

EXTENT OF PRINCIPALS' TECHNOLOGICAL SECURITY MANAGEMENT STRATEGIES FOR ENHANCING SECONDARY SCHOOLS' ADMINISTRATION IN AWKA EDUCATION ZONE, ANAMBRA STATE

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Abstract

The study was to investigate the extent of principals' technological security management strategies for enhancing secondary schools' administration in Awka Education Zone, Anambra State. Descriptive survey research design was adopted for this study. Two research questions and two null hypotheses guided the study. Principals' population was 54 while teachers' population was 621, the researcher purposively sampled 124 teachers' and made use of the 54 principals. The researcher made use of instrument for data collection. The instrument consisted of 15 items. The reliability of the instrument was determined using Cronbach Alpha with an overall reliability index of 0.80 which made the instrument highly reliable. The data were analyzed using mean and standard deviation while t-test statistics was used to test the hypotheses. The findings of the study showed that the respondents were of the views that, principals' technological security management strategies relating to the provision of security devices have an impact in enhancement of secondary school administration in Awka Education Zone to a low extent. It was recommended among others that the government should take the issue of technological security as a matter of priority as well as allocating money for the purchasing of such safety and security building equipment as video surveillance (CCTV) among others.

KEYWORDS: Technology, Security, School Administration, Principals and Management Strategies

Introduction

Changes in the Educational Landscape have made technology essential for enhancing school Security. Investing in new technology can help improve school's emergency response and preparedness. With the right support of technology, schools can become a safe and nurturing space for everyone. The right technology can make all the difference when looking to improve security in the school. Advanced surveillance system, access control measures and cyber security protocols contribute significantly to overall safety. Technological innovations act as deterrents while providing comprehensive data for post-incident analysis, helping to improve security strategies continuously. School security is the establishment and maintenance of protective measures that ensure a state of inviolability from Hostile act or influences (Paci-Green & Pandey, 2016). This is



to say that security measures are to be reinforced to keep the students, teachers and the environment from harm and danger.

The rapid advancement of technology has transformed the way organizations operate, including educational institutions. Secondary schools, in particular, have been impacted by the increasing demand for effective administration, efficient management of resources, and enhanced learning experiences. In Anambra State, Nigeria, secondary schools face unique challenges in administering their institutions effectively, amidst the increasing demand for technological adoption. In recent years, the importance of technological security management strategies has become increasingly evident. Technological security management strategies refer to the measures taken to protect computer systems, networks, and sensitive information from unauthorized access, use, disclosure, disruption, modification, or destruction. These strategies are essential for protecting sensitive information, preventing cyber threats, and promoting a secure learning environment.

Despite the importance of technological security management strategies, many secondary schools in Anambra State lack the necessary measures to protect their institutions from cyber threats. This lack of preparedness has resulted in various challenges, including inefficient administrative processes, data breaches, and disruption of learning. Principals, as the chief administrators of secondary schools, play a critical role in ensuring the effective management of technological security. However, the extent to which principals in secondary schools in Anambra State adopt technological security management strategies remains unclear.

Technology application in schools covers a wider scope. This according to Stephen, Nwali and Ugah (2019), includes the comprehensive approach to innovate education systems, methods and management through technology, restructuring education system, diversifying teaching-learning, management methods and practices, engaging all stakeholders of education and adapting rapid to changes in society and the environment and enhancing education efficiency, effectiveness and productivity. According to Tatnall (2020), technology is the process of putting new ideas into commercial or organizational practice. Technologies are appearing all the times in education. Some are adopted and used in the form in which they were offered.

The school use to be one of the safest environment for children. However, in many schools students are victimized in school by fellow students, educators as well as insurgency and others. For instance, in Chibok, a town in Nigeria, Ndali (2014) reported how evaded and abducted more than 200 senior secondary school girls from the school Usman, Adelaja and Okolie (2017) posited that on the 26th day of May, 2017 abductors stormed a particular boarding school in Epe area and took away six students in an incident, that was said to have caused massive withdrawal from describing how bad it is now with security in our schools, they further asserted that staff and students in Nigeria-



Turkish International school Lagos were also kidnapped. Such security threats could be averted if necessary technological security devices are made available.

Similarly, there is growing concern about the security of secondary schools in Anambra State, because of the escalating cases of security threat undermining the security of the schools and that of immunities thereby creating a climate of insecurity and fear which impairs the process of teaching and learning.

There has been cases of robbery, terrorism, herdsmen massacres and rape in secondary schools in Anambra state (Utazi, 2016) in a related development, Abonyi (2017) observed that armed robbers attacked community secondary school in Nwafia Njikoka local government area on the 9th day of November 2016. A similar case was also reported on 3rd day of January 2017 secondary school Nwagu in Dunukofia local government area where robbers broke through the school laboratory removed all the electrical fittings they also robbed the coppers lodge and some computer accessories were stolen. The school has to develop some security system and practices which includes the use of technology devices train staff and implement systems such as video surveillance cameras, physical access controls, paging and radio systems. According to Mentiki (2012), security devices are those pieces of electronic, technical equipment used to improve or add to the overall security system. The technological security devices include video surveillance camera, access control device, incident response device, unified communication, digital signage, smart connected building, desktop videos, notification services, visitor management system and school transportation when available, these devices make a positive and secure atmosphere for management teaching and learning.

Security is defined as a measure taken to prevent dangers and threats. It has been defined as the degree of protection against danger, damages, loss and crime (Dwyer & Osher, 2000) school security is important as they relates to students and their ability to concentrate and learn (Yell & Rozalski, 2000) learning requires a positive atmosphere in which students feel not just physically safe, but emotionally safe as well. Creating such environment means ensuring students safety throughout the school day and keeping them free from both physical and social or emotional bullying

There are different types of security threats which educators, managers and parents are faced with in the course of delivering a successful secondary school administration. According to Bucher & Manning (2003). These threats need to be addressed by all stakeholders in education including other organizations and government departments.

To help create a secure school environment Stewart (2006) posits that school principals have to enhance the technological security. The principals should be helped by the government to develop



some security devices. To ensure security in the school compounds, placing cameras throughout the school buildings will allow the personnel to see the possible video tape more motion of anyone within the camera field view will be of a great advantage to monitor the school environment.

Consequently, the devices help to prevent unauthorized access to school buildings and reduces personnel requirement for monitoring (Sprague & Walker 2005). Nonetheless, whether these devices are made available in schools in Anambra State are still vague.

It is therefore against this background, that the present study investigated the extent of utilization of technological security management strategies for enhancing security schools in Awka education of Anambra State.

Statement of the problem

Crime, violence, menace from herdsmen, threats from hoodlum, incessant kidnapping, cultism, disorder and gunmen invasion are the major problems facing secondary schools administration in Awka Education zone. Problems of this nature have really affected the successful administration of secondary schools in Awka Education zone, it has not only endanger students and teachers but they also prevent teachers from concentrating on their primary obligations as well as students learning concentration this is because when people are legally required to attend school, school personnel have the corresponding duty to provide children with a safe, secure and peaceful environment in which learning can occur. This change in educational climate has created an imperative need for the school principals to identify various technological security management strategies like providing security devices as well as establishing emergency plans in the schools. The problem of the study posed as a question is, what is the extent of principals of technological security management strategies for enhancing secondary schools' administration in Awka education zone, Anambra state.

Purpose of the study

The main purpose of this study was to investigate the extent of principals' technological security management strategies for enhancing secondary schools, administration in Awka Education zone, Anambra Stat. specifically, the study sought to:

1. Ascertain the extent of principals' of technological security management strategies in relation to the provision of security devices for enhancing Secondary Schools' administration in Awka Education Zone.
2. Determine the extent of principals' of technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka education zone.

Research Questions

The study was guided by the following research questions.

1. What is the extent of principals' of technological security management strategies in relation to the provision of security devices for enhancing secondary schools' administration in Awka Education zone?
2. What is the extent of principals' of technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education zone?

Hypotheses

The study was guided by the following hypotheses;

Ho1: There is no significant difference in the mean ratings of principals and teachers on the extent of principals' of technological security management strategies in relation to the provision of security devices for enhancing secondary schools' administration in Awka Education Zone.

Ho2: There is no significant difference in the mean ratings of principals and teachers on the extent of principals' of technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education Zone.

Method

Descriptive survey research design was adopted for this study. Awka Education Zone in Anambra State was the area of the study. The population for the study was 675. The total number of principals as at the time this research was carried out was 54 and teachers were 621. The researcher purposively sampled 124 teachers and made use of the 54 principals because they are manageable. The Questionnaire was used as an instrument for data collection. The questionnaire was however constructed by the researcher to gather information from the respondents. The instrument was face validated by three experts; two from the Department of Educational Management and one from Measurement and Evaluation all from the faculty of education, Nnamdi Azikiwe University, Awka. The instrument was made up of 15 items. The instrument was trial tested on 10 principals and 10 teachers in Nnewi Education Zone. The reliability of the instrument was determined using Cronbach Alpha with an overall reliability index of 0.80 which made the instrument highly reliable.

Data analyses were carried out by making use of mean and standard deviation. The hypotheses of this study were tested using t-test at 0.05 level of significance. 4 points response likert scale of Very Great Extent (VGE), Great Extent (GE), Low Extent (LE) and Very Low Extent (VLE) was made use of

by the researcher to ascertain the responses of the respondents. The decision rule was that, any computed mean scores that ranged from 2.50 and above was regarded as being great extent while



the item that fell below 2.50 was regarded as low extent. The decision rule for the hypotheses was that, hypotheses was not rejected when the t-calculated value was less than the critical table value, but rejected when the t-calculated value was greater than the critical table value.

Research Question One

What is the extent of principals' of technological security management strategies in relation to the provision of security devices for enhancing secondary schools' administration in Awka Education Zone?

Table 1: Mean ratings of the extent of principals' of technological security management strategies in relation to the provision of security devices for enhancing secondary schools' administration in Awka Education Zone.

s/n	ITEMS	Principals		Teachers		Dec
		X	SD	X	SD	
	Principals' technological security management strategies relating to the provision of security devices are:					
1.	Metal Detectors	2.54	0.89	2.47	0.92	LE
2.	Intruder Alarm system	2.62	0.91	2.55	1.00	LE
3.	Video surveillance (CCTV).	2.33	0.88	2.31	0.93	LE
4.	Access control system	2.13	0.76	2.03	0.89	LE
5.	Biometric Identification System	2.54	0.95	2.66	1.05	LE
6.	Secure Communication System	2.15	0.85	2.31	0.92	LE
7.	Surveillance Drones	2.11	1.02	2.33	1.05	LE
8.	Network Security System	2.54	0.96	2.59	0.99	LE
		2.37	0.90	2.41	0.97	LE

The data analyzed above showed that the two groups of respondents responded accordingly. The mean scores of the principals ranged from 2.11 to 2.62 with a grand mean of 2.37 and standard deviation of 0.90. Teachers mean scores ranged from 2.03 to 2.66 with a grand mean of 2.41 and standard deviation of 0.97. However, the mean scores of both groups ranged from 2.08 to 2.60 with a grand mean of 2.39. Thus; the respondents were of the views that, the principals' technological security management strategies in relation to the provision of security devices for enhancing secondary schools' administration by principals in Awka Education Zone is to a low extent.



Research Question 2

What is the extent of principals' technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education Zone?

Table 2: Mean ratings of the extent of principals' technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration principals in Awka Education Zone.

ITEMS		Principals		Teachers			
S/N	Principals' technological security management strategies relating to the provision of emergency response plans are:	X	SD	X	SD	Dec	
9	Digital Lockdown System	2.93	0.94	0.91	3.04	GE	
10	Emergency Notification System	2.64	0.81	0.92	2.83	GE	
11	School Ambulance.	2.76	1.06	1.00	2.87	GE	
12	Fire Extinguisher.	3.09	1.03	0.96	3.04	GE	
13	Emergency Alert System	2.84	0.98	1.00	2.93	GE	
14	Digital Emergency Response Plans	2.93	0.94	1.00	2.91	GE	
15	Crisis Management Software	3.14	0.81	0.91	3.15	GE	
		2.90	0.94	0.96	2.97	GE	

The mean scores of the principals ranged from 2.64 .to 3.14 with a grand mean of 2.90 and standard deviation of 0.94. Teachers mean scores ranged from 2.88 to 3.15 with a grand mean of 3.02 and standard deviation of 0.96. However, the mean scores of both groups ranged from 2.87 to 3.15 with a grand mean of 2.97. However, the respondents were of the view that, the principals' technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education Zone is to a great extent.

Hoi: There is no significant difference in the mean ratings of principals and teachers on the extent of principals' technological security management strategies in relation to the provision of technological security devices for enhancing secondary schools' administration in Awka Education Zone.



Table 3: t-test on the mean response scores of principals and teachers on the extent of utilization of technological security management strategies in relation to the provision of security devices for enhancing secondary schools' administration in Awka Education Zone.

Group	n	Mean	SD	df	t-cal	t-crit	Decision
Principals	54	2.37	0.90	176	0.12	0.86	Not Rejected
Teachers	124	2.39	0.97				

The table above shows that t-cal of 0.12 is less than t-crit of 0.86 which means that the null hypothesis will not be rejected. Thus, there is no significant difference between the mean response scores of principals and teachers on the extent of principals' security management strategies in relation to the provision of technological security devices for enhancing secondary schools' administration in Awka Education Zone.

Ho2: There is no significant difference in the mean ratings of principals and teachers on the extent of principals' security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education Zone.

Table 4: t-test on the mean response scores of principals' and teachers on the extent of principals' of technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education Zone.

Group	n	Mean	SD	df	t-cal	t-crit	Decision
Principals	54	2.90	0.94	176	Not 0.41	0.86	Rejected
Teachers	124	2.97	0.96				

The table above shows that t-cal of 0.14 is less than t-crit of 0.86 which means that the null hypothesis will not be rejected. There is no significant difference between the mean response scores of principals and teachers on the extent of principals' technological security management strategies in relation to the provision of emergency response plans for enhancing secondary schools' administration in Awka Education Zone.

Summary of Findings



From the results of data analyses, the following were found:

1. The respondents were of the views that, principals' technological security management strategies in relation to the provision of security devices to a low extent in Awka Education Zone.
2. The respondents were of the views that, principals' technological security management strategies in relation to the provision of emergency response plans to a great extent in Awka Education Zone.
3. There is no significant difference between the mean response scores of principals and teachers on the extent principals' technological security management strategic in relation to the provision of security devices in Awka Education Zone.
4. There is no significant difference between the mean response scores of principals and teachers on the extent principals' technological security management strategies in relation to the provision of emergency response plans in Awka Education Zone.

Discussion

It was found that, the various security devices like metal dictators, iron doors, secured car parking and visitors guidelines all have impacts in the technological security management strategies of principals for enhancing secondary schools. From the result of the respondents, devices like video surveillance, access control, armed response service and perimeter fencing of the school were utilized by the principals to a low extent in the secondary schools in Awka Education Zone. This finding was not in line with Spragne and Walker (2005) who posited that before now, technological security devices are very important in the monitoring of the school activities and they have positive impacts in the internal security of the school administration. Spragne and Walker suggested that schools should go for sophisticated security devices like Cisco physical security system which uses a Cisco' IP video surveillance camera to detect motions near the fence and automatically send alert to the school security officer's mobile phone for onward action.

It was found out that, the emergency response plans which address fire blanket, emergency medical bags, school ambulance, fire extinguisher, emergency PTA meeting, bell signals and students counselling services all have impact in technological security management in enhancing secondary school administration. The finding is in-line with Henry (2000), who posited that the schools should ensure that the teams are acquainted with conflict resolution, anger management, blinking up fights, mediation and first aid apparatus in order to make the school environment peaceful.

Conclusions

This study investigated the extent of principals' technological security management strategies for enhancing secondary schools' administration in Awka Education Zone, Anambra State. Based on the findings of the study, the conclusions made indicated that most of the principals' technological security management strategies relating to the provision of security devices in secondary schools

were to a low extent. The impact of emergency response plans was to a great extent in the enhancement of secondary schools in Awka Education Zone.

Recommendations of the Study

The following are the recommendations made for this study:

1. The government should take the issue of technological security as a matter of priority as well as allocating money for the purchasing of such safety and security building equipment as video surveillance (CCTV) among others.
2. The government should improve on such emergency response devices as, fire extinguishers, digital lockdown system, crisis management software, emergency alert system, and school ambulance among others.

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