

A Comparative Study of Library Automation Software Implemented in Academic Libraries of Shirpur City

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ABSTRACT

The rapid advancement of information and communication technologies has compelled academic libraries to adopt automation systems for efficient management of information resources. Library automation software plays a pivotal role in streamlining library operations, enhancing access to resources, and improving user satisfaction. Although numerous library management software packages are available in the market, academic libraries often select systems based on institutional requirements, affordability, and technical support. This study presents a comparative analysis of library automation software implemented in selected academic libraries of Shirpur City. The research primarily examines the usage of KOHA, LIBMAN, and SOFTLIB software packages, focusing on their adoption status, functional capabilities, data security practices, and staff satisfaction. The findings reveal dominant trends in software preference, highlight operational challenges, and suggest practical considerations for selecting appropriate library automation software in academic environments.

KEYWORDS: Library Automation, Academic Libraries, Library Management Software, KOHA, LIBMAN.

1. INTRODUCTION

Academic libraries are basic support units in teaching and learning, as well as in research. By traditional standards, libraries used manual solutions to the collection and service management, which became more and more ineffective as the number of information resources grew exponentially. The digital technologies have changed libraries into technology orientated knowledge centers offering access to both print and electronic materials.

The use of computer-based systems in carrying out the normal library activities including acquisitions, cataloguing, circulation, serial control, and information search is called library automation. Automation does not only enhance efficiency in operations but also accuracy, simultaneous nature, and timeliness of delivery of information services. Academic libraries now find it mandatory to embrace the appropriate library management software in the current digital world as opposed to optional.

2. OBJECTIVES OF THE STUDY

The current research has been conducted with the aim of the following:

- The objective of the research is to evaluate the level of automation software in academic libraries of Shirpur City.
- To determine the key characteristics of various library management software packages used.
- To compare the automation software that has been chosen in libraries in terms of functions and application.
- To investigate the degree of satisfaction of the library professionals with the software used.
- To provide general recommendations on the choice of the library automation software to use in academic libraries.

3. LIMITATIONS AND SCOPE OF THE STUDY.

In Shirpur City, there are numerous colleges which are under the Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon. The current study, however, is limited in its scope of seven sampled professional college libraries that are providing engineering, pharmacy, management and education programmes. The subject of the study is limited to library automation software and other practices; other features such as digital library programs and institutional repositories fall out of its scope.

4. RESEARCH METHODOLOGY

The research is founded on primary and secondary data. Primary data collection was done by using a structured questionnaire to the librarians and the library staff with a supplement of direct observation of automated library activities. The secondary data were obtained through books, academic journals, research articles, conference proceedings, and authentic online sources dealing with library automation.

The mixed research method of quantitative and qualitative was used. The gathered data were arranged in form of tables and plain statistical means like the count of frequencies and percentages to enable easy interpretations.

5. RELEVANT LITERATURE REVIEW.

Previous research indicates that automation of libraries has become a common practice in higher educational institutions but there is inconsistency in the implementation. According to Zaveri and Salve (2018), most of the libraries in colleges in Mumbai had embarked on automation, yet they were limited by the financial capabilities and availability of trained personnel. Jayarama (2019) pointed out poor infrastructure, low funding, and low staff training as some of the greatest barriers to effective automation of aided college libraries.

Muir (2005) highlighted the increased importance of open-source software in the libraries with such benefits as flexibility, affordability, and community development. Literature on commercial software solutions emphasizes such aspects as the support of the vendor, ease of use, compatibility with organizational systems as the main requirements in software selection.

6. LIBRARIES THAT WERE INCLUDED IN THE STUDY

Seven academic libraries in Shirpur City are discussed in the study. Such libraries are based on various software package automation application, that is KOHA, LIBMAN, SOFTLIB, and one of the libraries has not been automating any software applications.

They are as follows:

Table 1. Name of College / Institute abbreviation address

No.	College / Institute Name	Software	Address
1	The Shirpur Education Society's R.C.Patel College of Education, SHIRPUR, Dist.Dhule.	NO S/W	Shirpur
2	Shirpur Education Society's R.C.Patel Institute of Pharmaceutical Education and Reseach, SHIRPUR, Dist:Dhule.	KOHA	Shirpur
3	The Shirpur Education Society's R.C. Patel Institute of Pharamcy, Shirpur.	LIBMAN	Shirpur
4	The Shirpur Education Society's Smt.H.R.Patel Institute of Pharmaceutical Education and Research, SHIRPUR, Dist: - Dhule.	KOHA	Shirpur
5	Kisan Vidya Prasarak Sanstha's Institute of Pharmaceutical Education, BORADI, Tq.Shirpur, Dist:Dhule.	SOFT LIB	Shirpur
6	R.C.Patel Educational Trust's Institute of Management Research and Development, SHIRPUR, Dist.Dhule.	LIBMAN	Shirpur
7	Shirpur Education Society's R.C. Patel Institute of Technology, SHIRPUR, Dist:Dhule.	LIBMAN	Shirpur

7. ANALYSIS AND INTERPRETATION OF DATA

7.1. Back up devices:

Back up devices used any library going for automation has to use some back-up device to take the backup of the database. In most of the database back-up is taken at a regular interval so that if by chance some problems arise to the server and due to which the data in the database is lost then one can use the back-up taken. In order to see the awareness of the libraries towards the data it was asked to provide information regarding the back-up device used and the responses received were tabulated in the table 2 and pictorial presentation in the pie chart figure 1.

Table 2. Back-up Devices

Backup Device	No. of Libraries	Percent (%)
Zip Drive	0	0
C. D. / DVD Rom	5	71.42
Hard Disk	6	85.71
Pen drive	3	42.85
Not Use Back Device	1	14.28

Note: Because of multiple choice options the percentage is exceeded to more than 100%

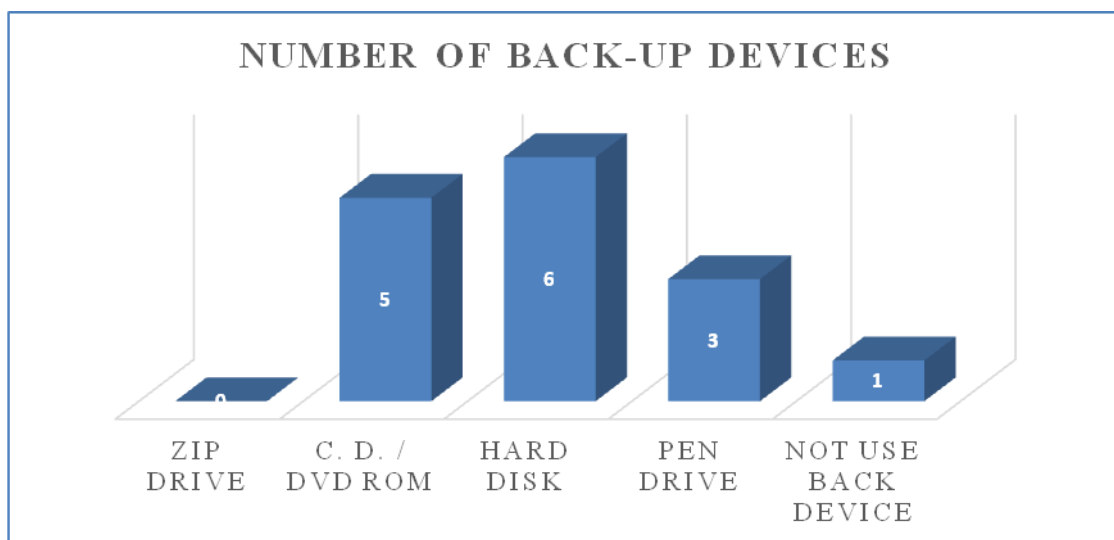


Figure 1. Number of backup devices

From the table 2 and the figure 1 it is observed that, all college libraries are not use Zip Drive and some back-up device to take the backup of the database and 05 (71.42%) libraries are using CD-ROM/DVD rom for taking back-up in the library, while 6 (85.71%) college libraries are use Hard Disk and 03 (42.85%) are use the Pend drive and 01 (14.28%) not using any back-up. It is good to see that majority of the libraries are aware of the importance of the library database and are taking backup on some device.

7.2. Library Application Software:

Library application software is the most important element in library automation. The success of library automation depends on the selection of right software and its correct implementation. Many commercial library software's like LIBSYS, LIB Manager, SOUL, CDS/ISIS, LIBMAN, SLIM, SOFTLIB, etc. are available in the market. Each and every software has its own unique features and limitations. The college libraries were asked to furnish the information regarding the library software use in the library and the responses received were tabulated in the table 3 and pictorial presentation has been made using fig. 3

Table 3. Different Types of Library Software used

Library Software's	Number of Libraries	Percent (%)
LIBMAN	3	42.85
KOHA	2	28.57
SOFT LIB	1	14.28
No. Library Software	1	14.28
Total	07	100

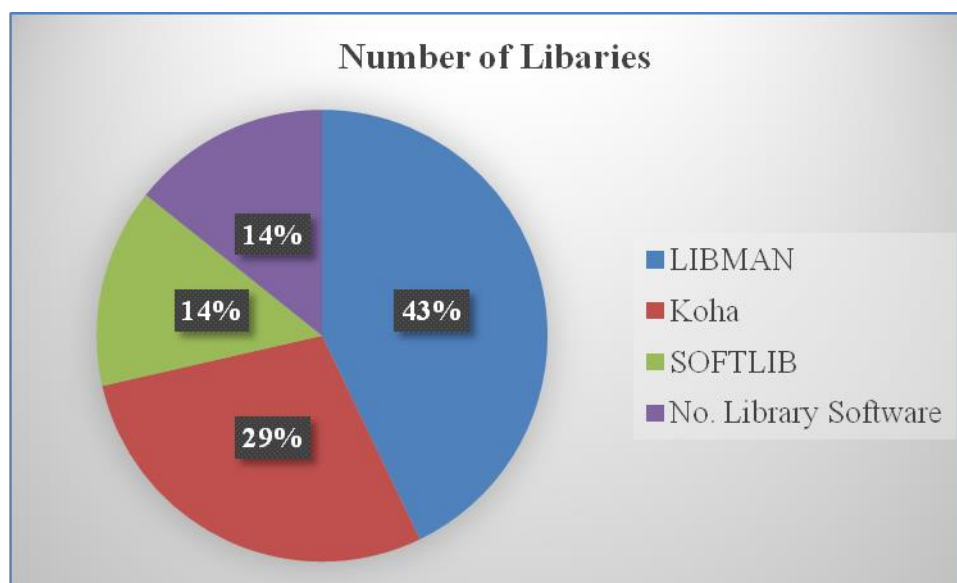


Figure 2. Number of Libraries

From the table 3 and figure 2 it is revealed that, out of 07 college libraries gone for library automation, 2 (28.57%) college libraries are using KOHA software, whereas 03 (42.85%) libraries are using LIBMAN, whereas 1 (14.28%) libraries using SOFT LIB and 1 (14.28%) library have not yet purchased any library application software. From the analysis it is interesting to know that 02 (28.57%) college libraries are using KOHA software developed by the the world's first free and open-source Integrated Library System (ILS), was initially developed in New Zealand by **Katipo Communications Ltd.** for the Horowhenua Library Trust (HLT) in 1999, with its first deployment in January 2000, and is now maintained and enhanced by a global community. It is obvious because the KOHA provide multiple services in ERP system for the college Library Management Automation system software which is considered as most user Friendly software for education Institutions. The second most popular software is know that 3 (42.85%) college libraries are using LIBMAN software develop by the Master-Soft ERP Solution Pvt. Ltd. Nagapur. It is obvious because the LIBMAN provide multiple services in ERP system for the college Office and Library Management Automation System Software which is considered as most user Friendly software for Education Institutions. He has provided to the Student Admission & Fees Collection, Student Administration, Financial Accounting, Payroll, Hostel, Leave System, Library Management System (LIBMAN), M-OPAC for Android Mobile (for library data Searching), Visitors Management System, WEBSITE, Bio-Matrix-X990-Finger Print + RFID Card Reader, Old Student C Generator, Inventory (Stores), Short Message Services, Inward Outward, Service Book & Establishment system all those system provided to Master-Soft ERP Solution System.

7.3. Opinion of Library Staff regarding Library Software Used:

Library staff should be happy with the software used in the library. The happiness depends on the user friendly characteristic and the facilities provided by the software. If the library software is users friendly then the staff can enjoy working with the software. It was asked to the college libraries having library software whether they are happy with software used in the library and the Reponses received have been tabulated in the table no. 4.

Table 4. Satisfaction with the software used

Happy with the Software Used	Number of Colleges	Percent (%)
No	2	28.57
Yes	4	57.15
No Library Software	1	14.28
Total	7	100

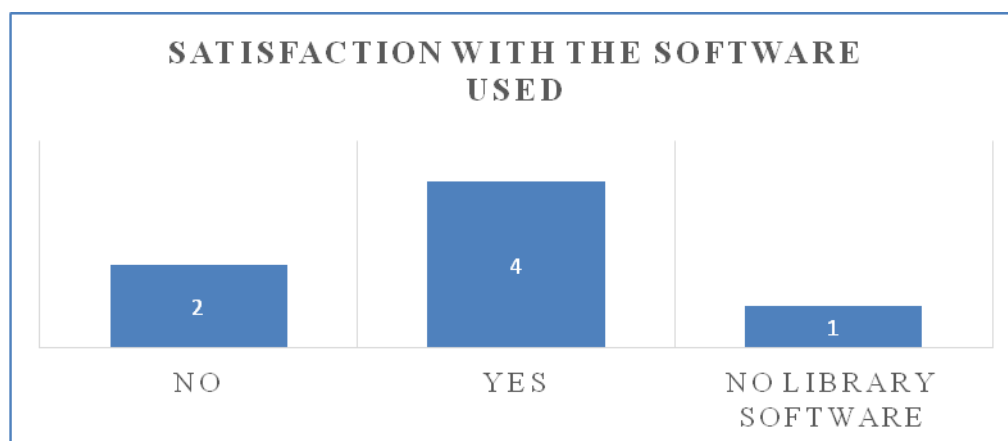


Figure 3. Satisfaction with the software used

From the table 4 it can be observed that, the staff of 4 (57.15%) college libraries is happy with the library software used, whereas staff of 2 (28.57%) college libraries not happy.

8. MAJOR FINDINGS

Ready-made library automation software packages have been implemented in most academic libraries in Shirpur City.

- The most used software is LIBMAN as it is cost-effective with ERP integration.
- KOHA is gaining popularity as an open-source alternative that can be trusted.
- Most libraries observe data backup practices and are not standardized in policies.
- The staff has moderate to high satisfaction with library automation software.

9. DISCUSSION

The results of the current research show unequivocally that academic libraries of Shirpur City are gradually switching their minds towards the manual approach to the automated one. This change depends on various factors including institutional support, funds, demand by the user and technological preparedness. The preponderance of LIBMAN software in the group of the surveyed libraries represents a trend towards integrated solutions that tie the work of the libraries with the larger ERP systems in the institutions. This kind of integration makes the administration easier to coordinate and improve the effectiveness of the workflow.

The use of KOHA by a certain number of libraries evidences some kind of a growing interest in open-source. The flexibility of KOHA, the community-oriented development, and the lack of the licensing fee precondition its use as a tool that may be especially appropriate to the institutions with limited financial possibilities. Nevertheless, open-

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source software application can be successfully implemented only with the help of the provision of technical skills and the unceasing training of the staff. Libraries which do not have sufficient IT support may struggle to get maximum out of such systems.

The other notable finding of the research has to do with the data security and backup. Although a majority of libraries use more than one backup devices, a lack of standard backup policies shows that there is a necessity to have formal data management guidelines. To guarantee the security of data and disaster recovery, it is necessary to have regular backups, offsite data storage, and frequent reinforcement of the integrity of the backup.

Employee satisfaction rates indicate that easy to use interfaces and good technical service are the main factors that affect the adoption of library automation software. The major cause of dissatisfaction is a lack of customization features, lack of training, and slow response on the part of the vendor. The library professionals can also be made to be more suited to automated settings through continuous professional development programs and practical trainings.

10. PROBLEMS IN AUTOMATING LIBRARIES.

Although the advantages of automation in libraries are quite obvious, academic libraries are still struggling with various issues. The biggest impediment is financial constraint especially to smaller institutions. Annual software and hardware maintenance, and the cost of software procurement is in many cases limiting factors to the scope of automation project.

The untrained manpower is another major challenge. Most library workers do not get exposure on sophisticated library management systems, hence there is a lack of use of available functionalities. The process of automation is further impeded by resistance to change and the desire to remain on the old ways of doing things.

The technical problems that do apply to the smooth running of automated libraries include software compatibility, system downtime, and data migration problems. Poor internet access and disruption during power supply is also another obstacle, particularly in the semi-urban areas.

11. RECOMMENDATIONS AND SUGGESTIONS

According to the results of the research, it is possible to provide the following recommendations:

- Libraries are to have special budgets in academic institutions.
- They should also be conducted regularly to train the technical capabilities of library professionals.
- Libraries ought to develop and institute standard protocols in terms of data back-up and security.
- Open-source programs such as KOHA can be promoted as long as there is sufficient technical support.
- The library automation systems must also be evaluated after a period of time to assure maximum use.

CONCLUSION

The research is bringing to the conclusion that automation of libraries has become a mandatory aspect of academic libraries in Shirpur City. Although commercial software programs like LIBMAN are superior in terms of institutional backing and integrated services, open-source programs like KOHA provide a viable solution to libraries that lack financial ability. The choice and implementation of library automation software must be done keeping the needs of the institutions, technical skills, financial capacity, and sustainability in the long-term. Increasing the level

of staff training and setting up of uniform backup and maintenance regulations will also help increase the effect of the library automation efforts.

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