and legal proceedings (Kepeghom, 2024). AI-powered systems are capable of analysing live video feeds to detect suspicious activities such as unauthorised access, loitering, or aggressive behaviour. Upon identifying a potential threat, these systems can send immediate alerts to security personnel, enabling swift responses. For instance, AI algorithms trained to recognise weapons can detect them in video feeds, thereby reducing response times during emergencies. Some AI systems are even programmed to automatically trigger lockdown protocols upon identifying firearms or suspicious objects (Kepeghom, 2024).

Integrating AI in school security systems presents a complex array of challenges that extend beyond technological considerations. One significant concern is the technical limitations inherent in AI systems. These technologies can produce false positives, misidentifying harmless objects as threats and false negatives, failing to detect actual dangers. Rendahl (2025) reported that in Metro Nashville Public Schools, there were 34 reported instances where AI surveillance systems were bypassed during the 2024–2025 academic year. Additionally, AI often struggles to adapt to new or unconventional threats and may misinterpret human behaviors, such as confusing a student retrieving a textbook with someone drawing a weapon (Karan and Angadi, 2025). On the other hand, Ly (2024) noted that ethical and privacy issues also pose significant challenges.

The use of facial recognition and behavior analysis technologies raises concerns about surveillance overreach, particularly affecting minors (Ly, 2024). Such practices risk normalizing intrusive monitoring and can disproportionately impact marginalized groups due to inherent biases in AI algorithms. Karan and Angadi (2024) reported that these systems are more likely to misidentify individuals from minority backgrounds perpetuating existing inequities.

Furthermore, resource constraints further complicate the integration of AI in schools. Implementing these technologies requires substantial investment in hardware, software and staff training, which can be particularly challenging for underfunded schools (Gocen & Aydemir, 2020). Moreover, the increased reliance on digital systems heightens the risk of cybersecurity breaches, exposing sensitive student data to potential threats. An overreliance on AI can also divert attention from the critical role of human judgment in maintaining school safety (Rendahl, 2025). There have been instances where staff, preoccupied with managing AI systems, failed to prevent student altercations. This underscores the importance of balancing technological tools with human oversight to effectively address manage security situations in secondary schools. Some authors have suggested that the gender of the school principals could play a part in their integration of technologies like AI in schools.

Gender differences in technology adoption have been extensively examined and research suggests that men and women may have different attitudes towards new technologies. Male principals may be more likely to employ AI-driven security solutions due to their greater confidence in technical applications or past experience to tech-related situations (Adewale et al., 2024). Female principals, on the other hand, may be more cautious about AI inclusion, prioritising ethical considerations such as privacy concerns and the possibility of algorithmic bias (Filiz et al., 2025). These distinctions may have an impact on the pace and scope of AI deployment in school security management. Onuorah et al. (2020) revealed that male and female principals in rural and urban public secondary schools did not differ in their opinion on their application of technological security management practices in public secondary schools in Anambra State. Despite these finding the researcher is worried that five years on, the state of

application of AI in public secondary schools seem not to have improved. It is against this backdrop that the study investigated the opportunities and challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State.

Statement of the Problem

Secondary schools in Anambra State are increasingly grappling with seeming security challenges that may threaten the safety, well-being and academic focus of students. Among the most troubling issues is the rising incidence of cultism among students of secondary school age. What was once predominantly associated with higher education institutions is now manifesting alarmingly within the secondary school system, with younger students being initiated into cult groups and exposed to violent behaviours. Alongside this is the growing threat of bullying and intimidation, both within and outside school premises, which may create a climate of fear and tension that undermines the school's role as a safe space for learning and personal development. Field interactions in some public secondary schools seem to suggest that, particularly at the senior secondary level, students reportedly come to school armed with dangerous objects or weapons with the intent of intimidating their peers. These actions may incite violence, instill fear and distract students from their academic work. Such hostile environments may compromise the psychological safety of learners and significantly hinder their academic performance, as students who feel unsafe are less likely to engage actively in classroom activities or attend school regularly.

Globally, the integration of Artificial Intelligence (AI) in security management appears to offer opportunities for mitigating such risks. AI-powered technologies such as surveillance cameras, facial recognition systems, predictive analytics and automated threat detection may

help in real-time monitoring, early detection of security threats and proactive intervention. However, the implementation of AI in Anambra State secondary schools may face several challenges, such as high cost of deployment, inadequate ICT infrastructure, poor technical expertise and concerns about data privacy and ethics.

The problem of this study, therefore, is that secondary schools in Anambra State seem to be exposed to persistent security challenges that may jeopardize the academic performance and overall well-being of students, while the opportunities offered by AI for improved security management remain largely untapped due to existing challenges. The researchers are particularly worried that if these ugly incidents and systemic limitations persist, they may lead to a further erosion of academic standards, moral values and the intellectual preparedness of students for higher education or employment. This situation calls for urgent investigation into the opportunities and challenges of integrating Artificial Intelligence in managing security in secondary schools in Anambra State.

Purpose of the Study

The main purpose of the study was to investigate the opportunities and challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State. Specifically, the study sought to determine the:

1. opportunities of integrating artificial intelligence in the management of security in secondary schools in Anambra State.
2. challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State.

Research Questions

The following research questions guided the study:

1. What are the opportunities of integrating artificial intelligence in the management of

2. security by male and female principals in secondary schools in Anambra State?
3. What are the challenges of integrating artificial intelligence in the management of security by male and female principals in secondary schools in Anambra State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean ratings of male and female principals on the opportunities of integrating artificial intelligence in the management of security in secondary schools in Anambra State.
2. There is no significant difference in the mean ratings of male and female principals on the challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State.

Methods

The descriptive survey research design was adopted for the study. The study was conducted in Anambra State. The population of the study comprised 267 public secondary school principals (159 males and 108 females) in Anambra State. The entire population of the study was used without sampling. The researchers used a self-structured questionnaire to collect data for the study. The questionnaire is titled "Questionnaire on Opportunities and Challenges of Integrating Artificial Intelligence in the Management of Security in Secondary Schools (QOCIAIMSSS)" The instrument has two sections, A and B. Section A contains one item on the respondents gender. Section B contains 20 items in two clusters, 1 and 2. Cluster 1 contains 10 items on the opportunities of integrating artificial in the management of security in secondary schools. Cluster 2 contains 10 items on the challenges of integrating artificial in the management of security in secondary schools. The instrument is structured on a 4-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

To ensure the content validity of the instrument, the instrument was carefully reviewed by three lecturers in the Department of Educational Management and Policy, Nnamdi Azikiwe University, Awka who assessed it for clarity, relevance and completeness. After validation, a pilot test was conducted involving 20 public secondary school principals in Enugu State. Test of reliability was done using Cronbach Alpha which reported reliability coefficients of 0.88 and

0.89 for Clusters, 1 and 2 respectively with an overall reliability coefficient of 0.89. The questionnaire was administered directly to respondents, with 207 out of 267 copies returned in good condition (properly completed). Data was analysed using mean, standard deviation and t-test. Mean scores were used to answer the research questions while the standard deviation was used to check the homogeneity or non-homogeneity of the respondents' opinions. A mean score of 2.50 or above indicated agreement, while a mean score below 2.50 indicated disagreement. To test the null hypotheses, t-test statistics were applied at a 0.05 level of significance. A p-value below 0.05 led to the rejection of the null hypothesis. This indicates a significant difference between groups. A p-value of 0.05 or above meant the null hypothesis was not rejected. This suggests no significant difference between the groups compared.

Ethical Consideration

The study was conducted in accordance with ethical norms. Prior to filling out the questionnaire, respondents were made fully aware of the aim of the study and participation was entirely optional. Since no names or identifying information were asked for, anonymity and confidentiality were ensured. Data were securely secured to avoid unauthorised access and used only for academic purposes. The Department of Educational Management and Policy at Nnamdi Azikiwe University in Awka provided ethical approval. The researchers made certain that every question on the survey avoided causing participants any discomfort and respected their privacy. To maintain honesty and fairness in reporting, potential ethical issues with artificial intelligence, such as bias, data privacy and information misuse, were carefully considered during instrument construction and data analysis.

Results

Research Question 1: What are the opportunities of integrating artificial intelligence in the management of security by male and female principals in secondary schools in Anambra State?

Table 1: Mean Ratings of Male and Female Principals on the Opportunities of Integrating Artificial Intelligence in the Management of Security in Secondary Schools in Anambra State (N = 207)

S/N	Item Statements	Male (N=117) Mean	SD	Female (N=90) Mean	SD	Remarks
1	enhances the detection of suspicious activities in real-time	3.70	0.61	3.76	0.72	Agree
2	assists in identifying security risks through data analytics	3.66	0.64	3.74	0.78	Agree
3	improves the response time during security breaches	3.68	0.60	3.99	0.75	Agree
4	allows for monitoring multiple areas simultaneously	3.71	0.63	3.78	0.74	Agree
5	aids in automating security alerts during unusual events	3.59	0.66	3.90	0.79	Agree
6	enhances access control by tracking personnel movements	3.65	0.62	3.77	0.77	Agree
7	provides insights for predictive security planning	3.64	0.61	3.89	0.76	Agree
8	helps to analyze patterns in security incidents over time	3.60	0.65	3.86	0.80	Agree
9	increases the overall effectiveness of the school's security system	3.70	0.59	3.79	0.71	Agree
10	contributes to reducing the burden on security personnel	3.54	0.68	3.91	0.79	Agree
	Cluster Mean	**3.64**	**0.62**	**3.46**	**0.76**	Agree

Data in Table 1 shows male and female principals mean ratings on the opportunities of integrating artificial intelligence in the management of security in secondary schools in Anambra State, Data in Table 1 show that male and female principals agreed on all the listed opportunities of integrating AI in security management. Male principals recorded a cluster mean of 3.64 (SD = 0.62), while female principals had a slightly higher cluster mean of 3.46 (SD = 0.76), indicating

stronger agreement among female principals.

Research Question 2: What are the challenges of integrating artificial intelligence in the management of security by male and female principals in secondary schools in Anambra State?

Table 2: Mean Ratings of Male and Female Principals on the Challenges of Integrating Artificial Intelligence in the Management of Security in Secondary Schools in Anambra State (N = 207)

S/N	Item Statements	Male (N=117) Mean	SD	Female (N=90) Mean	SD	Remarks
11	The high cost of implementing AI systems is a challenge	3.61	0.70	3.92	0.72	Agree
12	Lack of technical expertise to manage AI security systems is a significant challenge	3.38	0.69	3.71	0.71	Agree
13	Resistance from staff to adopt AI systems affects implementation	3.31	0.74	3.59	0.73	Agree
14	Limited infrastructure for AI implementation in schools is a barrier	3.39	0.68	3.78	0.97	Agree
15	Inadequate training for staff to operate AI systems hinders effective use	3.45	0.70	3.75	0.70	Agree
16	Privacy concerns related to AI monitoring raise ethical issues	3.48	0.79	3.73	0.64	Agree
17	Dependence on AI for security may reduce human involvement in security decisions	3.28	0.73	3.89	0.66	Agree
18	Frequent technological failures or system malfunctions pose challenges	3.40	0.68	3.71	0.60	Agree
19	High maintenance costs for AI systems make them difficult to sustain	3.44	0.75	3.75	0.65	Agree
20	Lack of awareness about the benefits and potential of AI limits its integration	3.41	0.74	3.61	0.62	Agree
	Cluster Mean	**3.42**	**0.72**	**3.74**	**0.70**	Agree

Data in Table 2 shows male and female principals mean ratings on the challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State, Data showed that respondents rated items 11-20 as the challenges of integrating artificial

intelligence in the management of security in secondary schools in Anambra State with mean ratings ranging between 3.25 and 3.92. Data in Table 2 show that both male and female principals agreed on all the listed challenges of integrating AI in security management. Male principals recorded a cluster mean of 3.42 (SD = 0.72), while female principals had a higher cluster mean of 3.74 (SD = 0.70). This suggests that female principals perceive AI-related challenges to be more significant than their male counterparts.

Hypothesis 1: There is no significant difference in the mean ratings of male and female principals on the opportunities of integrating artificial intelligence in the management of security in secondary schools in Anambra State.

Table 3: Summary of t-test Analysis on the Opportunities of Integrating Artificial in the Management of Security in Secondary Schools in Anambra State based on Gender

Gender	N	Mean	SD	df	t-cal	p-value	Decision
Male Principals	117	3.64	0.62				
				205	1.87	0.062	Reject H_0
Female Principals	90	3.46	0.76				

Data in Table 3 indicated that male principals reported a higher mean rating (M = 3.64, SD = 0.62) compared to their female counterparts (M = 3.46, SD = 0.76). The calculated t-value is 1.87 with 205 degrees of freedom and the associated p-value is 0.062. Since the p-value is less than the significance level of 0.05, hence the null hypothesis was rejected. This suggests a statistically significant difference in the opinions of male and female principals on the opportunities of integrating artificial in the management of security in secondary schools in Anambra State.

Hypothesis 2: There is no significant difference in the mean ratings of male and female principals on the challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State.

Table 4: Summary of t-test Analysis on the Challenges of Integrating Artificial in the Management of Security in Secondary Schools in Anambra State based on Gender

Gender	N	Mean	SD	df	t-cal	p-value	Decision
Male Principals	117	3.42	0.71				
				205	3.23	0.001	Reject H_0
Female Principals	90	3.74	0.70				

Data in Table 4 indicated that male principals reported a higher mean rating (M = 3.42, SD = 0.71) compared to their female counterparts (M = 3.74, SD = 0.70). The calculated t-value is 3.23 with 205 degrees of freedom and the associated p-value is 0.001. Since the p-value is less than the significance level of 0.05, hence the null hypothesis was rejected. This suggests a statistically significant difference in the opinions of male and female principals on the challenges of integrating artificial intelligence in the management of security in secondary schools in Anambra State.

Discussion

The findings of the study indicate that integrating artificial intelligence (AI) into the management of security in secondary schools in Anambra State presents several opportunities. Male principals recorded a cluster mean of 3.64, while female principals had a slightly higher cluster mean of 3.46. This suggests that the respondents generally agree on the potential opportunities of AI in enhancing school security, which include real-time monitoring, predictive analysis and reducing human error in surveillance tasks. Two key reasons could be attributed to these findings: first, AI's ability to swiftly process large volumes of data allows for more timely and accurate detection of potential security threats. This facilitates proactive measures, such as early warnings and more targeted responses. Second, AI's capacity for automation reduces the dependency on constant human monitoring, allowing security personnel to focus on more critical tasks. This finding is in agreement with Binns (2023) who reported that AI has the capability to process video feeds and identify unusual or suspicious behavior more quickly than traditional methods. This can lead to faster responses in situations that require immediate attention, which is essential for effective school security. Similarly, Abunike et al. (2024) found that AI-driven

surveillance systems effectively reduced crime rates in industrial environments in Anambra State. This demonstrates that the advantages of AI in enhancing security are not limited to schools but are broadly applicable across different sectors. Similarly, Kepeghom (2024) underscored AI's role in public safety, specifically highlighting its ability to analyze live video feeds and detect suspicious activities, which corresponds with the findings of this study that AI integration can significantly enhance the effectiveness of school security systems.

Additionally, the study revealed a statistically significant difference in the opinions of male and female principals regarding the opportunities of integrating AI in security management. This difference may be influenced by various factors, such as gender-based perspectives on technology adoption, leadership styles, or the level of familiarity with AI applications. Such differences also reflect the broader socio-cultural dynamics that may affect the perception and implementation of AI in different contexts. The findings of this study also resonate with those of Abunike et al. (2024), who observed the broader applicability of AI in security management, especially in industrial settings in Anambra State. This suggests that the potential of AI in enhancing safety and reducing risks is not limited to educational institutions but extends to other sectors. Their findings highlight how AI-driven solutions like predictive analytics and automated surveillance can significantly improve security outcomes, reinforcing the relevance of such technologies for secondary schools facing similar challenges.

The finding of the study revealed that items 11 to 20 are the challenges associated with integrating artificial intelligence in the management of security in secondary schools in Anambra State. The specific challenges discovered in the study include the high cost of implementing AI systems, lack of technical expertise to manage AI tools, resistance from staff to adopt new technologies, limited infrastructure in schools and inadequate training for personnel. Other challenges identified are privacy concerns related to surveillance technologies, overdependence on AI potentially reducing human oversight, frequent system malfunctions, high maintenance costs and a general lack of awareness about the benefits and potentials of AI. These challenges reflect both technical and human-related barriers, underscoring the complexity of integrating AI into school security management. They suggest that successful implementation would require not

only technological investment but also capacity building, stakeholder sensitization and careful attention to ethical considerations. The finding is in line with Gocen and Aydemir (2020) who observed that successful AI implementation requires significant investment in digital infrastructure and ongoing professional development for staff. In under-resourced school environments, particularly in rural areas, these requirements are difficult to meet. Additionally, the findings are consistent with the work of Ly (2024), who pointed out that ethical and privacy concerns remain a central issue in the use of AI technologies in schools. The deployment of facial recognition and behavior analysis tools can lead to surveillance overreach, especially affecting minors. Ly warned that such practices could normalize constant monitoring and disproportionately impact marginalized populations, an issue echoed by Karan and Angadi (2024), who observed that AI algorithms are more likely to misidentify individuals from minority backgrounds. These issues of algorithmic bias and surveillance ethics likely contributed to respondents' agreement on the challenges posed by AI integration. Furthermore, the study revealed a statistically significant difference in the opinions of male and female principals on the challenges of integrating AI in school security. This finding may be attributed to differences in exposure to digital tools, attitudes toward emerging technologies, or varying levels of training and confidence in managing AI systems. These differences suggest that gender may influence how school leaders perceive and engage with AI, pointing to the need for targeted training and support that addresses these disparities.

Despite its contributions, the study has certain limitations that may affect the generalisability of its findings. The study focused on principals of public secondary schools in Anambra State, excluding principals of private secondary schools whose contexts and resources may differ. Also, the reliance on self-reported questionnaire data may have introduced social desirability bias because respondents might have provided favourable answers. Furthermore, while the study considered ethical and technical issues of AI, it did not directly assess the actual deployment or functionality of AI systems in public secondary schools.

Conclusion

Based on the findings of the study, the researchers concluded that artificial intelligence presents substantial opportunities for enhancing security management in secondary schools in Anambra State. AI technologies such as real-time surveillance, behavioral analysis and predictive threat detection can significantly improve the speed and accuracy of incident response, reduce reliance on manual monitoring and support proactive security measures. However, the study also revealed notable challenges including high costs, limited technical expertise, privacy concerns, infrastructure deficits and disparities in implementation between male and female principals' perceptions. These challenges, if not adequately addressed, may limit the potential benefits of AI in ensuring a safe and secure school environment.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The Anambra State Government should increase investment in school security infrastructure, particularly in underfunded schools, to support the acquisition and maintenance of AI-powered surveillance and security systems.
2. The Ministry of Education should implement targeted capacity-building programmes to train school administrators and technical staff on the effective use, management and ethical application of AI in school security operations.
3. Policymakers should develop a comprehensive AI integration framework that includes ethical guidelines, data protection standards and accountability mechanisms to address privacy concerns and ensure responsible use in school environments.
4. School management boards should promote awareness campaigns and stakeholder engagement forums to educate teachers, parents and students on the benefits and limitations of AI technologies, thereby fostering trust and reducing resistance to adoption.

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