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Security & Conservation of Libraries

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ABSTRACT

The library has the primary role of acquiring, processing, organizing, preserving, conserving as well as securing the printed and non-printed information resources or materials for the use of their users. The rapid increase in the amount of published information also has put tremendous pressure on the library manager to collect and manage resources for the posterity. As the amount of available information grows, the problem of managing the information becomes more difficult, which can lead to information overload. In a nutshell, the information overload, collection development, their preservation & conversation for long term benefits and finally to secure the documents from unethical practice is an area of concern. Security is essential in spheres of life, not only it is required for individuals and their lives, but it is also equally important for the organizations like libraries. Some major security issues in libraries include, but not restricted to; mutilation of books, theft of library materials, intentional mis-shelving of books, use of other patron's library cards, duplicating ownership stamps, etc. Several types of safety and security problems faced by the library and different mechanisms followed in conservation of libraries are also discussed in this paper.

Keywords: Library Safety, Library Security, Theft Control in Libraries, Library Abuse, Material Theft and Mutilation, Library Users, Library Management, Library Conservation

Introduction

Gelfand¹² (2005) calls the library, "the only centralized location where new and emerging information technologies can be combined with knowledge resources in a user-focused, services-rich environment that supports today's social and educational patterns of learning, teaching and research." Library services can only be achieved through the availability of library collections. Anunobi and Okoye³ (2008) states that, "academic libraries are faced with hybrid challenges of managing resources and are challenged to acquire the necessary skills." One challenge is the issue of collection security for print and non-print resources. Chaney and MacDougall⁸ (1994) states that, "collections are very vulnerable to abuse of one sort or





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another and library managers need to keep this characteristic well to the forefront of the library." Ensuring effective use, longevity, and accessibility makes an effective program of collection security necessary. This program must include assessment of collection security issues and the measures use in curbing security breaches. Security is an important and complex challenge in contemporary societies. From documented evidences, everyday there are reports of theft, loss, fraud and mutilation etc. in libraries. These offences may affect any libraries be it small, medium or large. The main role of any libraries is to build a good collection to its patrons and provide, maintain and secure its collections in order to ensure the availability, accessibility and longevity of its collection, as well as to provide effective services to its community/patrons to whom it is meant for. Theft of library collection is an anti-social; un-lawful act and an offence, the perpetrators of which can be subjected to legal punishment¹⁹ (Maidabino, 2012). All kind of users come to the library to read, write, issue, return, and refer the documents. All users are not harmful to the library resources. Some of the user's generally involve in unethical doing. Secure access to the library document poses many challenges because of the working environment in libraries. Loss of library resources is a concern for the secure collection development. Academic Libraries are the "heart/mirror" of the learning community, providing a place for students and faculty to do their research and advance their knowledge (Simmonds, 2001). However, one major challenge that academic libraries have been faced is to securing their valuable resources which are collected over a period of time. Economically, libraries cannot afford to let their holdings wear out or damage from any other medium prematurely. Replacing library material, even when possible, is expensive. Preservation and conservation makes good economic sense.

Objectives of the Study

- To discuss about the major forms of theft and mutilation occur in different library set up.
- To know about the different mechanisms followed in different libraries for effective and efficient protection of library resources.
- To explore the collection security issues and measures used or adopted by the different libraries and foreseeable consequences of security breaches.
- To know about the different preservation and conservation systems followed in different libraries for the long term benefits of the library as well as the society.





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Literature Review

The issue of library security and conservation of library resources is a growing concern among the library managers. As a result there are a lot of literatures available in the area of study.

Akinfolarin (1992) observed that one of the serious issues that have bothered librarians from the earliest times to the present is how to ensure the security of library materials, especially against their theft and mutilation.

A study conducted by Olorunsola (1987) on academic library security discovered a relationship between high rates of security problems and the growth of the university. Not all thefts are committed by patrons.

Bello (1998) asserted that some library staffs takes materials from the library without checking them out. This kind of theft, according to Lorenzen (1996), is one of the hardest to prevent, since library employees know how to defeat the security system.

Yague, et al. (2003) has stated that digital libraries usually contain objects with heterogeneous security requirements. Securing the access to digital libraries poses important challenges because of the specific characteristic found in their environments.

Topper (2008) pointed out that, library location rather than size is more important factor in security, and even facilities serving their patrons well are not immune to confrontations. Ewing (1994) noted that theft of materials such as books, cassettes and other types of materials which are available for loan are generally prone to theft and other abuse.

Bello (1998) observed that security of both books and non-books materials of Nigerian university libraries are at risk, and these libraries rely mainly on checks at library entrance and exit to overcome the problem.

Holley (2009) stated that libraries need to protect their rare books from systematic theft since the rapid growth of the out-of-print book market on the internet has created a market for thieves to sell stolen materials easily with relatively few worries about being caught.

Allen (1997) has opined that preventing theft in libraries is a difficult and complicated problem. Theft is a disaster. It is a real problem which is as serious as in the late twentieth century as it has ever been. It is often the case that libraries do not know that they have been victimized until stolen material is recovered and returned.

Martell (2010) in his paper reported that theft is the major serious problem in libraries. He identifies a number of strategies for checking collection security beach incidences like theft. He further advises library managers to make better plan and strategies in order to combat security incidences like theft and non return of library materials.





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Holt (2007) has opined that there is also a major threat from internal staff/insiders who generally involved in such type criminal activities like stealing and tearing of books etc.

Sahoo (OHRJ, Vol. XLVII, No.01) observed that the holdings of the libraries are the priceless heritage of mankind as they preserve facts, ideas, thoughts, accomplishments and evidences of human development in multifarious areas, ages & directions. The past records constitute a natural resource and are indispensable to the present generation as well as to the generations to come. Any loss to such materials is simply irreplaceable. Therefore, preserving this intellectual, cultural heritage becomes not only the academic commitment but also the moral responsibility of the librarians / information scientists, who are in charge of these repositories.

According to the National Library of Australia (2004) one of the major crises facing libraries throughout the world is the rate of deterioration of their collections. Since library materials are composed primarily of organic materials, they are subject to natural deterioration.

Popoola (2003) stated that until 1980's, preservation and conservation of library materials were thought to be relevant to rare book materials only by librarians and curators of collection of special materials. Library materials are bound to deteriorate or breakdown with time through the aging process and to replace them may be difficult and expensive if not practically impossible.

Security System

Security generally refers to physical security protection that includes fire protection and emergency planning. Security is the degree of resistance to, or protection from harm. As noted by the Institute for Security and Open Methodologies (ISECOM) in the OSSTMM 3, security provides "a form of protection where a separation is created between the assets and the threat." These separations are generically called "controls," and sometimes include changes to the asset or the threat (Wikipedia). Fire risk is the major threat to libraries and archives and library protection should be managed accordingly, following the guidance of the National Fire Protection Administration (NFPA). Safety and security of library means ensuring the physical protection of library resources, library staff as well as library patrons. He/she also is responsible for protecting the building, its contents, and its immediate surroundings.

Concept of Library Security

Collection security refers to a process designed to protect library collections against unauthorized removal or loss. This involves protecting resources against disasters as well as thieves or intruders (Ajegbomogun, 2004). Library security concerns with the safety of the library materials as well as the users and staff of the library. Verzosa (2008) has share in her slides that library security or safety means providing a safe environment for people and materials. According to her the basic functions of library security are:





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- Freedom from danger
- Protection from unauthorized access
- Loss avoidance
- Damage prevention
- Reduction of long term threat posed by improper environmental conditions

Possible Security Issues in Libraries

There are some possible common losses which may be from fires, natural disasters, crimes, antisocial behavior, etc., that occur on or near the library involving library staff, library users, their property or library property. Lorenzen (1996) observes that collection mutilation takes many forms, ranging from underlining and highlighting text, tearing or removing pages, and tampering with the content. Lorenzen¹⁷ identifies several causes for mutilation, including:

- Student's dissatisfaction or unfamiliarity with library services
- A lack of knowledge of replacement costs and time
- A lack of concern for the needs of others
- Few students think of library mutilation and theft as a crime.
- The other losses that may occur are:
- Pages torn
- Books not returned by borrowers
- Doodled on books
- Pages cut out
- Damaged book due to wrong handling
- Books stolen from the shelves
- Photocopies of whole book without permission
- Issuing books using someone else borrower card
- Excess download from restricted subscribe sources
- Staff keeps book for personal use
- Allowing person or relatives for restricted documents
- Loss of books due to insects/termites
- Books burned in fire
- Deliberately hide books
- Coming with foods and eating inside the library
- Noise making in the library
- Books damaged due to water leak in rainy season

Causes of Security Issues in Libraries

The common causes of security breaches in libraries occur due to one or the other reason. However, the major of them are as follows:

- Dissatisfaction about library staff
- Natural disaster





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- Cost of learning material
- Insufficiency of library materials
- Indiscipline
- Selfish nature
- Loss of library card

Risk Assessment

Before prevention, the risk associated with library security needs to analyzed and find out the external (residential, industrial, shopping centre, rural, recreational or any other industrial area very close to the library) and internal threats (collections stored at a safe distance from plumbing, electrical and mechanical installations or fire-resistant walls is made or not) that might cause problems for the collections and assess any shortcomings of disaster prevention measures which are already in place.

PREVENTION

Once the risks have been assessed, take all the necessary precautions to make the library buildings and their holdings secure. Librarians need to take care of the problem wisely. The major issues can be controlled by using the following methods.

Closed Circuit Camera

Closed Circuit Television (CCTV) uses a video camera to transmit a signal to a specific or limited set of monitors. The first CCTV system was used in 1942 at test stand VII in Peenemuende, for the purpose of viewing the launching of V2- Rockets. As a result, CCTV came into use in Rocket launching sites to film and records the scenes of rocket launching. At present CCTV, has become an indispensable accessory in civic management in modern cities. It provides digital or video recording of crime, violence, theft, antisocial behavior, etc. Accordingly libraries are also increasingly using this technology for safeguarding their valuable resources. The major benefits of CCTV are:

- It acts as a deterrent.
- It can enable attendants to be deployed more effectively.
- Recordings can assist in post incident investigation.
- It can be used to assist with entry control arrangements into non-public areas.
- It can provide more general information to assist in the management of the premises.
- Where the premises are guarded out of hours it is a valuable aid for site monitoring.

RFID Security System

RFID (Radio Frequency Identification) allows an item, for example a library book, to be tracked and communicated with by radio waves. This technology is similar in concept to a cell phone. RFID is a broad term for technologies that use radio waves to automatically identify people or objects. There are several methods of identification, but the most common





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is to store a serial number that identifies a person or object and perhaps other information, on a microchip that is attached to an antenna (the chip and the antenna together are called an RFID transponder or an RFID tag). The antenna enables the chip to transmit the identification information to a reader. The reader converts the radio waves reflected back from the RFID tag into digital information that can then be passed on to computers that can make use of it⁴¹.

Biometrics

Biometrics refers to the automatic identification of a person based on his/ her physiological characteristics like fingerprints, eye-retina and irises, facial patterns, hand measurements, etc. Behavioral characteristics like signature, gait, typing pattern, voice recognition, etc. are also used in Biometrics. The use of biometric methods for personal authentication is more accurate than the methods of using passwords or PIN codes. The use of biometrics is not new to the world, and we all are familiar with the thumbprints in place of signatures. Even today in India, thumbprints are taken in addition to signatures on important documents, particularly legal documents and money transactions. This system may be a great help in the library for security purposes. A few libraries in the world have already switched over to biometric identity. The most simple, inexpensive and best method of biometrics is finger print match, which can be used for library security.

3M Security Gate

3M system provides effective protection and significant reduction in the loss of library materials. 3M Detection System consists of several components, including 3M Tattle-Tape Security Strips, circulation accessories, and the detection system(s). The key to the effectiveness of 3M system is protecting materials with 3M Tattle-Tape security strips.

Awareness Creation

Primary duty of a librarian is to create awareness among the staff and user of the library. If the users are well aware about the library security and conservation policy, they will hesitate to involve in any unethical practices, which will ultimately help the library in the years to come.

Alarm System

Depending on the size of the library the best type of alarm system can be chosen for a library. Effective library alarm is very useful to check thieves on the entrance and exit of the library door. But without the proper man power alarm system is not effective. So security personal and alarm system are cooperative to each other.

Security Guard

Appointment of dedicated library security officer in library is very necessary for the safety and security guiding of the library. For the identification of the right user of the library, guiding the reader to follow the rule of the library, control on entry gate, checking the theft etc are the duties of a library security officer.





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Fire Prevention and Detection

Fires may result from natural phenomena such as lightning or earthquakes, or from such unnatural events as wars, terrorist activities, or arson. However, the primary threat of fire in libraries is caused when fire safety rules are ignored or not adopted in the first place. Fires in libraries in general cause two types of damage: material loss of the collections and perhaps the building; and social damage. Without early detection, entire collections and buildings may be lost. It is therefore essential to have an automatic fire detection system that will give an early indication of the presence of fire. Cleaning of waste materials and regular inspection can prevent the fire. Each library should have a fire control system put in place to check fire in exceptional cases.

Library Conservation

The major threats of library materials may be broadly divided into four groups like (IFLA principles for the care and handling of library material):

- The nature of the material itself
- Natural and man-made disasters
- The environment in which it is kept
- The way material is handled

The term 'Conservation' has been defined in the IFLA Principles for the Care and Handling of Library materials (2010) as "specific practices taken to slow down deterioration and prolong the life span of an object by direct intervening in its physical or chemical make-up. Men are unquestionably the greatest enemies of the materials on which they record their thoughts. It is vital for any library, no matter what its size, to take every precaution possible to prevent the occurrence of an avoidable disaster. The equal importance also needs to be addressed to cope with the consequences of disasters, whether they be natural (Hurricane, floods, earthquake etc.) or man-made (Short circuits, fire, explosions etc.). The physical features of an original artifact like paper, ink, binding, sewing structure and cover etc. are also important for the long term preservation and conservation of the library. The primary aim of conservation is to keep library and archival materials in their original format for as long as possible through different conservation methods (flattening, book and paper repair, binding, mass de-acidification, fumigation, and surface cleaning etc.). Conservation also involves prudent collection management. For example, sound techniques for binding materials such as periodicals and unbound monographs are important, because the way these materials are bound determines how long they will last and how easily the contents can be accessed. While in the past, highly-decorated bindings were produced as a part of the rebinding process, the primary object of conservation is not cosmetic; and instead of this cosmetic approach can often compromise good conservation practice [38]. The conservation section in any library generally functions with the following main functional units like bindery preparations, book repair, conservation, digital preservation and mass deacidification. William Barrow (1904–1967) was an American chemist and paper conservator, and a pioneer of library and archives conservation. He introduced the field of conservation to paper de-acidification through alkalization. Conservators should refer to the AIC Code of Ethics and Guidelines for Practice, which states that the conservation professional must "strive to attain the highest possible standards in all aspects of conservation."

Ethics will play an important role in many aspects of the conservator's activities. When choosing which objects are in need of treatment, the conservator should do what is best for





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the object in question and not yield to pressure or opinion from outside sources. The AIC Code of Ethics and Guidelines for Practice also states: "While recognizing the right of society to make appropriate and respectful use of cultural property, the conservation professional shall serve as an advocate for the preservation of cultural property." This statement speaks to the conservator's need to balance his or her duty to conserve objects and maintain a collection with society's right to have access and use of objects for their own cultural/religious purposes [38]

Conclusion

Everyone is responsible for keeping the library and its resources from any unethical practice. While preservation and conservation specialists can advise and carry out specific activities, it is the duty of all library staff, from the head of the library downwards, to safeguard the welfare of their holdings. Preservation and conservation measures have to be endorsed, supported, and encouraged from the most senior level to the most junior in the library. Academic libraries have been plagued with security issues for a long time. It is difficult to replace materials that are stolen from the libraries or mutilated as such materials may be out of print or the library may not have the money to purchase a replacement copy. The traditional ways of manually checking patrons' bags are both inefficient and not userfriendly. A better way to deal with security in any libraries is to use the most advanced ICT applications in keeping the documents intact in a library. That will better ensure an effective security of library materials from theft, mutilation, or other forms of crimes. Library security issue is a big headache for the authority. Rare documents stolen, mutilated or damaged are not possible to replace. A traditional method of security control is not enough in digital era. Good staffing and awareness creation is the right way to deal with the security issues in libraries.

References

- 1. Akinfolarin, W. A. (1992). Towards Improved Security Measures in Nigeria University Libraries. African Journal of Library, Archives and Information Science, Vol.02, No.01, pp.51.
- 2. Ajegbomogun, F.O. (2004). Users Assessment of Library Security: a Nigerian University Case Study. Library Management, Vol. 25, No. 8/9, pp.386 390.
- 3. Anunobi, C.B., & Okoye, I.B. (2008). The Role of Academic Libraries in Universal Access to Print and Electronic Resources in Developing Countries. Library Philosophy and Practice. (Available: http://unllib.unl.edu/LPP/anunobi-okoye.htm)
- 4. Akor, Philip Usman (2013). Security Management for Prevention of Book Thefts in University Libraries: A Case Study of BENUE State University Library, Nigeria. Library Philosophy and Practice (e-journal). Paper 995 http://digitalcommons.unl.edu/libphilprac/995.
- 5. Butters, Alan (2007). RFID Systems, Standards and Privacy within Libraries. The Electronic Library, Vol. 25 No. 04, pp. 430 439.
- 6. Allen, Susan M. (1997). Preventing Theft in Academic Libraries and Special Collections. Library & Archival Security, Vol.14, No.01, pp. 29-43.
- 7. Bello, M. A. (1998). Library Security: Material Theft and Mutilation in Technological University Libraries in Nigeria. Library Management, Vol.19, No. 06, pp.378-383.
- 8. Chaney, M. & MacDougall, A. F. (1994). Security and Crimes in Libraries. Gower Publishing.





ISSN: 2231-4911

Vol. 5(4) Oct-Dec, 2015 www.ijlis.org ISSN: 2231-4911

- 9. Chen, S.; Choo, C. and Chow, R. (2006). Internet Security: A Novel Role/Object-Based Access Control for Digital Libraries. Journal of Organizational Computing and Electronic Commerce, Vol. 16, No.02, pp.87-103.
- 10. Ewing, David. (1994). Library Security in the UK, Library Management, Vol. 15, No. 02, pp.18 26.
- 11. Garten, Jeffrey E. (2006). Really Old School, New York Times (electronic source), pp. 01-02. (http://www.nytimes.com/2006/12/09/opinion/09garten.html?scp=1&sq=Nalanda&st=cse)
- 12. Gelfand, J. M. (2005). Library as Changing Place: Viewpoints from University Undergraduates. Library Hi Tech News, Vol.22, No.4,pp.10-12.
- 13. Holley, Robert P. (2009). The Out-of-Print Book Market and the Theft of Library Materials. Proceedings of the Charleston Library Conference. http://dx.doi.org/10.5703/1288284314777.
- 14. Holt, G.E. (2007). Theft by Library Staff. The Bottom Line: Managing the Library, Vol. 20, No. 02, pp.83-95.
- 15. Kern, Christian. (2004). Radio-Frequency-Identification for Security and Media Circulation in Libraries. The Electronic Library, Vol. 22, No. 04, pp.317-324. http://dx.doi.org/10.1108/02640470410552947.
- 16. Kuzma, Joanne. (2010). European Digital Libraries: Web Security Vulnerabilities. Library Hi Tech, Vol. 28, No. 03, pp.402 413.
- 17. Lorenzen, Michael G. (1996). Security Issues of Academic Libraries. ERIC Document. No. ED396765.
- 18. Lorenzen, M. (1996). Security Issues of Academic Libraries: A Seminar Paper Presented to the Faculty of the College of Education, Ohio University. ERIC: IR055938.
- 19. Maidabino, A. A. (2010). Collection Security Issues in Malaysian Academic Libraries: An Exploratory Survey. Library Philosophy and Practice.
- 20. http://www.webpages.uidaho.edu/~mbolin/maidabino-ngah.htm.
- 21. Maidabino, A. A. (2012). Theft and Mutilation of Print Collection in University Libraries: A Critical Review of Literature and Proposed Framework for Action. Annals of Library and Information Studies, Vol. 59, December 2012, pp. 240-246.
- 22. Maidabino, A. A. and Zainab, A.N. (2011). Collection Security Management at University Libraries. Malaysian Journal of Library & Information Science, Vol.16, No.01, pp.15-33.
- 23. Martell, C. (2010). Theft and its Effects on our Neighborhood Libraries. Public Library Quarterly, Vol. 20, pp.30-38.
- 24. Ogunmodede, Thomas A. and Ebijuwa, Adefunke Sarah (2013). Problems of Conservation and Preservation of Library Resources in African Academic Libraries: A Review of Literature. Greener Journal of Social Sciences, Vol. 03, No.01, pp. 50-57.
- 25. Olorunsola, R. (1987). Crimes in Academic Libraries: University of Ilorin Library Experience. Library Scientist, Vol.14, No.29, pp.29-43.
- 26. Osayande, Odaro. (2011). Electronic Security Systems in Academic Libraries: A Case Study of Three University Libraries in South-West Nigeria. Chinese Librarianship: An International Electronic Journal, 32. http://www.iclc.us/cliej/cl32osayande.pdf.
- 27. Oyesiku, F.A.; Buraimo, O. and Olusanya, O.F. (2012). Disruptive Readers in Academic Libraries: A Study of Olabisi Onabanjo University Library. Library Philosophy and Practice (e-journal). Paper 766. http://digitalcommons.unl.edu/libphilprac/766.





Vol. 5(4) Oct-Dec, 2015 www.ijlis.org ISSN: 2231-4911

- 28. Paul, Minnesota (2008). 3M Detection Systems Model 3500 Series and Model 3800 Series: Operator's Manual. Minnesota: 3M Library Systems, pp.1.1-3.1.
- 29. Popoola, SO (2003). Preservation and Conservation of Information Resources. University of Ibadan, Nigeria: Distance Leaving Centre.
- 30. Sahoo, Jyotshna. Preservation of Library Materials: Some Preventive Measures, OHRJ, Vol. XLVII, No. 01. http://odisha.gov.in/e-magazine/Journal/jounalvol1/pdf/orhj-14.pdf (Accessed on date 13/07/20125 at 12.50 pm)
- 31. Scott, Muir (2007). RFID Security Concerns. Library Hi Tech, Vol. 25, No.01, pp.95 –107.
- 32. Shien-Chiang, Yu (2007). RFID Implementation and Benefits in Libraries. The Electronic Library, Vol. 25, No.01, pp. 54 64.
- 33. Topper, Elisa F. (2008). How Safe is Your Library. New Library World, Vol. 109, No. 3/4, pp.182 184.
- 34. Yague, M. I. (2003). A Secure Solution for Commercial Digital Libraries. Online Information Review, Vol. 27, No. 03, pp.147 159. http://en.wikipedia.org/wiki/List_of_libraries_in_the_ancient_world (Accessed on date 18/05/20125 at 12.50 pm)
- 35. https://en.wikipedia.org/wiki/Security (accessed on 15/06/2015 at 2.30 pm).
- 36. http://multimedia.3m.com/mws/media/557221O/3500-3800-owners-manual.pdf (accessed on 01/07/2015 at 9.30 am).
- 37. http://www.goodreads.com/quotes/tag/theft (accessed on 02/07/2015 at 3 pm).
- 38. http://www.ifla.org/files/assets/pac/ipi/ipi1-en.pdf (accessed on 07/07/2015 at 3 pm).
- 39. https://www.library.cornell.edu/preservation/librarypreservation/mee/preservation/ (accessed on 09/07/2015 at 3 pm).
- 40. https://en.wikipedia.org/wiki/Preservation_(library_and_archival_science) (accessed on 09/07/2015 at 3 pm).
- 41. http://www.rfidjournal.com/site/faqs#Anchor-What-363 (accessed on 17/07/2015 at 3 pm).





