RELATIONSHIP BETWEEN ADEQUACY OF SCHOOL SECURITY EQUIPMENT AND SUSTAINABLE DEVELOPMENT IN TERTIARY EDUCATIONAL INSTITUTIONS IN KEBBI STATE, NIGERIA: IMPLICATIONS FOR EDUCATIONAL MANAGERS

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Abstract

This paper investigated the relationship between management of school security equipment and sustainable development of tertiary educational institutions in Kebbi State. Focus was on assessing the adequacy of protective and communication equipment as well as access control and safety equipment in the schools and the extent to which adequacy and management of security equipment affect the maintenance of a secured environment for sustainable development. In this study, 150 participants were purposefully selected from Management Staff and Security Staff of the selected institutions. Descriptive survey design was adopted and validated instruments with reliability index of .82 were used to collect data. It was found that the level of adequacy of school security equipment was rated low but has a significant relationship with sustainable development of tertiary educational institutions in Kebbi State. It was recommended among others that School Managers to develop a check list of necessary security equipment and ensure that they are adequately provided and managed to maintain a conducive, secured and peaceful school environment for sustainable development of tertiary educational institutions in Kebbi State. They should pay attention to internally generated revenue so as to reduce over dependence on government to supply their schools with all security equipment.

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Keywords: Security equipment, Sustainable development, Educational management, Protective devices, Access control
Introduction

Nigeria as a leading country in Africa, is striving towards unity, nation building, national transformation and reformation. The master key to achieving this is to have an effective functional education in all its ramifications (Akinwumi & Adebayo 2013). According to Otuchikere (2014), tertiary education constitutes the backbone of any nation’s development and future growth. Alade (2016) posited that the role of the tertiary educational institutions is critical in the training of the next generations of managers and professionals in various fields. But for schools to fulfill their statutory responsibilities, they must operate in a secure and peaceful environment. Isah (2013) however noted that insecurity has become an issue of global concern especially as tertiary educational institutions have become soft targets of cultists, kidnappers, rapists, armed robbers and other criminal elements. In view of these security challenges, tertiary educational institutions have a duty to device strategies that will create a secure and safe environment that will ensure peaceful co-existence and sustainable development not only in the educational institutions but of the nation in general.

One of the strategies that school managers in tertiary educational institutions should emphasize is the employment and deployment of well trained and motivated school security guards (Suleiman, 2018). But no matter the level of competence of security guards, they cannot operate effectively without being provided with critical equipment to ease their job performance (Chiaha & Mbannefo 2013). The common trend however in tertiary educational institutions in Nigeria is having security guards that are ill-equipped with vital security equipment which are supposed to facilitate the execution of their work. In this paper security equipment refers to protective body gears, communication gadgets, access control and safety equipment provided to ease the execution of security activities by school security guards in tertiary educational institutions. Protective body gears include uniforms, sweaters, raincoats, footwear, headgears, bullet proof vests, eye goggles, hand gloves, elbow parts and light weapons. Communication gadgets include telephones, Closed Circuit Television (CCVT), whistles, sirens, walkie-talkie, computers and alarm systems. Access control equipment include erection of school fence, school gate, provision of strong locks, safes, burgers proofs, strong door and window frames.
and security lights. Safety equipment includes fire extinguishers, smoke detectors, first aid kits, ambulances among others. Educational managers refer to policy maker in the Ministry of Education and school administrators. Sustainable development of tertiary educational institutions in this paper refer to the continued growth, peace and stability of tertiary educational institutional which enables and guarantees their continuous performance and improvement in their statutory mandate of teaching, research and community service (Edward, 2002).

**Statement of Problem**

There is no doubt that tertiary educational institutions are the live wire for the production of manpower required for sustainable development of any nation. However tertiary institutions may be unable to fulfill their mandate satisfactorily if adequate security is not provided to them. The provision of standard security is however largely dependent on the availability and adequacy of modern security equipment to ease the delivery in schools. It appears that many institutions seem to lack modern security equipment to cope with increasing security challenges in Nigeria. The main thrust of this paper therefore was to investigate the relationship between adequacy of school security equipment and sustainable development in tertiary educational institutions in Kebbi State.

**Objectives of the Study**

The primary objectives of this study, is to access and explain the circulate school security equipment and sustainable development in tertiary educational institution in Kebbi State. The specific objectives were to:

1. determine the level of adequacy of protective body gear and communication gadgets at the disposal of security guards in tertiary educational institutions in Kebbi State.

2. examine the level of adequacy of access control facilities and safety equipment made available to security guards in tertiary educational institutions in Kebbi State.

3. determine the relationship, between the management of security equipment and sustainable development in tertiary educational institutions in Kebbi State.
Research Questions

For the purpose of conducting of this study, the following research questions were formulated:

1. What is the level of adequacy of protective gear and communication gadgets at the disposal of security guards in tertiary educational institutions in Kebbi State.
2. What is the level of adequacy of access control and safety equipment in tertiary educational institutions in Kebbi State?
3. Is there any relationship between the adequacy of security equipment and sustainable development in tertiary educational institutions in Kebbi State?

Research Hypothesis

As a further guide to this study, this null hypothesis’ was tested:

Hₒ₁: There is no significant relationship between the management of security equipment and sustainable development in tertiary educational instruction in Kebbi state.

Review of Related Literature

Security guards are expected to be alert and capable of defending themselves as well as staff and students at any given point in time (Sani, 2007). But for them to be able to perform their duties effectively they need to be well equipped with suitable security equipment. The American National Security Board Association (ANSB, 2013) listed in their checklist, critical protective equipment to be made available to school security guards to include: Body gear comprising uniforms, badges, protective clothing such as sweaters and raincoats, identity tags, vest and foot wears such as dessert boots and rubber boots; head gear in form of caps and helmets; eye goggles, ear protectors, nose protectors and hand devices in terms of gloves, wristwatches, armband, elbow pads, touches, flash light, cuffs, and handkerchiefs; weapons which include batons, knives, guns and cutlass among others

Apart from protective body equipment, security guards need to be provided with communication equipment. The National Crime Prevention Center (NCPC, 2013) identified basic communication equipment required by security guards to include: electronic devices inform of computers and accessories; Closed Circuit, Television (CCTV), radio, printers, audio-
tape recorders, compact discs; audio devices which includes whistles, sirens, telephones, intercoms, walkie talkies, earphones; public address systems, microphones, amplifiers, speakers; tracking devices and alarm systems; vehicles, motor cycles, bicycles an tricycles. Animals such as security dogs, camels and horses can also be used for security operations (Sanderson, 2017).

Access controls is one of the central duties of security guards in a school environment. According to Suleiman (2018), access control involves placing and enforcing restrictions on movement of people to some areas of the school environment where visitors, strangers and unauthorized persons and not permitted to enter. But in order to be able to enforce access control, certain physical facilities must be constructed or provided in a school plant. Manga, Hakimi and Naka Zalle (2013) identified crucial equipment required by security guards to help them to exercise access control include: low construction of school fence, strong gate, strong doors and window frames, providing locking devices, fixing bugler proofs, barbed wires, bumps, road blocks, signs boards and security lights in strategic places (Goroff & Brophy, 2015).

Enforcement of safety regulation is a legal requirement that is mandatory to all schools. Gummi (2018) pointed out that schools need to be provided with safety equipment to aid in accident prevention and to prepare for emergency response in cases of disasters. The National Association of School Psychologists (2013) enumerated types of safety devices that should be provided in school to include: fire prevention and control such as fire extinguishers, smoke detectors, firefighting equipment; emergency response first aid kits and ambulance; waste and sewage dispose equipment; food preservation and water purification equipment. This study assumes that the provision of adequate security equipment will ease the work of security guards, enhance the maintenance of a secured environment for sustainable development of the institutions.

**Methodology**

This study was a descriptive survey of the correlation type conducted ex-post- factor. The study deliberately selected three States owned tertiary educational institutions in Kebbi State. These schools included the Kebbi State University of Science and Technology, Aliero;
the Waziri Umaru Polytechnic Dakin Gari and the College of Preliminary Studies, Yelwa Yauri. Purposive sampling was used to select 39 Management Staff from the three schools and 111 Security Staff across the schools to get a total of 150 participants.

Two researcher-designed and validated instruments with a reliability index of .86 and .78 were used for data collection. These were Adequacy of School Security Equipment Inventory (ASSEI) and Sustainable Development Questionnaire (SDQ). The inventory used 10 items divided into two sections made up provision of protective and communication equipment while section B was on the provision of access control and safety equipment. The instruments were personally administered by the researcher with the help of trained research assistants. Mean scores, Standard deviation, Standard score (z-scores) were used to answer the research questions while Pearson Product Moment Correlation Co-efficient at 0.05 alpha level was used for hypothesis testing.

Out of the 150 questionnaires distributed, 140 copies were retrieved and used for analysis. Participants were asked to weigh the extent of adequacy of provision of security equipment as well as the level of development of their schools. The responses were scored on a five point Likert Scale rating ranging from scale 5 for very high 4 for high; 3 for moderate, 2 for low and 1 for not available. The responses were subsequently summarized using Standard deviation and Standard scores and presented in tables.

**Results**

**Research Question 1:** What is the level of adequacy of protective gear and communication gadgets at the disposal of security guards in tertiary educational institutions in Kebbi State.

This research question was answered and presented in table 1
Table 1: Adequacy of Protective Gear and Communication Equipment in Tertiary Educational Institutions in Kebbi State

<table>
<thead>
<tr>
<th>S/N</th>
<th>Security Equipment</th>
<th>X</th>
<th>SD</th>
<th>Z-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>protective Equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Body wear: Uniforms, Badges, ID Tags, Whistle, Sweaters, Raincoats</td>
<td>3.82</td>
<td>1.09</td>
<td>6.14</td>
</tr>
<tr>
<td>2.</td>
<td>Foot wear: Desert Boots, Rubber Boots, Socks, Slippers</td>
<td>2.64</td>
<td>1.10</td>
<td>2.55</td>
</tr>
<tr>
<td>3.</td>
<td>Head gear: Caps, Helmets Face Mask, Eye Google, Ear and Nose Protectors</td>
<td>1.78</td>
<td>1.27</td>
<td>-4.77</td>
</tr>
<tr>
<td>4.</td>
<td>Hand devices: Gloves, Wrist Watches, Arm Band, Touches, Cuffs, Handsets</td>
<td>3.72</td>
<td>1.07</td>
<td>3.20</td>
</tr>
<tr>
<td>5.</td>
<td>Weapons: Batons, Knives, Guns, Shield, Tasers, Bows and Arrows, cutlass</td>
<td>1.92</td>
<td>1.19</td>
<td>-3.53</td>
</tr>
<tr>
<td>B.</td>
<td>Communication Equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Electronic Devices: Computers, Televisions, and CCTV, Cameras</td>
<td>1.57</td>
<td>1.31</td>
<td>-6.63</td>
</tr>
<tr>
<td>7.</td>
<td>Audio Devices: Telephone, Intercoms, Walkie Talkies, Public Address</td>
<td>2.86</td>
<td>1.06</td>
<td>4.42</td>
</tr>
<tr>
<td>8.</td>
<td>Tracking Devices and Alarm Systems</td>
<td>1.38</td>
<td>1.27</td>
<td>-8.27</td>
</tr>
<tr>
<td>10.</td>
<td>Animals: Dogs, Horses, Camels, Donkeys</td>
<td>2.19</td>
<td>1.17</td>
<td>-1.16</td>
</tr>
</tbody>
</table>

Mean 2.04 0.11

Analysis of data in table 1, revealed high level of rating in decreasing order of adequacy of body wear in terms of Uniforms, Badges, Identity Cards, Whistles, Biros, Pocket Notebooks, Handkerchiefs, (z-score = 6.14) moderate rating of adequacy audio devices such as Telephones, walkie talkies and public address system, (z-score = 4.42), Hand devices such as Gloves, Wrist Watches, Arm band, Touches and Handsets (z-score = 3.20), and Footwear in terms of Book, Socks, Slippers (z-score = 2.55).

Similarly, there was relatively low rating of adequacy of animals for security such as Dogs, Horses, Camels and Donkeys (z-score = -1.16), Security Vehicles in terms of Cars, Motorcycles, Bicycles, and Tricycles (z-score = -1.85) adequacy of weapons such as Guns, Knives, Cutlasses, Tasers, Bows and Arrows, Axes, Catapults (z-score = -3.53), adequacy of head gear, in term of Helmets, Facemasks, Eye Goggles, ear and nose protectors, (z-score = -4.77) electronic devices such as Computers, Televisions sets Closed Circuit Television (CCTV), Cameras, and Photographic Equipment (z-score = -6.63), Tracking devices and Alarm systems (z-score = -8.27). The overall mean score of 2.04 and standard deviation of 0.11 shows that school security equipment is grossly inadequate in tertiary educational institutions in Kebbi State.
Research Question 2: What is the level of adequacy of access control and safety equipment in tertiary educational institutions in Kebbi State?

This research question was answered and presented in table 2

Table 2: Adequacy of Access Control and Safety Equipment in Tertiary Institutions in Kebbi State

<table>
<thead>
<tr>
<th>S/N</th>
<th>Access Control and Safety Equipment</th>
<th>( \bar{X} )</th>
<th>SD</th>
<th>Z –Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> Access Control Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Buildings: Fence, Security Offices, Detention rooms, Shades.</td>
<td>1.90</td>
<td>1.17</td>
<td>-3.51</td>
</tr>
<tr>
<td>2</td>
<td>Entrances: Gates, Doors, Windows, Receptions, Corridors</td>
<td>3.80</td>
<td>1.07</td>
<td>6.12</td>
</tr>
<tr>
<td>3</td>
<td>Locking Devices: Padlocks, Safes, keys, Drawers, Cupboards.</td>
<td>2.69</td>
<td>1.08</td>
<td>3.18</td>
</tr>
<tr>
<td>4</td>
<td>Barriers: Burglar Proofs, Barbed Wires, Bumps, Sign Boards</td>
<td>2.62</td>
<td>1.08</td>
<td>2.53</td>
</tr>
<tr>
<td>5</td>
<td>Alarm systems: Door Alarms, Sirens, Metal Detectors.</td>
<td>1.35</td>
<td>1.35</td>
<td>-8.25</td>
</tr>
<tr>
<td><strong>B</strong> Safety Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Fire Control: Smoke Detectors, Fire Fighting Equipment</td>
<td>6.55</td>
<td>1.29</td>
<td>-6.61</td>
</tr>
<tr>
<td>7</td>
<td>Emergency Response: Ambulances, First Aid Kit</td>
<td>2.84</td>
<td>1.04</td>
<td>4.40</td>
</tr>
<tr>
<td>8</td>
<td>Refuse and Sewage Disposal Equipment</td>
<td>2.12</td>
<td>1.24</td>
<td>-1.83</td>
</tr>
<tr>
<td>9</td>
<td>Food Preservation and Water Purification Equipment</td>
<td>2.17</td>
<td>1.15</td>
<td>-1.14</td>
</tr>
<tr>
<td>10</td>
<td>Storage Facilities for combustible materials</td>
<td>1.76</td>
<td>1.25</td>
<td>-4.75</td>
</tr>
</tbody>
</table>

Mean 2.02 0.10

Analysis of data on table 2 in descending order revealed high rating for adequacy of Entrances such as School Gates, Doors, Window, Reception and Corridors (z-score = 6.12), moderate rating for adequacy of emergency response equipment such as ambulance, and first aid kit (z-score = 4.40) Locking Devices such as Padlocks, Safes, Drawers, Cupboards and Filing Cabinets Shelves (z-score = 3.18), and Barriers such as Bumps, Barbed wires, Signs Boards, Security Lights (z-score = 2.53). On the other hand, there was relatively low rating of adequacy of food preservation and water purification equipment (z-score = -1.14), refuse and sewage disposal equipment (z-score = -1.83), adequacy of buildings (z-score = -3.51), storage facilities (z-score = - 4.75) and fire prevention and control equipment (z-score = -6.61). The overall mean of 2.02 and standard deviation of 0.10 indicate that access control and safety equipment are grossly inadequate in tertiary educational institutions in Kebbi State.

Hypothesis 1: There is no significant relationship between the management of security equipment and sustainable development in tertiary educational instruction in Kebbi state.

This hypothesis was tested and presented in table 3.
Table 3: Test of Relationship between Management of Security Equipment and Sustainable Development of Tertiary Institutions in Kebbi State

<table>
<thead>
<tr>
<th>S/N</th>
<th>Sustainable Development</th>
<th>$\bar{X}$</th>
<th>SD</th>
<th>Z-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student enrolment has continued to increase in the last five years</td>
<td>-0.089</td>
<td>0.084</td>
<td>ns</td>
</tr>
<tr>
<td>2</td>
<td>Staff strength have continued to increase within the last of five years</td>
<td>-0.134</td>
<td>-</td>
<td>S*</td>
</tr>
<tr>
<td>3</td>
<td>Quality of teaching has continued to increase in the last five years</td>
<td>0.123</td>
<td>0.015</td>
<td>S*</td>
</tr>
<tr>
<td>4</td>
<td>Quality of research have improved in the last five years</td>
<td>-0.171</td>
<td>0.001</td>
<td>S**</td>
</tr>
<tr>
<td>5</td>
<td>Quality of community service have increased in the last five years</td>
<td>-0.058</td>
<td>0.235</td>
<td>sn</td>
</tr>
<tr>
<td>6</td>
<td>Management of Security equipment has continued to improve</td>
<td>0.039</td>
<td>0.408</td>
<td>ns</td>
</tr>
</tbody>
</table>

n = 140
source = field survey 2019
S* = significant at $p<.05$
S** = significant at $p<.10$
s= not significant at $p>.05$

The above result indicates that each of these items: Student enrolment has continued to increase (-0.089); quality of community service has continued to increase and (-0.191); and degree of peace has and security on campuses has continued to increase (-0.039); have no significant relationship with adequacy of security equipment in tertiary educational institution in Kebbi state. However, a significant relationship was found to exist between staff strength have continued to increase (-0.134); quality of teaching has continued to increase (0.123); management of security equipment (0.030) and sustainable development of tertiary educational institutions in Kebbi State.

Summary of Major Findings
1. Protective gear and communication equipment in tertiary educational institutions in Kebbi State were grossly inadequate to cope with security challenges
2. Access control and safety equipment were inadequate in tertiary educational institutions in Kebbi State.
3. There was low positive relationship between management of security equipment and sustainable development of tertiary institutions in Kebbi State.
Discussion of Findings

Result in table 1 show that protective gear and communication equipment in Kebbi State tertiary institutions is grossly inadequate. This finding confirm Thomas 2016 and Kent 2016 who observe most school do not have adequate security equipment as little priority is given to the procurement of security equipment. Result in table 1 shows that majority of participants (76.4%) gave high rating to adequacy of body wear for security guards. This is because uniforms, badges, identity cards, biros, pocket notebooks, and protective clothing are made compulsory and are made to be the responsibility of the security staff to provide for themselves. Also 53% gave moderate rating to adequacy of footwear hand devices and audio equipment. Sixty percentage of participant indicated very low rating of adequacy of critical head gear, electronic devices such as CCTV, and computers, tracking devices, vehicles as well as lack of availability of weapons and use of animals such as security dogs, horses, camels and donkeys for security operations. This finding agrees with Sanderson (2017) who noted that the use of animals such as security dogs and horses is not common in schools security operations even though they are useful security animals.

Result in table 2 show that access control and safety equipment are grossly inadequate in tertiary educational institution. This finding are agree with Suleiman (2018) who noted that one of most neglected aspects of school security practice is the failure to provide suitable equipment to enforce access control and environmental safety. Table 2 indicated that majority of participants (76%) rated the adequacy of entrances such as gates, doors and windows to be high. But many of them considered the numerous illegal entrances made by destroying sections of the school fence where it exists. However, (52%) gave moderate rating to availability of barriers such as Burglar Proofs, Road Bumps and Bars at the Gates. In addition Locking Equipment and emergency response equipment such as First Aid Kit and Ambulance was rated moderate. Most of the participant (72%) rated as low (inadequate) or even not available critical buildings such as School Fence, Security Office, Detention Room, Waiting Rooms, Parking Spaces, Alarm Systems, Metal Detectors, Fire Fighting Equipment Refuse and Sewage Disposal, Food and Water Safety Equipment as well as storage facilities for flammable substances.

Table 3, demonstrated that there was generally little or no correlate between the management of protective security equipment and sustainable development of tertiary
educational institutions in Kebbi State. This implies that continued progress noted in aspect of increased students enrolment and staff are not closely correlated to adequacy or otherwise of security equipment but rather to extraneous variables such as population increase as well as increase in demand for higher education regardless of the security situation. In addition where a correlation seems to be established between management of security equipment and quality of teaching, research and community service many not be accurate. This may rather be a result of enforcement of the demand for lecturers to acquire higher qualifications and to have some publications before they are promoted. Notwithstanding this however, it is obvious that education growth and sustainable development in any given environment must be backed by the existence of a secure and peaceful environment.

**Conclusion**

Based on the findings of this study, the following conclusion are made

1. There was low rating of adequacy of protective devices and communication equipment, which indicated that they were generally inadequate in tertiary educational institutions in Kebbi State.

2. There was generally low rating for adequacy of access control and safety equipment, this show that they were also inadequate in the tertiary educational institutions in Kebbi State.

3. The level of adequacy and management of protective and communication equipment, access control and safety equipment was generally low to significantly affect sustainable development in tertiary educational institutions in Kebbi State.

**Recommendations**

Based on the findings, conclusions and implications of this study, the following recommendations are hereby tendered:

1. School managers should focus their attention on security by developing checklist of the expected security equipment and ensuring that are adequacy provided

2. School managers should not entirely depend in the government to supply every security equipment that is needed but should considered ways of suing internally generate revenue
(IGR) as well as seeking help from international donor agencies to procedure modern security equipment in the school (University of Edibug, 2017).

3. The existing security equipment should be correctly utilized, properly maintained and well managed to ensure a conducive and peaceful environment for sustainable development of tertiary educational institutions in Kebbi State.

Implications to Educational Managers

There is relative peace and security in tertiary educational institutions in Kebbi State. But considering the volatile nature of security condition in Northern Nigeria which is characterized by Boko Haram insurgency, Cattle rustling, rampant cases of kidnapping, violence and other crimes, school managers must make the security of their schools a top priority (Chiaha & Mbanefo, 2013). Schools have become globally and nationally vulnerable to attacks and security threats (Grant, 2009). The focus of managerial action should be on recruiting competent security staff and ensuring that they are adequately provided with necessary equipment to enable them function effectively. The era of totally depending on the police or military to adequately protect schools is over as the security agencies are equally facing enormous challenges of maintaining security in the nation as a whole (Otuchikere, 2014). Efforts must be made to supplement the efforts of other security agencies by developing a well-equipped security system and ensuring that security equipment are well utilized and maintained to ensure school effectiveness in tertiary educational institutions in Kebbi State.

References


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