ROLE OF RFID AND BIOMETRICS IN ACADEMIC LIBRARY OF CENTRAL UNIVERSITY IN U.P.

Shweta Chourasia[1] and Dharam Vir singh[2]
[1]Research Scholar [2]Associate Professor
Department of library and Information Science, Swami Vivekanand University Sagar, M.P
Corresponding Author: *shweta.chaurasia .044@gamil.com*

ABSTRACT: RFID is the latest technology used in library detection systems. This paper contains information about the RFID security system. It is one of the fastest growing and most useful technologies used by academic libraries to increase efficiency and improve safety, security, productivity, accuracy and convenience. To solve the problems of arranging documents in order they have given classification schemes. To solve the problems of search him documents they have given cataloging guidelines. To solve the problems of space and time they have taught librarian to digitize the documents and share over network. To automate the counter activities they gave us Bar codes. This technology also helps locate lost items and identify misplaced items. This article also introduces the various parts of an RFID system, the operation of the system, the advantages and disadvantages of the system, as well as several points to consider in an RFID library management system. The study is to find out the possibility of application/use of biometrics in libraries and information industry, especially academic libraries, which aim to provide improved services to meet the needs of all researchers, whether they are faculty members or students. Using a descriptive analytical approach, this study explores the concept of biometrics, biometric applications and their categories. The study then sheds light on the use of biometrics in academic libraries, the benefits of using biometric applications in academic libraries.
KEYWORDS: Role, RFID, Library Management System, Biometrics, Libraries. Security Systems.

RFID stands for Radio Frequency Identification which is use in wireless non-contact radio system to transmit information from a tag attached to books for automatic identification and tracking. It is one of the technologies adopted by Central University Library. A modern Central University library is home to millions of books, periodicals, CDs, DVDs and other electronic reading materials. Managing such a huge collection is a challenge for librarians.1 With RFID technology, using RFID tags in the library is easy and convenient. In the library system, the library staff handles the lending, returning, sorting, tagging, etc. of books with RFID tags. The label contains electronically stored data that can be read even at the end of several engines.

RFID is a recognized technology in libraries, in part because the profession has adopted best practices that minimize the technology's potential to undermine the privacy of library users.6. The origin of the word biometrics comes from the Greeks. It consists of combining two words "bio" which means life and "metric" which means measurement. The library is a "temple of learning" that plays a central role in the general development of society. But it is a known fact that libraries are not always safe places and have various security problems including theft, mutilation of library materials and other unethical harms. But it is the duty of the librarian to keep the library buildings, shelves, and stacks open and free without losing existing items or putting people at undue risk to the alicious, greedy, or irrational actions of others. In addition, library and information professionals now deal with huge databases, providing access to online journals and online public Internet directories in an online digital environment with plenty of room for computer .2.A biometric attendance management system detects and stores scanned fingerprints that are separated by specially defined biological coordinates. Later, an online management system used these biological parameters to accurately record the entry and exit times of students, staff and faculty anywhere on campus.5

RESULTS AND DISCUSSION

It is depicted in Table -1 that the year of implementation of respective RFID and Biometrics in a Library among the given libraries, the RFID Technology, and Biometric System were first installed in 2013(BBAU) and second installed in 2014 (AMU& BHU) and Biometric System installed in 2013 (BBAU). It is visible that all the four Libraries are using RFID Technology, and Biometric are used by tall four Libraries, respectively. It is also stated that the RFID and Biometrics both was primarily introduced In BHU in the year 2013.

The responses of the open ended questions related to RFID Technology are given in Table-2. This information will provide a basic understanding of the implementation of the RFID System in the University Libraries in the future. As depicted in the table-2, out of four University Libraries, (AU, AMU, and BHU and BBA) of them have tagged all the materials of libraries (Books, Thesis - U.G., P.G. and Ph.D. and Bounded Volume, Journals) with RFID /EM tags.

Libsys 2.0 and Libsys 7.0 is integrated multi-user Library Management Software and SOUL (Software for University Libraries) KOHA (Open Source integrated Library System) ILS, Software that caters to the needs of an advanced library and advanced library and information professionals. Software used for RFID, Libsys Software (A U, AMU) and Soul Software used to (BHU) , and KOHA Software used in BBAU . It is visible that all the four libraries are using ILMS and Users friendly.

As part of the implementation of contemporary ESSs, the Biometric System is gaining considerable interest in different organizations. The main reason behind the expansion of this technology is the affordability. This section provides an analysis of the various aspects of the biometric system such as the applications /Area, components, benefits and related problems. As revealed in Table 3, in all libraries having Biometric system for Staff attendance placed in common area in cluding gate in /out check using the fingerprint module.

The components of libraries include database module or sensor module are found using all of three, I.e. sensor, database and a matching module. The main benefits of the biometric system are its enhance efficiency in the management of human resource. All the respondents' opinion about their satisfaction regarding this system and found no problems associated with it as stated in table-).

Table -1: Types and year of implementation of RFID and Biometric in library of Central University, Uttar Pradesh

Sl. No.	ESSs/Year	Name of University			
		AU	AMU	BHU	BBAU
1.	RFID/Year	2015	2014	2014	2013
2.	Biometric/Year	2014	2015	2014	2013

Table- 2: RFID Technology Information in library of Central University, Uttar Pradesh

S.N.	RFID Tech.	Name of University			
		AU	AMU	BHU	BBAU
1.	All documents are tagged with RFID/EM	Yes	Yes	Yes	Yes
2.	Software used for RFID	Libsys-2.0	Libsys-7.0	SOUL	KOHA
3.	ILMS	Yes	Yes	Yes	Yes
4.	User-friendly with PwD	Yes	Yes	Yes	Yes

Table- 3: Biometric Security System Applications in library of Central University, Uttar Pradesh

Sl. No.	Technology	University Name			
		AU	AMU	BHU	BBAU
1.	Biometric	Yes	Yes	Yes	Yes
2.	Application/Area	Staff attendance	Yes	Staff attendance and Gate Checking	Yes
3.	Biometric Types	Fingerprint	Fingerprint	Fingerprint	Fingerprint
4.	Components	Database Module	Sensor Module	Sensor Module	Sensor Module
5.	Benefits	Management of Human Resource	Management of Human Resource	Enhance efficiency in the management Resource	Management of Human Resource
6.	Problems	No	No	No	No

CONCLUSIONS

Librarians are using various new inventory technologies in libraries and they have started using to give more effective and efficient circulation services as well as for security of library collections. It is more effective, convenient and cost efficient technology in library security. This technology has replaced to the traditional library items. Day-by-day the use of RFID system by libraries has grown dramatically, but the cost factor, non-availability of standards and user privacy is the major barriers in adoption of RFID technology by more libraries.3 Biometric techniques are really useful

85

for LIS professionals to provide better security and security to valuable collections of information resources in various formats. Although there are few restrictions, technology can be used in our libraries in phases.5 Academic libraries can use technology to provide better security and security for their invaluable information resources as well as their human resources.

REFERENCES

Berek, László. (2016) "Implementing RFID Technology for Libraries in the Field of Library Security." Óbuda University e-Bulletin 6.1: 17–20.

Ibrahim, Mahaa. (2019) "Use of Biometrics in informative Institutions: Academic Libraries as an example" International Journal of Informatics, Media and Communication Technology 1 (1): 137-167.

Nisha, F. (2018). "Implementation of RFID technology at defense science library, DESIDOC: A case study." *DESIDOC Journal of Library and Information Technology*, *38*(1), 27–33.

Parul, and Margam Madhusudhan. (2017) "RFID Technology in Libraries: A Review of Literature of Indian Perspective." DESIDOC Journal of Library and Information Technology 37.1: 58–63.

Rebin, A. Hamaamin (**2024**) "Biometrics Systems: A Comprehensive Review" Basra Journal of Science 42 (1): 146-167.

Smith, J. and Wang, L. (2022) "The Impact of RFID Technology on Library Management" Library Management, 42(5) : 221-235.