

Original Article

LEVERAGING INFORMATION AND COMMUNICATION TECHNOLOGIES FOR ENHANCED LIBRARY SECURITY IN HIGHER EDUCATION

Juliet Ngozi Ekong

Department of Office Technology and Management, School of Business and Administrative Studies, Captain Elechi Amadi Polytechnic, Rumuola, Port Harcourt, Rivers State, Nigeria.

DOI: <https://doi.org/10.5281/zenodo.17140667>

Abstract: This study investigated the role of modern Information and Communication Technologies (ICTs) in curbing crimes in academic libraries across tertiary institutions in Rivers State, Nigeria. A correlation research design was adopted, focusing on four institutions: Rivers State University (RSU), Ignatius Ajuru University of Education (IAUE), Captain Elechi Amadi Polytechnic (CEAPOLY), and Ken Saro-Wiwa Polytechnic (KENPOLY). The study population comprised 1,901 staff members, from which a sample size of 220 was determined using the Krejcie and Morgan (1970) sampling table.

Data collection was carried out using a self-developed questionnaire based on a four-point rating scale. The questionnaire was administered via phone calls and email communication to ensure broad participation. The findings revealed a high level of utilization of modern ICT tools in these institutions and a significant positive correlation between the use of ICT and the reduction of library-related crimes. Additionally, the study established that the types and frequency of crimes committed in academic libraries had a direct relationship with the level of technological interventions available.

The study concluded that modern ICT solutions such as surveillance cameras, electronic access systems, digital inventory controls, and automated monitoring software play a critical role in enhancing the security of academic libraries. Traditional methods were found to be insufficient in addressing the evolving security needs of these institutions. Therefore, it is recommended that the government and other relevant stakeholders prioritize the integration of modern ICT tools into library security frameworks to safeguard resources and maintain academic integrity.

Keywords: use modern technologies, information and communication technology, curbing academic libraries, crimes, tertiary institutions, Rivers state

Introduction

Academic libraries are essential part of polytechnics, colleges, universities, or other institutions of postsecondary education, administered to meet the information and research needs of its students, faculty, and staff. Academic libraries provide both publish and electronic information resources for library users to consume. Some of these library materials are to be read and kept back in the shelves but some are to be taken out of the libraries for use

Original Article

through lending (Okogwu, & Nnam, 2013). The rate at which crimes are committed in the academic libraries both public and private, moreover, stolen properties call for an overall and revamp of the security system to nib and prevent perpetrations of such crimes in academic libraries. Library crimes, just like any other crimes, are of ancient origin, which does not start today. Theft or stealing of books or academic resources, in the view of Okpokwasili (2019) can be traced as far back as 539 BC in Egypt when the Persian Conquerors removed rolls of Papyri from the library of Pharaoh Rameses II from Circa 41BC. Libraries books need to be chain-locked using information and communication technologies to prevent theft.

Bhoi (2017) postulated that book theft in academic libraries is a global problem pervasive in developing and developed countries. Libraries are indispensable in institutions where valuable and relevant educational materials, both print and electronic are stored for human consumption. Crimes, on the other hand are an act or omission to act which flouts the core values, rules, and regulations guiding a particular establishment. By implication, library crimes can be described as a process of using unauthorised method(s) to gain access to libraries materials, and these include forging of Library Identification Particulars (LIP), mutilation, pilfering, theft or stealing, fraud, and the like. A lot of researchers reasoned from the reports of scholars that crime is widespread (Ebunuwele, Ola, & Uduebor, 2014).).

Therefore, the need for using Information and Communication Technologies installation such burglar-proof, detection gadgets and other security precautionary measures in both public and private libraries in Nigeria to prevent and curb libraries crimes. According to Byrne and Marx (2011), technological innovation has been the driving force leading to reform of crimes prevention, crimes control and curbing strategies, both by individual citizens and concerned groups, and by formal police agencies (Bhoi, 2017).

Modern Information and Communication Technologies are integration of computing, networking, and information processing technologies and their applications of both hardware and software (Ghuloum, H. (2012). The significant developments in ICT have forever changed the way of information gathering, processing, and disseminating. The modern ICT based products, services have brought a great revolution with serious challenges in the field of education, and libraries are no exception in this context, including crimes management in academic libraries (Kumbhar, 2009). Modern ICT deal with new challenges and increasing demand of users, libraries are reconsolidating; reshaping, redesigning and repackaging their services and information products by incorporating ICT based products and services.

Owing to ICT enabled products and services, libraries have changed in terms of provision of information services and securing the academic libraries resources through the integration of computer and communication technologies which can be apply to store and disseminate the information about the academic libraries resources, libraries users, staff and every stakeholder. They have changed the traditional practices of libraries in delivery of services (Eghworo, Ogo, & Ayomanor, 2015)

The ICT products & services are beneficial for the libraries in the following ways:

1. It provides efficient and accurate services.
2. It saves the time, space, energy and resources.
3. It helps for controlling the tremendous escalation of information.
4. It assists to provide high quality of services and increases the range of services.
5. It has invented the ways of resource sharing by operation and coordination.
6. ICT makes library work easier, faster, cheaper, and more effective.
7. Helps to manage information overload, as information retrieval is made easier in computerized systems.
8. Remote access is enabled through networked systems
9. Computerization saves space and reduces paper work
10. Monitoring, detection and prevention of crimes

Original Article

There are two general types of technological innovations that can be identified: information-based technologies (which is referred to as soft technology) and material-based technologies. Both types of technological innovation have been linked to “dramatic changes in the organization policing” particularly at the turn of the last century, while similar linkages can be offered more in general crimes prevention strategies by individuals, groups of residents and in the libraries (Husain & Nazim, 2015). While the specific types of technologies acquired in this program varied from agency to agency, the most commonly acquired technologies were mobile data centres (MDCs) or laptops, followed by automated field reporting systems (AFRS), record management systems (RMS), personal computers, computer-Aided Dispatch (CAD) Systems, and Automated Fingerprint Identification Systems (AFIS). Of course, these technologies expenditures only tell part of the technology implementation story. Recent review has documented the acquisition of a wide range of additional hard technology innovations during the last two decades, including new weapons, less-than-lethal force technologies, body armour, CCTV systems, gunshot location technology, and new patrol car technology which can also be applied in the academic libraries. A lot of scholars have written about libraries crimes, but this study is justified because of using modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions (Arinola, Adigun, & Oladeji, 2012)

Review of Related Literature to the Study

1. Types of Library Crimes

Adewuyi and Adekanye (2011) listed the following ways adopted in stealing information resources in the libraries:

- i.** Hiding libraries items in their clothes
- ii.** Throwing stolen item (s) through the window and door when people are not looking and observing
- iii.** Putting libraries item (s) in handbags or briefcases
- iv.** Collaborating with library staff to steal library collection
- v.** Selling of library books by library staff to supplement poor monthly salary and making friends with porters before carrying out their illegitimate plans. Others are, Book theft, Book mutilation, Non-return borrowed books, using fake ID cards to borrow books, mis-shelving of books, Noise making in library, Eating in the libraries, and engaging in illicit discussions.

2. Factors Responsible for Academic Libraries Crimes

There exists legion of factors causing libraries crimes. These include economic, environmental, academic and social factors. (Okumus, 2013) detailed the cause of libraries crimes in developed and developing countries as follows: indigence of students, drastic reduction in book votes, poor security with the belief that public property belongs to nobody in particular, selfishness on the part of some users, and absent-mindedness on the part of staff resulting in failure to properly check out books. The widespread poverty and high cost of living in Nigeria account for the various crimes in our academic libraries. No wonder (Dexter, 2011) contended that most books in Nigeria are unaffordable by a majority of the students while the cost of living has gone up so high as to make living standard difficult for the low income group. Perhaps, against this background, Whong (2014) argued that the predicament of book theft in Nigeria is even more pronounced in these days of economic crunch when books are not only scarce but also their prices are exorbitant for most users to afford, and this has resulted in emphasis being placed on book preservation instead of reader satisfaction.

Lending credence to the above assertion, Mishra and Mishra (2014) disclosed that libraries crimes are caused by many factors, which include inadequate volume of books, poverty on the part of the students, short period of loaning by the libraries, and selfishness on the part of the students to hide libraries books illegally. Arguing from the same direction Mairaj and El-Hadi, (2012) put forward that the major causes of libraries crimes in Nigerian university libraries are the inability of these libraries to adequately cope with the increase in students' population, introduction of new courses and expansion of existing ones. This exacerbated by insufficient funding from Federal, State, and Local Governments. Another factor that increases the incidence of crimes and wrong doings

Original Article

in a university or college libraries is the unusually large number of students in a class (Lawal-Solarin, 2015). A lot of studies have linked crimes and deviance to social, economy, environmental and libraries factors.

Social environment as a determinant of crimes is certainly not a recent development in the aetiology and epidemiology of crimes in the real global environment. The environmental nature of libraries in the manner of social organisations and social conditions like overcrowding with its concomitant induce crimes in all its ramifications.

Furthermore, Hogan-Bassey, (2000) hypothesised that a large number of stolen books were found in the student's possession and the student was arraigned before the University Disciplinary Committee which Hogan-Bassey happens to represent the University Librarian. Thus, Hogan-Bassey used the opportunity to ask the student how he managed to steal such large number of books. The student's confessional statement was descriptive but intriguing as stated thus:

"Any day I felt like taking away some library books, I would wait till the final bell rings between 9:30–10: 00 PM. Then I would station myself in a queue that usually builds up at closing time. I would study situation, particularly the person checking. At the appropriate time, I would give the lead in harassing the "checker that he should hurry up, he was wasting our time." Unfortunately, other innocent students would take a cue from me, also harassing and confusing the porter doing the checking. Most of the time, the porter doing the checking will succumb to the harassment and would then checks in a hurry. I will then succeed at such times to make away with unborrowed books"

This ordinarily can be nib in the board before the items are taking away with technology like Close Circuit Television (CCTV) in place in reading the footage in the events of missing libraries resources. No human being who knew that such machine is in place would want to commit such crime, as such the argument of sing modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions.

3. Computerized Charging System

Libraries adopt various types of charging system, such as Brown Charging System. Some libraries have computerised their charging system to make their operations faster. Whichever system a library adopts, it is one of the means of detecting stolen books since due dates are always on the date due slip of each book borrowed. Commenting further on the importance of library charging systems in the library, Gama, (2013) noted that, some charging systems enable the libraries to know the statistics of use or circulation of some books. This could be used to weed and the system also identifies some books that are missing and makes provision for their replacement if they are needed.

4. Use of Electronic Exit Control

In order to minimise the occurrence of crimes in the libraries, exit controls are necessary. Some libraries use turnstiles and guards to slow down movements of users and check patrons going out at the exit. Libraries in developed countries mostly use electric security system at their exits. Adopting electronic exit control system will assist a lot in curbing libraries crimes in our academic environment.

5. Installation of Close Circuit Television (CCTV)

Electronic security system like Close Circuit Television (CCTV) should be installed in academic libraries. CCTV is a specially designed crimes detection gadgets. This will enable easy prediction, prevention, control and library crimes curbing. It will assist greatly academic library crimes to be nib in or on the board (Okogwu & Nnam, 2013).

6. Use of MDC, ARFS, RMS, CADS and AFIS

While specific types of technologies acquired in this program varied from agency to agency, the most commonly acquired technologies were Mobile Data Centres (MDCs) or laptops, followed by Automated Field Reporting Systems (AFRS), Records Management Systems (RMS), personal computers, Computer-Aided Dispatch (CAD)

Original Article

Systems, and Automated Fingerprint Identification Systems (AFIS). These technologies can assist seriously in curbing academic libraries crimes in Nigeria.

7. Introduction of Soft Technologies

Soft technologies involve strategic use of information to prevent crime (e.g. the development of Risk Assessment, and Threat Assessment Instruments) and to improve the performance of the policing in an area like Predictive Policing Technology, and Recording/Video Streaming Capabilities in police vehicles could be installed in the academic libraries in Nigeria. Soft technology innovations which include new software programs, classification systems, crimes analysis techniques, and data sharing/ system integration techniques to record, store, analyse as well as curb crimes.

Some of the soft and hard technologies on the table can be used to curb crimes in libraries in Nigeria. See table 1 below:

Table 1: The Application of Hard and Soft Technology to Crimes Prevention and Policing

	HARD Technology	SOFT Technology
Crime Prevention/ Curbing	<ul style="list-style-type: none"> – CCTV – Street/ library lighting – citizen protection devices(e.g. mace, tasers) – metal detectors, ignition interlock systems(drunk drivers) 	<ul style="list-style-type: none"> – Threat assessment instruments – risk assessment instruments – Bullying ID protocol – sex offender registration – risk assessment prior to involuntary civil Commitment – profiling potential offenders – facial recognition software used in conjunction with CCTV
Police/Security	<ul style="list-style-type: none"> – Improved police/security protection devices(helmets, vests, cars, buildings) – Improved/new weapons less than lethal force (mobile/riot control) – computers in squad cars – offender and citizen ID's via biometrics/ Fingerprints targeted individuals – Amber alerts – mobile data center around video tapes in the library – Creation of watch lists of potential violent Offenders 	<ul style="list-style-type: none"> – Crime mapping (hot spots) – Crime analysis (e.g. COMPSTAT) – Criminal history data systems enhance- Ment – Info sharing w/in CJS and private sector – New technologies to monitor communications(phone, mail, internet) to/from – watch lists of potential violent

Original Article

– gunshot location devices

Source: Byrne and Marx, (2011)

8. Installation of Surveillance Tapes and Chips in the Libraries Books

Modern technologies such as video tapes if installed in the academic libraries can assist in curbing crimes. Modern technologies (MT) also known as information and communication technology have introduced a lot of things which prevent people from committing crimes. Modern technologies like CCTV camera, GPRS system, using database for finding criminals' information are some unique things which cannot be possible without ICT or MT. Today, world-class policing uses GPRS to track someone's car, mobile phone if it has been stolen. Police use CCTV camera to detect criminals' face. Fingerprint is another especial method modern technology with which the police and other security agents can identify thieves.

This is making our life safer and very easy in many ways which are possible in applying in our academic libraries. For example, in big super markets like Market Square, Everyday Buyers, ASDA, SPAR or Tesco etc., they do not need to think too much if someone tries to still their products, because some products have got chips which can be detected if that product is not swiped over the bar code reader. The same can be done to libraries' books and materials (resource), since it has assisted these big shops to apprehend heavy and light robbers (Ukata, 2018)

9. Application of Alarm Security System in Academic Libraries

Generally, Alarm Security System consists of 5 parts. They are:

- i. Security sensor or detectors
- ii. Gate entering alarm
- iii. Perimeter protection defence
- iv. Video record linkage and CCTV camera
- v. Network alarm report or sending.

These five (5) parts can be applied independently or in an integrated manner according to actual requirement and basic principles for the safety of all. These principles say, the alarm security system should be assured of safety and reliability in its application. A computer security or cyber security or IT security. IT security is applied to computer and computer networks. This field covers all processes and mechanisms by which computer-based equipment information and services are protected from unauthorized access and destruction. The academic libraries in Nigeria can adopt this independently or integrated Alarm Security System that consisted of five (5) in crimes prevention and curbing, (Ukata, 2018)

Statement of the Problem

The Nigerian educational system is faced with a lot of challenges, not only with the challenges of teaching and learning but also with insecurity in academic libraries in the areas of managing academic resources. The traditional security system seems not working and been able to take care of the security needs of owners, users, and managers of academic libraries, therefore, the need for this study "Using modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions"

Purpose of the Study

The purpose of this study is to find out using modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions. The study specifically sought to:

1. Find out the level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions
2. Find out how to use modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions

Research Questions

The under stated research questions were posed to guide the researcher in this study:

Original Article

1. What is the level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions?
2. How can modern information and communication technologies be used in curbing academic libraries crimes in Rivers state tertiary institutions?

Hypotheses

Two null hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant relationship between the level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions and the use of modern information and communication technologies in curbing the crimes.
2. There is no significant relationship between modern information and communication technologies and curbing of academic libraries crimes in Rivers state tertiary institutions.

Method

This study adopted a correlation research design to determine using modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions. The study covered Rivers State University (RSU- 482) (Business Education, Year 4 = 165, 3 = 157 & 2 = 160), Ignatius Ajuru University of Education (IAUE - 570) (Library and Information Science, Year 4=180, 3=190 & 2=200), Captain Elechi Amadi Polytechnic (CEAPOLY - 354) (Office Technology and Management ND 2=174, and Mass Communication, ND 2=180) and Ken Sarowiwa Polytechnic (KENPOLY) (495) (Mechanical Engineer, HND 1=195, Accountancy = 300). Six departments were from the four (4) higher institutions were carefully selected to form the population of 1901. National Diploma I and year I students were excluded in the study because they may not be able to give fair information on the use of library due to their newness in the higher institutions under investigation. The breakdown is as stated below using Exploded Pie Chart in 3-D for the presentation of the population:

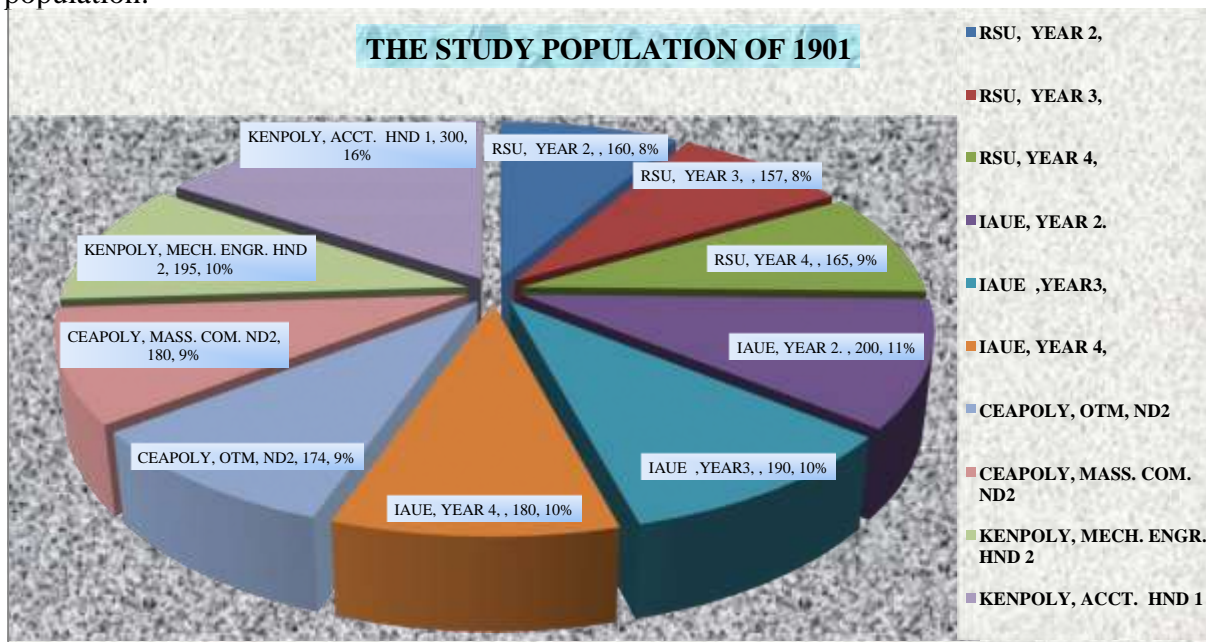


Figure 1: Exploded Pie Chart in 3-D. Presentation of the Population

The sample size adopted for this study was 220 of students from of the six departments of the four Rivers state tertiary institutions. The sample technique used was Krejcie and Morgan (1970) table of determining the sample

Original Article

size from a known population of the students of males and females. The Sample Size is as presented including their percentages in Exploded Pie Chart in 3-D below:

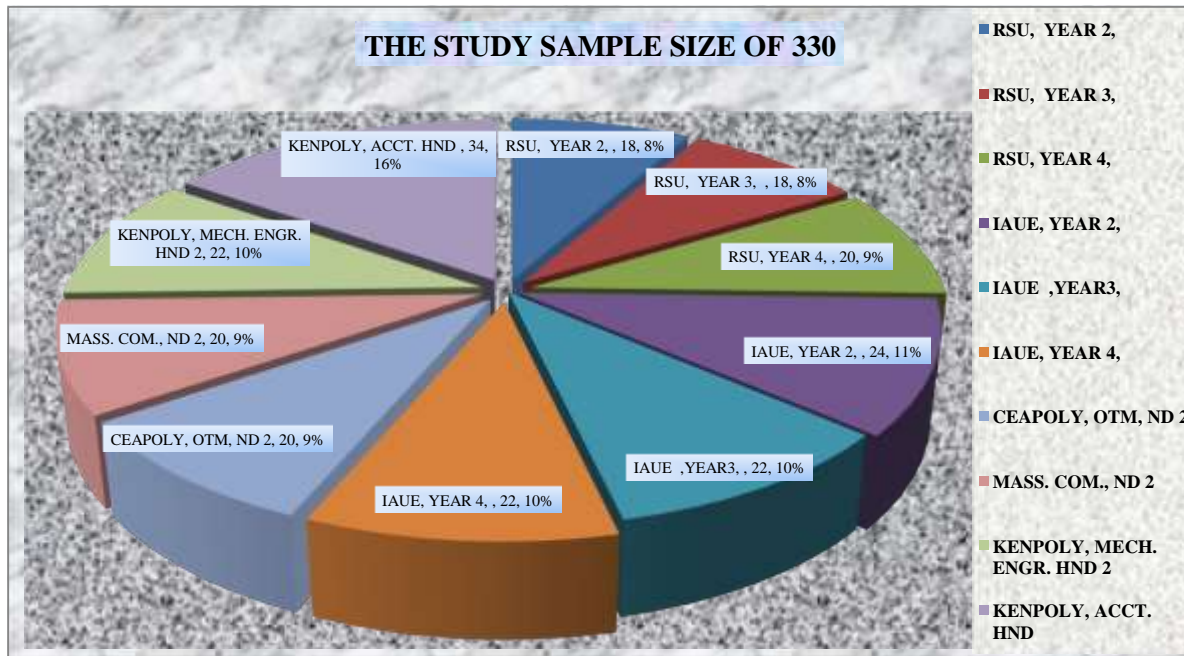


Figure 2: Exploded Pie Chart in 3-D. Presentation of the Sample

Morgan and Krecie (1970) method was used to decide on the sample size of 220. The instrument used was called “Using modern information and communication technologies in curbing academic libraries crimes in Rivers state tertiary institutions (UMICTACALCIN)” with a four point scale of Very High Level of Crimes and Curbing Academic Library Crimes

(4 points), High Level of Crimes and Curbing Academic Library Crimes (3 points), Low Level of Crimes and Curbing Academic Library Crimes (2 points) and Very Low Level of Crimes and Curbing Academic Library Crimes (1 point). Three experts from Rivers state university validated the instrument and a field trial of test retest was done on 20 students of department of Business Education from university of Uyo via telephone calls because of the COVID-19 to know the internal consistency using Scale Score Reliability Estimates of Test-Retest Sample which yielded 0.88 reliability coefficients. 220 questionnaires items were administered through phone calls and email to the respondents and successfully retrieved. Arithmetic mean was used to analyse the two research questions, and Standard Deviation used to find out the extent in which scores in the distribution clustered around the means.

Pearson Product Moment Correlation Coefficient (r) was adopted as statistical tool for testing the two hypotheses to determine the extent of significant relationship between the variables under investigation. Mean scores from 3.50 to 4.49 was seen as Very High Level of Crimes and Curbing Types Of Academic Library Crimes (4 points), 2.50 to 3.49 High Level of Crimes and Curbing Types Of Academic Libraries Crimes (3 points), 1.50 to 2.49 Low Level of Crimes and Curbing Types Of Academic Libraries Crimes (2 points) and 0.50 to 1.49 Very Low Level of Crimes and Curbing Types Of Academic Libraries Crimes (1 point). The decision point was that, any calculated grand mean from 2.50 to 3.49 representing High Level of Crimes and Curbing Types of Academic Libraries Crimes (3 points) and above will be accepted and any grand mean below will be rejected.

Also, any calculated value of (r) Pearson Product Moment Correlation Coefficient that is greater than > the critical table value of 0.113 at 0.05 significant levels such null hypothesis (H_0) will be rejected, but if the critical table

Original Article

value is greater than $>$ the computed value such null hypothesis will be accepted. The decision points for (r) are as stated below:

From -0.1 to -0.5 = Very High Negative Significant Relationship (VHNSR)

-0.6 to -0.8 = High Negative Significant Relationship (HNSR)

-0.9 to -1.0 = Negative Significant Relationship (NSR)

+0.1 to + 0.5 = Positive Significant Relationship (PSR)

+0.6 to +0.8 = High Positive Significant Relationship (HPSR)

+0.9 to +1.0 = Very High Positive Significant Relationship (VHPSR)

Result Presentation

Research Question 1: What is the level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions?

Table 2: Computed Mean and Standard Deviation on the Level of Crimes and Types of Academic Libraries Crimes Committed In Rivers State Tertiary Institutions

N = 220, TNR = Total Number of Response

SN	Item statement	\bar{x}	SD	Remark
1	Non-return borrowed books	3.5	0.8	HLCCTALC CRSTI
2	Book theft,	3.4	0.8	HLCCTALC CRSTI
3	Book mutilation	3.5	0.8	HLCCTALC CRSTI
4	Putting library item(s) in handbag or briefcase	3.3	0.8	HLCCTALC CRSTI
5	Hiding libraries items in their clothes	3.4	0.8	HLCCTALC CRSTI
6	Throwing stolen item(s) through windows and doors	3.3	0.8	HLCCTALC CRSTI
7	Collaborating with library staff collection	3.5	0.8	HLCCTALC CRSTI
8	Selling of library books by library	3.3	0.8	HLCCTALC CRSTI
9	Using fake ID cards to borrow bo	3.6	0.9	HLCCTALC CRSTI
10	Eating and engaging in ill discussions.	3.6	0.9	HLCCTALC CRSTI
Grand Mean and Standard		3.4	0.8	HLCCTALC CRSTI

Deviation

Original Article

Field Study (2020)

The grand mean of table 2, showed 3.4, representing High Level of Crimes and Types of Academic Libraries Crimes Committed in Rivers State Tertiary Institutions. The grand standard deviation was 0.8, representing closeness in the views of the respondents on the High Level of Crimes and Types of Academic Libraries Crimes Committed in Rivers State Tertiary Institutions.

Research Question 2: How can modern information and communication technologies be used in curbing academic libraries crimes in Rivers state tertiary institutions?

Table 3: Computed Mean and Standard Deviation on Modern Information and Communication Technologies Used In Curbing Academic Libraries Crimes in Rivers State Tertiary Institutions

N = 220, TNR = Total Number of Response				
S N	Item statement	\bar{x}	SD	Remark
1	Computerized Charging System	3.6	0.9	HLMICTUCA LCRSTI
2	Use of Electronic Exit Control	3.6	0.9	HLMICTUCA LCRSTI
3	Installation of Close Circuit Television (CCTV)	3.9	0.9	HLMICTUCA LCRSTI
4	Use of MDC, ARFS, RMS, CADS & AFIS	3.9	0.9	HLMICTUCA LCRSTI
5	Introduction of Soft Technologies	3.8	0.9	HLMICTUCA LCRSTI
6	Threat assessment instruments	3.8	0.9	HLMICTUCA LCRSTI
7	Risk assessment instruments	3.8	0.9	HLMICTUCA LCRSTI
8	Use of surveillance tapes and chips	3.9	0.9	HLMICTUCA LCRSTI
Grand Mean and Standard Deviation		3.6	0.9	HLMICTUCA LCRSTI

Field Study (2020)

The grand mean of items on the above table 3 showed 3.6, representing high level of modern information and communication technologies used in curbing academic libraries crimes in Rivers state tertiary institutions. The grand standard deviation was 0.9; representing closeness in the views of the respondents on the high level of modern information and communication technologies used in curbing academic libraries crimes in Rivers state tertiary institutions.

Hypothesis 1: There Is No Significant Relationship Between The Level Of Crimes And Types Of Academic Libraries Crimes Committed In Rivers State Tertiary Institutions And The Use Of Modern Information And Communication Technologies In Curbing The Crimes

Table 4: Summary Of Calculated (r) On The Level Of Crimes And Types Of Academic Libraries Crimes Committed In Rivers State Tertiary Institutions And The Use Of

Original Article

Modern Information And Communication Technologies In Curbing The Crimes

SN Level	Variables cal. tab.	N	\bar{x}	SD	Df	Alpha	R-	R-	Decision	Remark
1	The level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions	220	3.4	0.80						
2	Using of modern information and communication technologies in curbing the crimes	220	3.4	0.87						
					218	0.05	0.617	0.113	Rejected	HPSR

Field Study, (2020)

The calculated Pearson Product Moment Correlation Coefficient (r) 0.617 is greater than (>) the critical table value of 0.113 at 0.05 significant levels. Since the calculated value of (r) 0.617 is greater than (>) the critical table value of 0.113, the null hypothesis which stated that there is no significant relationship between the level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions and the use of modern information and communication technologies in curbing the crimes is rejected. The computed value of (r) 0.617 signifies a high positive significant relationship between the level of crimes and types of academic libraries crimes committed in Rivers state tertiary institutions and the use of modern information and communication technologies in curbing the crimes. This means that modern information and communication technologies play high positive role in curbing crimes and types of academic libraries crimes committed in Rivers state tertiary institutions.

Hypothesis 2: There is no significant relationship between modern information and communication technologies and curbing of academic libraries crimes in Rivers state tertiary institutions.

Table 5: Summary of Calculated (r) On Modern Information and Communication Technologies and Curbing of Academic Libraries Crimes in Rivers State Tertiary

Institutions.

SN Level	Variables cal. tab.	N	\bar{x}	SD	Df	Alpha	R-	R-	Decision	Remark
1	Modern information and communication technologies	220	3.6	0.90						
2	Curbing of academic libraries crimes in Rivers state tertiary institutions	220	3.7	0.89						
					218	0.05	0.687	0.113	Rejected	HPSR

Field Study, (2020)

Original Article

The calculated Pearson Product Moment Correlation Coefficient (r) 0.687 is greater than ($>$) the critical table value of 0.113 at 0.05 significant levels. Since the calculated value of (r) 0.687 is greater than ($>$) the critical table value of 0.113, the null hypothesis which stated that there is no significant relationship between modern information and communication technologies and curbing of academic libraries crimes in Rivers state tertiary institutions is not accepted. The computed value of (r) 0.687 signifies a high positive significant relationship between modern information and communication technologies and curbing of academic libraries crimes in Rivers state tertiary institutions. This means that modern information and communication technologies play high positive role in curbing crimes academic libraries crimes committed in Rivers state tertiary institutions.

Discussion of Findings

From the analysis of research question one and table one, the grand mean showed 3.4, representing high level role of modern information and communication technologies used in curbing academic libraries crimes in Rivers state tertiary institutions. The opinions of the respondents are in agreement with the opinions of Adewuyi and Adekanye (2011) who listed Book theft, Book mutilation, Non-return borrowed books, using fake ID cards to borrow books, Mis-shelving of books, Noise making in library, eating in the library and engaging in illicit discussions as some of the crimes committed in academic libraries in Nigeria. Also, from the analysis of research question two, the grand mean showed 3.6, representing high level role of modern information and communication technologies used in curbing academic libraries crimes in Rivers state tertiary institutions. The views of the respondents are in agreement with (Lawal-Solarin, 2015), (Okogwu & Nnam, 2013), (Byrne & Marx, 2011) and (Ukata, 2018) who saw Computerized Charging System, Use of Electronic Exit Control, Installation of Close Circuit Television (CCTV), Use of MDC, ARFS, RMS, CADS & AFIS, Introduction of Soft Technologies, Threat assessment instruments, Risk assessment instruments and Use of surveillance tapes and chips as ways information and communication technologies are used in curbing academic libraries crimes in Nigeria.

Conclusion

From the findings of the study, it is concluded that there are High Level of Crimes and Types of Academic Libraries Crimes Committed in Rivers State Tertiary Institutions. There was also high level role of modern information and communication technologies used in curbing academic libraries crimes in Rivers state tertiary institutions with closeness in the views of the respondents on the high level role of modern information and communication technologies used in curbing academic libraries crimes in Rivers state tertiary institutions

Recommendations

1. Government and concerned authorities should adopt and make available modern information and communication technologies as mean of curbing academic libraries crimes in Nigeria since the traditional methods seems not meeting the security expectations.
2. There should be adequate funding from government and other concerned agencies for regular training and retraining of Librarians and libraries staff to meet the current trend of libraries security management.
3. There regular and adequate orientations, including advertisement for students and the public on the need on joining hands to protect academic libraries items instead of stealing and destroying them

References

- Adewale, T. O. and Oluwasanmi, H. (2007). "Book theft and its prevention in Nigerian academic libraries". *Gateway Library Journal*, 10 (1), 73-84.
- Adewuyi, O. W. & Adekanye, E. A. (2011). *Strategy for prevention of crime in Nigerian university libraries: The experience of the university of Lagos. Library and Archival Security* 24 (1), 127-140. Retrieved from <http://www.tandf.co.uk/journals/tiokoye.htm#les/01960075.asp> on November, 20th, 2019.

Original Article

- Akinfolarin, W.A. (1992). "Towards improved security measures in Nigerian university libraries." *African Journal of Library, Archives and Information Science*, 2 (1), 51-56
- Arinola, A. A., Adigun, O. & Oladeji, B. O. (2012). Impact of ICT on cataloguing and classification of library materials; Case study of some selected university libraries in South-West Nigeria. *American International Journal of Contemporary Research* 2(6) Retrieved from http://www.ajcnet.com/journals/Vol_2_No_6_June_2012/15.pdf.
- Bello, A.S. (2001). "Library use malpractices: A case study of the Ibadan Polytechnic library." *Nigerian Libraries*, 35 (1), 23-32.
- Byrne, J. M. & Marx, G. T. (2011). Technological innovations in crime prevention and policing. A review of the research on implementation and impact. *Cahiers Politiques studies Jaargang 3* (20), 17-40
- Dexter, S. (2011). School technology leadership: Artefacts in systems of practice. *Journal of School Leadership*, 21(1), 1-10.
- Ebunuwelem, E. G., Ola, O. S., & Uduebor A. (2014). Application of information communication technology in academic libraries in Nigeria. *International Journal of Education and Research* 2(12) Retrieved from <http://www.ijern.com/journal/2014/December-2014/36.pdf>
- Eghworo, O. R., Ogo, E. P., & Ayomanor, K. E. (2015). Information communication technology: A catalyst for enhancing the role of libraries in the creation of an information society. *European Journal of Research and Reflection Arts and Humanities*, 3 (2), 39 – 47
- Gama, U. G. (2013). Application of information and communication technology (ICT) facilities to reference and information service (RIS) provision in university libraries in North West Zone of Nigeria. *Information Impact Journal of information and Knowledge Management* 3(1), 1-17.
- Hogan-Bassey, 1 (2000). "Library crimes and technology. " *Nigerian Libraries*, 34 (2), 29–40.
- Krejcie, R. & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 2 (30), 607-610.
- Kumbhar, R. (2009), "Use of e-learning in library and information science education", *DESIDOC Journal of Library & Information Technology*, 29 (1), 37- 41.
- Lawal-Solarin, E. O. (2015). The use of information and communication technology (ICT) in academic libraries in Nigeria: A case study of Covenant University Library Ota, Nigeria. Retrieved from <http://eprints.covenantuniversity.edu.ng/1654/1/The%20Use%20of%20Information>

Original Article

%20and%20Communication%20Technology.pdf

- Mairaj, M. I. & El-Hadi, W. M. (2012). Applications of information and communication technologies in libraries in Pakistan Medical Library. Retrieved from doi: <http://dx.doi.org/10.3163/1536-5050.100.3.013>
- Mishra, L. & Mishra, J (2014). ICT resources and services in university libraries. *International Journal of Digital Library Services* 4(3), 243-250. Retrieved from <http://ijodls>.
- Okogwu, F. I. & Nnam, U. M. (2013). The Sociology of library crime in Nigerian academic libraries. *Library Philosophy and Practice (e-journal)*, 494 (1), 1-17
- Olanlokun, S. O. & Salisu, T.M. (1985). *Understanding the Library: A Handbook on Library Use*, Kano: Concept Publication Ltd.
- Ukata, P. F. (2018). *Foundation of ICT Theory and Practical Steps for Students and Office Workers*. Port Harcourt: Agipea Global Service.
- Whong, F. M. (2014). Application of information and communication technologies (ICT) to management of library information resources in selected Nigerian federal university libraries (Master's Thesis, Ahmadu Bello University, Zaria, Nigeria). Retrieved from <http://kubanni.abu.edu.ng:8080/jspui/bitstream/12345>