

Study of Security System used in College Libraries

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ABSTRACT

The present paper has aim to know the security systems applied in college libraries. The paper focused on concept of security and specified the objectives of the research, hypothesis, scope, limitations, methodology and findings of the study. The paper also discussed need of security system and different type of security systems adopted by college libraries. These security systems are traditional and modern technology based systems.

1. Introduction

Library reading material is constantly need security because of damage of library material by environment, atmospheric hazards, natural threats, user and staff behavior etc. It attempts to provide some remedies and suggestion to face security. Events and physical aspects of buildings and equipment related to protection of the collections as well as patron and staff.

Libraries are incurred huge amount on reading material therefore security is more important. Various library security technologies and systems are available today in market; these are RFID, 3M Technology, Magnetic tackle tape, web cameras etc. and manual systems are surveillance, key and locks, surveillance, guards, lighting at late night etc. Security prevention is best policy for avoidance of crime.

2. Definitions:

Security

Simply security means freedom from danger, protection from unauthorized access, loss avoidance, damage prevention, reduction of long-term threat created by improper environmental conditions.

Security means “the state of being or feeling safe; freedom from fear, danger, anxiety, doubt, etc; state or sense of safety, tranquility, certainty, etc; protection; safeguard. 3.a. protection or defense against attack, interference, espionage, etc. b. protection or defense against escape c. procedures to provide such protection or defense. Agnes, Michael. Webster Dictionary. (2007)

Security System:

An electronic alarm system installed at the entrance and [exit](#) of a [library facility](#) to detect the unauthorized removal of [library materials](#) ([theft](#)). Most [security](#) systems use a swing-arm or pair of uprights called a [security gate](#), activated by a [magnetic strip](#) affixed to each [item](#), which must be [desensitized](#) by [circulation staff](#) at the time the item is [checked out](#) to avoid triggering the alarm. Some security systems include a [counting device](#) for gathering statistics on traffic patterns. **Reitz, Joan M. (2005)**

3. Importance of the Study

The study has importance to know the college libraries adopted security systems and to study the electronic security systems available for colleges. In view of the significance of the libraries in higher education, it is necessary to undertake the study of library security systems for collection, building, future, staff and user. This would highlight the current security status of college libraries. A systematic study is essential to find out ways

and means of library security regarding to collection, infrastructure, staff and patrons.

4. Objectives of Research

Objectives of present study are:

1. To identify the different types of security systems.
2. To find out security system adopted by college libraries.
3. To study the advantages of electronic security systems.

5. Hypotheses:

Following hypothesis are formulated for the study

1. Manual and technological security systems are available.
2. Traditional security systems are used by college libraries.
3. Electronic security systems are more advantageous.

6. Scope and Limitations:

The research has plan to undertake only Arts, Commerce and Science (ACS) private aided college libraries Affiliated to Dr.Babasaheb Ambedkar Marathwada University. Aurangabad (BAMU). The study is limited to 108 private aided colleges. Out of these colleges, only 84 (77.77%) colleges were responded to the questionnaire. While, professional colleges such as Law, B.Ed., Engineering, Management, Information Technology etc. are not included in the study.

Table No.1 District wise private aided colleges

Sr. No.	Districts	Colleges
01	Aurangabad	37
02	Jalna	14
03	Beed	37
04	Osmanabad	20
	Total	108

This University covers four districts; these are Aurangabad, Jalna, Beed and Osmanabad. Aurangabad District has 73 ACS colleges, Jalna has 14 ACS colleges,

Beed has 37 ACS colleges and Osmanabad has 20 ACS colleges. (www.bamu.net 2013).

7. Review of Literature:

Study is aiming to study the current status of security systems for college libraries. Very limited research was found on library security. Today high technological environment implement and suggested RFID, 3M technology for security of library collection in various surveys. Building and vandal activities are protected by using CCTV alarms. Biometrics system is for controlling of access to user. Automatic book drop system is there for easy circulation. Policies, their implementation, rules and regulations strictly followed by institutions for reducing threats. Check lists and security standards available for security management. Skillful personnel's own or outsourcing are available in local level for repair and maintenance equipments, damage collection etc, it can be utilized by libraries to maintain security.

David, Lourdes T. (2001) suggested Security system for providing checks against theft of library materials. He thinks theft did force us to evaluate our collection.

Electronic systems such as building alarm systems, access control systems, RFID, CCTV, alarms, etc, installed in proper places. Wyly, Mary. (1987), Luurtsema, David(1997), UC Davis General Library (2002). Brown-Syed, Christopher. (1999), Mwantimwa, Kelefa (2007) Electronic security systems, electronic devices such as motion detectors, alarm systems, and closed circuit television, RFID have been employed increasingly for after hours security. It can be extremely advantageous in preventing theft in academic libraries.

Galhotra, M.K. and Galhotra, A.M. (2009). Suggested RFID as anti-theft security system. He also explored about traditional and modern RFID systems, their work and functions etc. in his article. Ranawella, Thanuja C. (2006). suggested for install RFID to reduce theft in library. Funding agencies should fund to purchase RFID in academic libraries. Libraries are finding that RFID technology holds many advantages over traditional barcodes and antitheft tags, and contributes to realize considerable labour and cost savings. Maidabino, A.A. (2012). Suggested electronic system for security in his study to reduce security theft problem, his study defined objectives are To identify and discuss the major forms of theft and mutilation incidences with reference to print collection in university libraries; To examine the strategies to be used for effective and efficient protection of library resources; and To propose a framework for the protection of collection against theft and mutilation in university libraries. Quinsee and McDonald (1991), Lincoln and Lincoln (1986), (1987) have noted,

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maintaining the accessibility of the library. Kahn (2009) Stated that access to the building. Brown-Syed, Christopher. (1999). Suggested RFID ID Card.

There are various security technologies that can be implemented library. These could include closed circuit television (CCTV) systems, videoing and video surveillance footage whether analogue or digital; alarms; metal detectors or handheld detectors; x-ray machines and/or card reader systems Lombaard & Kole, (2008).

Bahr, Alice Harrison. (1984), Merri, Hartse. (2001) suggest alarm monitoring facility. Olson (1955), Cloete (1989), Saulmon (1988) and Hanson (1989). Bansode, Sadanand Y. & Desale Sanjay K. (2009) also stress on key lock, guard, surveillance, lighting in campus, window and doors, Physical checking, Identity card for authentication along with electronic security systems.

8. Research Method

There is several research methods i.e. descriptive, future research, historical research etc. The present study has used survey method to collect the data from Arts, Commerce & Science College Libraries affiliated to Dr. BAMU, to find out the prevailing situations. However, The Descriptive methodology is used for the present research findings.

Data Collection and Analysis

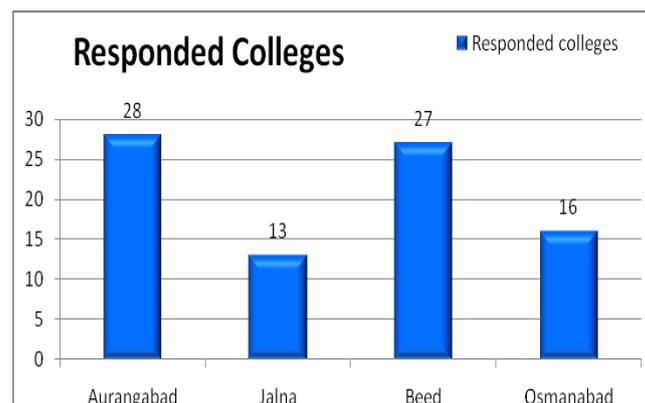
Data is collected by structured questionnaire. While organizing the questionnaire, it is determined to use closed ended questionnaire to response.. Collected data is interpreted by using of tables, graph. Microsoft Excel is used for analysis of data.

For this study, 108 questionnaires send to private aided colleges affiliated to Dr. B.A.M.U. Aurangabad and 84 colleges were responded. Responded colleges are as follows.

Table No.2 District Wise Responses of Private-aided Colleges

Districts	Responded colleges	%
Aurangabad	28	33.33
Jalna	13	15.48
Beed	27	32.14
Osmanabad	16	19.05
Total Responded colleges	84	100.00

Graph No. 1 District Wise Responses of Private-aided Colleges



The Table No. 2 and Graph No. 1 reveals that the 84 private aided colleges participated from selected districts amongst 13 (15.48%) colleges from Jalna district, and 16 (19.05%) from Osmanabad district. The Aurangabad district has highest response that is 28 (33.33%) and 27 (32.14%) is from Beed district.

9. Need of the Study

Prevention of library material from theft, mutilation, misplacement, loss, missing, fire, flood and damage is important. The major concerns appear to have been accidental losses of records by human errors and natural disasters. The experience of the trade community suggests that security planning should also encompass the protection of records against deliberate alteration.

A library should not limit its approach to the physical protection of assets through such means as locks, access control, avoiding barriers. Security audits of several public and academic libraries have revealed numerous architectural elements, policies and procedures that seriously limit the usefulness of the electronic security system in those libraries. Present study has been endeavoring to study the security systems implemented in college libraries for protection of collection, user and staff.

Risk of such type of loss and damage is also anxious. It is not possible to prevent threats without proper security systems. Every library needs to implement policies, security systems, procedures, rules and regulations for dealing with safety and security concerns.

10. Security Systems:

Library has various security systems from its establishments. It has differentiated in traditional and modern systems. Modern systems were made by technological support. Traditional systems are totally based on human. This includes security systems such as electronic anti-theft devices, visual cameras, smoke detection and alarm system at entrances, exits and stack areas in the library. This system can help prevent unauthorized removal of collections and feasible monitoring and detection of user in general reading and reference rooms, as well as shelves areas.

Traditional – Manual security systems

- Locks & Key system,
- Installing grills on windows.
- Single door entry-exit for staff & User
- Security guards employed to patrol
- Installing after-hours security lighting
- Observation by library staff
- Fire extinguisher & security equipments
- ID cards and access authorization
- Physical checking for user
- Signature of every user
- Security Clearance procedure

Advanced- Electronic security system

- CCTV cameras,

- Electronic recording
- RFID system
- 3M exit detection
- Alarm systems installed
- Moisture sensor
- Glass break sensor
- Fire /smoke sensor
- Biometrics
- Smart Card
- Air conditioner for Humidity control

Any item that has not been checked-out either by staff or self check-out will be detected by security gates with theft detection system. Provision of self-service station is for checking out books separately by the borrower without any interference of library staff. The theft detection system of the smart tags for that book is deactivated to enable smooth passage from the security gate.

A security system is made up by different components; a security system comprises of physical security, security measures and the human element. When all security measures become operational and integrated with each other, work in conjunction or with each other, a security system is generate; which incorporates a number of security principles.

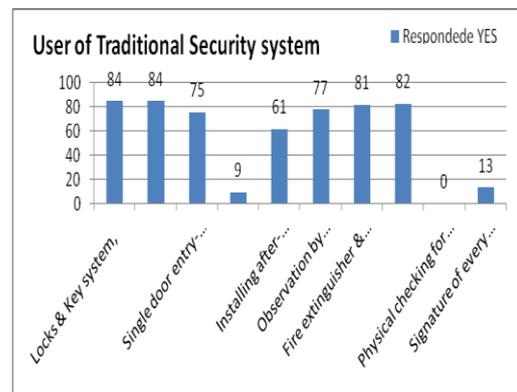
10.1. Traditional – Manual security systems

Traditional or manual security system are security guards, patrolling of the library, well building, security lighting, ID cards, physical checking, door checkers, access control etc. The data is presente in Table No.3 and Graph No. 2.

Table - 3 Traditional Security Systems

Traditional – Manual Security Systems	Response received YES	Percentage
Locks & Key system,	84	100.00
Installing grills on windows.	84	100.00
Single door entry-exit for staff & User	75	89.29
Security guards employed to patrol	9	10.71
Installing after-hours security lighting	61	72.62
Observation by library staff	77	91.67
Fire extinguisher & security equipments	81	96.43
ID cards and access authorization	82	97.62
Physical checking for user	0	0.00
Signature of every user	13	15.48

Graph No.1 Traditional Security System



The Table 3 and Graph No.2 represent the responses received from respondents on various security systems used in libraries to maintain security. Response indicate that 100% respondents have used locks, key system and installed grills on windows; 82 (97.62%) college libraries have ID cards for authorized access; 81 (96.43%) respondents have installed fire extinguisher and security equipment; 77 (91.67%) respondent have surveillance by staff to control delinquent activity deals by user; 75 (89.29%) respondents have agree to single door entry-exit system for all staff & User; 61 (72.62%) respondents have installed after-hours security lighting in campus and building; 13(15.48%) have consented entry record and signature for every user; 9 (10.71%) have appointed security guards employed for patrolling, while physical checking for not used by any library, it's percentage is zero as per the ranking order.

The other preferred preventive security systems by the respondents have removed obstacles from campus, using property counter, creating awareness among users, restricted area, dues and punishment system, contact police etc..

Most useful security system are locks-key and grills for windows reported 100% libraries and very less 9 (10.71%) libraries have appointed security guards for patrolling, while 0% physical checking of user as per the ranking order.

If library has most affected by some security problem then they can use physical checking system for security and appoint the security guard if possible.

10.2. Advanced- Electronic security systems:

All the manual or traditional security systems and subsystems are used today in conjunction with electronic

systems. Electronic systems are worked automatically step by step as per programmed. The electronic security systems are radio frequency or electromagnetism, CCTV's, alarm technology etc. After all any security system is as good as the person use it properly and reduce threats. The data is analyzed regarding to electronic security system and presented in Table No. 4.

Table No. -4 Advanced- Electronic Security System

Advanced- Electronic Security System Applied	Response Received n=84	Percentage
CCTV cameras, Electronic recording	6	7.14
RFID system	0	0.00
3M exit detection	0	0.00
Alarm systems installed	0	0.00
Moisture sensor	0	0.00
Glass break sensor	0	0.00
Fire /smoke sensor	2	2.38
Biometrics	0	0.00
Smart Card	0	0.00
Air conditioner for Humidity control	0	0.00

the Table 4 represent the responses received from respondents to modern electronic security systems like camera, alarm gates and theft detection system, RFID etc. Out of 84 respondents 6(7.14%) reported CCTV cameras and 2(2.38%) libraries have fire/smoke sensor for maintaining security. RFID system, 3M exit detection, alarm systems, moisture sensor, glass break sensor,

biometrics, smart card, air conditioner for humidity control have not found in any library.

Response for electronic security systems or devices like Closed Circuit Television (CCTV's), electronic recording, RFID system for exit detection, alarm systems, moisture sensor, glass break sensor, fire /smoke sensor, biometrics, smart card, air conditioner for humidity control to prevent paper from damage, criminal acts etc. found zero percent in these libraries. **Hence the Table No. 2 and 3 and Graph No. 1 indicated that the college libraries using traditional security system not modern or electronic. They have accepted all security systems from their formal education. Which they have learned in their management subject means they used managerial security systems as per the first objective of study. First hypotheses and objective was verified positively.**

The study recommends college libraries to install electronic security systems and devices to manage or reduce day to day security problems.

Advantages of Electronic Security system

Today high technological environment implement and suggested RFID, 3M technology for security of library collection in various surveys. Building and vulnerable activities are protected by using CCTV alarms. Biometrics system is for controlling of access to user. Automatic book drop system is there for easy circulation. Policies implementation, rules and regulations strictly followed by institutions for reducing threats. Check lists and security standards available for security management. Skillful personnel's own or outsourcing are available in local level for repair and maintenance equipments, damage collection etc, it can be utilized by libraries to maintain security.

Electronic Security technology is a boon to the librarian as well as its users. The RFID, CCTV, Biometrics technology makes the work of librarian easier, fast tracking of documents and save the time of the users. It has provide rapid check out / check-in, increase the circulation, minimize the time of the users as well as library staff, minimize the expenditure incurred on counter and inventory staff, high reliability, high speed inventorying, automated material handling.,

11. Summary and findings

1. While a majority of college libraries have applied traditional routine general security systems. These systems can change in today's high technological environment, increased huge collection, users need are changed.
2. New technological based designed security systems developed for protection of collection and assist different activities to library. These systems are easy to

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inventories, stock verifications, protection of collection and to control user access.

3. College libraries used traditional security systems due to lack of funds. There is scope to use tags, security gates for access security; they should control abuse, vandal activity, vulnerabilities by using CCTV's etc.

The primary purpose of this study was to determine the approach, opinions and awareness of librarians regarding security system; the study did not include other aspect of library.

12. Conclusion:

Security is most important to prevent from damage of knowledge resource and spent amount on it for users benefit. It is responsibility of every Librarian to implement best security system and measures. If a security program is to be effective, there must be widespread understanding of the importance of security to the mission of the repository. Proper security system should implement to avoid loss and damage of library collection and asset along with staff and user security.

References:

- [1]. ACRL/RBMS (2003). Guidelines Regarding Security and Theft in Special Collections retrieved from http://www.ala.org/ala/mgrps/divs/acrl/standards/security_theft.cf
- [2]. Agnes, Michael. (Ed.) (2007). Webster's New World College Dictionary. 3rd Ed. New Delhi., Wiley India (P) Ltd. P.1297.
- [3]. Bahr Alice. H. (1989). The thief in our midst. *Library and Archival Security*. 9(3/4). 77-81.
- [4]. Bansode, Sadanand Y. & Desale Sanjay K. (2009). Implementation of RFID technology in University of Pune Library. *Electronic library and information system*. 43(2). 202-214.
- [5]. Brown-Syed, C. (2004). Law Enforcement Agencies and Library Records. *Library & Archival Security*, 19(1): 53-57. 37
- [6]. Carey, Jeanne. (2008). Library Security by Design. *Library and Archival Security*, 21(2). Retrieved from (www.haworthPress.com) INFLIBNET
- [7]. David, Lourdes T. (2001). Introduction to Integrated Library Systems, model 2. Bangkok, UNESCO. 150
- [8]. Davis, D.G., & Huanwen, C. (1997). Destruction of Chinese books in the Peking siege of 1900. *IFLA Journal*, 23, 112-116. doi: 10.1177/034003529702300206
- [9]. Dennis, Brad. (2001). Preventing Theft of Compact Discs at the Wyoming Branch Library: A Case Study. *Library and Archival Security*, 16(2) Retrieved from (www.haworthPress.com) INFLIBNET.
- [10]. Galhotra, M.K. and Galhotra, A.M. (2009). Application of Radio Frequency Identification Technology in Libraries. *DESIDOC Journal of Library & Information Technology*, 29-3, pp. 59-64
- [11]. Government of India. (2005). Government Financial Rules 2005. New Delhi: Government of India, Ministry of Finance, Department of Expenditure.
- [12]. Grawal, Gaggandeep. (2004). Handbook of Library Security. Delhi, Dominant Publishers and Distributors.
- [13]. Hartse, Merri and BES security Guidelines subcommittee. (2001). Library Security Guidelines. BES Safety and Security of Library Building Committee.
- [14]. Kahn, M. (1998), Disaster response and planning for libraries, Chicago: American Library Association, 21-32;
- [15]. Kale, Kishor B. (2004). Security care & maintenance of books in university libraries in India : A critical study (Doctoral Thesis submitted to Nagpur University, Nagpur) Mr. Kishore B. Kale 2004 Dr. P. S. G. Kumar
- [16]. Lincoln, A.J. and Lincoln, C.Z. (1986). Library crime and security: An International Perspective. *Library and Archival Security*, Spring /Summer, 8(1/2).
- [17]. Maidabino, Abass Atiku. (2010) Collection Security Issues in Malaysian Academic Libraries: An Exploratory survey. Retrieved from <http://www.webpages.Unidaho.edu/~mbolin/maidabinongah.htm>.
- [18]. Mwantimwa, Kelefa (2007). *Mutilation of library materials & its impact on teaching. Libraries & Research in selected academic libraries in Tanzania*. 5th International Conference, GLOBELICS-RUSSIA-2007: Regional and National Innovation Systems for Development, Competitiveness and Welfare.
- [19]. National Assessment and Accreditation Council (2007). Internal Quality and Assurance Cell, New

Methodology of Assessment & Accreditation and the New Grading System. Adopted by NAAC Effective from 1st April 2007. Bangalore, NAAC. P-7

- [20]. Quinsee and McDonald, (1991) Security in Academic and Research Libraries, *Nigerian Library and Information Science Review*,9(1) :16.
- [21]. Ranawella, Thanuja C. (2006). An Introduction to a Library material Management And Security Control System - Radio Frequency identification (RFID) technology, journal of the University Librarians Association of Sri Lanka. V.10. 29-39
- [22]. Rao, Tata K; Raju, Soma P. (1993) [User's attitude and behavioural pattern towards theft and mutilation in the university libraries -A study of Andhra University library](#) (Doctoral Thesis submitted to Andhra University) Retrieved from <http://dspace.vidyanidhi.org.in:8080/dspace/handle/2009/5610>
- [23]. Reitz, Joan M. Online Dictionary for Library and Information Science. (ODLIS) Received on August 23, 2013 from http://www.abc-clio.com/ODLIS/odlis_A.aspx#library .
- [24]. Shuman, Bruce A. (1999). Library Security and Safety Handbook: Prevention, policies, and procedures. ALA publishing.
- [25]. Wyly, Mary. (1987). Special Collections Security: Problems, Trends, and Consciousness. *Library Trends*, 36: 241-256.
- [26]. www.bamu.net (accessed on April 2012 and September 2013)