Study of Library Security Systems used in Government College Libraries in Erstwhile Karimnagar

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ABSTRACT

The present paper aimed to know the library security systems adopted by the government college libraries in erstwhile karimnagar district, 14 libraries belonging to the government institutions are covered in this study. Among these 10 are Degree Colleges, 3 are Engineering Colleges and one is University. With the poor security systems every selected Government college libraries are facing a problem about theft of books , among 14 selected libraries, two libraries show that approximate loss of books per annum will be between 1-10 per thousand books, remaining 11 libraries the loss of books will be between 11-20 per 1000 volumes. Purchasing more copies of books which are in great demand can reduce the theft in libraries, regular updating of AntiVirus, and the latest version of browsers can protect the library information and patron information.

Keywords: Library Security, Information Security, Library Material, Karimnagar, Telangana,

1. Introduction:

Libraries are always a major and essential part of the civilized society as all the libraries contribute towards education, learning, R & D and disseminating information for the social good. The Library security issues are always there since the inception of the Libraries, Safety is an issue of great importance in libraries of all types, though the most pressing safety issues are ever evolving. There are a number of resources to assist with safeguarding patrons, staff, and library material and building. In the 21 century security is becoming more important after the adoption of ICT technologies in the libraries as well as with the open access software's, resources has become very complicated to give security for e resources and library databases.

2. Library Security:

Library Security issues may be divided into the two groups **a.** Physical Security which addresses the issues necessary to protect the physical items available in the library such as Books, journals & magazines including the library building and its premises etc, **b.** Electronic and Information Security deals with protection of library databases, patron information security and its critical elements like electronic resources security including the

systems and hardware that use, store and disseminate that information. To implement the security systems in the library strictly every library should have policy, awareness, training, education and technology updating.

Library security is one of the major challenges being faced by the Library professionals. The number of resources and users are increasing day by day and this causes an increase in the vulnerabilities of theft and other related issues. University libraries face a number of security challenges with their collections (both print and non-print). In this paper, the researcher discusses the different library security tools and techniques which were implemented in academic libraries. Libraries should be concerned about security and should spend considerable sums on preventing, detecting and resolving security breaches. In order to reach a desirable level of protection against threats and to provide the necessary mechanics to protect an organisation's assets and knowledge, a vast variety of management approaches and methods have been developed in the last decades. Libraries should review some of the plans, procedures, policies, some tools and methods that can be used to protect the library system including Organisational, Physical and technological security. This paper also deals with some of the measures that are taken by the selected university librarians on how they are using the methods to secure their libraries such as Anti-theft systems, security from natural hazards to print as well as electronic materials. Further the paper ends with providing suggestions for better library security.

A basic security system will secure vulnerable perimeter access points such as doors and windows, as per as library building concerns almost all the Universities libraries having only one exit and entry point will be there with many of the windows which is protected by the mesh.

3. Review of Literature

Rimanath Nath and Dipen Deka(2020), in their research article how the university libraries implemented both traditional, electronic and digital resources security measures even though the most of the universities in Assam are facing financial constraints.

Kumbhar K.N, Veer D.K (2016) expressed that implementation of Electronic Security will play crucial role towards the safety of Library Material, both selected 108 private and aided colleges under Dr. Babasaheb Ambed Marathwada University, Aurangabad. 84% of colleges are still depending upon Traditional security arrangements, 6% of colleges are using Electronic Security systems like CCTV cameras and Video surveillance systems,etc.

Vikas Singh and Madhusudhan Margam (2018), examine in their research paper about physical, organizational and technological information security measures of three central universities at Delhi. JNU is implemented the highest security features in its library with 69.23%, followed by DU 63.07% and JMI with lowest score 63.07%

4. Objectives of the Study

- To discuss about the major forms of theft and mutilation occur in the selected libraries

- To know about the different Traditional and Electronic Library Security systems and techniques adopted in selected libraries

- To know about the mechanisms followed by the selected libraries for their collection security.

- To know about the present status of the selected libraries.

- To provide suggestions for improving information security measures in selected libraries.

5. Need for the Study

The Library security system deals with not only a collection security of the library it deals with security of the Library building, its contents, and its immediate surroundings, safety and security of library means ensuring the physical protection of library resources, library staff as well as library patrons.

There is a paradigm shift from traditional libraries to digital libraries. Very limited facilities are there in the field of library security especially there is a major problem for information security of the patrons of the library also there is a limited research done on security systems in libraries. Therefore a systematic study is essential in Academic libraries of Telangana State to find out ways and means of library security regarding collection, infrastructure, staff and patrons. The study finds out the current state of the security systems, types of security system, types of attackers in information security, methods for information security, used in the selected libraries of Telangana State.

6. Scope and Limitations

The research article is planned to undertake only on selected college libraries of Erstwhile Karimnagar District of Telangana State. The study is limited to 13 college libraries and one University Library. Out of these colleges, all college libraries responded to the questionnaire.

7. Methodology

Personal observation by the researcher and Questionnaire was distributed for data collection. Closed-ended questionnaire was developed by the researcher as it captured related items in the research questions. The data collected were analyzed using descriptive statistics.

8. Advantages of the Electronic Security Systems

Following are some security tools and techniques used in the selected libraries where the researcher personally observed.

a. RFID Radio frequency identification has the biggest impact on libraries in the University of India. RFID technology is used in charging, discharging, tracking, and stock verification and to sort out the reading material. RFID technology can secure the library material as well as avoid the theft of documents. 3M Exit Technology can help the library staff to take total control on library material and almost to fix all the security issues. Here in the selected libraries nobody implemented RFID technology in their libraries.

Fig 1: Single RFID Gate for entry and exit in the University of Hyderabad Library

b. Barcode is an optical machine–readable representation of data. It usually describes data about the object that carries the barcode. Barcode technology is used in the library for the circulation and

inventory control through which can reduce the theft problem. Selected college libraries are strictly enrolling the login entry with this Barcode Library ID Card

Fig: 2 Student ID cards of SKNR Govt Arts & Science College Jagtial issued with Barcodes

c. Video surveillance

Video surveillance and security cameras are good security tools for libraries, as they can protect a large area of space in the library.

Fig .3 CCTV Surveillance, between the Racks cameras installed, video backup monitoring screen at librarian desk and fire safety equipments in the Engineering college library

d. PASSWORD

Password is a key or a secret word or a string of characters which is used to protect your assets or information from others in the Digital Environment. It is used for authentication to enter in to the Library Digital Resources, to prove patron identity and to get access to the library resources. It should be kept secret to prevent access by unauthorized users.

In this article most of the selected libraries are giving access to their patrons for their library e resources like OPAC, NList, E Sodh sindhu which was included ieee xplore etc .
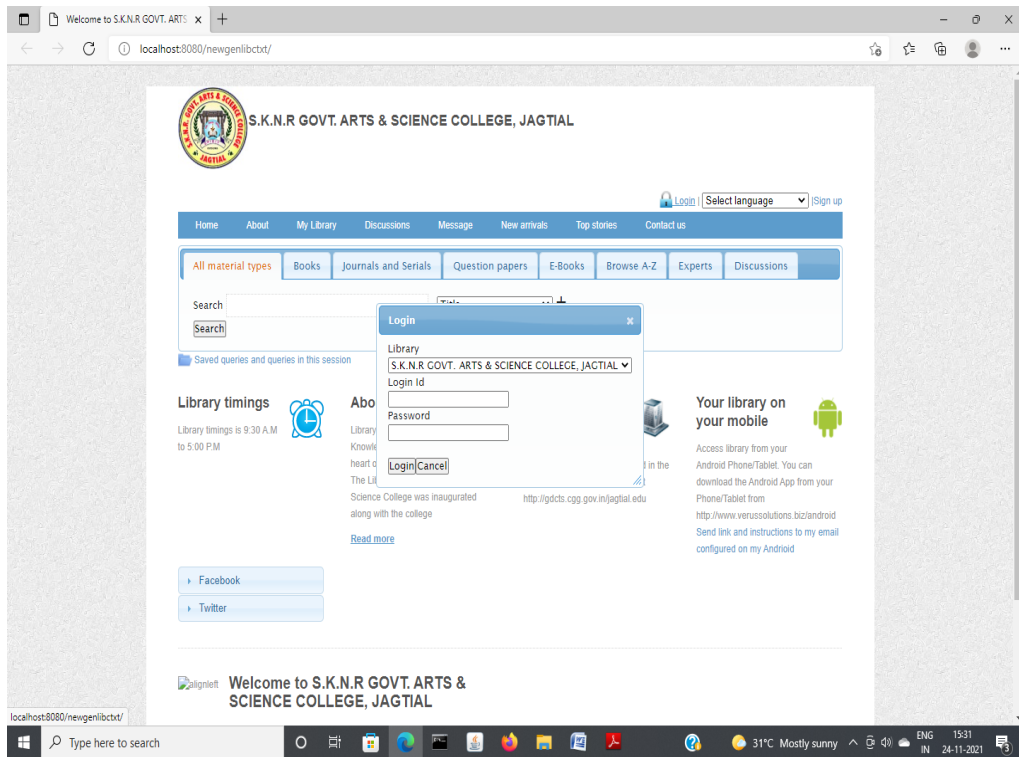
Fig 4: OPAC of SKNRGASC Jagtial Library with Login & Password for Patrons

Table No.1: Erstwhile Karimnagar District wise Government selected college Libraries

	District	Libraries	Engin	Degree
1	Karimnagar	5*	0	4
2	Jagtial	3	1	2
3	Siricilla	3	1	2
4	Peddapalli	3	1	2
	Total	14*	3	10

* Includes Sathavahana University Library

The erstwhile Karimnagar now consists of 4 districts and a total number of 14 libraries belonging to the government institutions are covered in this study. Among these 10 are Degree Colleges, 3 are Engineering Colleges and one is University. This selection helps in comparing the status of libraries, as access to knowledge is their main motto.

Table No. 2: Selected Colleges List with Year of Establishment and respective colleges websites

S.N	Name of the college/Library	Established	Website Address
1	Satavahana University Library Karimnagar	2008	http://www.satavahana.ac.in/
2	SRR Govt Arts & Science College Karimnagar	1956	http://gdcts.cgg.gov.in/karimnagar.edu
3	Government Womens College, Karimnagar	1973	http://gdcts.cgg.gov.in/karimnagarwomen.edu
4	Government Degree college, Huzurabad	1974	http://gdcts.cgg.gov.in/huzurabad.edu
5	Government Degree & P.G College, Jannikunta	1981	http://gdcts.cgg.gov.in/jammikunta.edu
6	JNTUH College of engineering, Jagtial	2007	https://jntuhcej.ac.in/
7.	SKNR Government Arts & Science College, Jagtial	1967	http://gdcts.cgg.gov.in/jagtial.edu
8	Government Degree College for Women Jagtial	2008	http://gdcts.cgg.gov.in/jagtialwomen.edu
9	Government Degree College, Godhahvarikani	1981	http://gdcts.cgg.gov.in/godavarikhani.edu
10	JNTUH College of Engineering Manthani	2010	https://jntuhcem.ac.in/
11	Government Degree & PG College, Peddapally	1981	http://gdcts.cgg.gov.in/peddapalli.edu
12	Government Degree College, Agraharam	1981	http://gdcts.cgg.gov.in/agraharam.edu
13	Government Degree College, Ghambhirraopet	2008	http://gdcts.cgg.gov.in/gambhiraopet.edu
14	JNTUH College of Engineering Siricilla	2021	https://jntuh.ac.in/

Table 3: Status of the Libraries

	Status of the Libraries	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Library Furniture	S	S	S	S	S	S	S	S	S	S	S	S	S	N
2	NAAC grade	N	A	B	B	B	B	B	B	B	B	B	B	B	N
3	Stock verification	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
4	Open Access	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	PCs for Patrons Use	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	Internet/Wifi	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

S - Sufficient, A- A Grade, B-B Grade, N-Nill

The status of the given libraries reveals facilities available to perform the functions of the library as an information resource centre. Nine degree colleges are graded B and SRR Degree College was awarded 'A' grade by NAAC. Among the three Engineering Colleges Two were graded 'B' by the NBA and one college started recently in this academic year 2021. All the libraries are providing open access to the library's collections. All the libraries have desktops in the Internet Section or Digital Library Section for browsing the internet at other library e resources like OPAC, NList, E Sodh sindhu which was included ieee explore etc.

Table 4 : Approximate Loss of Books after Stock verification (per 1000 Books)

	Report	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Not reported														Y
2	1-10 Books	Y	Y												
3	11-20 Books			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Table 4 gives information regarding the approximate loss of books per annum per 1000 books after stock verification in the selected libraries. The table shows that out of 14 selected libraries, two libraries show that approximate loss of books per annum will be between 1-10 per thousand books, remaining 11 libraries the loss of books will be between 11-20 per 1000 volumes. One Library not yet started circulation and given "Not reported" for the same

Table 5: Mutilation, Theft and Misplacement of Library Books

	Types	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Mutilation and Misplacement of Library Books	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
2	Tearing the important pages in the book	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
3	Marking/ Underline	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
4	Un Authorised Borrowing	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
5	Non Return of the Important Books	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
6	Theft of Books & other Electronic material	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N

Library materials are generally not handled properly and prone to damage in many ways or kinds by users. Mutilation of books is one of the major problems in degree college libraries as users underline the text while reading and damage books carelessly handling them. Most of the libraries reported that students hide the books in some other shelves and not return the important books within a given time. Tearing pages from the books, newspapers and magazines is also reported as degree and engineering college libraries. Another common problem is theft of books and it is reported by libraries manned by one or two staff members due to lack of vigilance on users

Table 6: Traditional – Manual security systems

	Function	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Central Locking System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	Single Door Entry & Exit for Patrons	✓	✓	✓	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	Security staff at the Main Entrance	✓	X	X	X	X	✓	X	X	X	X	X	X	X	X
4	Security Lighting at the premises after library timings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Observation by the Library Staff	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	Fire extinguisher & security equipments	✓	✓	✓	X	X	✓	X	X	X	X	✓	✓	X	X
7	ID cards and access authorization at the entrance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	Physical checking for patron at the gate	✓	X	X	X	X	✓		✓	✓	✓	✓	✓	✓	✓
9	Signature of every user (Gate Register)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	Security Clearance procedure (Issue Slip Maintenance etc)	✓	✓	✓	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓

Data from the above table 6, it is obvious that most of the libraries are still functioning using manual methods to check the library users. These traditional methods need more people to perform the duties assigned.

Table 7 : Library Management Software and database security System adopted in the selected Libraries

	Features	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Library Management Software	L	N	S	S	S	N	N	N	S	N	S	S	M	M
2	Anti-spyware software	Y	Y	N	N	Y	Y	N	N	N	N	N	N	N	N
3	Login authentication	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4	Separate Room for Server	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N
5	Alternate Power Sources	Y	Y	N	N	N	Y	N	N	N	N	N	N	N	N
6	Data Recovery	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7	Web Filtering Software	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N

L=LibSys, N=NGL, S=SOUL, M- Manual

Libraries with ILMS require additional means of security to safeguard information about the resources and transactions done in the library. These needs are capital and technology intensive. Most of the libraries though using Open Source Softwares and unable to take care of security due to not engaging AMC of the software and hardware vendors. This alone is causing many hardships in continuing and effectively making use of ILMS.

Table 8: ELECTRONIC SECURITY SYSTEMS

	Security	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	RFID	N	N	N	N	N	N	N	N	N	N	N	N	N	N
2	3 M exit Detection	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3	Barcode	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
4	CCTV Cameras	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N
5	Fire safety Cylinders	Y	Y	N	N	N	N	Y	N	N	N	N	N	N	N
6	Biometrics	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Though technology enabled security systems are available, they need many resources to execute them in true spirit. Therefore most of the libraries are not utilizing the electronic security systems. Security of the reading materials is one of the major concerns

Table 9 Library Collection and Library Building/Block status

	List of Libraries	Collection	Staff	Block	Students strength
1	Satavahana University Library, Karimnagar	24500	9	Y	More than 3000
2	SRR Government Arts & Science College, Karimnagar,	48800	3	Y	More than 3000
3	Government Degree College for Women, Karimnagar,	16500	2	Y	2500
4	Government Degree College, Huzurabad		1	N	345
5	Government Degree College, Jammikunta	4751	2	Y	465
6	JNTU College of Engineering, Jagtial	23487	6	Y	2500

7	SKNR Government Arts & Science College, Jagtial,	27548	1	N	575
8	Government Degree College for Women, Jagtial	11124	2	N	600
9	Government Degree College, Godhavarikhani	7548	2	N	575
10	JNTU College of Engineering, Manthani	13458	5	Y	2000
11	Government Degree College, Pedapalli	8521	1	N	375
12	Government Degree College, Agraharam, Rajanna Siricilla	12145	1	N	350
13	Government Degree College, Ghambhirraopetm, Rajanna Siricilla	4985	1	N	350
14	JNTU College of Engineering, Rajanna Siricilla	N	N	N	240

Most of the degree college libraries do not have personnel in proportion to book collection or user base. The disproportionate library staff, collection, and user base in the table is a clear indication of the pathetic situation of libraries. Security of the reading materials is one of the major concerns for all librarians, as they are held responsible for loss/theft of library materials irrespective of the institution. All the above factors directly or indirectly have an effect on the safety and security of the library materials. The above data demands immediate attention of the management to improve and strengthen the libraries in multiple aspects.

9. Conclusions & Sugestions:

With the above study it is observed that Engineering college libraries are far better than other Government Degree College Libraries for effective implementation of library security measures.

For Libraries especially Academic libraries there should be a particular policies and procedures and it should be implemented perfectly. These policies must and should be published in the web pages of the libraries like basic information on safety and security, a clear code of conduct of the patrons, Prohibiting theft of library materials. In the selected colleges orientation classes will be taken at the beginning of the academic year to every section and the library rules was placed at the library notice board and posted at the OPAC web page , still the illegal activities going on due to poor security conditions due to lack of staff and least budget allotment towards the libraries security purpose.

Libraries must consider safety and security to be a part of their workflow when thinking about managing their belongings, purchasing of more copies of books which is in great demand can reduce the theft in libraries, towards the technology resources, the first step is to ensure that library computers are running up-to-date versions of operating software, trail the upgrade process on one system first, and test the software to ensure the upgrades are running smoothly.

Patron's information must be kept in safe condition, you can't make your library patrons safe if your library systems aren't safe, you may check regular backups and to go for updating of the software's to fix the bugs.

 Make sure the browsers on all your computers are also on the latest versions as it is highly impossible to secure an old browser.

Antivirus resources are sometimes disregarded because it is related to money matters; However, it's still important to ensure that computers and their data are protected by antivirus software only.

Safety standards for the collection area are also important. It can be applied by placing a staff member in collection area that is easily monitored by the Staff. Although there is CCTV but it is still important to note because sometimes CCTV cannot reach areas that may be used by users to commit stealing the collection.

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