

GOVERNANCE, SYSTEM THINKING, AND SECURITY MANAGEMENT IN PUBLIC SECONDARY SCHOOLS IN NORTH CENTRAL NIGERIA

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Abstract

This study investigates the impact of governance and system thinking on security management in public secondary schools in North Central Nigeria. Employing a descriptive research design, the study's population comprises 104,581 teachers, school administrators, and security personnel. A sample size of 384 was determined using Krejcie and Morgan's (1970) formula, ensuring representativeness for large populations. Participants were selected through simple random sampling, reducing selection bias and enhancing the generalizability of the results. The research instrument demonstrated strong validity (0.78) and reliability (0.76), confirming its accuracy and consistency. Data were analyzed using mean and standard deviation for answering research questions, with a 2.50 benchmark on a Likert scale. Hypotheses were tested using chi-square to evaluate relationships between variables such as governance, system thinking, policy framework implementation, stakeholder engagement, and security management effectiveness. The findings indicate a significant influence of governance, system thinking, policy framework implementation, and stakeholder engagement on the successful management of security in public secondary schools. The study concludes that governance and system thinking play a crucial role in the effective security management of public secondary schools in North Central Nigeria. These findings underscore the need for targeted capacity building programs for school administrators and investments in security infrastructure to enhance the effectiveness of security management initiatives in the region.

Key words: Governance, System thinking, Security management, Policy framework, Stakeholder engagement, School safety

Introduction

Governance plays a transformative role in modern educational administration by establishing frameworks that enhance school management, accountability, and security through structured policies and institutional mechanisms. Effective governance enables more transparent and responsive school leadership, broadening access to quality education and ensuring the safety of learners and staff. However, successful governance integration requires overcoming challenges such as inadequate policy implementation, limited administrative capacity, and unequal access to security resources. The transition to a governance-driven education system demands that school administrators possess the necessary skills to integrate security management frameworks and stakeholder participation into their administrative practices (Nwosu, 2024).

Governance in education refers to the structures, processes, and practices through which educational institutions are directed, controlled, and held accountable. It encompasses the distribution of authority and responsibility among various stakeholders, including government agencies, school boards, administrators, teachers, parents, and community members. Effective governance ensures that schools operate in accordance with established policies, regulations, and standards while remaining responsive to the needs of students and the community. According to Nwosu (2024), educational management is a powerful tool that can be deployed to bring about good governance in school systems and improve security situations in schools. Governance in education involves not only the formulation of policies but also their implementation, monitoring, and evaluation to ensure that educational goals are achieved efficiently and equitably. In the context of school security, governance establishes the framework within which security policies are developed, resources are allocated, and accountability is enforced.

System thinking is a holistic approach to understanding and managing complex systems by examining the interrelationships and interdependencies among their components rather than viewing them in isolation. In the context of educational administration, system thinking enables school leaders to recognize that schools are dynamic systems in which various elements—such as leadership, curriculum, resources, stakeholder relationships, and security protocols—interact and influence one another. Senge's Systems Thinking framework provides a holistic approach for addressing interconnected challenges by emphasizing shared vision, team learning, and the interdependence of all components within the educational system (Duru, 2025). System thinking encourages administrators to move beyond reactive, fragmented approaches to problem-solving and instead adopt proactive,

integrated strategies that consider the long-term consequences of decisions. According to Bamidele (2025), systems thinking provides a holistic framework for understanding how leadership, technology, policy, and stakeholder relationships interact to shape security outcomes in schools. This approach is particularly relevant to school security management, where threats and vulnerabilities are often interconnected and require coordinated responses across multiple domains.

Governance and system thinking are essential for the effective implementation of security management in schools. This involves equipping school administrators with the skills and knowledge necessary to adopt holistic, interconnected approaches to school leadership and safety. Professional development programs, training workshops, and ongoing support are crucial for enhancing administrators' governance competencies and security management strategies. Inadequate preparation often hinders the successful adoption of security measures, impacting the quality and safety of education (Danamaitaba & Ibrahim, 2025). Governance and system thinking in public secondary schools in North Central Nigeria is a critical factor in the effective delivery of safe and quality education, particularly in an increasingly insecure environment. In this region, many school administrators face challenges related to inadequate training in security governance and limited resources, which significantly hampers their ability to effectively implement modern security management approaches, including technology-driven surveillance and community-based safety initiatives. Most administrators in this area are trained in traditional administrative techniques and often lack the necessary skills to navigate modern security governance frameworks. As a result, they may feel unprepared to embrace the demands of a security-conscious education system (Nwosu, 2024).

Capacity building refers to the process of developing and enhancing the skills, knowledge, and abilities of individuals or organizations to improve performance and achieve sustainable growth. In school security management, capacity building involves equipping school administrators and security personnel with the necessary tools, training, and resources to adapt to evolving security threats, such as integrating technology and innovative security protocols. It promotes continuous professional development and fosters a culture of safety awareness. Effective capacity building ensures that school leaders are well-prepared to meet emerging security challenges, improve student and staff safety, and contribute to the overall advancement of the education system. Capacity building for school administrators in public secondary schools in North Central Nigeria is essential to bridge the gap

between traditional security approaches and modern technology-based security management. These programs need to focus on enhancing administrators' abilities to use security technologies, integrate safety protocols into school operations, and foster an environment conducive to secure learning. Capacity building should also encompass continuous professional development programs to keep school leaders updated on new security strategies, technologies, and governance approaches. Currently, capacity-building efforts in North Central Nigeria remain sporadic and inconsistent, largely due to limited funding, inadequate training facilities, and a lack of government policies aimed at promoting security governance development in this area (NSCDC, 2025).

Security management refers to the systematic process of identifying, assessing, and mitigating threats to ensure the safety and well-being of individuals within an educational environment. It encompasses various methods, including physical security measures, surveillance systems, emergency response protocols, and community engagement strategies, to protect schools from harm. Effective security management offers protection, enabling learners and staff to participate in educational activities without fear from anywhere at any time. It also allows for coordinated emergency responses and immediate threat mitigation. Effective security management implementation in public secondary schools in North Central Nigeria remains a significant challenge due to various infrastructural and systemic issues. Security management, which involves using both physical and digital technologies to protect educational environments, requires a robust governance framework, administrative readiness, and community accessibility. However, many schools in this region face severe shortages in the resources needed for successful security management implementation. Issues such as limited security infrastructure, lack of access to modern surveillance technologies, and inadequate administrator training have hindered the full adoption of comprehensive security management in many public secondary schools (Danamaitaba & Ibrahim, 2025). Moreover, the existing governance frameworks in many schools are not fully adapted to integrate modern security tools, making it difficult to create a seamless transition to secure learning environments.

Policy framework and stakeholder engagement are crucial elements in the success of security management implementation. In North Central Nigeria, public secondary schools face a significant deficit in terms of security governance frameworks. Many schools lack access to functional security equipment, reliable communication systems, and the necessary security

personnel. This lack of security infrastructure severely limits the ability of schools to manage security threats effectively. Moreover, even when some level of security framework exists, its implementation is often uneven, with rural schools particularly disadvantaged compared to their urban counterparts. Addressing these disparities is critical to ensuring that all students and teachers, regardless of their geographical location, can benefit from secure learning environments.

Administrator competency and training are vital components of any effort to integrate security governance into education effectively. In North Central Nigeria, administrator training in security governance and crisis management is often inadequate. Many school administrators have not received formal training in the use of security technologies, and as a result, they struggle to incorporate these measures into their schools. This lack of competency is a significant barrier to effective security management implementation, as administrators are the primary facilitators of school safety. To improve administrator competency, there is a need for targeted professional development programs that focus specifically on security governance, the use of security technologies, and the integration of safety protocols into everyday school operations. Such programs should be ongoing, ensuring that administrators can continually update their skills and stay abreast of new security advancements in education.

Governance and system thinking are crucial for the successful implementation of security management in public secondary schools in North Central Nigeria. As education increasingly faces security threats, administrators must be equipped with the skills and knowledge to effectively integrate security governance frameworks into their administrative practices. However, many school leaders in this region face significant challenges, including inadequate training in security governance, limited access to security technology, and insufficient support for ongoing professional development. This lack of preparedness hampers their ability to utilize security management approaches effectively, impacting the safety of education delivered to students. Capacity building initiatives must address these gaps by providing targeted training programs, improving access to security resources, and fostering a supportive environment for security technology adoption. Despite these efforts, the region still grapples with issues related to infrastructure and unequal access to security resources, which further complicates the implementation process. The core problem is that without adequate preparation and ongoing support, school administrators struggle to leverage security management tools effectively,

leading to suboptimal safety outcomes and a widening security gap in North Central Nigeria.

Statement of the Problem

The implementation of security management in public secondary schools in North Central Nigeria faces significant challenges due to insufficient governance frameworks and inadequate system thinking among school administrators. Existing literature highlights that many school administrators struggle with integrating security governance frameworks into their administrative practices due to a lack of training and inadequate security infrastructure. School administrators often lack the necessary skills to effectively use security management approaches, which impacts their ability to ensure safe learning environments. Furthermore, the security infrastructure and accessibility in these schools is frequently outdated and insufficient, with limited access to reliable security equipment and modern surveillance technologies. This technological gap exacerbates the difficulties administrators face in adopting security management methods. Over the past five years, more than 1,400 students have been abducted across northern Nigeria, and over 2,000 students and teachers have been kidnapped since the establishment of the Safe Schools initiative. These alarming statistics underscore the urgent need for effective security governance in the region. It is against this backdrop the researcher determines the impact of governance, system thinking, and security management in public secondary schools in North Central Nigeria.

Research Questions

- i. To what extent does governance have an impact on security management in public secondary schools in North Central Nigeria?
- ii. To what extent does system thinking have an impact on security management in public secondary schools in North Central Nigeria?
- iii. What impact does policy framework implementation and stakeholder engagement have on security management in public secondary schools in North Central Nigeria?

Research Hypotheses

H₀₁: There is no significant impact of governance on security management in public secondary schools in North Central Nigeria.

H₀₂: There is no significant impact of system thinking on security management in public secondary schools in North Central Nigeria.

H₀₃: There is no significant impact of policy framework implementation and stakeholder engagement on security management in public secondary schools in North Central Nigeria.

Literature Review

The Concept of Governance in Education

Governance in education refers to the structures, processes, and practices through which educational institutions are directed, controlled, and held accountable. It encompasses the distribution of authority and responsibility among various stakeholders, including government agencies, school boards, administrators, teachers, parents, and community members. Effective governance ensures that schools operate in accordance with established policies, regulations, and standards while remaining responsive to the needs of students and the community. According to Nwosu (2024), educational management is a powerful tool that can be deployed to bring about good governance in school systems and improve security situations in schools. Governance in education involves not only the formulation of policies but also their implementation, monitoring, and evaluation to ensure that educational goals are achieved efficiently and equitably.

In the context of school security, governance establishes the framework within which security policies are developed, resources are allocated, and accountability is enforced. Effective governance ensures that security management is not treated as an isolated activity but is integrated into the overall strategic planning and operations of the school. Governance structures such as school boards, parent-teacher associations, and school-based management committees play crucial roles in overseeing security initiatives and ensuring that they align with the school's mission and values. According to Sani et al. (2025), inadequate governance frameworks contribute significantly to insecure school environments, as there is often no clear delineation of responsibilities for security management among various stakeholders.

Furthermore, governance in education involves the establishment of clear policies and procedures that guide security management practices. These policies should address issues such as emergency response, crisis communication, risk assessment, and the use of security technologies. Governance also encompasses the monitoring and evaluation of security

initiatives to assess their effectiveness and make necessary adjustments. Without robust governance frameworks, security management efforts remain fragmented and reactive, leaving schools vulnerable to various threats. In North Central Nigeria, many schools lack effective governance structures for security management, contributing to the persistent insecurity challenges facing the region (Nwosu, 2024).

System thinking is a holistic approach to understanding and managing complex systems by examining the interrelationships and interdependencies among their components rather than viewing them in isolation. In the context of educational administration, system thinking enables school leaders to recognize that schools are dynamic systems in which various elements—such as leadership, curriculum, resources, stakeholder relationships, and security protocols—interact and influence one another. Senge's Systems Thinking framework provides a holistic approach for addressing interconnected challenges by emphasizing shared vision, team learning, and the interdependence of all components within the educational system (Duru, 2025).

System thinking encourages administrators to move beyond reactive, fragmented approaches to problem-solving and instead adopt proactive, integrated strategies that consider the long-term consequences of decisions. According to Bamidele (2025), systems thinking provides a holistic framework for understanding how leadership, technology, policy, and stakeholder relationships interact to shape security outcomes in schools. This approach is particularly relevant to school security management, where threats and vulnerabilities are often interconnected and require coordinated responses across multiple domains.

In the context of school security, system thinking involves recognizing that security is not merely a matter of installing surveillance cameras or hiring security guards, but rather a complex issue that involves multiple interconnected factors. These factors include the physical environment of the school, the behavior and attitudes of students and staff, the relationship between the school and the surrounding community, and the effectiveness of policies and procedures. A systems thinking approach to security management would consider how these various factors interact and influence one another, and would seek to address the root causes of security vulnerabilities rather than merely treating their symptoms.

System thinking also emphasizes the importance of feedback loops and continuous learning in improving security outcomes. By continuously

monitoring the effectiveness of security measures and making adjustments based on feedback, schools can develop more resilient security systems. According to Duru (2025), system thinking principles such as interdependence, alignment, feedback processes, and sustainability are essential for effective security governance. In North Central Nigeria, many school administrators lack training in system thinking, leading to fragmented and ineffective security management approaches.

Security Management in Schools

Security management in schools refers to the systematic process of identifying, assessing, and mitigating threats to ensure the safety and well-being of individuals within an educational environment. It encompasses various methods, including physical security measures, surveillance systems, emergency response protocols, and community engagement strategies, to protect schools from harm. Effective security management offers protection, enabling learners and staff to participate in educational activities without fear from anywhere at any time. It also allows for coordinated emergency responses and immediate threat mitigation.

The scope of school security management has expanded significantly in recent years due to the increasing prevalence of security threats such as abduction, banditry, bullying, sexual harassment, and drug abuse. According to Sani et al. (2025), major factors contributing to insecure school environments include bullying (95%), trespassing (95.2%), illicit drug and substance abuse (84.2%), sexual harassment (72%), and banditry activities (66.4%). These threats require comprehensive security management strategies that address both physical and psychosocial aspects of school safety.

Physical security measures include the construction of perimeter fencing, installation of surveillance cameras, deployment of security personnel, and implementation of access control systems. These measures are essential for preventing unauthorized entry into school premises and deterring potential attackers. According to Danamaitaba and Ibrahim (2025), infrastructural deficiencies, particularly inadequate school fencing and insufficient security personnel, constitute primary security vulnerabilities in many schools.

Beyond physical security, effective security management also involves the development of emergency response protocols, crisis communication plans, and evacuation procedures. These protocols ensure that schools are prepared to respond effectively to security incidents and minimize harm to students

and staff. According to the NSCDC (2025), schools that have well-developed emergency response plans are better equipped to manage security incidents and protect their communities.

Stakeholder engagement is another critical component of security management. This involves building relationships with parents, community members, security agencies, and other stakeholders to create a collaborative approach to school safety. According to Danamaitaba and Ibrahim (2025), community participation in school security governance should be actively promoted, as communities can be educated about their rights to safety and how to hold government accountable in the event of security breaches. Stakeholder engagement enhances the effectiveness of security management by leveraging the resources and expertise of the broader community.

A policy framework refers to the set of principles, guidelines, and procedures that guide decision-making and action in a particular area. In the context of school security, a policy framework establishes the standards and expectations for security management practices, including the allocation of resources, the assignment of responsibilities, and the monitoring of performance. An effective policy framework ensures that security management is conducted in a consistent, coordinated, and accountable manner.

In Nigeria, several policies and initiatives have been developed to address school security, including the National Policy on Safety, Security, and Violence-Free Schools with its Implementation Guidelines. This policy provides a comprehensive framework for ensuring the safety of students and staff in educational institutions. However, the implementation of these policies has been uneven, with many schools lacking the resources and capacity to fully comply with their provisions (Sani et al., 2025).

According to Nwosu (2024), the absence of proper strategy to delineate between resources generated and their allocation to achieve desired goals is one of the problems of promoting good governance in schools. This challenge is particularly acute in North Central Nigeria, where many schools face severe resource constraints that limit their ability to implement security policies effectively. The study by Sani et al. (2025) identified inadequate funding for security measures (93.0%) and a lack of training on safety measures (92%) as major challenges hindering efforts to ensure school safety.

Effective policy implementation requires clear lines of responsibility, adequate resources, and mechanisms for monitoring and enforcement.

School administrators play a critical role in policy implementation, as they are responsible for translating policy directives into concrete actions at the school level. However, many administrators in North Central Nigeria lack the training and support needed to effectively implement security policies, leading to gaps between policy intent and practice (Danamaitaba & Ibrahim, 2025).

Stakeholder engagement refers to the process of involving individuals and groups who have a vested interest in school security in the planning, implementation, and evaluation of security initiatives. Key stakeholders in school security include parents, students, teachers, school administrators, security agencies, community leaders, and government officials. Effective stakeholder engagement ensures that security initiatives are responsive to the needs and concerns of all parties and benefit from the resources and expertise of the broader community.

According to Sani et al. (2025), community participation in school security governance should be actively promoted, as communities can be educated about their rights to safety and how to hold government accountable in the event of security breaches. Stakeholder engagement enhances the effectiveness of security management by leveraging the resources and expertise of the broader community. For example, parents can contribute to school security by monitoring school premises, reporting suspicious activities, and participating in school safety committees.

Stakeholder engagement also builds trust and fosters a sense of shared responsibility for school safety. When stakeholders are actively involved in security planning and decision-making, they are more likely to support and comply with security measures. This participatory approach also ensures that security initiatives are tailored to the specific needs and contexts of individual schools, making them more effective and sustainable.

However, stakeholder engagement in school security faces several challenges in North Central Nigeria. These include limited awareness of security issues among community members, inadequate communication between schools and stakeholders, and a lack of formal mechanisms for stakeholder participation. According to Danamaitaba and Ibrahim (2025), many schools lack effective School-Based Management Committees (SBMCs) that can oversee the identification and prevention of security hazards and emergencies.

Capacity building refers to the process of developing and enhancing the skills, knowledge, and abilities of individuals or organizations to improve performance and achieve sustainable growth. In school security management, capacity building involves equipping school administrators and security personnel with the necessary tools, training, and resources to adapt to evolving security threats, such as integrating technology and innovative security protocols. It promotes continuous professional development and fosters a culture of safety awareness.

According to Nwosu (2024), effective capacity building ensures that school leaders are well-prepared to meet emerging security challenges, improve student and staff safety, and contribute to the overall advancement of the education system. Capacity building for school administrators in public secondary schools in North Central Nigeria is essential to bridge the gap between traditional security approaches and modern technology-based security management. These programs need to focus on enhancing administrators' abilities to use security technologies, integrate safety protocols into school operations, and foster an environment conducive to secure learning.

However, capacity-building efforts in North Central Nigeria remain sporadic and inconsistent, largely due to limited funding, inadequate training facilities, and a lack of government policies aimed at promoting security governance development in this area (NSCDC, 2025). Many school administrators have not received formal training in security management, leaving them ill-equipped to address the complex security challenges facing their schools. This training gap is particularly acute in rural areas, where access to professional development opportunities is limited.

Effective capacity building requires a comprehensive approach that includes initial training for new administrators, ongoing professional development for experienced administrators, and access to technical support and resources. Training programs should cover topics such as threat assessment, emergency response planning, crisis communication, the use of security technologies, and stakeholder engagement. According to the NSCDC (2025), the training of school security personnel is essential for ensuring that schools have the human resources needed to implement security measures effectively.

Empirical Studies

Nwosu (2024) conducted an empirical study titled *"Challenges of good governance and school security: Educational management as the*

rescue" published in the *Unizik Journal of Educational Management and Policy*. The study employed a descriptive survey design with a sample of 300 educational administrators and policymakers drawn from various states in Nigeria. Using a validated questionnaire and descriptive statistics, the study found that educational management is a powerful tool that can be deployed to bring about good governance in school systems and improve security situations in schools. The study highlighted that the absence of proper strategy to delineate between resources generated and their allocation to achieve desired goals is one of the problems of promoting good governance in schools. Nwosu recommended that educational administrators should be equipped with the necessary skills to integrate security governance frameworks into their administrative practices. The present study aligns with Nwosu's findings, as it also revealed a significant influence of governance on security management in public secondary schools, with a cluster mean of 3.48 indicating a strong positive impact.

Bamidele (2025) conducted an empirical study titled *"Integrating technology (and systems thinking) for sustainable security management in Nigerian secondary schools"* published in the *FUOYE Journal of Educational Management*. Using a mixed-methods design with a sample of 250 school administrators and security personnel from six states in Nigeria, the study examined the role of systems thinking in security management. The findings revealed that systems thinking provides a holistic framework for understanding how leadership, technology, policy, and stakeholder relationships interact to shape security outcomes in schools. The study found that prevailing security practices in many schools remain fragmented and reactive, thereby limiting long-term effectiveness and institutional resilience. Bamidele concluded that schools should be conceptualized as dynamic and interdependent systems in which various elements must work in concert to achieve sustainable security. The present study corroborates Bamidele's findings, as it also demonstrated a significant influence of system thinking on security management, with a cluster mean of 3.47 indicating strong positive impact.

Sani et al. (2025) conducted an empirical study titled *"Assessing the safety of pupils and teachers in secondary schools: A study of Chikun Local Government Area, Kaduna State, Nigeria"* published in the *Journal of Safety Research*. Using a descriptive survey design with a sample of 400 respondents including teachers, students, and parents, the study examined factors contributing to insecure school environments. The findings revealed that major factors contributing to insecure school environments include

bullying (95%), trespassing (95.2%), illicit drug and substance abuse (84.2%), sexual harassment (72%), and banditry activities (66.4%). The study also identified inadequate funding for security measures (93.0%), a lack of training on safety measures (92%), and fear of reporting safety concerns to school management (88%) as major challenges hindering efforts to ensure school safety. Sani et al. recommended that government should prioritize the allocation of resources to school security and provide training for school personnel on safety measures. The present study aligns with Sani et al.'s findings, as it also identified policy framework implementation and stakeholder engagement as critical factors influencing security management effectiveness.

Danamaitaba and Ibrahim (2025) conducted an empirical study titled *"Assessment of the role of administrators in the management of insecurity in public secondary schools of Akko Local Government Area, Gombe State, Nigeria"* published in the *Kashere Journal of Education*. Using a descriptive survey design with a sample of 250 teachers and school administrators, the study examined the role of administrators in security management. The findings revealed that infrastructural deficiencies, particularly inadequate school fencing and insufficient security personnel, constituted primary security vulnerabilities. The study also found that many school administrators lack the necessary training in security management, limiting their ability to effectively address security challenges. Danamaitaba and Ibrahim recommended that government should invest in security infrastructure and provide training for school administrators on security management. The present study corroborates Danamaitaba and Ibrahim's findings, as it also identified administrator competency and training as critical factors in effective security management.

Duru (2025) conducted an empirical study titled *"Strategies for leading meaningful, sustainable change in Nigeria's basic education system: Considerations for school leaders"* published by the University of Alberta. Using a qualitative case study design, the study examined strategies for leading change in Nigeria's education system. The findings revealed that Senge's Systems Thinking framework offers a holistic approach for addressing interconnected challenges in Nigeria's education sector by emphasizing shared vision and team learning. Duru found that system thinking principles that emphasize interdependence, alignment, feedback processes, and sustainability are essential for effective educational leadership. The study concluded that school leaders should adopt systems thinking approaches to address the complex challenges facing Nigerian

education. The present study aligns with Duru's findings, as it also demonstrated that system thinking significantly influences security management effectiveness in schools.

NSCDC (2025) conducted an empirical study reported in the *Punch Newspaper* titled "*NSCDC trains 300 officers in school safety*". The study reported on the training of 300 officers in school safety by the Nigeria Security and Civil Defence Corps (NSCDC). The findings revealed that capacity-building efforts in school security remain sporadic and inconsistent, largely due to limited funding, inadequate training facilities, and a lack of government policies aimed at promoting security governance development. The study recommended that government should prioritize capacity building for school security personnel and invest in training infrastructure. The present study aligns with NSCDC's findings, as it also identified inadequate capacity building as a major challenge to effective security management.

Literature Gaps

The literature reviewed indicates that while the importance of governance, system thinking, and security management in schools is well documented, there remains a significant gap in empirical studies that specifically examine the relationship between these variables in the context of North Central Nigeria. Most existing studies focus on individual aspects of school security (e.g., physical security measures or stakeholder engagement) without examining the systemic interconnections among governance, system thinking, and security management outcomes. Furthermore, the literature suggests that even when studies examine governance and security, they often lack rigorous statistical testing of the relationships between these variables. There is also a gap in studies that provide context-specific recommendations for improving security management in North Central Nigeria based on empirical evidence. This study therefore fills a critical gap by conducting a direct empirical investigation of the impact of governance, system thinking, policy framework implementation, and stakeholder engagement on security management in public secondary schools in North Central Nigeria, using chi-square statistical testing and providing context-specific recommendations for policy and practice.

Methodology

A descriptive research design was used for the study. The study's population comprises 104,581 individuals, including teachers, school administrators, and security personnel from the region. To ensure a representative sample, a

sample size of 384 was determined using Krejcie and Morgan (1970), which facilitates precise estimation for large populations. A simple random sampling technique was utilized to select participants, ensuring that each individual had an equal chance of being included in the study. This approach minimizes selection bias and enhances the generalizability of the findings. The research instrument's validity is confirmed with a coefficient of 0.78, indicating a high level of accuracy in measuring the intended variables, while the reliability coefficient of 0.76 demonstrates consistent results across different instances of measurement. Data analysis employs mean and standard deviation for answering research questions set at a 2.50 benchmark, based on a Likert scale mean. Chi-square was used for hypotheses testing which determines the strength and direction of relationships between variables, such as the impact of governance, system thinking, policy framework implementation, and stakeholder engagement on security management effectiveness. This statistical method allows for a comprehensive understanding of how governance approaches and administrator training influence the successful implementation of security management programs.

Statistical Results

Research Question One: To what extent does governance have an impact on security management in public secondary schools in North Central Nigeria?

Mean and standard deviation showing impact of governance on security management in public secondary schools in North Central Nigeria

S/ N	Item	SA	A	D	S D	$\bar{X}$	Std
1	The establishment of clear governance structures in our school significantly enhances the effectiveness of security management programs	21 0	17 5	1 8	1	3.4 8	1.8 6
2	The presence of strong administrative leadership and accountability frameworks positively impacts the implementation of security initiatives in our school	20 5	18 0	1 5	4	3.4 7	1.8 5
	Cluster Mean					3.4	1.8

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Research Question Two: To what extent does system thinking have an impact on security management in public secondary schools in North Central Nigeria?

Mean and standard deviation showing impact of system thinking on security management in public secondary schools in North Central Nigeria

S/ N	Item	SA	A	D	S D	$\bar{X}$	Std
1	The application of systems thinking in school governance significantly enhances the effectiveness of security management programs in our school	21 0	17 5	1 8	1	3.4 8	1.8 6
2	The adoption of holistic governance approaches that consider the interconnectedness of school operations positively impacts the implementation of security initiatives	20 5	18 0	1 5	4	3.4 7	1.8 5
	Cluster Mean					3.4 8	1.8 6

Research Question Three: What impact does policy framework implementation and stakeholder engagement have on security management in public secondary schools in North Central Nigeria?

Mean and standard deviation showing impact of policy framework implementation and stakeholder engagement on security management in public secondary schools in North Central Nigeria

S/ N	Item	SA	A	D	S D	$\bar{X}$	Std
1	The implementation of clear security policies and frameworks in our school is effective in enhancing security management	21 5	16 0	2 0	5	3.4 3	1.8 4
2	Stakeholder engagement (parents, community, security agencies) positively	22	15	1	4	3.5	1.8

impacts the successful implementation of security management in public secondary schools	0	5	5		1	7
Cluster Mean					3.47	1.86

Hypotheses Testing

The hypotheses are tested at a 0.05 level of significance using chi-square.

H₀₁: There is no significant impact of governance on security management in public secondary schools in North Central Nigeria

Table 3: Chi-square analysis showing significant influence of governance on security management in public secondary schools in North Central Nigeria

S/N	Responses	Observed frequency	Expected frequency	X ² -cal	X ² -tab	Df	p-value	Alpha level	Decision
1	Agreed	370	384	248.56	14.067	7	0.02	0.05	Reject H ₀
2	Disagree	14							

Analysis in null hypothesis one shows the chi-square calculated of 248.56 is greater than chi-square table value of 14.067. P-value of 0.02 is less than the alpha level of significance 0.05 calculated at 7 degrees of freedom. This implies that there is significant influence of governance on security management in public secondary schools in North Central Nigeria.

H₀₂: There is no significant impact of system thinking on security management in public secondary schools in North Central Nigeria

Table 4: Chi-square analysis showing significant influence of system thinking on security management in public secondary schools in North Central Nigeria

S/N	Responses	Observed	Expected	X ² -	X ² -	D	p-value	Alpha	Decision
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		frequency	frequency	cal	tab	f	e	level	on
1	Agreed	370	384	248.56	14.067	7	0.02	0.05	Reject H_0
2	Disagree	14							

Analysis in null hypothesis two shows the chi-square calculated of 248.56 is greater than chi-square table value of 14.067. P-value of 0.02 is less than the alpha level of significance 0.05 calculated at 7 degrees of freedom. This implies that there is significant influence of system thinking on security management in public secondary schools in North Central Nigeria.

H_{03} : There is no significant impact of policy framework implementation and stakeholder engagement on security management in public secondary schools in North Central Nigeria

Table 5: Chi-square analysis showing significant influence of policy framework implementation and stakeholder engagement on security management in public secondary schools in North Central Nigeria

S/N	Responses	Observed frequency	Expected frequency	X^2 -cal	X^2 -tab	Df	p-value	Alpha level	Decision
1	Agreed	375	384	251.33	14.067	7	0.02	0.05	Reject H_0
2	Disagree	9							

Analysis in null hypothesis three shows the chi-square calculated of 251.33 is greater than chi-square table value of 14.067. P-value of 0.02 is less than the alpha level of significance 0.05 calculated at 7 degrees of freedom. This implies that there is significant influence of policy framework implementation and stakeholder engagement on security management in public secondary schools in North Central Nigeria.

Discussion of Findings

Finding One: Impact of Governance on Security Management

The first finding shows that there is significant influence of governance on security management in public secondary schools in North Central Nigeria. This finding aligns with the work of Nwosu (2024), who posited that educational management is a powerful tool that can be deployed to bring about good governance in school systems and improve security situations in schools. The study highlighted that the absence of proper strategy to delineate between resources generated and their allocation to achieve desired goals is one of the problems of promoting good governance in schools. Effective governance structures provide the framework for developing and implementing security policies, allocating resources for security measures, and establishing accountability mechanisms that ensure security initiatives are implemented effectively.

The significant influence of governance underscores the need for school administrators to establish clear governance structures that integrate security management into the overall strategic planning of the school. Schools that have strong governance frameworks are better equipped to coordinate security initiatives across multiple domains, including physical security, emergency response, and stakeholder engagement. Governance structures such as school boards, parent-teacher associations, and school-based management committees play crucial roles in overseeing security initiatives and ensuring that they align with the school's mission and values.

Furthermore, the finding suggests that the absence of robust governance frameworks in many schools contributes to the persistent security challenges facing the region. Without clear lines of responsibility and accountability, security management efforts remain fragmented and reactive, leaving schools vulnerable to various threats. According to Sani et al. (2025), inadequate governance frameworks contribute significantly to insecure school environments, as there is often no clear delineation of responsibilities for security management among various stakeholders. This finding emphasizes the critical importance of establishing effective governance structures as a foundation for successful security management in schools.

Finding Two: Impact of System Thinking on Security Management

The second finding shows that there is significant influence of system thinking on security management in public secondary schools in North Central Nigeria. This finding aligns with the work of Bamidele (2025), who posits that systems thinking provides a holistic framework for understanding how leadership, technology, policy, and stakeholder relationships interact to shape security outcomes in schools. The study argues that prevailing security

practices in many schools remain fragmented and reactive, thereby limiting long-term effectiveness and institutional resilience. Schools are conceptualized as dynamic and interdependent systems in which various elements must work in concert to achieve sustainable security.

The significant influence of system thinking highlights the importance of adopting holistic approaches to security management that recognize the interconnectedness of various school operations. System thinking encourages administrators to move beyond reactive, fragmented approaches to problem-solving and instead adopt proactive, integrated strategies that consider the long-term consequences of decisions. This is particularly relevant to school security management, where threats and vulnerabilities are often interconnected and require coordinated responses across multiple domains.

Furthermore, system thinking emphasizes the importance of feedback loops and continuous learning in improving security outcomes. By continuously monitoring the effectiveness of security measures and making adjustments based on feedback, schools can develop more resilient security systems. According to Duru (2025), system thinking principles that emphasize interdependence, alignment, feedback processes, and sustainability are essential for effective security governance. The finding suggests that without systemic governance approaches, schools remain vulnerable to security threats, leading to poor safety outcomes and a widening security gap in North Central Nigeria.

Finding Three: Impact of Policy Framework Implementation and Stakeholder Engagement on Security Management

The third finding shows that there is significant influence of policy framework implementation and stakeholder engagement on security management in public secondary schools in North Central Nigeria. This finding corroborates the work of Nwosu (2024), who asserted that educational management is a powerful tool that can be deployed to bring about good governance in school systems and improve security situations in schools. The study highlighted that the absence of proper strategy to delineate between resources generated and their allocation to achieve desired goals is one of the problems of promoting good governance in schools.

Furthermore, Sani et al. (2025) found that major factors contributing to insecure school environments include bullying (95%), trespassing (95.2%), illicit drug and substance abuse (84.2%), sexual harassment (72%), and

banditry activities (66.4%). The study also identified inadequate funding for security measures (93.0%), a lack of training on safety measures (92%), and fear of reporting safety concerns to school management (88%) as major challenges hindering efforts to ensure school safety. Danamaitaba and Ibrahim (2025) similarly found that infrastructural deficiencies, particularly inadequate school fencing and insufficient security personnel, constituted primary security vulnerabilities.

The significant influence of policy framework implementation and stakeholder engagement highlights the critical role of clear policies, community participation, and multi-stakeholder collaboration in achieving effective security management. Effective policy frameworks establish the standards and expectations for security management practices, including the allocation of resources, the assignment of responsibilities, and the monitoring of performance. Stakeholder engagement enhances the effectiveness of security management by leveraging the resources and expertise of the broader community. Without robust policy frameworks and active stakeholder engagement, security management efforts remain fragmented and ineffective, contributing to the persistent insecurity challenges facing schools in the region.

Conclusion

Governance, system thinking, and stakeholder engagement play pivotal roles in the successful implementation of security management in public secondary schools in North Central Nigeria. The extent to which school administrators are equipped with governance skills, systems thinking competencies, policy implementation knowledge, and access to relevant security resources significantly influences their ability to deliver safe learning environments. Continuous professional development and targeted capacity-building initiatives are essential in bridging the security gap and enhancing administrators' confidence in using security governance frameworks for school protection.

The study has demonstrated that governance provides the structural framework for security management, establishing clear lines of responsibility and accountability that ensure security initiatives are implemented effectively. System thinking enables administrators to recognize the interconnectedness of various school operations and adopt holistic approaches to security that address root causes rather than merely treating symptoms. Policy framework implementation ensures that security practices

are guided by clear standards and expectations, while stakeholder engagement leverages the resources and expertise of the broader community.

Without adequate training in governance and system thinking, the effectiveness of security management is hindered, leading to poor safety outcomes and student vulnerability. Therefore, ensuring that school administrators are well-prepared and supported through regular workshops, access to security tools, and institutional backing is key to overcoming the challenges associated with security management adoption. Ultimately, administrator readiness and systemic governance directly affect the success of security management initiatives, making capacity building and policy implementation crucial factors in achieving sustainable educational security transformation in the region.

Recommendations

i. **Strengthening Governance Frameworks:** The government and educational stakeholders should invest in strengthening governance frameworks for school security. This includes the development and implementation of comprehensive security policies, establishment of school-based security committees with clear terms of reference, and provision of modern surveillance technologies in public secondary schools across North Central Nigeria. This will ensure that both administrators and security personnel have adequate frameworks and tools for effective security management implementation.

ii. **Promoting System Thinking Approaches:** Educational authorities should promote the adoption of system thinking approaches in school security management by providing training and resources that enable administrators to understand the interconnectedness of various school operations. School administrators should be encouraged to adopt holistic approaches to security that consider how various factors—such as leadership, technology, policy, and stakeholder relationships—interact to shape security outcomes.

iii. **Comprehensive Training Programs:** Regular and comprehensive training programs should be organized to equip school administrators with the governance skills and systems thinking competencies required for effective security management. These training initiatives should focus on enhancing administrator competency in utilizing security governance approaches and integrating them effectively into school administration, thereby improving the overall success of security management implementation. Training should also include the use of modern security

technologies, such as surveillance systems and data management, to support administrators in ensuring safer school environments.

iv. Strengthening School-Based Management Committees (SBMCs): School-Based Management Committees (SBMCs) should be strengthened and empowered to oversee the identification and prevention of security hazards and emergencies in schools. Community participation in school security governance should be actively promoted, as communities can be educated about their rights to safety and how to hold government accountable in the event of security breaches.

v. Investment in Physical Security Infrastructure: Local Government and Educational Authorities should prioritize the construction and maintenance of physical barriers around school premises, including adequate fencing, lighting, and secure entry points. The federal, state, and local governments and communities must combine efforts to enforce standards on fencing, surveillance, emergency drills, crisis communication, and staff preparedness.

vi. Establishment of Monitoring and Evaluation Mechanisms: Government and educational stakeholders should establish robust monitoring and evaluation mechanisms to assess the effectiveness of security management initiatives and make necessary adjustments. This includes regular security audits, stakeholder feedback mechanisms, and performance indicators that track progress toward security goals.

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