

# **Security Measures Adopted in University Libraries, Nigeria**

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## **ABSTRACT**

*This study investigates security measures adopted in university libraries in the south west, Nigeria. The study utilized survey research design and the population for the study consisted of all information materials in the academic libraries south west region of Nigeria. The research method that was adopted in this study is the quantitative research method as this method recognizes the objective measurement and statistical analysis of the data collected from the field. The study uses a descriptive study design as it uses a representative sample of the study population to generalize the entire population. The population of the study is drawn from the selected federal and state university libraries. This study used cluster sampling as a technique to select the study sample. Cluster sampling is frequently used in large scale studies because it is the least expensive sample design. The study instrument used for data collection is a self-developed questionnaire in Likert scale format. The study used descriptive statistics and inferential statistical tools of independent samples t-test at 95% confidence interval will be used to test the hypotheses of this study. The results of the analysis showed that entrance/exit doors measure is the main type of security measure adopted. Furthermore, the study findings revealed that personnel's security training within and outside the library is the effective measure against theft; book mutilation is the most common security offences and; alarm systems, closed-circuit cameras and fire/smoke sensors are the most common electronic gadgets used in detecting general crimes in the universities' libraries in the South West region of Nigeria.*

**KEYWORDS:** Security, Measures, Adopted, University and Libraries.

## **INTRODUCTION**

Security as concern of library argued that libraries are 'systems' and security is a vital part of maintaining balance in the system. It aids adoptable strategies of librarians and other library staff to prevent or ameliorate the negative consequences of a realized threat in the libraries. Library security is a specialized effort that deals practically with complex problems of library safety and security. Security is logical to every establishment and therefore highly important for staff to know how to handle safety-related situations in a consistent way. Security threats and

challenges occur also in academic libraries. As a system in tertiary institutions, academic libraries serve as the "heart" of the learning community, as they support the objective of the institution in terms of learning, teaching, research and community service by providing and building a rich and robust collections (both traditional and virtual) thus empowering students, faculty staff members and the entire host community to learn, carry out research and extend the frontiers of knowledge. Library services can only be achieved through the availability of library collections. Library collections constitute the bedrock for services provided to the community and serve as important assets to the library.

Securing and protecting the collections can help libraries provide an effective service in response to the information needs of the academic community. Anunobi and Okoye (2008) they are of the view that "academic libraries are faced with hybrid challenges of managing resources and are challenged to acquire the necessary skills." One challenge is the issue of collection security for print and non-print resources. Collection security implies the need for libraries to provide, maintain and secure its collection to ensure longevity, accessibility and effective provision of services to users. To achieve this noble objective however, libraries need an effective strategy to assess the degree of collection security breaches they are facing and establish an acceptable level of collection security implementation. "Collections are very vulnerable to abuse of one sort or another and library managers need to keep this characteristic well to the forefront of the library"(Chaney & MacDougall, 1994).

There have been reports of book loss, fraud and mutilation in libraries and these offences may affect any library be it small, medium or large. Theft of library materials is an ancient problem. The looting of the Great Library in Alexandria by soldiers of the Prophet in the Seventh Century is the first recorded example. Stuart did a historical study on Europe dealing with book theft. The study focused on Dr. Pilcher, a well-known scholar, who also stole extensively from the Imperial Russian Library in the 19th Century. Stuart also studied some earlier book thieves as well. Not surprisingly due to all the Nigerian research on this topic, theft and mutilation were an international problem as well as a historical one. Stealing of library materials has been an age-long problem of libraries.

Theft and mutilation in academic libraries are a basic global problem. Security of library materials has been the subject of much investigation. However, the situation seems not to be getting better (Innocent 2019). The destructive habits of some users such as theft, mutilation and hiding of library and information materials pose a serious problem to other customers or users who are normally hindered from having access to library and information collections. Arising from these unwholesome activities and practices, the library staff also experience difficulties providing quality services while the library management runs into financial mess of replacing lost or damaged collections (Igbinalola & Akande 2019). Theft of library collection is an anti-social; un-lawful act and an offence, the perpetrators of which can be subjected to legal punishment (Maidabino, 2012). Therefore, this paper would address the issues security as it affects libraries and academic libraries in particular. The real focus is on electronic security.

### **Research Questions**

This paper will address the following research questions:

1. What are the types of security measures adopted to secure information resources in universities' libraries and information centers in the South West region of Nigeria?
2. What are the types of security breaches in universities' libraries and information centers in the South West region of Nigeria?
3. What are the electronic devices use in securing information resources in universities' libraries and information centers in the South west region of Nigeria?

### **Hypotheses**

The statements of hypotheses of this study are presented in null forms as below:

H<sub>01</sub>: The mean scores of federal and state university libraries staff on the types of security measures adopted to secure information resources in the universities' libraries and information centers of South West region of Nigeria will not differ significantly

H<sub>02</sub>: The mean scores of federal and state university libraries staff on the usage of electronic gadgets to secure information materials in the universities' libraries and information centers of South West region of Nigeria will not differ significantly.

## **LITERATURE REVIEW**

A submission about the library revealed it been a social university with the primary role of preserving as well as conserving library resources (Oluwaniyi 2010). For this regard, libraries and information centers at the moment are undergoing tremendous change in the contemporary world in struggling to get acquainted with the latest information and communication technology (ICT) such as shelf charging-discharging, automated handling of materials, high-speed inventory for the sake of security (Gupta & Madhusudhan 2018). Times New Roman, declared that after fixing the closed-circuit televisions (CCTVs), they became relaxed and they were comfortable about what happens within the library premises. It becomes easy to monitoring the activities of the users in the library from the circulation to the serial and reference sections and the cases of book theft became rare considerably. Vikas Nidagundi who was a final year student of Karnataka University also posit that he had a difficult time concentrating on his research and studies whenever unserious library users were listening and playing music from their sound devices or cell phones and make some loud noise in the library, but after CCTVs were installed, silence automatically returned in the library.

Theft, meaning stealing of library resources from the library have been described as 'library epidemic' wrecking academic libraries and information centers globally, and these basic acts of theft of book is of great concern without distinction (Isebe 2014). As a result, librarians and libraries and information centers became so serious and studies carried out on the extent to which theft and mutilation of library resources affected the library and its users in meeting their information needs. In the 15th century, it was traced that books were chained against theft and mutilation in order that library resources could not be illegally removed (Ifidon & Ifidon 2007). It is difficult to count the losses of books by theft. A study revealed that a good number of books are being lost yearly from library shelves, and in a related study, the loss in book materials have been treated under various titles such as delinquent

readers or problematic patrons, practiced in academic, public and special libraries and information centers (Zintah, Tabawa & Oyinyole 2017)

The term mutilation is when portion or part of materials from the library is removed by cutting and or ripping in order to remove the area that concerns the defaulter. Ideally, excised materials generally do not get returned to the library. Many studies as well, like the case of theft have shown the act of mutilation as a leading problem in libraries and information centers which is common for all type of libraries and information centers and such damages not easily detectable (Obikoya 2004). In Nigeria, malicious damage of books is difficult to combat in higher university libraries and information centers because the risk of getting caught is very low, while the likelihood of success is high, and the criminal activities have gone beyond the library to include loss of student materials such as notebooks (Okoyo 2001).

Theft and mutilation of library materials are harmful habits that libraries and information centers frequently face all over the world, particularly higher university libraries and information centers. As a result, frustration is common among users and is likely since the library books and other information materials needed cannot be found (Alokun 2003). In a study, information gathered on the perceptions of the methods of theft, attitudes to and perceived implications of theft on academic performance and library use revealed that, high cost of books, frequent power outage, and non-detection of preceding acts of theft are some of the basic causes of theft and mutilation of library materials in universities (Okotore 2001).

**Research Question 1:** Types of Security Measures Adopted to Secure Information Resources in University Libraries of South West Region of Nigeria

### **Methods**

The research method that was adopted in this study is the quantitative research method as this method recognizes the objective measurement and statistical analysis of the data collected from the field. The study uses a descriptive study design as it uses a representative sample of the study population to generalize the entire population. The population of the study is drawn from the selected federal and state university libraries. They are University of Medical Sciences Ondo, Federal University of Science and Technology, Akure, Ondo State, Lagos State University, Ojo, University of Ibadan, University of Lagos, Ekiti State University, Ado-Ekiti, Federal University Oye, Osun State University, Osobo, Federal University of Agriculture, Abeokuta Oyo State Technical University, Ibadan, Ladoko Akintola University of Technology, Ogbomosho and Obafemi Awolowo University, Ile-Ife. This study used cluster sampling as a technique to select the study sample. Cluster sampling is frequently used in large scale studies because it is the least expensive sample design. It involves first selecting larger groupings, called cluster and then selecting the sample units from the cluster (Nachmias & Nachmias 2000).

In addition, cluster sampling is a type of random sample that uses multiple stages and is often used to cover wide geographical area in which aggregated units are randomly selected and then samples are drawn from the sample aggregated units or cluster (Neuman 2011). However, the total number of the library staff in the six (6) selected university libraries and information centers stood at three hundred and forty five (345). The study instrument used for data collection is a self-developed questionnaire in Likert scale format. The study used descriptive statistics of frequency and means to achieve the objectives of this study and to answer the research questions. In addition, this

study will use the average or grand mean to answer the research questions posed by the study. However, the inferential statistical tools of independent samples t-test at 95% confidence interval will be used to test the hypotheses of this study.

**Responses to Research Question One**

S/N	Security Measures	SA	A	D	SD	Mean
1	Ownership stamps on the textbooks	142	152	12	4	3.39
2	Entrance doors measure (security personnel)	168	132	6	4	3.50
3	Electronic gadget such as: CCTV, RFID Book Drop System, RFID Transponder and Reader system; Moisture and Glass Breaker System	114	122	60	14	3.08
	<b>Average mean (x)</b>					<b>3.32</b>

*Source: Field Survey (2022)*

The table showed the responses to the questions that were presented to answer the research question one. The mean scores for the security measures reported by the library staffs are 3.39, 3.50 and 3.08 for questions 1, 2 and 3 respectively. The average mean score for the questions is 3.32 which is above the decision mean 2.50. Since these values are above the cut-off point, it implies that majority of the respondents from both federal and state universities in the South-West region of Nigeria agreed that they adopted the three security measures in their libraries and information centers namely: ownership stamp on textbooks, entrance door security measure and use of electronic gadgets. This showed that the universities use both traditional and 21<sup>st</sup> century security measures to self-guide their information resources from theft and or mutilation.

**Research Question 2: Electronic Gadgets Use in Securing Information Materials in academic Libraries**

**Responses to Research Question 2**

S/N	Electronic Gadgets	SA	A	D	SD	Mean
1	3M exit detection	10	18	150	132	1.70
2	Alarm systems	110	166	16	18	3.19
3	Biometrics	22	48	104	126	1.83
4	Closed-Circuit TV (CCTV)	128	108	30	44	3.03
5	Electronic Eye Detection	10	16	158	126	1.71
6	Electronic Recording	12	14	150	134	1.69
7	Network and Server Security System	11	17	158	124	1.73
8	Smart Card	12	15	128	155	1.63
9	Antivirus Software	16	14	158	122	1.75
10	RFID Book Drop System	8	14	138	150	1.61
11	RFID Transponder and Reader system	6	4	128	172	1.50
12	Moisture and Glass Breaker System	1	4	75	230	1.28
13	Fire /Smoke Sensor	118	134	34	24	3.12
	<b>Average mean (x)</b>					<b>1.98</b>

*Source: Field Survey (2022)*

## **Security Measures Adopted in University Libraries, Nigeria**

The above showed that providing the above following gadget will help check mate theft of information materials in university libraries and information centers but unfortunately a few were found in use by the universities' libraries in the South- West, Nigeria. And these included only the use of alarm systems, closed-circuit television (CCTV) and Fire /Smoke Sensor with their Mean score 3.19, 3.03 and 3.12 respectively above the decision Mean/cut-off mark of 2.50. The electronic devices found not in use in securing the library information materials were the followings: 3M exit detection; Biometrics; Electronic Eye Detection; Electronic Recording; Network and Server Security System; Smart Card; Antivirus Software; RFID Book Drop System; RFID Transponder and Reader system; and Moisture and Glass Breaker System respectively. Their Mean score stood at 1.70, 1.83, 1.71, 1.69, 1.73, 1.63, 1.75, 1.61, 1.50 and 1.28 respectively. The total average Mean score of 1.64 is below the cut-off point. Thus, the grand Mean of 1.98 shows that electronic gadgets are not widely used in securing information materials in the libraries and information center under study

### **Hypothesis One**

H<sub>01</sub>: The mean scores of federal and state university libraries staff on the types of security measures adopted to secure information resources in the universities' libraries and information centers of South-West region of Nigeria will not differ significantly.

**Table :** Test of Hypothesis One

Variable	Groups	N	Mean	SD	df	P value	Decision
Security measures	State Universities	135	3.46	0.46	309	0.059	<b>Insignificant</b>
	Federal Universities	175	3.25	0.55			

*Source: SPSS output (2022)*

Table 3 shows that there is no significant difference in mean scores of federal and state university libraries and information centers staff on the extent of security measures adopted in the protection of information resources. From the table, the total number sample in the three state universities are 135 with (M = 3.46, SD = 0.46) and total number sample from the three federal universities are 175 with (M = 3.25, SD = 0.55). The p-value is equal to 0.059 that is, the result is significant at  $p > 0.05$ . The null hypothesis is therefore accepted which indicates that the mean scores of federal and state university libraries staffs on types of security measures adopted to secure information resources in the universities' libraries of South West region of Nigeria did not differ significantly. It is thus concluded that, in state and federal universities in the South West region of Nigeria, significantly, their mean rating of security measures in the protection of library resources in the university libraries and information centers did not differ.

### **Hypothesis 2**

H<sub>02</sub>: The mean scores of federal and state university libraries staff on the usage of electronic gadgets to secure information materials in the universities' libraries and information centers of South West region of Nigeria will not differ significantly

**Table - Test of Hypothesis Six**

Variable	Groups	N	Mean	SD	Df	P value	Decision
Usage of electronic gadgets	State Universities	135	2.27	0.12	309	0.251	<b>Insignificant</b>
	Federal Universities	175	1.81	0.19			

*Source: SPSS output (2022)*

Table shows that there is no significant difference in mean scores of federal and state university libraries staff on the usage of electronic gadgets to secure information materials in the universities’ libraries and information centers. From the table, the total number sample in the three state universities are 135 with (M = 2.27, SD = 0.12) and total number sample from the three federal universities are 175 with (M = 1.81, SD = 0.19). The p-value is equal to 0.251 that is, the result is significant at  $p > 0.05$ . The null hypothesis is therefore accepted which indicates that the mean scores of federal and state university libraries staff on the usage of electronic gadgets to secure information materials in the universities’ libraries of South West region of Nigeria did not differ significantly. It is thus concluded that in state and federal universities in South West region of Nigeria did not differ significantly in their mean rating of usage of electronic gadgets in the protection of library resources in university libraries and information centers.

## **DISCUSSION AND FINDINGS**

In a major finding of this study, majority of the respondents from both federal and state universities in the South West geo-political zone of Nigeria agreed that they adopted three security measures in their libraries and information centers such as the use of ownership stamp on textbooks, entrance door security measure and use of electronic gadgets; a clear indication that the library utilizes the contemporary digital and traditional security measures. In this study, it is revealed that electronic security system was in place; users are searched before leaving the library; staff security training within and outside the library; checking users identity card before gaining access to the library; use of security guards at every unit of the library; written security policy to be placed on notice boards; acquiring multiple copies of a particular print-title; more emphasis on acquisition of e-resources to give room for multiple access; harsh sanctioning/punishment of the offenders; continuous security officers’ patrol; all library windows are gauzed to make it very difficult for books to be thrown out; and unannounced searching of students’ hostels all constitutes the effective ways to preserve and protect theft and mutilation of information resources in the libraries and information centres of the state and federal universities South West Nigeria

Another result of this study is on electronic gadget. It was found out that the e-gadget which would help check mate theft of information materials in the university libraries and information centers studied were unfortunately not found: 3M exit detection; Biometrics, Electronic Eye Detection, Electronic Recording, Network and Server Security System, Smart Card, Antivirus Software, RFID Book Drop System, RFID Transponder and Reader system and Moisture and Glass Breaker System respectively. The only found e-gadgets were alarm system, Closed-Circuit TV (CCTV) and Fire /Smoke Sensor. The findings for the study revealed that electronic security systems have not impacted positively in the reduction of the following security threats to information resources in the libraries studied – book theft and mutilation. This finding tends to agree with that of (Jadhav & Kulkarni 2014) who attest that electronic security systems are widespread and effective in deterring and catching thieves

## **CONCLUSION AND RECOMMENDATIONS**

This study was on security measures adopted in university libraries in the South West, Nigeria. The study established a problem that majority of students in the academic libraries and information centers lack 21st century approaches to security and preservation of library and information resources. This study posits that the types of security measures adopted to secure information resources in the universities' libraries and information centers of south-west region of Nigeria are currently outdated and cannot serve as preventive measures to protect against theft and mutilation of library and information resources in the institutions, although the use of electronic gadgets was present; a last finding of the study proved this at a negligible rate to include only alarm system, Closed-Circuit TV (CCTV) and Fire /Smoke Sensor. Based on the study findings, the following recommendations are put forward by this study for the federal and state universities in the south-west Nigeria:

- The universities' libraries and information centers of South West region of Nigeria should deploy other non-physical resources and security measures in addition to existing ones in the universities. Such non-physical resources include the use of artificial intelligence, soft cameras and theft-checkers software.
- The current level of technological and electronic gadgets in use to secure information materials in the universities' libraries and information centers of South West region of Nigeria is insufficient to check the wave of theft and mutilation of materials and therefore there is need to employ more sophisticated approach such as the use of touch detectors and bar codes.

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