

# **AAJSMSHEL**

**AFRICA AND ASIA JOURNAL OF SOCIAL AND MANAGEMENT SCIENCES,  
HUMANITIES, EDUCATION AND LEGAL STUDIES , SAN JOSE OCCIDENTAL  
MINDORO, PHILIPPINES**

## **AAJSMSHEL**

Africa And Asia Journal of Social And Management Sciences, Humanities, Education and Legal Studies (aajsmshel), San Jose Occidental Mindoro, Philippines

Volume 4, Issue, 2, 2023, ISSN: 2955-0548  
Articles are Indexed in Google Scholar Email: [ajhsms2080@gmail.com](mailto:ajhsms2080@gmail.com)

Published by Africa And Asia Journal of Social and Management Sciences, Humanities, Education and Legal Studies: San Jose Occidental Mindoro, Philippines

## **Editorial Board**

**Professor Joselito Aguid (Editor)  
State University, Occidental Mindoro, Philippines**

**Professor Wilson Yayoh (Editor)  
University of Cape Coast, Ghana**

**Professor Akoh Harry Asana (Editor)  
Georgia, Perimeter College Atlanta, Georgia, USA**

**Dr Nsah Julius Bongkireh (Editor)  
University of Buea, Cameroon**

**Dr Sonia Dela Cruz (Editor)  
Polytechnic University of The Philippines**

**Dr Rodrigo V. Lopiga (Editor)  
Polytechnic University of The Philippines**

**Dr Elizabeth D. Roces (Editor)  
La Consolacion University Philippines**

**Dr John Mark Distor (Editor)**  
**Polytechnic University of the Philippines**

**Dr Maricris M. Usita (Editor)**  
**Occidental Mindoro State University**

## **Editorial Note**

**AAJSMSHEL** is a multidisciplinary online google scholar journal that encourages academic excellence in the dissemination of research. It welcomes and publishes well scholarly articles in Social and Management Sciences, Humanities, Education and Legal Studies. Submitted articles are subjected to total peer- review and editing before they are accepted for publication. The journal is domiciled in San Jose Occidental Mindoro, Philippines, Asia. Most of the editors are drawn from STATE UNIVERSITY, OCCIDENTAL MINDORO, PHILIPPINES , University of CAPE Coast, Ghana and other Universities.

## **AVAILABILITY AND UTILIZATION OF MODERN SECURITY TECHNOLOGY EQUIPMENT IN TERTIARY INSTITUTIONS IN DELTA STATE, NIGERIA**

**DAFIAGHOR Charity**

**Department of Educational Administration and Foundation,**

**College of Education, Warri, Delta State, Nigeria**

**Email: [charitydafiaghор@gmail.com](mailto:charitydafiaghор@gmail.com)**

**&**

**ESHENAKE Samuel Jimoh PhD**

**Department of Economics,**

**College of Education, Warri, Delta State, Nigeria**

### **Abstract**

This study examined the availability and utilization of modern security technology equipment for the effective administration of tertiary institutions in Delta State. The main problem of this study is insecurity which has become a recurring decimal in the history of Nigerian tertiary institutions. The study adopts *ex-post facto* research design and the sample consists of 3,900 respondents which were drawn from the 13 tertiary institutions in Delta State, Nigeria. The instrument used for data collection was self-structured which is titled: Modern Security Technologies in tertiary institutions Questionnaire (MSTTIQ). The validity of the questionnaire was determined through face and content validity and the research instrument has a reliability index of 0.77 and 0.78.

The findings of this study revealed that the range of security equipment available in tertiary institutions in Delta State are cell phones, trained security personnel, functional security manpower etc. Close Circuit Television (CCTV) technologies, explosive indicators, conventional alarm systems and amongst others were not available and it gave room for various security challenges on the campuses in Delta State. Based on the findings of this study, it was concluded that the right application of security equipment for effective administration of tertiary institutions in Delta State should be provided in order to checkmate sabotage and terrorism on campuses. It was also recommended that items like closed circuit television (CCTV) technologies, explosive indicators, conventional alarm systems etc should be provided in tertiary institutions in Delta State for an effective and efficient security network.

**Keywords:** Institutions, Delta State, Technology, Security Network, Equipment, Television

## Introduction

Nigerian tertiary educational institutions were established with the aim of giving students sound and qualitative education that would make them productive, self-fulfilling and thereby attain self-actualization. In realization of all these important goals, the Federal Republic of Nigeria has the following as its policy:

- (a) Development of an individual into a morally sound, patriotic and effective citizen;
- (b) Total integration of the individual into the immediate community, the Nigerian society and the world;
- (c) Provision of equal access to qualitative educational

opportunity for all citizens at all levels of education, within and outside the formal school system;

- (d) Inculcation of national consciousness, values and national unity;
- (e) Development of appropriate skills, mental, physical and social abilities and competencies to empower the individual to live in and contribute positively to societal development (FRN 2014:2).

These goals are expected to be pursued through teaching, imparting of knowledge and skills, research, dissemination of information, service-fostering to community, and professional training for the development of intermediate and high-level manpower.

Furthermore, the goals of tertiary education as enunciated above are crucial for national development. However, research by scholars such as Okebukola (2006) has shown that many of Nigerian tertiary educational institutions are finding it increasingly difficult to achieve the highlighted goals because of the problems confronting them. One of such is the problem of students' insecurity on campus.

The prevalence of students' insecurity in Nigerian tertiary institutions in recent times makes this research apt. This is because the more that is known about students' insecurity and its management, the better for the formulation of realistic students

security management strategy that will help to achieve peace in tertiary institutions and, thus, contribute to the achievement of the goals of tertiary education as specified in the National Policy on Education.

Tertiary education is widely conceived in Nigeria as an indispensable tool for the people's socio-economic advancement, their political survival, and the realisation of their aspirations and potentialities. The Federal and State Governments largely perceived tertiary education as an investment in human capital development, with the aim of producing the required skilled manpower for managerial and technocratic levels of the economic, social and political sectors of the nation. Many secondary school leavers in Nigeria conceive tertiary education as a legitimate passport not only to self-fulfillment, but as a ladder to higher socio-economic status in life. While many is on the view that tertiary education is a formidable instrument that could be judiciously used in Nigeria to wipe out economic woes and social vices. Such social vices include corruption, bribery, ignorance, disease, malnutrition, superstitious beliefs, tribalism, nepotism, political instability, unemployment and economic stagnation (Okebukola, 2016).

Adesina (2005) affirmed that the product of the Nigerian educational system should be able to take his place meaningfully in society and make positive contributions to national development through the knowledge, skills and exposures that he

has acquired from the educational system”.

As tertiary education is well embraced in Nigeria, the demand for this level of education in the last three decades, precisely between 1988 and 2018, had been unprecedented. As of 2018, Nigeria has tertiary educational institutions, which include 158 (38%) Universities, 82 (43.5 %) Polytechnics, 82 (43%) Colleges of Education, 53 (13%) Monotechnics; and 45 (11%) Innovation Enterprise Institutions (Fapohunda, 2018 and <https://campusbiz.com.ng/list-ofuniversities-in-nigeria-27/03/2018>).

In spite of the astronomic increase in the number of tertiary educational institutions in Nigeria, the nation is still witnessing all kinds of economic woes and social vices, which include rape, cultism, armed robbery and kidnapping. All concerted efforts made by the three tiers of Government in Nigeria, to alleviate these economic, socio-political problems have proved abortive. Hence, the inevitable need to use the highly cherished tertiary education as a panacea for good governance and national security. For the Nigerian tertiary educational institutions to accomplish the lofty goal of producing the required skilled manpower who would excel in their various leadership positions in government and business organisations and contribute meaningfully to national security, prominent attention must be given to sound management, adequate funding and quality control through effective security

and supervision of the tertiary educational institutions. Security, across the world, has recently become one of the most challenging issues, seemingly because of its indispensability in achieving peace and prosperity of nations, states and all forms of organization. Because of this trend of insecurity in the country and elsewhere; Nigerian universities are urgently re-examining their security framework, following several recent and unrelated security threats to educational institutions in general by the Boko Haram Islamic extremist.

These developments have raised security concerns on the campuses and jolted state governments and university authorities alike into action. Civil society organisations have called on the federal and state governments to re-examine the existing campus security framework. The terror attacks of Boko Haram represent the biggest insurgency in the Nigerian nation has faced since its independence in 1960. Among the targets of these attacks are some of the most vital national assets - institutions of learning — as many students, teachers and lecturers have died in these heinous attacks.

Several tertiary institutions in Nigeria have suffered from the attack of this deadly group called Boko Haram. Bayero University, Kano, established in 1977 has had its share of this barbaric unleash, when in April 29<sup>th</sup> 2012 gunmen attacked, and at least 17 students were killed. A lecture theatre and a sports complex, used by

Christian worshippers at the old campus of the university, were also attacked by gunmen (Ani, 2010). Further, the attack on Sa'adatu Rimi College of Education and that of Kano School of Hygiene on 23<sup>rd</sup> June 2014. That same year on April 14, 2014, Boko Haram attacked Government Girls Secondary School, Chibok, Borno state and abducted two hundred and seventy-six Chibok schoolgirls in their dormitory. In 2017 lecturers of the University of Maiduguri on oil exploration in the North East Region were abducted and this led to the closure of the school. And in 2018, the Musab al – Barnawi faction of the Boko Haram sect abducted one hundred and ten (110) Dapchi schoolgirls in Yobe state. According to UNICEF (in Saharareporters, 2018) reported that 1,4000 schools have been destroyed and more than 2,295 teachers lost their lives since the beginning of the insurgency in that region in 2009. And all this left an impression of a general state of insecurity in Nigerian educational institutions.

### **Statement of the Problem**

The provision of management and administration of tertiary education is the responsibility of private sector, and federal and state governments. There have been myriads of administrative problems confronting tertiary education in Nigeria. morale of lecturers, corruption, conflicts, cultism and examination malpractices, but also insecurity The system has not only witnessed decayed facilities and infrastructures, poor funding, poor quality products, low. The government does not seem to be

able or willing to provide a solution for solving these problems. These problems have become a recurring decimal in the history of Nigerian tertiary education.

This is because, for many years, budgets for education have been under enormous pressure as a result of declining budgetary allocation in enrolment and, shortfalls of funds from Federal and State Governments.

The issue of insecurity everywhere in Nigeria exposed the nation to continuous loss of human life, which impacts negatively on the human capital index of the country. The schools, colleges, universities, research centres and training institutes that are meant to be the paradise for human capital development are increasingly becoming in-secured in the country. Physical structures in many institutions that are used for human capacity building have collapsed at different times in different parts of the country; leading to the destruction of capacity-building materials resources, while others have been blown off by wind and or conquered by flood. Many of them have become dilapidated to the level that human capital development cannot take place in them effectively. Also there are major security threats to human capital development in the country that are man-made, which are causing physical, psychological, material and other forms of damage to the growth of human capacity. Amongst them include the activities of Islamic fundamentalists, kidnappers, cultists, community militias,

and Fulani Herdsmen, among others. These later forms of insecurity that are pre-planned and humanly driven have turned into a big threat to all levels and stages of human capacity building in the country. This work presents religious extremism, kidnapping, political violence, armed robbery and cultism as a threat, to human capacity development. However, one could only understand the significance of national insecurity in Nigerian human capital development through a proper understanding of the concept of national security. The fundamental question to be asked is what is government and tertiary institutional authorities doing to secure lives and properties in our tertiary institutions.

### **Research Questions**

The following research questions were formulated to guide this study:

- I) What are the ranges of modern security technologies available in tertiary institutions in Delta State?
- ii) What are the challenges to effective utilization of modern security technologies in the administration of tertiary institutions in Delta State?

### **Research Hypotheses**

The following hypotheses are formulated:

- (i) There is no significant relationship between the availability and utilisation of modern security technology pieces of equipment in tertiary institutions in Delta State.
- (ii) Do you agree that relationship between challenges

encountered in the use of modern security technology equipment and the effective administration of tertiary institutions in Delta state?

Against this backdrop, the researcher sought to investigate the application of modern security technologies in the administration of security challenges in the tertiary institutions in Delta State.

### **Purpose of the Study**

The purpose of the study is to examine the application of security equipment in the administration of security challenges in tertiary institutions in Delta State. However, the specific objectives include:

- i) Identify the range of modern security technologies available in tertiary institutions in Delta State.
- ii) Examine the challenges to effective utilization of modern security technologies in the administration of tertiary institutions in Delta State.

### **Scope and Delimitation of the Study**

This study will examine the application of security equipment in the administration of tertiary institutions. In the attempt to do this, this study will identify the security equipment and challenges confronting tertiary institutions as regard security matters. This study will be delimited to all the tertiary institutions in Delta State.

### **Justification of the Study**

The study is significant to the extent that it would draw the

attention of all the stakeholders in the education industry to modern security technology for securing tertiary educational institutions.

Secondly, this study will expose all the gadgets that have parts to contribute towards the successful implementation of tertiary education policies in Nigeria. This will also enhance the self-awareness and consciousness of individuals in tertiary institutions on security.

Thirdly, security experts and security-concerned citizens would be made to know who to relate or discuss security issues with concerning tertiary educational institutions and indeed by implication and national security. This is very important as it is believed that tertiary educational institutions, being the ivory tower and citadel of learning, are no-go areas regarding insecurity. The study could also encourage entrepreneurs in the production of security equipment for tertiary institutions.

### **Research Design**

This study adopts the ex post facto research design. Ex post facto research design is any systematic empirical enquiry into which the independent variables have not been directly manipulated because they have already occurred.

## **Population of the Study**

The population of this study comprises thirteen tertiary institutions in Delta State, Nigeria. The population will include academics communities, executive and administrative staff and students with qualifications ranging from school certificates to post-graduation degrees in different fields of study. They include male and female respondents with an average experience of ten years for academic and non-academic staff and three years for students.

## **Sample and Sampling Technique**

The sample consists of 50 staff and 250 students drawn from each of the thirteen tertiary institutions in Delta State. Through a stratified random sampling technique, a total of 3,250 students and 650 staff amounting to 3,900 respondents which make up the sample. The stratified sampling technique is a probability sampling technique wherein the researchers divided the population into subgroups or strata, and then randomly selected the final sample proportionately from each stratum. The reason for the choice of stratified sampling technique reduces bias and it is to ensure that each stratum is proportionately represented in the population. Each of the schools will be used as a stratum given thirteen strata in all. The sample size will be considered appropriate for the Delta State Education Zone because the average number of staff and students for each stratum was fifty for staff and two hundred and fifty for students. The random selection of respondents is graphically shown below:

**Table 1: Sample Distribution**

<b>S/N</b>	<b>Names of Institutions</b>	<b>No. of Staff</b>	<b>No. of Students</b>
1.	Delta State University, Abraka	50	250
2.	Dennis Osadebey University, Asaba	50	250
3.	University of Science and Technology Ozoro	50	250
4.	University of Delta, Agbor	50	250
5.	Federal University of Petroleum Resource Effiarnun	50	250
6.	Nigeria Maritime University, Okerenkoko	50	250
7.	Petroleum Training Institute, Effurun	50	250
8.	Delta State Polytechnic, Ogwashuku	50	250
9.	Delta State Polytechnic, Oghara	50	250
10.	Delta State School of Marine Technology, Burutu	50	250
11.	Federal College of Education (Technical), Asaba	50	250
12.	College of Education, Warri	50	250
13.	College of Physical Education, Mosogor	50	250
	<b>Total</b>	<b>650</b>	<b>3,250</b>

**Source Field Work 202**

### **The instrument for Data Collection**

The instrument used for data collection was Modern Security Technologies in Tertiary Institutions Questionnaire (MSTTIQ) constructed by the researchers. The questionnaire is made up of two parts. Whereas Part A was on personal data and Part B deals with the availability and utilization of security pieces of equipment. The part B comprised a list of Security equipment, which students and staff are requested to indicate whether the

equipment are available and utilized in the administration of school security.

### **Validity of the Instrument**

To determine the face and content validity of the instruments, Modem Security Technologies in Tertiary Institutions Questionnaire (MSTTIQ) was given to two experts in Measurement and Evaluation from Delta State University, Abraka. Based on the inputs, corrections and suggestions made by the supervisor and experts, the final copy of the questionnaire was produced.

### **Reliability of the Instrument**

To establish the reliability of the instruments, a sample of students, outside the study area, was drawn from an equivalent study sample and was used for testing of the items of the instrument. The reliability of the instrument was determined through a test re-test administration of the instrument to thirty (30) students who were not part of the sample for the study. The instrument was collected by the researchers and after two weeks, they were re-administered to the same group of students. The essence is to find out how the respondents will react to the instruments. The reliability of the two instruments was computed using Pearson Product Moment Correlation Coefficient. The reliability coefficient or index of the instrument for staff and students using the Pearson (r) were 0.77 and 0.78. The high-reliability index indicated that the two instruments were reliable.

## **Method of Data Collection**

The researchers make use of research assistants from each of the selected schools. The research assistant is to assist the researchers to administer the questionnaire to the staff and students. Heads of Department provide the research assistants, after discussing with them the purpose of this research. A total number of 3,900 copies of the questionnaire were distributed to staff and students and 3,720 were collected immediately and 3,700 were found usable.

## **Method of Data Analysis**

The data from the questionnaire were analysed using mean score and frequency. Percentages were used to provide answers to the research questions on availability, usage, types of security technologies and hindrances to the use of this equipment. The data further obtained were used to compute the perception of staff and students on the application of security technology equipment and the administration of security in tertiary institutions in Delta State. The null hypothesis was computed using Chi-Square and Pearson Product-Moment Correlation Coefficient ®.

## **Presentation and analysis of data based on staff responses**

**Research Questions 1:** What are the ranges of modern security technologies available in tertiary institutions in Delta State by staff?

**Table 2**

S/N	Items	Yes	No
1.	Are there close-circuit television (CCTV) technologies available in your school	135 (20.77%)	515 (79.23%)
2.	Are there explosive indicators strategies located in your campus	107 (16.48%)	543 (83.54%)
3.	Are there conventional alarm systems inbuilt in your building structure	170 (26.15%)	480 (73.85%)
4.	Are there door metal detectors present in most of your buildings	60 (9.23%)	590 (90.77%)
5.	Are there telephones available in your school	270 (41.54%)	380 (58.46%)
6.	Are there radios available in your school	75 (11.54%)	575 (88.46%)
7.	Are there cell phones available in your school	610 (93.85%)	40 (6.15%)
8.	Are there intercoms available in your school	275 (42.31%)	375 (57.69%)
9.	Are there pagers available in your school	60 (9.23%)	590 (90.77%)
10.	Are there trained security personnel available in your school	885 (59.23%)	265 (40.77%)
11.	Is there functional security manpower available in your school	680 (66.15%)	220 (33.85%)
12.	Are there private security personnel available in your school	120 (18.48%)	530 (81.54%)
13.	Are there public security law enforcement personnel in your school	620 (95.38%)	30 (4.62%)
14.	Is there an access control system available in your school	30 (4.62%)	620 (95.38%)
15.	Are there crime combat kits available in your school	115 (17.69%)	535 (82.31%)
16.	Is there a security outpost available in your school	545 (83.85%)	105 (16.15%)
17.	Are there security analysis and control offices available in your school	200 (33.85%)	430 (66.15%)
18.	Are there patrol vehicles available in your school	385 (59.23%)	265 (40.77%)
19.	Are there sports facilities to keep security personnel physically fit and healthy available in your school	120 (33.85%)	430 (66.15%)
20.	Do the security personnel go for weapons training	220 (33.85%)	430 (66.15%)
21.	Do security personnel go for security information analysis training	165 (25.38%)	485 (74.62%)
22.	How often does the security personnel go for training	170 (26.15%)	480 (73.85%)
23.	How often does the security personnel go for retraining	160 (24.62%)	490 (75.38%)
24.	Is there a security personnel service insurance scheme in place in your school	120 (18.48%)	530 (81.54%)
25.	Is there computer-based training for all security personnel to prepare them for modern and advanced security operations in your school	165 (25.38%)	480 (73.84%)

Table 2 above showed the range of modern security technologies available in tertiary institutions in Delta State by staff. It revealed that the range of security equipment adequately available in tertiary institutions in Delta State are cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security outpost. The table shows that while only 5 of the items (7,10,11,13, and16) i.e. cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security outpost was considered as adequate, 20 of the item (1,2,3,4,5, 6, 8,9,12,14,15,17,18,19,20,21,22,23,24 and 25) were considered to be somewhat inadequate. It, therefore, implies that the range of modern security technologies available in tertiary institutions in Delta State by staff is grossly inadequate. Items such as closed circuit television (CCTV) technologies, explosive indicators, conventional alarm systems, door metal detectors, telephones, radios etc as shown in items (1,2,3,4,5, 6, 8,9,12,14,15,17,18,19,20,21,22,23,24 and 25) should be sufficiently provided in tertiary institutions in Delta State for effective and efficient security network.

**Research Questions 2:** What are the challenges to effective utilization of modern security technologies in the administration of tertiary institutions in Delta State by Staff?

**Table 3 Challenges of Utilisation of Security Technology Equipment**

S/N	Items	Yes	No
1.	Non – availability of materials affect the utilization of security technology equipment	620 (95.38%)	30 (4.62%)
2.	Non – replacement of materials affect the utilization of security technology	620 (95.38%)	30 (4.62%)
3.	Poor maintenance hinders the use of security technology equipment	620 (95.38%)	30 (4.62%)
4.	Financial constraint hinders the use of security technology equipment	595 (91.54%)	55 (8.46%)
5.	An unstable power supply affects the use of security technology equipment	695 (97.69%)	15 (2.31%)
6.	Lack of awareness hinder the use of security technology equipment	475 (73.08%)	165 (25.38%)
7.	Lack of training of security personnel affect the use of security technology equipment	390 (60%)	260 (40%)
8.	Lack of retraining of security personnel affect the use of security technology equipment	390 (60%)	260 (40%)

Table 3 above showed the challenges to effective utilization of modern security technologies in the administration of tertiary institutions in Delta State by challenges. It revealed that the challenges to effective utilization of modern security technologies in the administration of tertiary institutions in Delta State are non-availability of materials affects the utilization of security technology equipment, non-replacement of materials affects the utilization of security technology, poor maintenance hinders the use of security technology equipment, financial constraint hinders the use of security technology equipment, unstable power supply affects the use of security technology equipment, lack of awareness hinder the use of security technology equipment, lack of training of security personnel affect the use of security technology equipment and lack of re-training of security personnel affect the use of security technology equipment. It shows that many

challenges seem to affect the use of modern security technologies in the administration of security in tertiary institutions by staff in Delta State.

## **Presentation and analysis of data based on students' responses**

**Research Questions 1:** What are the ranges of modern security technologies available in tertiary institutions in Delta State by students?

**Table 4: Ranges of Modern Security Technologies**

S/N	Items	Yes	No
1.	Are there closecircuit television (CCTV) technologies available in your school	1100 (33.85%)	2150 (66.15%)
2.	Are there explosive indicators strategies located in your campa	1880 (40.62%)	1930 (59.38%)
3.	Are there conventional alarm systems inbuilt in your building structure	950 (29.23%)	2300 (70.77%)
4.	Are there door metal detectors present in most of your building	1090 (11.38%)	2880 (88.62%)
5.	Are there telephones available in your school	1320 (40.62%)	1930 (59.38%)
6.	Are there radios available in your school	1200 (36.92%)	2050 (63.08%)
7.	Are there cell phones available in your school	1950 (60%)	1300 (40%)
8.	Are there intercoms available in your school	2050 (63.38%)	1200 (36.92%)
9.	Are there pagers available in your school	1100 (33.85%)	2150 (66.15%)
10.	Are there trained security personnel available in your school	1520 (46.77%)	1730 (53.23%)
11.	Is there functional security manpower available in your school	2110 (64.92%)	1140 (35.08%)
12.	Are there private security personnel available in your school	1100 (33.85%)	2150 (66.15%)
13.	Are there public security law enforcement personnel in your school	244 (2.89%)	3156 (97.11%)
14.	Is there an access control system available in your school	301 (9.26%)	2949 (90.74%)
15.	Are there crime combats kits available in your school	940 (28.92%)	2310 (71.08%)
16.	Is there a security outpost available in your school	3010 (92.62%)	240 (7.38%)
17.	Are there security analysis and control offices available in your school	1300 (40%)	1950 (60%)
18.	Are there patrol vehicles available in your school	2000 (61.54%)	1250 (38.46%)
19.	Are there sport facilities to keep security personnel physically fit and healthy available in your school	1100 (33.85%)	2150 (66.15%)
20.	Do the security personnel go for weapons training	980 (30.15%)	2270 (69.85%)
21.	Do security personnel go for security information analysis training	1610 (43.38%)	1840 (56.62%)
22.	How often does the security personnel go for training	1300 (40%)	1950 (60%)
23.	How often does the security personnel go for retraining	1200 (36.92%)	2050 (63.08%)
24.	Is there a security personnel service insurance scheme in place in your school	1060 (32%)	2210 (68%)
25.	Is there computerbased training for all security personnel to prepare them for modern day advanced security operations in your school	1350 (26.15%)	2400 (73.85%)

Table 4 above showed the range of modern security technologies available in tertiary institutions in Delta State by students. It revealed that the range of security equipment available in tertiary institutions in Delta State are cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security outpost. The table shows that while only 5 of the items (11,13,16,18 and 25) i.e., cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security in tertiary institutions in Delta State are cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security outpost. The table bows that while only 5 of the items (11,13,16,18 and 25) i.e. cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security outpost was considered as adequate, 20 of the items (1,2,3,4,5, 6, 8,9,12,14,15,17,19,20,21,22,23 and 24) were considered to be somewhat inadequate. It, therefore, implies that the range of modern security technologies available in tertiary institutions in Delta State by students is grossly inadequate. Items such as closed circuit television (CCTV) technologies, explosive indicators, conventional alarm systems, door metal detectors, telephones, radios etc as shown in items 1,2,3,4,5, 6, 8,9,12,14,15,17,19,20,21,22,23 and 24) should be sufficiently provided in tertiary institutions in Delta State for effective and efficient security network.

**Research Questions 2:** What are the challenges to effective utilization of modern security technologies in the administration of tertiary institutions in Delta State by Students?

**Table 5: Challenges of Utilisation of Security Technology Equipment**

S/N	Items	Yes	No
1.	Non – availability of materials affect the utilization of security technology equipment	3000 (92.31%)	250 (7.69%)
2.	Non – replacement of materials affect the utilization of security technology	2920 (89.85%)	330 (10.15%)
3.	Poor maintenance hinders the use of security technology equipment	2800 (86.15%)	450 (13.85%)
4.	Financial constraint hinders the use of security technology equipment	2900 (89.23%)	350 (10.77%)
5.	An unstable power supply affects the use of security technology equipment	3050 (100%)	-
6.	Lack of awareness hinders the use of security technology equipment	2320 (71.38%)	930 (23.62%)
7.	Lack of training of security personnel affects the use of security technology equipment	1950 (60%)	1300 (40%)
8.	Lack of retraining of security personnel affects the use of security technology equipment	1750 (53.85%)	1500 (46.15%)

Table 5 above showed the perception of the student of tertiary institutions in Delta State on the challenges to the utilization of security technology equipment in tertiary institutions in Delta State by students. The study shows that the challenges to the utilization of security technology equipment in tertiary institutions in Delta State are the non-availability of materials affect the utilization of security technology equipment, Non-replacement of materials affect the utilization of security technology, poor maintenance hinders the use of security technology equipment as

perceived by Students of tertiary institutions in Delta State, Financial constraint hinders the use of security technology equipment, unstable power supply affects the use of security technology equipment, lack of awareness hinder the use of security technology equipment, lack of training of security personnel affect the use of security technology equipment and lack of re-training of security personnel affect the use of security technology equipment as shown in items (1, 2,3,4,5,6, 7 and 8).

## Hypothesis

**Question 1:** Do you agree that relationship between the availability and utilisation of modem security technology equipment in tertiary institutions in Delta State?

**Table 6** Relationship between the availability and utilisation of modem security technology equipment in tertiary institutions in Delta State

Responses	Male	Female	Total
Yes	85	65	150
No	1225	2325	3550
<b>Total</b>	<b>1310</b>	<b>2390</b>	<b>3700</b>

Source Field work, 2022

Level of significance: 0.05

**Table 7**

Observation	Expected Value	O – E	$(O - E)^2$	$\frac{(O - E)^2}{E}$
85	53.108	31.892	1017.099	19.152
1225	96.892	1128.108	1272627.660	13134.497
65	1256.892	-1191.892	1420606.560	1130.253
2325	2245.135	79.865	6378.418	2.841
<b>Total</b>				<b>2466.742</b>

= 2466.742 (Chi square calculated)

$$X^2 = 3.841 \text{ (Chi-square table)}$$

**Decision Rule:** Since  $X^2$  calculated is greater than the  $X^2$  table, we, therefore, reject the  $H_0$  and accept the  $H_1$ .

**Interpretation:** This can simply be interpreted that there is a significant relationship between the availability and utilization of modern security technology equipment in tertiary institutions in Delta State. This is based on the result of the researcher's findings that, there is a significant relationship between the availability and utilization of modern security technology equipment in tertiary institutions in Delta State.

**Question 2:** Do you agree on the relationship between challenges encountered in the use of modern security technology equipment and the effective administration of tertiary institutions in Delta state?

**Table 8**

Responses	Male	Female	Total
Yes	145	105	250
No	1265	2185	3450
Total	1410	2290	3700

**Source** Field work, 2022

Level of significance: 0.05

**Table 9**

Observation	Expected Value	$O - E$	$(O - E)^2$	$\frac{(O - E)^2}{E}$
145	95.27	49.73	2473.073	25.956
1265	154.73	1110.27	1232699.473	7968.322
105	1314.73	-1209	1461681	111.189
2185	2135.27	49.73	2473.073	1.158
<b>Total</b>				<b>8106.673</b>

= 2466.742 (Chi-square calculated)

$$X^2 = 3.841 \text{ (Chi-square table)}$$

**Decision Rule:** Since  $X^2$  calculated is greater than the  $X^2$  table, we therefore reject the  $H_0$  and accept the  $H_1$ .

**Interpretation:** This can simply be interpreted that there is a significant relationship between challenges encountered in the use of modern security technology equipment and the effective administration of tertiary institutions in Delta state. This is based on the result of the researcher's findings that, there is a significant relationship between challenges encountered in the use of modern security technology equipment and the effective administration of tertiary institutions in Delta state.

### **Discussion of Findings**

The study revealed that the range of security equipment adequately available in tertiary institutions in Delta State are cell phones, trained security personnel, functional security manpower, public security law enforcement personnel and security outpost. Close circuit television (CCTV) technologies, explosive indicators, conventional alarm systems in-built into your building structure, door metal detectors, telephones, and radios technologies amongst others were not available in many institutions to make a meaningful impact on the school campus which gave room for various security challenges on the campuses in Delta State. This corroborated the works of Eduongo (2008). He opined that kidnappings and terrorism has become a means of economic survival, political assassinations as well as the recent abduction of

over 270 Chibok school girls in a state government secondary school in Bornu State indicated poor school security, which made Eduongo (2008) to maintain that, “the spate of kidnappings and related crimes are fast gaining grounds in Nigeria. The study showed that there is a significant relationship between the availability and utilization of modem security technology equipment in tertiary institutions in Delta State.

It was also discovered that the challenges to effective utilization of modem security technologies in the administration of tertiary institutions in Delta State are non-availability of materials affects the utilization of security technology equipment, non-replacement of materials affects the utilization of security technology, poor maintenance hinders the use of security technology equipment, financial constraint hinders the use of security technology equipment, unstable power supply affects the use of security technology equipment, lack of awareness hinder the use of security technology equipment, lack of training of security personnel affect the use of security technology equipment and lack of re-training of security personnel affect the use of security technology equipment. It shows that many challenges seem to affect the use of modem security technologies in the administration of security in tertiary institutions by staff in Delta State.

## **Conclusion**

Based on the findings of this study, it was concluded that with the

right application of security equipment in the administration of tertiary institutions in Delta State, crime can be combated, adequate natural surveillance and natural access control to the school provided and checkmate sabotage and terrorism on campuses. Generally speaking, security which is the protection or safety from harm, chaos, danger, anarchy, crime, and death, is one of the utmost desires of every individual particularly those that have been put in positions of management. Another is the desire to effectively and efficiently utilize the available human and material resources to achieve predetermined goals and objectives through the arts and science of management. The right application of security equipment in the administration of tertiary institutions in Delta State cannot be over-emphasized for effective and efficient school management. This will enhance the security of these institutions as well as being a panacea for national security especially as they have passed through the same or similar tertiary educational institutions at one time or the other. Based on the challenges identified, it was suggested that the Federal and State governments should provide sufficient materials for effective utilization of security technology equipment and make adequate replacements of such materials as at when due. Federal and State government should endeavour to constantly maintain and replace security technology equipment since the inability of the government to constantly maintain the equipment seems to hinder theft use in schools. The state government should endeavour to provide a regular /stable power supply which also affects the use of

security technology equipment in tertiary institutions in the Delta State. These steps have become expedients as they will help to address the numerous challenges to effective utilization of security equipment in the administration of tertiary institutions.

## **Recommendations**

It is recommended that:

- ❖ Items such as closed circuit television (CCTV) technologies, explosive indicators, conventional alarm systems, door metal detectors, telephones, and radios. etc should be provided in tertiary institutions in Delta State for an effective and efficient security network.
- ❖ The state government should make more funds available for the provision of modern technologies like conventional alarm systems, door metal detectors, telephones, radios, Cell phones, Intercoms, and public address systems since this equipment are widely used in the administration of security in tertiary institutions by staff and students in Delta State.
- ❖ Staff and students should be made to wear or carry their identity cards or tags at all times while on campus so as to enhance quick identification.
- ❖ All entrances and departures of all campuses should be built and properly equipped with well-befitting security-gate offices, and equipment and manned by competently trained security personnel for effective and efficient

connectivity on security matters.

- ❖ There should be regular training and retraining of all the members of staff of the security department as well as those in the security committee. This will provide an opportunity for an update on the latest development in security locally, nationally and internationally.
- ❖ Federal and State government should fulfil their financial obligations to the tertiary institutions to enhance security.
- ❖ Federal and State governments should provide sufficient materials for the effective utilization of security technology equipment and make adequate replacements of such materials when due.
- ❖ Federal and State governments should endeavour to constantly maintain and replace security technology equipment since the inability of the government to constantly maintain this equipment seems to hinder their use in schools.
- ❖ The state government should endeavour to provide a regular /stable power supply which also affects the use of security technology equipment in tertiary institutions in Delta State.
- ❖ The state government should create more awareness regarding the use of security technology equipment via training of security personnel.
- ❖ Each higher institution in Delta State should secure the services of a certified security consultant for the effective provision and maintenance of security technology equipment.

## References

Adesina, S. (2005). *Growth without development: Nigeria's educational experience between 1914-2004*. Educational Industries Ltd.

Ani, K. J. (2010). National Insecurity in Nigeria: Issues and Challenges for Human Capital Development. Proceedings of the Lit Organization: Ladies of the Ivory Tower held at Enugu State University of Science and Technology, Enugu from 11th- 15th October, 2010

Fapohunda, O. (2018). List of accredited polytechnics in Nigeria. Retrieved from <https://www.myschoolgist.comng> on 26/03/2018.

Okebukola, P. (2016). The State of Nigerian University in Borishade, B and Okebukola, P (eds) *Repositioning Higher Education in Nigeria*. Heinemann Education Books (Nigeria) Plc., 24-79.