

**ENHANCING SECURITY OF INFORMATION RESOURCES FOR MBARARA
UNIVERSITY OF SCIENCE AND TECHNOLOGY (MUST) LIBRARY**

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**A RESEARCH PROPORSAL SUBMITTED TO THE EAST AFRICAN SCHOOL OF
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CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1 Background to the study

The exponential growth of information and information bearing materials are a result of the ever increasing growth of knowledge gives impetus for the need to organize information materials and to provide adequate security for these materials. According to Parker (2002), the security of library materials (book and non-book materials are of utmost importance to the librarian and information specialist for the purpose of reducing or avoiding unauthorized access to information bearing materials available in the library. To avoid unauthorized access to library resources, library management and information professionals must devise strategies which will enable them to provide adequate security that can protect the information resources available in the library.

Library resources are the information bearing materials which enable the library to fulfill its goal of meeting the information needs of its users (Adomi, 2008). Libraries in their effort to provide a broad array of resources to meet the needs of their users collect resources in various sizes and formats. These library resources can include manifestation of the printed world, audio and video recordings, microforms, visual and electronic resources and generations of requisite equipment for accessing or listening to data stored on them". These resources constitutes library collection that help in meeting the users' information needs.

Security of information resources in libraries is an issue of importance, and should be considered carefully in creating policies and strategic plans of institutions wanting to set up a digital library. The integrity and availability of all these systems have to be protected against a number of threats which include hacking, SQL injections and virus attacks etc. Hackers, rival corporations, terrorists and even foreign governments have the motive and capability to carry out sophisticated attacks against computer systems (Patel, Qassim and Wills, 2010). Thus, security mechanisms appropriate for Internet-based, real-world applications should be a prerequisite for a 21st century digital library system.

Access control is often described as rules regulating how participants are allowed to access object and could also be viewed as information flow control because every access results in flow of information between entities (either or both participant and object) (Chen et al 2006). Unless an attack is successful or a system is compromised, security in general, intrusion detection (ID) in particular, is rarely noticed by management. When security fails and the notification is too

late, only would managers consider viewing the security issue as visible as their organizational needs. Such crisis would finally open the sense of importance of security in any given system. Dorsish and Staren (2004), mentioned in their paper that “effective security solutions depend also on people’s ability to understand them and use them as part of their work”.

Moreover, Birnbaum (2004), in his work shared that in today’s information-rich world; libraries would play an essential role and will assume central positions of even more significance in pervasive systems. They will not only serve as repositories of knowledge and information, and as the primary mechanism for its retrieval and distribution, but they will also be the focal point for the integration of information and scholarship across all boundaries of application, language, and media. Since they will also inevitably become the target of malicious attacks by people seeking unauthorized information, and by terrorists seeking to disrupt the global information infrastructure and the physical infrastructures built upon it, it is both timely and essential to study the cyber security characteristics that future libraries will have to support.

In libraries security front, there are two main processes that are the focal point of security threats namely: the addition of information to the database and the retrieval of information from the database (access control). When these two ends are well secured using good security policies, the level of attacks or intended attacks on libraries` resource will in no small measure be reduced to its lowest ebb.

Library collections are changing rapidly as more and more electronic resources become available. The proliferation of electronic resources does not mean that printed resources will disappear. According to Aina (2004), library resources or materials must be safe; hence security

1.2. Background to Mbarara University of Science and Technology

Mbarara University library started in 1989 with the founding of Mbarara University of Science and Technology in its core functions of teaching, learning, and research through the provision of information resources and services. The library started from a humble beginning with the library building which would only house forty stacks with a book stock of five thousand five hundred fifty (5550) volumes most of which were donations. The sitting capacity was seventy three (73) seats; there were no proper working area and offices. There were four (4) members of staff manning it.

With the increasing number of library users resulting from yearly student in-take and the annual book stock, the University was faced with the challenge of expanding the existing library structure. Fortunately through the Government funding and fundraising from well-wishers a storeyed library building was commissioned by His Excellency Yoweri Museveni in 1998. By 2001 the building was completed and functioning. This is in manifestation of fifth law of Library Science as stated by DrRanganathan (1891) who is referred to as the “Father.” of Librarianship that a “Library is a growing organism.”

Today the library has a collection of over 85,000 monographs with annual addition of about 2800 textbooks and subscribes to electronic information resources such as; e- databases of scholarly journals, CD-ROM, among others. There is also a book bank system with a collection of basic textbooks for the taught courses. It has a sitting capacity of 700 readers, but still there is need to extend the existing library building to create more reading space for the increasing number of students and staff. However, in the meantime departmental libraries have been established e.g. Pharmacy, IITR, Management Science, among others to minimize the challenge of space shortage. There are 9 qualified members of staff i.e. 2 holding Masters, 2 Bachelors, 2 Diplomas, and 3 Certificates in Library and information studies

In long term, the University has secured money from African Development Bank (ADB) to construct a 1,500 seater library at the new site at Kihumuro. The architectural design is in place and construction work is expected to start early next year (2015). According to the plan the library structure is expected to provide enough reading space, space for shelves and stacks, seminar rooms, offices, technical room, Archive, among others. This will also come with its challenges but we shall cross the bridge when we reach it.

MUST library draws its strength in terms of information resources from being a member of the Consortium of Uganda University libraries, who negotiates for low cost electronic information resources, such as international databases, e-books, and scholarly on-line journal articles covering various subjects. This has enhanced access to up – to date peer reviewed literature. Today a total no. of 90 computers is connected to internet. The library collection is accessed through on-line public access catalogue (OPAC) locally designed and KOHA library management system in which data entry is ongoing.

1.3. Problem Statement

Though libraries have been providing some level of security measures, for example, making available security staff that is always at the entrance of a library to ensure that all library materials taken out of the library are checked, security of library information materials have not yet been fully attained. So also most libraries do not allow patrons to bring their bags and briefcase into the library. In spite of these precautions, library materials are still not safe characterized by theft and loss.

Therefore there is need for librarians to device a very concrete physical means of securing the materials available in the library and to have telecommunication or electronic security systems which will help to provide a safe and secure facility for library resources and equipment. To provide adequate security using telecommunication, electronic systems such as building alarm systems, access control systems, video surveillance, tele surveillance etc. can be adopted in the library. Mbarara University of Science and Technology library need to adopt the best security options available to enhance its security of library and information resources.

1.4. Purpose of the Study

The purpose of this study will be to establish guidelines of enhancing security of information sources in MUST academic library. It which will also bring about the problems due to insecurity in the academic library stated above and the causes of such problems.

1.5. Objectives

The main objective were to determine possible ways or solutions to the problems of security management for prevention of incessant book insecurity in the MUST University Library. Specifically the study is designed:

- i. To identify causes of insecurity for library information materials
- ii. To find out the means through which library information materials are being stolen
- iii. To identify the methods library should adopt to prevent its information resources from the insecurity?
- iv. To define the security guidelines that can help to enhance safety of information resources

1.6. Research Questions

The following research questions guided the study:

- i. What is the causes of information resources' insecurity of library materials?
- ii. What are the means through which library materials are being stolen?
- iii. What method may the library adopt to prevent its information resources from the insecurity?
- iv. What security guidelines can help to enhance safety of information resources in the MUST library?

1.7. Significance of the Study

This research project may be focused on alerting the need of combating insecurity of information resources in MUST library and research shows that the library holds many information resources which include print, non-print and electronic materials to lecturers, students and its community.

This study may be to assist and sensitize the university management on having functional academic library that will be cater for the university management on the need of both lecturers and students when it comes to acquiring expanded literature on how information materials are mishandled and what measures should be put to overcome them.

The study may be lead to proper securing information resources of information sources and the effective measures of preserving information sources from insecurity in MUST academic library.

The study may be also helpful to MUST university academic library reference agency especially to the researchers that will be want to know more about the existing literature in the field of library and information science.

1.9. Scope of the Study

The study covered MUST academic library and the focused on the measures of doing away with insecurity of information resources for example by installing a strong security platform to help in solving certain problems.

1.10. Definition of Terms

Insecurity of information materials is the unlawful tearing or cutting off of necessary parts of a book which could cause danger and destroy the importance of such materials.

Information sources

Information sources refer to anything that might inform a person about something or provide knowledge about it.

Combating refers to taking action in order to reduce or prevent something.

Securing information resources

According to Nelly Ballotffet (2004) securing information resources refers to steps that address the overall safekeeping of all the library holdings.

Library

According to Freeman (2005) a library is the only centralized location where new and merging information technologies can be cabined with traditional knowledge resources in a user focused service rich environment that support todays social and educational patterns of learning teaching and research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter the researcher represents the related literature on the topic of the study. This chapter gives a critical examination on the published studies that is both printed and electronic that have been carried out in different areas of combating insecurity of information sources.

According to Tylor (2006) literature review is an account of what has been published on a topic by accredited scholars and researchers more often part of an introduction to an essay

The aim of the literature review is to show your reader that you have read and have a good grasp of the main published work concerning a particular topic or question in your field.

2.2 Types of insecurities in academic libraries

According to Lincoln and Alan (1989) enumerated six types of insecurity in libraries which include

1. International damage of materials
2. Insecurity outside the building
3. Insecurity inside the building
4. Insecurity to vehicles
5. Insecurity to equipment

2.3. Library Information Security

Security and in academic libraries is essential library duties for librarians to achieve (Doherty and Fulford, 2006). Due to security breaches in academic libraries, users sometimes are not able to get information materials needed and this makes the library ineffective in satisfying users' information needs. Results obtained from a study by Breeding (2003) revealed that book theft, noise- making and mis-shelving in the library and book mutilation are the major security breaches in the libraries. It also revealed among other findings that print materials, serial/periodical collections, reference collections and reserve collections are vulnerable to security breaches. To improve security measures in the libraries some prevention measures such as written security policy to be placed on the notice boards, manual security approach such as

monitoring users in the library premises, introduction of electronic security system to mention but a few were recommended.

Musinguzi (2014) reports that in the EIFL study released in 2011, stakeholders in Uganda identified the three major challenges facing public libraries as limited space for users' comfort, inadequate funding and lack of technology, which includes computers and Internet access. However, insecurities that are existing among libraries was mistakenly not identified. Therefore Hant (2003) says that the threat of intellectual property through insecurity of intellectual and other forms of abuse has posed challenge to the growth and development of the collage libraries and librarians I general.

It is noted by Al- Salihy et al. (2003) that information security is not simply computer security. Whereas computer security relates to securing computing systems against unwanted access and use, information security also includes issues such as information management, information privacy and data integrity. For example, information security in a library would include personnel security and policies, steps taken for effective backups, and the physical integrity of computing facilities.

Libraries, especially public libraries, have an outstanding record of protecting the privacy of their patrons. The American Library Association's Intellectual Freedom Manual (ALA, 1996) assists librarians in defending the Library Bill of Rights. More recently, the ALA has taken a strong stand against the use of filtering software in libraries, and specified guidelines for the freedom of computer and Internet use in libraries Information Security for Libraries. In spite of this record, Ismail (2011) argues that there are two important security problems often not addressed in libraries. The first is the privacy offered for data that may be collected or collectable apart from circulation records. The second is the risk of penetration of library systems from outside parties who may access circulation or other data.

Farahmand et al. (2006) investigated about security challenges in university libraries in Southwest Nigeria. Questionnaires and interviews were used to collect data for the study. Findings from the study revealed that university libraries in Southwest Nigeria are confronted with security challenges. The challenges include noise making through the use of cell phone,

theft, mutilation, and defacement of library materials and hiding of book to prevent other users from having access to them. Farahmand et al. (2006) also found that textbooks, serial publications, and reference materials were the materials highly susceptible to abuse by users. The problems are attributed to factors like a harsh economic situation that makes it difficult for library users to buy books and ineffective library security systems. The study recommended adequate and effective security through recruitment, training, and retraining of security personnel; purchase of multiple copies of materials in high demand; provision of photocopying services; adequate training and education for library staff and users on the effects of crime on library services; and tough punishment for perpetrators of library crimes.

2.4 The means through which library information materials are being stolen

The issue of collection security is of growing concern to university libraries and librarians. As a consequence, there is a vast literature on a range of problems concerning collection security in university libraries. Ugah (2007) considers collection security breaches as formidable obstacles to information access and use. Such acts are serious problems that can result in user dissatisfaction. He identifies major security issues in libraries to include: theft and mutilation; vandalism; damages and disaster; over borrowing or delinquent borrowers; and purposefully displacing arrangement of materials.

Book theft is identified as the most common crime in libraries, one which has been on the increase for many years which violates the security of library information (EDUCAUSE/Internet2 Security Task, 2004). Theft and malicious damage against books are difficult to combat because the risk of getting caught is very low, while the likelihood of success is high. Criminal activities in academic libraries are not limited to library information materials alone but theft of properties such as handbags, purses, calculators and notebooks are equally common. Doherty and Fulford (2006) concur that the extent, nature and rate at which these crimes occur vary from one academic library to another.

One of the major problems in small health service library situations is the lack of staffing to supervise the library at all times and the need, perhaps perpetuated by tradition, for libraries to be accessible on a twenty-four-hour basis to medical staff” (Trounce, 2000). As soon as we found out there were \$10,000 worth of books missing, we began to take steps to improve security. Early in 1998, after discussions with the Library Committee and the director of the residency

programs, the lock on the library door was changed. Patrons now have to sign in through security to gain access to the library after-hours. (For several years prior to this, every staff physician and every resident had a key to the library.)

A study by Farahmand et al. (2006) discovered that the major causes of theft and mutilation of the University library materials are usually caused by many factors and it was discovered from the study that financial constraint, scarcity of library materials and selfishness on the part of students contribute to theft and mutilation and according to this research; selfishness on the part of students is the major cause of theft and mutilation, this represented by 60% of the respondents. Farahmand et al. (2006) advised that the students should therefore be taught to have other student's interest at heart and not think about their own good alone.

It is realistic to recognise that library staff themselves may contribute to the losses sustained by libraries either by failing to return loan items, or by deliberate theft. Several cases have occurred to drive this point home. Probably the most well-publicised recent case was that of Norma Haig, a librarian from Liverpool who was found guilty in 1984 of what was described in court as “a £46,000 trail of havoc around the country” (Thiagarajan, 2002).

2.5 Methods libraries should adopt to prevent information from insecurity

Information security includes personnel security, privacy, policy and computer security. Specific personnel must be assigned security-related tasks in order for any security system to be effective. Due to the continuing emergence of new security exploits, tools and techniques –coupled with the constant parade of software and hardware upgrades likely in most library environments – ongoing diligence is required to keep informed of security developments.

In medicine, prevention is better than cure, and also in libraries good preventive measures particularly of storage and security should be on alert so as to prevent damages and missing of books. Akor (2013) comments that the art of prevention is as old as human civilization. Since the innovation of writing, mankind has been faced with the problem of prevention. Thiagarajan (2002) adds that documents have been existed in one form or the other and it is natural for man to attempt to securing, managing and preventing them from deterioration. Edoka (2000), say that “library emerged when the need arose to safeguard, exploit and utilize records of civilization”.

It is advised by Scarfone et al. (2008) that the goal of the security system in the libraries should be to provide a safe and secure capability for library employees, library resources and equipment, and library patrons. At the same time, Suhazimah (2007) argues that the security system must perform these functions as seamlessly as possible, without interfering with the library's objective of easily and simply providing patron services.

Yeh and Chang (2007) also advises that as information professional, we have a responsibility to mankind: to explore the possibilities of finding methods of securing, managing and preventing library and information materials and to ensure their continued availability for as long as possible, remembering that prevention is better than cure.

Anunobi and Okoye (2008) contributed that, "academic libraries are faced with crossbreed challenges in order to acquire the necessary skills". One challenge is the issue of security management for prevention of theft of print and non-print resources in the academic libraries. There is a need for academic libraries to ensure accessibility and effective use to make an effective program of collection security necessary. This programme must include assessment of collection security management for prevention of incessant book thefts and the measures use in curbing security infringement.

The common method of preserving collections all over the world is by reformatting the collection in an appropriate order or manner that is through setting a strong security organ that is always alert and takes immediate action

Where insecurity and multiple losses take place, it should consist of security cameras, check points, installed alarms, library security officers and many more. Damaged documents should receive possible conservation treatment, should be placed in secure places and well placed folders.

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According to C&RLNews (October, 1999); the library security officer should be given authority by the library and the parent institution to act on their behalf while working with the institutions legal counsel and security force. Consult section 11 of the ACRL Guidelines for the security of rare books, manuscripts and other special collections for a fuller description of library security officer's role for it will be work according to secure the library holdings.

Disaster are security issues that threaten the library collection. Aziagba and Edet(2008) identify “disasters as natural and man-made .we have little or np control over natural disasters which come usually as a result of flood, landslides, earthquakes, storm and many others”. All of these have been experienced by universities in different countries .Flood and water damage are particularly threatening to library collections.

Shuman (1998) describes “flooding as abnormally high water flow and it is generally considered to be the most destructive and costly natural disaster libraries can ever experience “therefore, there's a need for constant security measures, such as vigilant staff and user education, to handle security threats caused by this type of disaster. Brown (2007) suggests coordination policies to address all these threats”

Nkiki&Yusuf (2008) observed that “*information is an essential part of a nation resources and access to it is a basic human right*”.Thanuskodi (2009) asserted that “information is not only a national resource but also a medium for social communication. With declining budgets and higher subscription cost, it is becoming difficult to meet the demands of library users “libraries should therefore ensure the security and safety of their collections.

Barclay (1989) states “on the securing information resources of books and documents in their original format”. Considers the securing information resources of books and documents in original format. Outlines a strategy that encompasses a justification for resources, methodologies for selection and range of securing information resources technologies.

According to Hart(2011) Insecurity of library materials refers to the act of deliberate destruction of information material both books and non-book material.

Salaam and Onitade (2010), insecurity of library materials has been an age long problem in the libraries which take the form of ripping of pages of books and document , deliberate defacement of materials and sabotage of library equipment's and outright insecurity of book materials.

According to Flodin and Matheson's (2000) interviews with public librarians, the most vandalized materials reported by the interviewer were magazines, cookbooks and commonly children materials. Another complaint will be the librarians who filled up the cross puzzles of the daily newspapers carried by their libraries.

Libraries have been seen as one of the pillars of civilization. No nation can function effectively without the use of a library. The term "library" means a collection of educational materials organized for use. The word is derived from the Latin word "Liber" which means a book. This is a good reason to believe that the root concept of Library is deeply embedded in our ways of thinking about the world and coping with its constraints. In its primary role as guardian of the social memory, there are many parallels with the ways in which the human memory orders, stores and retrieves the information necessary for survival. Broadhead, (2002) asserted that the

"study of library history and its related disciplines bear witness that the instinct to preserve, the zeal to collect and the desire to manage have been dominant influences in the genesis and growth of the library idea in the history of civilization".

According to the National securing information resources office (2001) libraries and archives contain an irreplaceable accumulation of human knowledge and experience therefore the resources contained in the library are essential for the development of the country.

Library information resources are essential ingredient of teaching and learning in all educational institutions. All library staff should be trained on how to handle information resources and likewise the library users.

The society expects the libraries to collect and preserve records of the past in order to learn from them. To protect information sources from being stolen and destroyed by different library users that may end up affecting the library organization.

To improve on efficiency and productivity of information sources through imposing best ways of preserving information sources for ample tight security and other security measures.

2.6 Collection Security Management Problems in Academic Libraries

According to Maidabino (2010) the "issue of collection security is of growing concern to university libraries and librarians. As a consequence, there is a vast literature on a range of

problems concerning collection security in university libraries”. Library security management has to do with taking necessary measures to ensure that the materials available for use in the library are kept in a good condition and prevented from being stolen. Collection security management in libraries can be conceptualized to mean the overall manner in which collection security policies, programs, procedures, or measures are deployed to mitigate risk and ensure access.

Ajebomogun (2004) stated that “collection security management refers to a process designed to protect library collections against un-authorized removal or loss”. This involves protecting resources against disasters as well as thieves or intruders. Libraries must be safe from security threats and vulnerability. University library collections are broad and varied. University libraries support the educational community through access to the collections. Borrowing privileges is an important means of giving access to library collection for personal, educational, and socio-economic advancement.

Da Veiga and Eloff (2007) also contributed that “Information security governance is the manner in which information security is deployed”. Ameen and Haider (2007) opined that “access to collection is important as this service has supported scholarship in the humanities, sciences and social sciences and remains the key to intellectual freedom”. Ugah (2007) also considers “collection security breaches as formidable obstacles to information access and use. Such acts are serious problems that can result in user dissatisfaction”. He identifies major security issues in libraries to include: insecurity; damages and disaster; over borrowing or delinquent borrowers; and purposefully displacing arrangement of materials.

Disruptive behavior is another security issue in libraries. As a number of studies reviews (Lorenzen, 1996; Momodu, 2002; Ajebomogun, 2004) acknowledge that “disruptive or criminal behavior can cause security problems in the library. Difficult patrons include those who are intoxicated or using drugs, mentally disturbed, and some juvenile users”. Momodu (2002) asserts that “libraries have faced varying degrees of delinquency in the use of their resources. The extent of this problem varies from one library to another, but seems to be universal”.

The literature on collection security shows that security breaches often happen when the library premises are left unsecured. Oder (2004) maintains that “security measures such as supervision, patrolling, and surveillance are lacking in libraries and keys are kept unsecured, if not in plain

sight of the users". Thomas (2000) notes that "the major challenge for new or renovated space is to incorporate flexibility while providing a safe and secure library environment" Atkins and Weible (2003) believe that "successful inventorying process helps identify missing items; however it may be dependent on the size of the library's collection". They proposed using interlibrary loan (ILL) data failure cases to identify materials missing from a library's collection instead.

Brown and Patkus (2007) stressed that "university libraries must ensure that access and storage areas for collection are arranged and monitored for quick and easy inspection. Non-return of library materials is a threat to the effective use of resources". Udoumoh and Okoro (2007) suggest that "libraries create policies to ensure library resources are used effectively".

Disasters are a security issue that threatens library collections. Aziagba and Edet (2008) identify "disasters as natural and man-made. We have little or no control over natural disasters, which come usually as a result of flood, landslides, earthquake, storm, cyclone, or hurricane". All of these have been experienced by universities in different countries. Flood and water damage are particularly threatening to library collections. Shuman (1999) describes "flooding as abnormally high water flow, and it is generally conceded to be the most destructive and costly natural disaster libraries can experience". According to Evans, et al. (1998), "disasters can destroy thousands of volumes within a short time. Insect infestation, environmental factors, and human causes constitute a serious security threat and may have devastating consequences". There is a need for constant security measures, such as vigilant staff and user education, to handle security threats cause by this type of disaster. Brown (2007) suggests "coordinated policies to address all these threats".

Nkiki and Yusuf (2008) observe that "information is an essential part of a nation's resources and access to it a basic human right". Thanuskodi (2009) asserted that 'information is not only a national resource but also a medium for social communication. With declining budgets and higher subscription cost, it is becoming difficult to meet the demands of library users". Libraries should therefore ensure the security and safety of their collections. Maidabino (2010) contributed that, "these problems indicate the need to determine the current state of collection security management in academic libraries". Library and information managers must have a clear vision and focus on the contemporary reality of security breaches in university libraries, especially

those targeting the collections. This is one of the many things librarians should concern themselves with; if they are to successfully manage a flourishing and efficient library.

2.7 Causes of Insecurity of Library Materials.

Various writers have expressed their view on what contributes to the cause of different forms of abuse in the library. However, many researchers base their argument on economic depress and insecurity as the main cause of abuse of library materials.

Lorenzen (2017) observes that “collection takes many forms, ranging from underlining and highlighting text, tearing and removing pages and tampering with the content. Lorenzen identifies several causes for which include;

- Student’s dissatisfaction or unfamiliarity with library services.
- Lack of knowledge of replacement costs and time.
- Lack of concern for the needs of others.
- Few students think of library and insecurity as a crime.

Abifarín (2007) contributed that (students steal or mutilate library materials because of scarcity of library materials, selfishness on the part of some students, financial constraint and high cost of learning materials”

Whereas thirty years ago the main reasons as to why average person stole library materials ranged from “lack of money for photocopying to failure to remember the library card” (Cravey, 2001, p.27), the motives for insecurity are now much more varied.

According to Pamela Cravey (2001), “an attitude of entitlement, the expectation of immediate gratification, ease of access and the Kenny factor “(p.27). One of the most interesting aspects of Cravey’s assessment is the shift away from monetary concerns and incidents of oversight to one that demonstrates increasing numbers of premeditated acts.

Nwalo (2003) also asserted that,

“a major problem encountered in library security is that the security department of the parent body (in the case of academic and special libraries) insists on providing security personnel for the library. These security men are loyal to the security department and not to the library

authority. This situation makes it difficult for the librarian to control security matters in his library as his orders may be flouted”

Moreover, the security personnel posted to the library are often not literate enough to identify library materials and prevent them from being stolen. They are always gullible as library users often play on their intelligence. Library security will be definitely be enhanced by the deployment of trained library personnel at the security posts.

2.8 Nature of Book Insecurities in Academic Libraries

is the act of destroying or removal of an essential part of library materials as to render it useless. These could be as a result of bending of corner of paper or inserting pencil or biro into pages. Also opening of books back to back, tearing of relevant pages etc. Aliyu (2004) defined insecurity “as the total removals of library materials from the library without the normal procedures, either by the library users, library staff or both of them”.

Utah (2004) defines and insecurity of library materials as “deliberate removal or attempted removal of library materials from the library without their being checked out”. Also, successful unauthorized removal of library materials from the library, failure to return materials to the library is also considered to be insecurity of library materials. Ifidon (2000) in his own opinion stated, “ and insecurity in libraries is a menace that has persisted.

In a similar study, Aina (2004) investigated the factors responsible for the vandalization of books in sokoto state of Nigeria. He surveyed five hundred (500) university students using social survey research; the method of collection in used will be a questionnaire. The finding revealed that only expensive books were stolen or mutilated. James (2005) found that “books were vandalized during examination period”.

Afolabi (1993) also added that “damages are caused by library users, insects and other animals and also by climatic conditions including hazards, she emphasized that recent studies have indicated that the greatest agent that deface books and cause wear and tear on library materials are human beings which are library users/ patrons”.

Isaac (2008), carried out an investigation on the prevalent rate of book insecurity in academic society especially academic libraries, he evaluated the rate at which book insecurity and are

plaguing academic libraries in Nigeria and to proffer some measures for curbing the menace. In his research, a total of 120 copies of questionnaire were distributed to professional librarians, library officers and library porters (security staff) in four (4) different academic institutions in Ibadan, Ogbomoso and Oyo state, in Nigeria. Seventy eight (78) copies were returned and found useful (a response rate of 65%). He reported that reference materials, periodicals such as journals, newspapers and magazines are mostly affected. The results from the analysis of responses showed that most of the academic libraries investigated agreed that book insecurity and are serious problems facing their collection.

Hendrik (2004) stated that most academic libraries, however, suffer from a debilitating disease (sick). The quiet but insidious of their periodical collections not only drains badly needed financial resources but also frustrates and frequently infuriates their patrons. Thus the magnitude of the problem is such that any insight leading to a reduced rate of would lead to substantial monetary loss, not to mention reduced frustration and anger on part of library staff and innocent patrons. Students do not consider as a severe offence. The great majorities, who are unconcerned about getting caught, feel it is either not a crime or a minor misdemeanor and stated that a fine paid to the library should serve as a penalty. This assessment of students perception yield an image of students as relatively unconcerned about ; they assume it is relatively trivial and easily repaired and in general they are unaware of the great costs and efforts involved in this problem.

2.7 Challenges of Securing information resources

Educating record keepers, members of the organization and researchers the best ways to handle the records as well as the conditions to maintain and use the records up to their disposal stage.

The human factor. Improper handling and storage of practices are major securing information resources menace of information resources in academic libraries.

Light: Materials such as books and other paper based materials are affected by light causing fading of information resources.

Risks to reliability and authenticity: Changes in records storage use and retrieval require that the records migrated to suitable materials and equipment if the information is to remain accessible overtime. The process can affect the authenticity and reliability of records.

Moisture: it works for and against the securing information resources of library information resources. A certain amount of moisture is necessary for flexibility in paper and vellum.

Heat/temperature: Heat food and moisture are the three conditions for microbial growth and these accelerate the chemical deterioration of paper.

Pollutions: Dust usually encourages the growth of microorganism on most library information resources especially book formats.

2.8. Research Gap

According to the thorough observation on the previous researches as explained in the literature and empirical review given above, I have discovered that they are rules and regulations set for proper handling of information sources but the weak security system in the library management is the major cause of insecurity of information sources.

This imposes a gap with reality that although these materials are kept, the review proves the existence of challenges like poor security that lives the life span of a library holdings at stand still.

CHAPTER THREE: RESEARCH METHODOLOGY.

3.1. Introduction.

Under this chapter the researcher looked at the following. Area of the study, research design, population of the study, sampling and sampling strategies, sample size, data collection methods and research instruments, data quality control measures, data analysis and presentation, ethical issues and limitations of the study.

3.2. Area of the study.

The research was conducted at MUST University Library to put in place guidelines to combat insecurity so as to enable effective operation of the library services to meet the needs of the library users. This is because the library is managed by professional librarians and the rate at which students borrow books is high.

3.3. Research design.

According to Viruthatabud (2009), a research design is a detailed plan or blue print of how the goals of research will be achieved so as to facilitate the smooth sailing of various research operations. In addition, Shalmadas (2007) states that it is a conceptual structure within which research is conducted. The function of a research design is to provide for the collection of relevant information with minimal expenditure of effort time and money. It states how, when and where data will be obtained. In this study, the researcher used a case study research design. A case study research design is an approach to studying a social phenomenon through a thorough analysis of an individual case (Kumar, 2005). Yin (2009) defines a case study as a detailed analysis and a description of the activities of an area under study.

A case study provides an opportunity for the intensive analysis of many specific details often looked by other methods. Yin (2009) pointed out that the approach rests on the assumption that the case being studied is a typical of cases of certain type. Therefore, intensive analysis may be made that must be applicable to other cases of the same time. A case study is capable of exposing both quantitative and qualitative data about the research. A case study research design can be designed to address just the specific problem to meet the specific objective. This study will be also adopt a qualitative research approach to obtain an in-depth and detailed information.

3.4. Population of the study.

Bombo (2006) defines population as a group of persons or elements that have at least one thing in common. The population of the study included university students in MUST University (MUST). Data will be also be obtained from the library staff of the university. A total population in the library of 50 will be used. This included 45 students and 5 library staff and it composed of 24 females and 26 males.

3.5. Sample size.

According to Russell (2007), determination of sample size involves methods for deciding how much data should be collected in a statistical study. The sample size will be chosen to meet one or more goals, which could relate to precision of estimation, power, cost, or some other criteria.

In this study therefore, a sample size of 50 respondents will be used and it includes two categories that is the students and the library staff of MUST as shown in table 1. This will be a fair and manageable sample size to the library provides accurate and credible information to the researcher.

Table 1: Category of respondents

Category	Sample size
Library staff	5
Library users	45
Total	50

3.6. Sampling and sampling strategies.

Sampling is the process of selecting units (for example people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they will be chosen (William, 2006).

Sampling can also be defined as part of statistical practice concerned with the selection of an unbiased or random subset of individual observations within a population of individuals intended to yield some knowledge about the population of concern, especially for the purposes of making

predictions based on statistical inference. The researcher used purposive and simple random sampling for this study.

Purposive sampling involved selecting individuals known to meet a certain criteria whereas in simple random sampling a random sample of the general population will be obtained to be a representative of the larger population and each element in the target population had an equal chance or probability of inclusion in the study. Purposive sampling will be used mainly to save time through selecting individuals to meet certain criteria and simple random sampling will be used to eliminate bias.

3.7. Data collection methods and research instruments.

According to Moser, (2010), data collection methods are methods that allow the researcher to collect information about the object of study and about the setting in which they occur. Wang, (2007) reveals that there are practical ways of collection and analysis of data. They comprise of content analysis, questionnaire, interview, focus group discussions and observation method.

According to Statistical Quality Standards, U.S Census Bureau (2010), data collection instruments refer to the devices used to collect data, such as a paper questionnaire or computer assisted interviewing system. In this study however, the researcher will use questionnaires, interviews and observation methods and the instruments used will be questionnaire and interview guides.

3.7.1. Semi- Structured Questionnaires.

Ahuja (2009) defines a questionnaire as a structured set of questions usually sent by e-mail, lost or delivered by hand. It is also a data collection tool in which written questions to be answered are presented to the respondents in written form (Chaleunvang, 2009). This will be availed with forms containing questions related to the study. Both open ended and closed questions will be used to collect data. The open ended questions will be intended to permit greater depth of responses by stimulating the respondents to give an insight into their feelings and opinions. The semi-structured questionnaires will be distributed to the students and this allowed the researcher to encourage the respondents if they will be looking for more information, these will be help to collect a lot of information/data over a short period of time and elaboration of answers provided by the respondents. For example questions like; does the current library system satisfy your

needs? Yes or No, Give a reason for your selected choice among others. . It will be self-administered (Fibbons, 2009) (**see appendix A**).

3.7.2. Unstructured Interviews.

According to Berg (2009), an interview is a conversation with a purpose between two or more persons. The researcher interviewed library staff using unstructured interview guides which contained open ended questions. The researcher will ask questions to the interviewees and she expects answers. This will be interactive in nature and will be help to have a deeper and detailed conversation and discussion between the researcher and the respondents. The unstructured interviews will be enable the respondents to discuss a limited number of topics and in great depth. For example questions like; how do you track information materials when not in the shelves? What challenges do you face using the current library system? Among others. This also will be help the researcher to collect information that cannot be put down in writing and also helps the researcher to capture the meanings beyond the words (**See appendix B**).

3.8. Data quality control measures.

Data quality control is defined as the means adopted to improve the quality of data (Weiner, 2000). It can also be defined as the efforts and procedures put in place to ensure the quality and accuracy of data being collected using the methodologies chosen for a particular study. Data quality control is about ensuring acceptable levels of validity and reliability of the study.

In this study, triangulation will be used. This is a methodology developed that utilizes both quantitative and qualitative data that is collected from different sources that uses different strategies to verify the accuracy of data collected. This ensures data quality and bias elimination through gathering data from variety of information resources and researchers.

3.9. Data analysis and presentation.

According to Wikipedia (2017), analysis of data is a process of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making. Analysis of data begins with a procedure that is commonly termed validation. Validation means a thorough check of the analytical method to

ensure that an adequate quality control process has been used. For analysis of data from a research project, quality control is an integral part of the method used for analysis.

The researcher carried out data analysis process to prepare data for analysis and to ensure that data will be reasonably good. This will be done in reference with the objectives of the study, aim of the study and the questions that will be established in the questionnaires, interview guides and participant observation. Data will be edited which involved rewriting the findings to remove any errors, incompleteness or inconsistencies before data entry and presentation will be done. The findings will be presented in the form of tables, bar charts and pie charts for easy interpretation.

3.10. Ethical issues.

The dignity, rights, safety and well-being of participants that take part in any research process should be the primary considerations for any research. Luther, (2013) notes that ethics in qualitative research is important because it takes on more personal methods, it is more intrusive into the everyday life of the participant and therefore the greater role of the researcher is to create a relationship with the participant through an ethical interaction.

Some of the important ethical principles include; Respect for human person, Honesty, Benevolence. The researcher considered the following fundamental and derived ethical principles in this research study.

Permission from the authority.

The researcher ensured that she seeks permission from the authorities before the questionnaires and interviews will be conducted.

Informed consent and voluntary participation.

The respondents were informed a head of time about the intended purposes of the study and the benefits thereof. Consent will be sought from each of the respondents to establish their willingness to voluntarily participate in this study.

Confidentiality.

The most ethical challenge that were encountered in this study were on confidentiality of individual responses and data provided especially on sensitive issues that have implications on people's jobs.

Therefore a high level of confidentiality and anonymity were maintained throughout the research process by not including names of respondents in the study and above all assuring them that the work is for academic purpose only as this was shown too in the tools.

Integrity and respect.

The researcher endeavored to balance professional integrity and respect for the varying views and backgrounds of the participants.

The researcher ensured that the research team has the required professional expertise in data collections to ensure factual accuracy, avoid falsification, fabrication and misinterpretation of data.

3.11. Limitations of the study.

Inadequate literature: The researcher may fail get enough literature especially current literature for the study. This was because not so much currently has been written about the study.

CHAPTER FOUR: PRESENTATION, ANALYSIS AND DISCUSSION OF THE FINDINGS

4.0 Introductions

The study was focussing on enhancing security of information resources of Mbarara University of Science and Technology (MUST) Library. This chapter comprises of presentation, analysis and discussions from the findings as per objectives of the study.

4.1 Composition of the Respondents

In the course of carrying out this research Fifty (50) questionnaire were distributed to the teaching staff and students.

Table1: Composition of Respondents

Category	No. Respondents (N = 50)	Percentage %
Principle Librarian	1	2
Library Attendants	2	4
Library users	47	94
Total	50	100

Source: Field Data 2018

questionnaire consisting of (10) questions was prepared and a total of (50) copies of questionnaire were administered to the professional, paraprofessional staff and student at the MUST University Library. From the 50 questionnaires distributed 45 were fully filled and returned. The table above shows Library users as a major respondent with 47(94%), Library Attendants 2(4%), Principle Librarians 1 (2) making a total of 50 (100%) of valid respondents for the study.

4.1.1 Demographic Characteristics of the Respondents

Table 2: Percentage distribution of the respondents by demographic characteristics

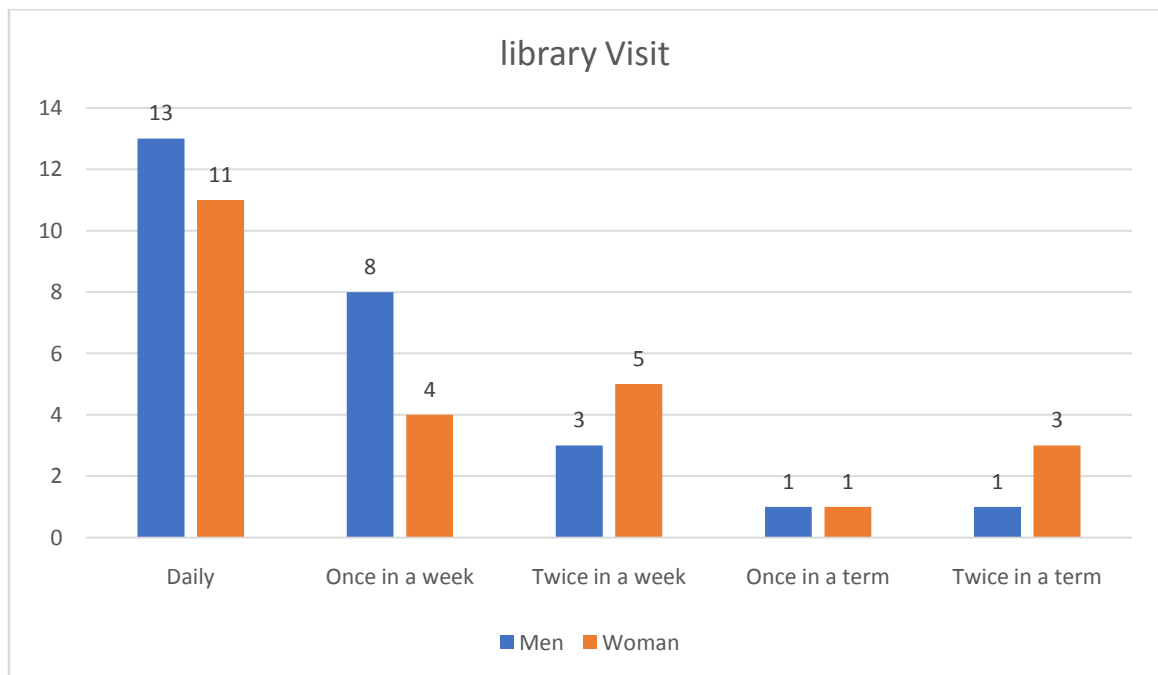
Gender	No. of respondents (n=50)	Percentage %
Male	26	52
Female	24	48
Total	50	100

Source: Field Data 2018

From the above table, the 50 respondents who picked the questionnaires all answered and returned them. Therefore the majority of the respondent were Males 26 (52%) and 24 (48%) Women.

4.2 Frequency of Library Visit

Fig 1 Frequency of Library Visit



Source: Field Data 2018

Figure show frequency of Library visit. 13 men and 11 women (28%) have visited the Library daily, 8 men and 4 women (24%) have visited the Library once in a week, 3 men and 5 women have visited the library twice in a week (16%), 1 man and 1 woman (2%) have visited the Library once in a term and 1 man and 3 woman (8%) have visited the library twice in a term.

4.2.1 Purpose of Library Visit

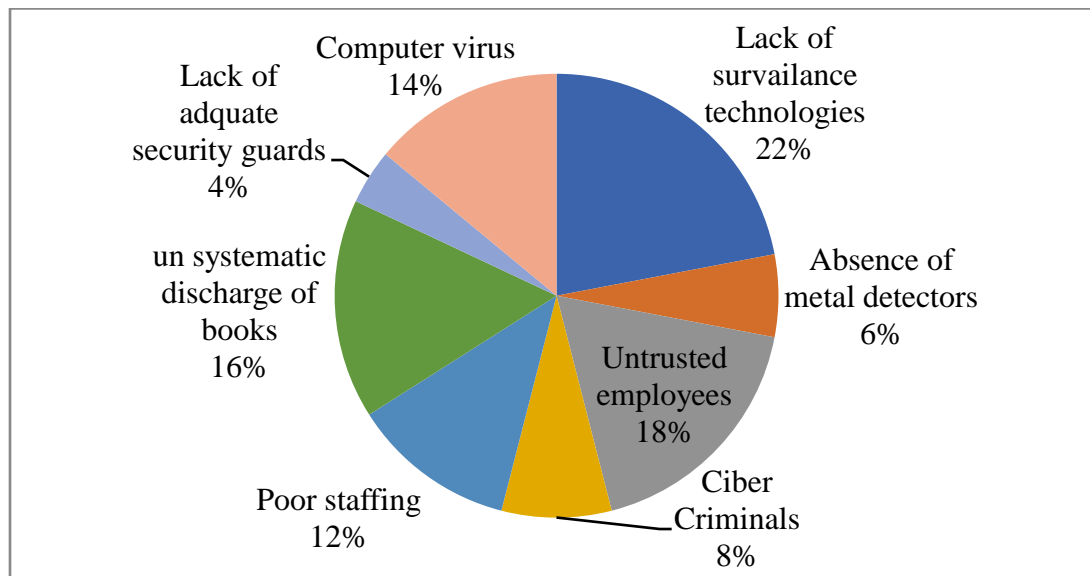
Table 3: purpose of library Visit

Purpose	No. of Respondent (n=50)	Percentage (%)
Study and Research	22	44%
Borrow Books	12	24%
Reading	16	32%
Access e-resources	0	0.0%

Source: Field Data 2016

The table above shows a majority of the respondents 20 (40%) visit the library for the Study and Research, 12 (24%) visit the library for Borrowing books, 16 (32%) visit the library for Reading and 00 (0.0%) access of e-resources. This shows Users are utilizing the library

4.3.1 causes of insecurity for library information materials



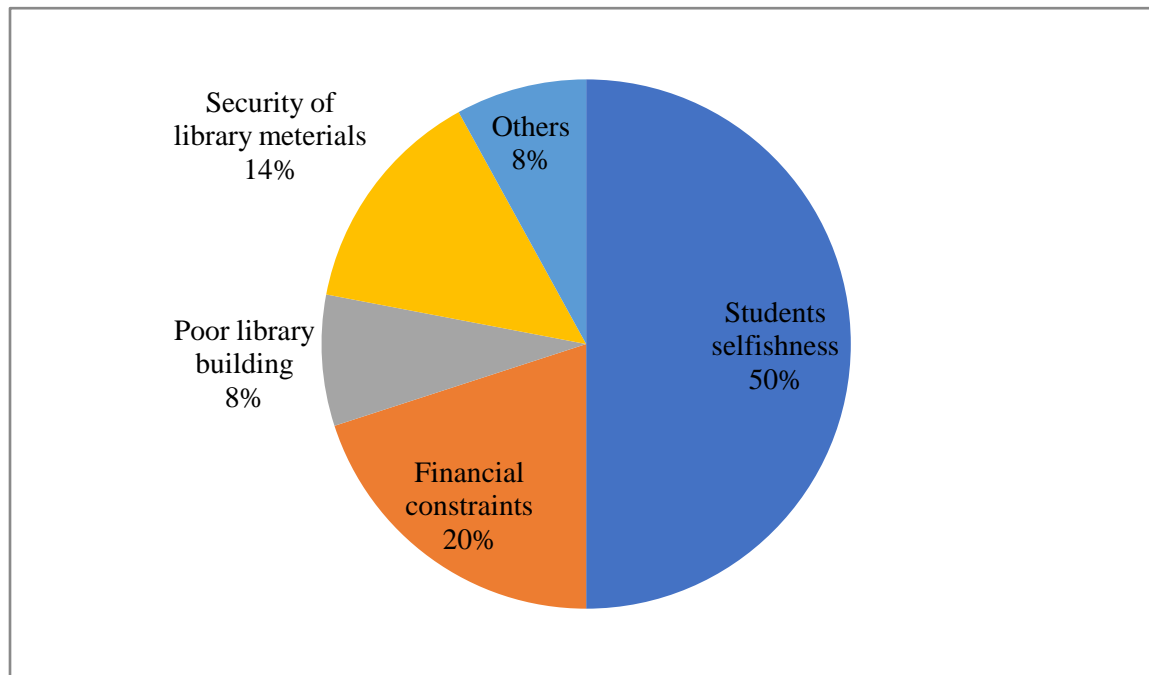
(Source, Primary data)

According to figure 1 above, the study unveiled the different causes of insecurity of library information materials. Therefore, the biggest percentage (22%) the respondents noted that lack of surveillance cameras have compelled many library users to take away library information material without any concern of being seen. In addition to the same matter, 18% of the respondents agreed that entrusted employees have been seen selling library materials such as books and printed journal. in the same manner, respondents noted that computer technologies (hardware) are also smuggled by IT staff. In doing so information saved on technologies such as hard drives get lost without any concern.

As if that is not enough, the study also discovered that 16% of the respondents complained that un systematic discharge of materials such as books has also caused insecurities to library information of MUST. According to the study findings, it was revealed that book theft in MUST Library have become so common among readers. The chief librarian noted that in a study some materials were removed from the library without registering the transaction, while some books were borrowed on tickets containing false or incorrect information about the owners and others were borrowed and never returned Corroborating this report. It was also discovered that MUST had to replace over one thousand pages of library books damaged by students in the month of April of that year alone. *"From the above practical cases cited on how books and other information materials are lost from the libraries through theft and mutilation, one can easily deduce that these acts occur in every library and in every country of the world."* Said the librarian.

Technologically, 14% of the respondents noted that electronic library information is also commonly affected by computer virus (Malware) that affect the files and the system negatively. Viruses destroy computer memories and information fails to be accessed by any required individual. In doing so, library information becomes insecure. However much as only 4% of respondents noted that information insecurity at MUST library is also caused by inadequate deployment of security guards to provide protection to the repository, it was also observed by the researcher that MUST library had only one security guard. In case of his absence, the chief librarian noted that this may create a loophole for any inside and outside to cause any kind of insecurity to the collections.

4.3.2 Why Library Books are Stolen?



(Source, Primary data)

In an attempt to find out the main causes of theft and mutilation of library materials in the library the above option in the table 3 shows that 7 respondents representing (20%) of the respondents agree that the reason is financial constraint, 50% (21 respondents) agree that it is selfishness on the part of students, 14% (9 respondents) see the cause as scarcity of library materials, 8% (1 respondent) think that it is as a result of poor of library building.

4.4 The means through which library information materials are being stolen

Table two showing the means through which library information materials are being stolen

Means	Frequency	Percentage (%)
Hiding under cloth and inside pocket	30	60
Tearing of page(s) off	10	20
Removing the jacket cover	5	10
Hacking	5	20
Total	50	100

(Source, Primary data)

The table 2 reveals the most common method of book theft in the MUST Library is by hiding under the cloth and inside the pocket, this is represented by the biggest percentage 30(60%) of respondents. They confirm that students are seen hiding books in bags and sweaters. Further still, 20% (10respondents) agree that books are stolen and destroyed through tearing of relevant page(s) off. In addition to the same matter, 10% (5 respondents) agree that it is done through removing the jacket cover of library materials. Lastly, 20% (5) of respondent noted that smart library users hack in the library system and access information illegally.

4.5 The methods library should adopt to prevent its information resources from the insecurity

Table 3: Showing methods library should adopt to prevent its information resources from the insecurity

Options	Frequency (F)	Percentage (%)
CCTV and security personnel	27	54
Dropping bags at entrance	5	10
Adequate staffing	5	10
Deploying security guards	6	12
Using bar cord	7	14
Total	50	100

(Source, Primary data)

According to the table 3, 27(54) of respondents respond that closed circuit television (CCTV) and security personnel are the measure in use to reduce the act of theft and mutilation in the library, 5(10) respond that dropping of bags at the library entrance is the measure in use, 5(10) respond that the security personnel moving around in the library is the measure in use to reduce theft and mutilation in the library.

Library security management has to do with taking necessary measures to ensure that the materials available for use in the library are kept in a good condition and prevented from being stolen. Collection security management in libraries can be conceptualized to mean the overall manner in which collection security policies, programs, procedures, or measures are deployed to mitigate risk and ensure access.

Security is a way of life. Librarians noted that security is to ensure the safety of library materials against human and natural agents. The librarian mentioned that constant vigilance on the part of library staff may help to secure library materials. According to MUST librarian, “security refers to device designed to guard library materials against crime, accident, disasters, fire and attacks”. She added that, “library materials must be safe; hence security devices need to be provided by library to ensure that materials are not stolen or mutilated”. Other respondents suggested measures to reduce the problems, which include tightening security at library entrances and exits, expulsion of students involved in theft and mutilation, provision of multiple copies of heavily used text, reducing the cost of photocopying, and periodic searching of students’ hostels and staff.

The study also revealed that respondents opined that the “library security should be planned when the library building is constructed wherever possible, through architectural considerations which include the site design and building design”.

It was also discovered that since library has been employing different kind of security systems to save library resources from theft and mutilation; there is also a need to secure or preserve these information materials in order to prolong their life span and meet the need of the clientele. According to assistant librarian, the researcher discovered that preservation is a word, which is as old as the materials you want to preserve. This term implies proper storage of physical object kept in good order and arrangement. Therefore, it involves everything which contributes to the physical well being of the collection; this includes the protection, maintenance and restoration of library resources.

CHAPTER FIVE: THE SECURITY GUIDELINES THAT CAN HELP TO ENHANCE SAFETY OF INFORMATION RESOURCES

To ensure security of library materials in MUST library, the following guidelines can be applied;

Departmental libraries should be established in the university to reduce the pressure on the main library; more books will be made available for the users in the process.

Male and female security personnel should be employed to ensure that a thorough search takes place for both male and female students at the exit of the library.

More closed circuit television (CCTV) system should be increased so as to minimize the menace of book theft and mutilation.

Orientation on how to effectively use library services should be organised regularly for all library users.

Provisions of photocopying services in the library to enable library users make quick photocopies for their need of library materials.

Stiff penalties should be well spelt out for dishonest users associated with theft, illegal removal of library materials or vandalism

The library security personnel should be placed in strategic position in the library so that strict compliance to the library rules and regulations would be ensured among the library users.

The library should provide stable and uninterrupted power supply in order to maintain the electronic security network and other ICT equipment.

The university library should provide adequate library materials to meet the information needs of users.

Using electronics books in the library, especially for high-demand, latest-edition texts: book theft will be reduced by transferring a 'high risk' physical item into an electronic version that cannot be illegally removed from the premises.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study was focusing on enhancing security of information resources of Mbarara University of Science and Technology (MUST) Library. This chapter comprises of conclusion and recommendations of the study.

5.2 Summary

This study was about enhancing security of information resources of Mbarara University of Science and Technology (MUST) Library. It aimed at identifying causes of insecurity for library information materials, finding out the means through which library information materials are being stolen, identifying the methods library should adopt to prevent its information resources from the insecurity and defining the security guidelines that can help to enhance safety of information resources. The study revealed different causes of insecurity for library information materials at MUST including lack of adequate security guards, unethical library staff, selfishness of the students and others. to solve insecurities, the researcher discovered that students must be fully oriented about the dos and donts of the library. the study also revealed that heavy punishments to those who case security breach must can also minimize and threatens the criminals. Such punishments include paying fines, imprisonment and others. The study also presents numerous recommendations to eliminate and minimize information insecurities fro MUST library.

5.3 Conclusion

This study reveals that stolen and missing books in academic libraries is a large and challenging issue. However, importance of information resources cannot be over-emphasized, man depends on library resources for knowledge and new ideas are projected through the use of library resources. The data collected in this research revealed the various security lapses and ways library loses its materials through theft and other means. It was discovered that security system applied in university libraries have not been really effective, there is still much to be done in ensuring a well secured library and an opportunity for the future generation to share in the knowledge of today. It was further discovered that other contributing factors observed include limited number of copies of library materials, high cost of books and non-book materials and

absence of photocopy machine in the libraries. Therefore, there is need to preserve and maintain library information materials at all cost.

5.4 Recommendations

Library security is a complex but important issue. The safety of library staff, patrons and the library collection needs to be considered. MUST Library has some security problems, which must be attended to, namely; provision of various security measures, such as, writing a library security policy and making sure that they are applied and also providing security systems, such as, installing electronic security systems to monitor the use of the library.

Unfortunately, security problems will probably not disappear in the future, and the library staff will need to continue to be aware of what is occurring in the library and develop new ideas in dealing with different security problems.

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AN INTERVIEW WITH THE LIBRARY STAFF OF MBRARA UNIVERSITY OF SCIENCE AND TECHNOLOGY

I am, a student at Makerere University pursuing a As part of the programme, I am conducting a study on the topic, **Enhancing security of information resources for Mbrara University of Science and Technology (MUST) library**. This is a kind request to have an interview with you. Your responses will be used only for this academic excursion and not for any other purpose.

Thank you and God bless you.

Area One: General Information about the respondents

1.1 What is your role in MUST library?

1.2 What is your working experience?

Area Two: Different the causes of information resources' insecurity of library materials

2.1 Do you experience information insecurities?

2.2 What are the causes of information resources' insecurity of library materials?

Area Three: Means through which library materials are being stolen

This area attempts to find out the means through which library information materials are being stolen

3.2 What are the means through which library materials are being stolen?

Area Four: Method to be adopted to prevent its information resources from the insecurity

This area aims at identifying the methods library should adopt to prevent its information resources from the insecurity

4.1 What method may the library adopt to prevent its information resources from the insecurity?

Area Five: Guidelines that can help to enhance safety of information resources

5.2 What are different guidelines that can be followed to improve information security?

Thank you for participating in the interview