APPLICATION AND USE OF LIBRARY AUTOMATION SOFTWARE IN THE SCIENCE AND TECHNOLOGY LIBRARIES OF NORTHERN INDIA

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ABSTRACT: - *Library automation is required through efficient and effective software to provide the best service to the readers by the library staff. This study was conducted to learn more about the application and usage of library automation software in North Indian science and technology libraries with this need in mind. A structured questionnaire was used to gather information on 105 different categories of science and technology libraries in Northern India. According to the study, SOUL software is the second most popular after Libsys, though there is a significant gap between the two, and the popularity of other software is not particularly noteworthy.*

Keywords: Library Automation, Information Communication Technology (ICT), Science and technology libraries, Northern India.

Introduction:

Since the introduction of automation in libraries, librarians, educators, and researchers from all over the world have been forced to work harder due to automation's expanding and adaptable use in everyday library tasks.

The automation of libraries and learning facilities began in India in the middle of the 1980s, whereas it had already become popular in developed countries by the middle of the 1960s. The University Grants Commission (UGC) created INFLIBNET to enable automation in college and university libraries.

Using computers and other ICT tools for conventional library services is known as automation in the library. Automation of routine housekeeping tasks like cataloguing, circulation, and others can guarantee more effective and efficient library services. It improves the performance of the library staff, which guarantees that users will receive better library services. Better library facilities, like remote access to resources and services, can be offered by

automating library services. In essence, library automation is essential, especially in this age of information explosion.

In academic libraries, automation plays a crucial role in the development of acquisitions and collections, and it is an integrated approach for all Library operations.

Automation is very effective at enhancing library amenities and expanding access to its resources. It has significantly enhanced libraries' and knowledge centres' capacity to provide for patron needs. Some of the important factors that have a direct or indirect impact on library automation include management, staff skills, resources available, software accessibility, and location. The college libraries are moving toward the adoption of automation and networking facilities because they are essential for the efficient use of library services.

Review of Literature

Khare (2013) focuses on automation in the libraries of Indian Institutes of Technology, the systems used therein and the costs and benefits Implementation of automation in libraries is not a simple task, as the activities and services in a library have different steps from each other and each step may have several variables.

Iglesias (2013) looks at the history of library automation inside the technical directionality contest, where much has been written about library history and evolution.

A digital library, according to **Prasad (2012),** is a sort of information retrieval system in which collections are kept in digital formats and accessed by computers.

Kemdarne (2012) investigates library automation and networking in the Dental College Libraries linked with Rajiv Gandhi University of Health Sciences, Bangalore. Beginning in the late 1970s, libraries focused on the DBM section. The importance of automation in the establishment of acquisitions and collections in academic libraries was demonstrated by **Onoriode (2012).**

Balasubramanian (2011) addressed that the libraries have always embraced modern technologies to fulfill their fundamental commitments. The introduction of new technology in libraries is, according to him, a part of the historical cycle.

Isaac et al (2011) discuss trends and problems, and how the latter was tackled in support of LIS education and training in two developing counties, Southern Sudan and Uganda.

Mathew (2011 analyses to determine whether developments in ICT have any impact on professional developments in the library.

Pandey (2010) edits the contribution of various authors explaining the use of computers and other IT devices to conduct library tasks and to provide library and information as services commonly known as library automation. The academic

libraries must be prepared to meet the demand and provide users with fast and efficient services.

Tiwari (2010) discusses the process of equipping library professionals with basic library automation information. It provides a library roadmap which contemplates partial or complete automation of their systems.

Ramzan & Diljit Singh (2009) investigated the status of Information technology application in Pakistan libraries and found a low – level of IT availability especially the computers, e-mail and internet in a few libraries. Libraries need to be fully automated using standard library softwares. **Bansode & Periera (2008)** surveyed library automaton in college libraries in Goa State and found that insufficient funds, lack of space and proper training were common barriers faced by many libraries. Status of automation in the colleges of Goa was similar to that of college libraries throughout India. They concluded that libraries and librarians and college administrators must initiate automation in order to provide effective and efficient services to users.

Mittal & Mahesh (2008) found that the use of open source software especially for the creation of institutional repositories was common while major digital library initiatives of India use custom-made software and the collection size in most digital libraries and repositories was in a few hundreds.

Haneefa (**2007**) studied the application of ICT in special libraries in Kerala (India) and revealed that libraries had hardware, software and communication facilities but the services were not reaching the users to the expected extent. CDS/ISIS was used more than other software. Library catalogue was the most popular area of automation and e-mails users were largest.

Matoria ,Upadhyay & Moni (2007) discussed the automation and networking of public libraries in India using the e- granthalaya software from the National Informatics centre.

Aryal (2005) discussed the application of SOUL in Kathmandu University and highlighted the features and modules for automating any type of libraries.

Research Methodology:

The study empirical in nature was carried out to know the status of library automation softwares being used in Science and Technology Libraries of Northern India (Haryana, Punjab, Chandigarh and Delhi) and level of users' satisfaction of these softwares. The present study was done through a structured questionnaire and observation method. The data was analysed through a percentage method.

Data Analysis:

This research work is an endeavour to analyse the extent of usage of information technology in different Science and Technology libraries of

Northern India (viz. Haryana, Punjab, Delhi and Chandigarh). The analysis presented in the following sections is based on the response/feedback, provided by the librarians to the questionnaire designed and distributed for the purpose.

To achieve more meaningful and realistic results, the sample data has been segregated and analysed from different angles as presented in the following Tables.

The sample of 105 Science and Technology libraries has been categorised in five main groups shown in Table 1 below:

Table 1: Subject Wise Distribution of Libraries.

Sr. No.	Type of Library	No. of Libraries	Percentage
1.	General Sciences	8	7.62
2.	Agriculture Sciences	6	5.71
3.	Medical and Allied Areas	15	14.29
4.	Engineering Areas	71	67.62
5.	Defence Sciences	5	4.76
	Total	105	100

The Engineering Areas Libraries Group is at the top of the tally with i.e. 71 (67.62%) libraries, followed by 15 (14.29%) libraries from Medical and Allied Areas Group covering Dental Sciences, Nursing, Physiotherapy etc. categorized in the same cluster due to their small number. The table further reveals that the numbers of libraries in the General Science, Agriculture Science and Defence Science groups are comparatively less which are 8 (7.62%), 6 (5.71%) and 5 (4.76%) respectively.

Table 2: State/Union Territory wise Distribution of Libraries

Sr. No.	States/Union Territories	No. of Libraries	Percentage
1.	**Haryana**	**38**	**36.19**
2.	Punjab	**34**	**32.38**
3.	**Delhi**	**25**	**23.81**
4.	**Chandigarh**	**8**	**7.62**
Total		**105**	**100**

Further, these libraries have been categorised state wise to study the status of technical libraries located in different states. Table2 shows the State wise Distribution of libraries covered in the study. Out of 105 libraries, maximum libraries i.e. 38 (36.19%) are from Haryana, nearly equal number of 34 (32.38%) are from Punjab, 25 (23.81%) from Delhi and 8 (7.62%) libraries are from the Union Territory of Chandigarh.

Table 3: State wise Distribution of Libraries Versus Their Funding Source

States/UT	Govt.	Non-Govt.
Haryana	**11 (28.95)**	**27 (71.05)**
Punjab	**12 (35.29)**	**22 (64.71)**
Delhi	**23 (92.00)**	**2 (8.00)**
Chandigarh	**8 (100.0)**	**--**
Total /Average	**54(51.43)**	**51(48.57)**

Note: The Figures in parentheses are in percentage.

Table 3 depicts the State-wise Distribution of libraries versus their funding sources. Out of the sample, 54 (51.43%) libraries are funded by the Government while 51(48.57%) are funded by non-government sources like self finance, NGOs, private agencies etc.

Table 4 : Readymade: Library Application Software.

Software	Libraries	Percentage
LIBSYS	29	41.43
TECH LIB PLUS	1	1.43
SOUL	10	14.29
ALICE for Window	4	5.71
SANJAY	2	2.86
TROODON	2	2.86
GRANTHALAYA	2	2.86
WINISIS / CDS/ISIS	2	2.86
KOHA	2	2.86
SUCHIKA	1	1.43
Net Lib	2	2.86
GIMS/LIBRARY	2	2.86
LIMS	2	2.86
Lib Guru	2	2.86
ACTIF	1	1.43
DELPLUS	2	2.86
TLSS	2	2.86
E – GRANTHALAYA	1	1.43
SLIM++	1	1.43
Total	**70**	**100.0**

There are many ready-made Library Application Softwares available in India. These include softwares produced in India viz. Libsys,

Granthalaya, Delplus, Soul, Troodon, Sanjay, Suchika etc. Besides these softwares, the other type of softwares include softwares produced abroad but marketed in India which include: ALICE for Window produced in Australia by Softlink Australia and marketed and supported by Softlink Asia in India, TechLib Plus form USA marketed & supported by NIC, however, now NIC is no more marketing it, and CDS/ISIS and WINSIS prepared from UNESCO, which are available free of cost. Some open source softwares are also available such as Koha and NewGenLib etc. Libraries were asked to furnish information regarding the library application softwares being used by them and the response obtained is depicted in Table 4. It is found from the said responses that 41.43% libraries are using Libsys followed by 14.29% libraries are using SOUL, 5.71% libraries are using ALICE for Windows, 2.86% libraries are using Sanjay, Troodon, Granthalaya, Koha, Netlib, WINISIS/ CDS/ISIS, GIMS/Library, LIMS, Lib Guru, Delplus and TLSS each. Only 1.43% of libraries are using TECH LIB PLUS, SUCHIKA, ACTIF, E – GRANTHALAYA, SLIM++ each. This study reveals that Libsys software enjoys the greatest popularity, while the second rank in terms of popularity goes to SOUL though the difference between the popularity of Libsys and Soul is also quite sizable, while the popularity of other softwares is not mentionable.

Table 5.: Readymade Library Application Softwares Vs Level of Satisfaction: Cross Tabulation

Software	Satisfied with software	Total	
	Yes	No	
LIBSYS	23(79.30)	6(20.70)	29(100.0)
TECH LIB PLUS	1(100.0)	0(0.00)	1(100.0)
SOUL	6(60.00)	4(40.00)	10(100.0)
ALICE for Window	4(100.0)	0(0.00)	4(100.0)
SANJAY	0(0.00)	2(100.0)	2(100.0)
TROODON	2(100.0)	0(0.00)	2(100.0)
GRANTHALAYA	2(100.0)	0(0.00)	2(100.0)
WINISIS	0(0.00)	2(100.0)	2(100.0)
KOHA	2(100.0)	0(0.00)	2(100.0)
SUCHIKA	1(100.0)	0(0.00)	1(100.0)
Net Lib	2(100.0)	0(0.00)	2(100.0)
GIMS/LIBRARY	0(0.00)	2(100.0)	2(100.0)
LIMS	2(100.0)	0(0.00)	2(100.0)
Lib Guru	2(100.00)	0(0.00)	2(100.0)

ACTIF	1(100.00)	0(0.00)	1(100.0)
DELPLUS	2(100.0)	0(0.00)	2(100.0)
TLSS	2(100.00)	0(0.0)	2(100.0)
E - GRANTH ALAYA	0(0.00)	1(100.0)	1(100.0)
SLIM++	0(0.00)	1(100.0)	1(100.0)
Total	52(74.28)	18(25.72)	70(100.0)

Note: The Figures in parentheses are the percentages to total.

The study further tried to ascertain the satisfaction level with regard to the softwares being used by various libraries. Table 5 reveals that 74.28% of libraries feel satisfied with the choice of their softwares. Out of 29 Libsys users 79.3% are satisfied. The users of SANJAY, WINISIS, GIMS/LIBRARY, E - GRANTHALAYA, SLIM++ are not satisfied. In the case of CDS/ISIS and WINISIS the reason is obvious as they are just Information Storage and Retrieval software and not library application softwares. In the case of Open source software "Koha", used by only two users, both showed their satisfaction.

Conclusion:

Today, all libraries must automate their collections. The Libraries began utilising automation software in accordance with their financial capacity. Most academic libraries use proprietary software because they will receive adequate support and frequent updates from the vendor, as opposed to open source software, which requires the library staff to update themselves with the assistance of technical staff. The technical staff does not frequently provide the library staff with enough assistance, so they use proprietary software to manage the resources. The library staff should perform a thorough evaluation of the software prior to selecting any software.

References:

1. Bansode, Sadanand Y Pereira, Shamin 2008, 'A Survey of Library Automation in College Libraries in Goa State, India', *Library Philosophy & Practice,* vol.10, no. 2, p 1-7.

2. Haneefa, K Mohamed 2007, 'Information & communication technology in special libraries in Kerala', *Annals of Library and Information technology Studies,* vol. 54, pp. 32-36.

3. Matoria, Ram Kumar, Upadhyay, PK & Moni, Madaswamy 2007, 'Automation and networking of public libraries in India using the e – granthalaya software from the National Informatics Centre', Program: electronic libraries and information system, vol. 41, no. 1, pp. 47 – 58, viewed 2 March 2008, <http://www.emeraldinsight.com/10.1108/00330330710724881>.

4. Guha, B, Rajan, TN & Chakraborty, AR 1969, 'Automation in libraries: A short review', *Ann. Lib. Sci. Doc.,* vol. 16, no. 2, pp. 59-73.

5. Ravichandra, Rao IK 1986, 'Design and development of library automation: Functions, file requirements and procedures', *Library Science with a slant to Documentation.* vol. 23, no. 1, pp. 1-9.

6. Reddy, ER 1995, 'Automation and Networking Experience of IGM Library, University of Hyderabad', *CLIS Observer,* vol. XII, no. 3-4, p 37-42.

7. Wei, Chiu-Chi, Liu, Ping-Hung & Chen, Chie-Bein 2000, 'An automated system for product specification and specification and design', *Assembly Automation,* vol. 20, no. 3, pp. 225-233, viewed 7 October 2007, <http://www.emerald-library.com>.

8. Yeates, R 1996, 'Library automation: the way forward', *Program,* vol. 30, no. 3, pp. 239-53.

9. Akinfolarin, WA 1998, 'Automation in the Adeyemi College of Education Library, Ondo', *Library Management,* vol. 19, no. 1, pp 26 – 28, viewed 22 November 2005, <http://www.emeraldinsight.com/ 10.1108/014351298101 98567>.

10. Anil Singh 1998, 'Compatibility of library automation software package with multimedia', *Herald of Library Science,* vol. 37, no. 3-4, pp. 72-75.

11. Patel DR & Bhargava, Rachna 1995, 'Comparative study of software available in the Indian market for library automation', *DESIDOC Bulletin of Information Technology*, vol. 15 no. 3, pp. 3-12.

12. Ramzan, Muhamman& Diljit Singh 2009, 'Status of information technology application in Pakistani libraries', *The Electronic Library,* vol. 27, no.4, pp.573-587, viewed 19 January 2010, <http://www. emeraldinsight. com/10.1108/02640470910979543 >.

13. Aryal, Rudra Prasad 2005,'Library Automation in Kathmandu University'. *TULSSAA,* vol.4, no. 1.

14. Khare, V. P. (2013). Automation in the libraries of Indian institute of technology: A study of retrospects and prospects with an emphasis on system design and cost-benefits analysis. Ph.D. thesis.Department of Library and Information Science. The University of Technology. Bundelkhand University.1.

15. Iglesias, E. (2013). Robots in academic libraries: Advancement in library automation. IGI Global.13.

16. Prasad, A. (2012). Digital cataloging: New Delhi: Arise Publishers and Distributors.

17. Tiwari, P. (2010). Library automation. New Delhi: APH Publishing Corporation.

18. Mathew, K.S. (2011). Impact of information communication technology (ICT) on professional development and

educational needs of library professionals in the universities of Kerala. Ph.D. thesis. Library and Information Science. Department of Computer Science Cochin University of Science and Technology. 4.

19. Kemdarne, S. B. (2012). A study of library automation and networking in dental college libraries affiliated to Rajiv Gandhi University of health sciences, Bangalore. Ph.D. Thesis, Department of Library & Information Science, Tilak Maharashtra Vidhyapeeth.
20. Balasubramanian, P. (2011). Library automation and networking. New Delhi: Deep & Deep Publications.