Research Journal of Library Sciences ISSN 2320–8929
Vol. **7(2),** 1-7, July **(2019)** *Res. J. Library Sci.*

Status of Koha-ILS in Medical libraries of Bangladesh

Md. Monirul Islam[1], S.M. Humayun Kabir[2], Bepin Behary Karmakar[3], Tashnova Afrin[4], Md. Nurul Islam[5] and Md. Mohi Uddin[5*]

[1]University of Dhaka and Librarian, Army Medical College Chittagong, Bangladesh
[2]National Health Library and Documentation Centre, Mohakhali, Dhaka-1212, Bangladesh
[3]Birdem General Hospital, Shahbagh, Dhaka-1000, Bangladesh
[4]National Institute of Cancer Research and Hospital, Mohakhali, Dhaka-1212, Bangladesh
[5]International Islamic University Chittagong, Bangladesh
mohiuddinell@gmail.com

Available online at: www.isca.in, www.isca.me
Received 27th May 2019, revised 5th July 2019, accepted 20th July 2019

Abstract

The main purpose of this research to present the current status of koha-ILS in the medical and health libraries of Bangladesh in conducting library operations. The study adopted a descriptive survey design and the data was collected using a questionnaire from 24 Medical and Health institutional libraries in Bangladesh. Collected data was analyzed using frequency count and percentage. The study found that only three medical and health libraries are using Koha-ILS. Onemedical university, one medical College and one health institutional library are using SLiMS OSS. One medical college library uses customized software. Some libraries are trying to adapt automation with the help of Koha Open Source Software to conduct the library services properly. But Most of the medical and health libraries of Bangladesh are not aware about library automation system. This paper draws the attention of medical university and college authority as well as other health institute's authority to embrace Open Source Software (OSS) as a tool which improves the standard of library services. The authors are the medical and health library professionals who are involved in library automation process at medical and health libraries in Bangladesh. This will reflect a tremendous impact on library professionals to adapt them with the automation process in the medical and health libraries in Bangladesh.

Keywords: Koha-ILS, Library Automation, Medical Education, Health library, Bangladesh.

Introduction

Medical and Health library automation has been a well-established field of academic work and practice among developed countries. In developing countries, this field is practically non-existent. Health libraries in these countries however, are acquiring new information and communication technologies in an attempt to modernizetheir services. In many developing countries, information technologies are transferred without previous analyses of existing information processing procedures; less interest is placed on the social and cultural elements involved[1]. A technology-based library is a pre-requisite to continue education and research of any college, institute and university[2]. Medical and health libraries "exists to meet the information needs of its users by the right information to the right person at the right time The use of Information and Communication Technologies (ICTs) in libraries is increasing gradually for providing high-quality personalized services to its users[3]. The use of ICTs in libraries may be classified into three broad groups: Integrated Library Systems (ILS), information storage and dissemination, and administration/ office management tasks[4]. Generally, there are three types of ILSs which are open source, freeware, and proprietary/ commercial[5]. Currently, adoption and use of Open Source Integrated Library Systems (OSILS) in libraries are gaining momentum[6]. There are a huge number of medical and health libraries available in Bangladesh where the automation status is not satisfactory level.

The objective of the study: The prime objective of the study is to describe the present status of koha in the libraries of medical and health institutions of Bangladesh. More specifically, the objectives of the study are: i. To overlook the current library automation services in the medical and health intuitional libraries of Bangladesh. ii. To measure professionals satisfaction level and adaptations of them with library automation.

Literature Review: A huge number of studies on library automation process especially with the help of koha-ILS have been already done in national and international arena. The term Integrated Library System (ILS) is also known as Library Management System (LMS) which is an Enterprise Resource Planning (ERP) system for a library[7,8]. An ideal ILS should have the following modules which are acquisition, cataloging, OPAC, circulation, serials control, Inter-Library Loans (ILL), reporting and patron management[9,10]. Anuradha and Sivakaminathan defined that an Integrated Library Automation Package (ILAP) integrates all routine works of a library[11]. Uzomba et al. described that ILS is used to automate many activities in the library[12]. Ahammad defined the term ILS refers to having all library functions under one system[13]. Silvestre

stated that an ILS is planned, conceived and developed to coordinate and automate several library functions and register all the library operations. Many librarians in Bangladesh are working to bring their libraries up to global standards. The history of technology involved in library operations and services in Bangladesh goes back to the 1980s[14,15]. Alam and Islam reviewed that automated library systems in Bangladesh are still in the infancy level. However, in recent times, very few initiatives have been noticed taken by different institutions[16].

Operational Definition: Koha-ILS: The name Koha comes from a Maori term for a gift or donation. The development of koha began in 1999, funded by a group of libraries in rural New Zealand[17]. Mentionable that Koha is a web-based ILS. Koha is the first and full-featured OSILS, mostly used worldwide by the public, academic and special libraries. Since the original implementation in 1999, Koha functionality has been adopted by thousands of libraries worldwide, each adding features and functions, deepening the capability of the system. Koha is web-based ILS, with cataloging data stored in MARC and accessible via Z39.50 or SRU. Koha is available for free download from the Koha web site or from one of the companies that supports the OSS.

Methodology

A total of 24 medical university, medical college and health institutional libraries were decisively selected for this research. To give a detailed analysis of the study, the websites of these medical universities, colleges and health institutions were reviewed. Besides this, the literatures on the automation system from the national and international arena were reviewed to get the concept of automation and Koha-ILS. To assess the present scenario of library automation by koha-ILS in medical and health libraries of Bangladesh questionnaire and interview methods have been carried out in selected libraries.

Method of Data Analysis: The data collected from the field was analyzed using the descriptive statistics of simple percentage and frequency count. Data collected for the objectives of the study were coded using SPSS Version 22.0. This method was adopted because of their simplicity and easy understanding.

Demographic Variables: The demographic information of the respondents in Table-1 reveals that 7(29.2%) were in between of 20- 29years, 10(41.7) were 30- 39years, 6(25.0) were 40-49years while 1(4.2%) fall between the age of 50-59years. This indicates that the largest percentage were within the range of 30-39years. In addition, 13(54.2%) of the respondent were male and 11(45.8%) female. On the position of the respondent, 14(58.3%) were librarian, 2(8.3%) were deputy librarian, 4(16.7%) were assistant librarian, 1(4.2%) were cataloguer and 1(4.2) were library assistant. Also the institutions of the respondents those took part in the study, 14(58.3%) were from public, 3(12.5%) were from private and 1(4.2%) was from autonomous institution. This indicates that most of the respondents were from public institution.

Table-1: Demographic information of the respondents.

Demographic information		Frequency	Percentage (%)
Age	20-29 years	7	29.2 %
	30-39 years	10	41.7 %
	40-49 years	6	25.0 %
	50-59 years	1	4.2 %
	Total	24	100 %
Gender	Male	13	54.2 %
	Female	11	45.8 %
	Total	24	100 %
Status	Librarian	14	58.3 %
	Deputy Librarian	2	8.3 %
	Assistant Librarian	4	16.7 %
	Cataloguer	1	4.2 %
	Library Assistant	1	4.2 %
	Researcher	2	8.3 %
	Total	24	100 %
Institution	Public	14	58.3 %
	Private	3	12.5 %
	Army Led	6	25.0 %
	Autonomous	1	4.2 %
	Total	24	100 %

Medical and health institutions in Bangladesh: In Bangladesh, Bangabandhu Sheikh Mujib Medical University (BSMMU) is the first medical university in Bangladesh. It offers only postgraduate degrees (MD, PhD, MS, MPhil, MDS, Diploma and FCPS Courses[18]. Another two medical universities named Chittagong Medical University (CMU) and Rajshahi Medical University (RMU) are also announced as Medical University. Table-2 shows the status of medical university in Bangladesh.

Table-2: Medical university status in Bangladesh.

Medical University Name	Est. year
"Bangabandhu Sheikh Mujib Medical University (BSMMU)"	1965
Chittagong Medical University (CMU)	2016
Rajshahi Medical University (RMU)	2017

A medical school is known as a medical college. Allopathic and Alternative Medicine related medical education at the graduate level is provided by medical colleges. The colleges are under the jurisdiction of the Ministry of Health and Family Welfare (MoHFW), and are affiliated with a university on the respective region like University of Dhaka (DU), CMU, RMU, Gono Bishwabidyalay (GB), Bangladesh University of Professionals (BUP), Shahjalal University of Science and Technology (SUST) and University of Science and Technology (USTC). They however have to be recognized after meeting a set criterion by a central regulatory authority called Bangladesh Medical and Dental Council (BM and DC). There are total 106 recognized medical colleges in Bangladesh, 36 of which are public and 69 private. Apart from these, there are six medical colleges which are run by the Bangladesh Armed Forces and are under the Ministry of Defence. BM and DC is a statutory body with the responsibility of establishing and maintaining high standards of medical education and recognition of medical qualifications in Bangladesh [19]. BM and DC was formed under the Bangladesh Medical Council Act. This act was made in 1973. Like medical education, dental education is conducted by different Dental College located all over the country. These Dental Colleges are affiliated with medical faculty of different government funded public University. Each Dental college is affiliated with a specific Medical Faculty of a University. BM and DC also act as motoring and regulatory body to monitor, assess, evaluate, and permit the practice license of these dental schools graduate along with respective University. The three universities that have Dentistry in their Medical Faculty are DU, The University of Chittagong (CU), the University of Rajshahi (RU) and SUST. This three Public university have their Medical Faculty affiliated dental college and hospital those may be publicly or privately funded". There are 9 public and 18 private dental colleges/units exist in Bangladesh. Table-3 shows the status of medical and dental colleges of Bangladesh.

The Ministry of Health and Family Welfare implements its programmes and provides services through different executing and regulatory authorities. The executing authorities include five Directorates of the Ministry and some other organizations. The Directorates are: the Directorate General of Health Services (DGHS); Directorate General of Family Planning (DGFP); Directorate General of Drug Administration (DGDA); Directorate of Nursing Services (DNS); and the Health Engineering Department (formerly known as the Construction Management and Maintenance Unit). The DNS and the DGDA are attached to the health wing of the Ministry of Health and Family Welfare. The DNS is responsible for nursing education and nursing services, while the DGDA implements drug regulations. Other executive organizations accomplishing significant tasks of the Ministry include the Transport and Equipment Maintenance Organization, National Electro-medical and Engineering Workshop, and the Essential Drugs Company Limited. The regulatory bodies of the health sector are the Bangladesh Medical and Dental Council (BMandDC), Bangladesh Nursing Council (BNC), State Medical Faculty (SMF), the Ayurvedic, Homeopathy and Unani Board, and the Bangladesh Pharmacy Council[21.] . Besides this, there are so many medical and health institutes exist in Bangladesh such as Unani and Ayurvedic medical college (1), Unani diploma college (16), Ayurvedic diploma college (9), Homeopathic medical college (2), Homeopathic diploma college (5), Post graduate medical institute (39), Nursing college (43), National health institute (1), International institute, ICDDR,B (1) etc.

Table-3: Medical and dental college status in Bangladesh[20].

Type of Medical and Dental College	Number (Affiliated with)									Total
	DU	CMU	RMU	GB	BUP	SUST	USTC	CU	RU	
Govt. Medical College	16	6	12	0	1	1	0	0	0	36
Non-Govt. Medical College	39	14	10	1	0	4	1	0	0	69
Govt. Dental College	5	1	2	0	0	1	0	1	2	12
Non-Govt. Dental College	14	1	3	1	0	0	0	1	3	23
Army Medical College	0	0	0	0	5	0	0	0	0	5
Total	74	22	27	2	6	6	1	2	5	145

Results and Discussion

Status of Koha-ILS in medical and health institutional libraries of Bangladesh: Automation status: To find the overview of 24 medical and health libraries collected data were analyzed. Table-4 shows the automation status of the selected libraries.

From Table-4, shows that the largest group 19(79.2%) of the respondents' library were manual, 4(16.7%) were hybrid and only 1(4.2%) respondent's library was fully automated. This indicates that most of the medical and health libraries of Bangladesh are manual.

To get the information about adopted software used in the selected medical and health libraries the data collected from the respondents were analyzed. Table-5 shows the status of used ILS software in the selected libraries.

From Figure-1, it is apparent and clearly stated that the library of the largest group 17(70.8%) of the respondents don't use any software, 3(12.5%) use Koha, 3(12.5%) use SLiMS and only 1(4.2%) uses customized software. This indicates that the medium group of medical and health libraries of Bangladesh use either koha or SLiMS as Integrated Library System (ILS). Table 5 demonstrates the status of library automation in medical and health institutes of Bangladesh.

Resources and users in the selected libraries: From Table-6, presented that the selected Medical university, college and institute libraries managed average 9499 books of 3284 titles for 1316 users.

Satisfaction Level: Out of the 24 respondents including the 3 institutions using Koha in Figure-2, 9 (37.5%) were satisfied with the library services, 6 (25.0%) were not satisfied and 9(37.5%) ware less satisfied. That indicates the satisfaction level of library professionals of medical and health libraries is not satisfaction level.

Table-4: Library automation status of selected medical and health institutes.

Status		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully automated	1	4.2	4.2	4.2
	Hybrid	4	16.7	16.7	20.8
	Manual	19	79.2	79.2	100.0
	Total	24	100.0	100.0	

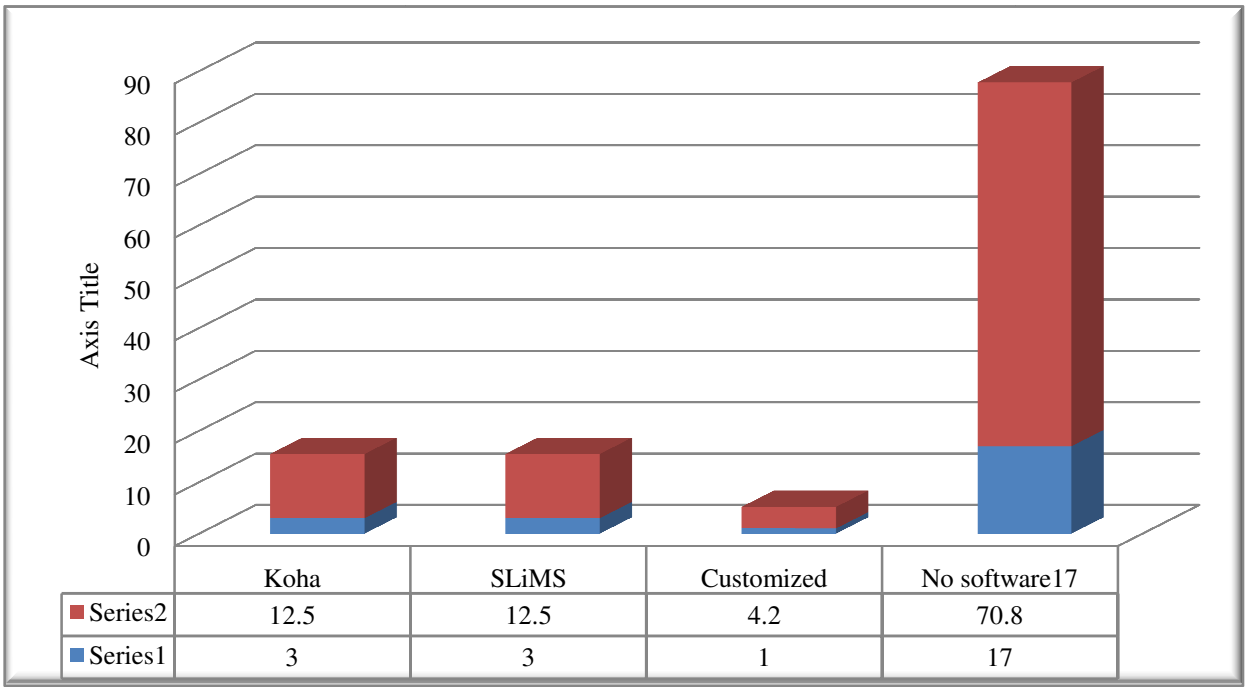

Figure-1: Used ILS Software in medical and health libraries of Bangladesh.

Table-5: Use of ILS in the selected medical and health libraries in Bangladesh.

Library name	Institute Type	Software	Version	Est. Year
National Health Library and Documentation Centre Library (NHLDC)	Public Institute	Koha	18.05	2003
National Institute of Mental Health and Hospital (NIMH) Library	Public Institute	Koha	18.04	2018
Bangladesh Health Professions Institute Library	Private	Koha	17.05.02	2014
BSMMU Library	Public University	SLiMS	3.0	2012
BIRDEM Library	Public Institute	SLiMS	8	2017
Army Medical College Chittagong (AMCC) Library	Army Led	SLiMS	6.2	2018
Chattagram Maa-O-Shishu Hospital Medical College (CMOSHMC) Library	Private	Customized (Made by E Vision software company)	-	2014

Table-6: Number of books and patrons.

University	No. of Books	No. of Titles	No. of Patrons
National Health Library and Documentation Centre (NHLDC)	17890	3400	250
National Institute of Mental Health and Hospital Library	2000	100	200
Bangladesh Health Professions Institute Library	11598	4500	2000
BSMMU Central Library	25000	12500	2560
BIRDEM Library	3600	1045	2500
Army Medical College Chittagong Library	1863	300	250
Chattagram Maa-O-Shishu Hospital Medical College (CMOSHMC) Library	4545	1140	1453
66496	22985	9213	
9499	3264	1316	

Figure-2: Satisfaction level of library professionals towards their library service.

Discussion of Findings: Easy access to information resources in a library collection and beyond is one reason behind every installation of an ILS. Through the implementation of Koha, users' satisfaction in the area of quick information access and retrieval, online search for e-resources, OPAC search, client's registration, charging and discharging of resources among others were done with ease[22].

The first finding in this study showed that most of the medical and health libraries (79.2) are providing library services manually. 16.7% libraries are hybrid and 4.2% are fully automated. That means most of the medical and health libraries of Bangladesh are in primary level in Integrated Library Software (ILS).

The second result in this study showed that only 3 medical and health libraries are using Koha Opens Source Software. This indicates that the adoption of Koha-ILS in medical and health libraries of Bangladesh is not satisfactory level.

The third findings in this study showed that 37.5% library professional were satisfied with the library services, 25.0% were not satisfied and 37.5% ware less satisfied. That indicates the library professionals of medical and health should be more aware to adopt library automation software to increase the status of library.

Recommendation: To increase the adoption of automation system especially with the help of Koha-ILS in medical and health libraries of Bangladesh the following recommendations should be absorbed: i. Since Koha is customizable and easy to search so that medical and health libraries should develop automation activities with Koha software. ii. Koha is OSS which is more appropriate to select by any health libraries especially small, medium and large library considering the economic condition of developing countries. iii. Develop positive attitude towards the library automation software. iv. Organize the training program by health ministry and other related organization. V. Medical and health authority should increase the budget for library automation.

Conclusion

Koha is a well featured ILS which make the libraries from manual to automated. The findings indicated that the medical libraries as well as health libraries of Bangladesh are till yet to adapt this software properly and widely. It is known that Koha is open source library software with original source code. It is possible to adjust the source code by which professionals or users can provide the better service to library users. Furthermore, the major challenges facing Koha library software are consciousness regarding library automation, lacking of skilled professionals, poor maintenance, and negligence from higher authority. So library professionals should be aware more about library automation.

References

1. Macías-Chapula C.A. (2001). Implementation of a Hospital Library Automation Project in Mexico: Learning from Experience. *The Electronic Journal of Information Systems in Developing Countries*, 5(1), 1-12. https://doi.org/10.1002/j.1681-4835.2001.tb00035.x

2. Ranganathan S.R. (1961). Reference service (2nd ed.). Bombay: Asia Publishing House.

3. Rahman M. (2014). Use and applications of library software in university libraries of Bangladesh. Retrieved from http://repository.library.du.ac.bd/xmlui/bitstream/handle/123456789/431/Mizanur%20Rahman.pdf?sequence=1

4. Islam M.A. (2007). Application of information technology in the special libraries of Bangladesh: Problems and prospects. (Unpublished PhD thesis). Sambalpur University, India.

5. Chouhan L.B. (2010). Open Source Software (OSS) for Library Management-A Study. *NATIONAL INSTITUTE OF SCIENCE COMMUNICATION AND INFORMATION RESOURCES (NISCAIR), CSIR*. Retrieved from http://eprints.rclis.org/22633/

6. Kumar V.V. and Jasimudeen S. (2012). Adoption and user perceptions of Koha library management system in India. *Annals Library and Information Studies*, 59, 223-230.

7. Ahammad N. (2014). Implementing the Koha integrated library system at the Independent University, Bangladesh: A practical experience. *The Electronic Library*, 32(5), 642-658. https://doi.org/10.1108/EL-04-2012-0036

8. Uzomba E.C., Oyebola O.J. and Izuchukwu A.C. (2015). The use and application of open source integrated library system in academic libraries in Nigeria: Koha example. *Library Philosophy and Practice*, 1.

9. Ahammad N. (2014). Implementing the Koha integrated library system at the Independent University, Bangladesh: A practical experience. *The Electronic Library*, 32(5), 642-658. https://doi.org/10.1108/EL-04-2012-0036

10. Caminita C. (2010). Open source integrated library systems [Powerpoint]. Paper presented presented at the Louisiana Library Association Annual Conference. Retrieved from Paper presenhttp://www.slideshare.net/stellacomans/open-source-integrated-library-systems

11. Anuradha K.T. and Sivakaminathan R. (2009). Enhancing Full text Search Capability in Library Automation Package: A Case Study with Koha and Greenstone Digital Library Software. In *Proceedings of 2009 International Conference on Computer Science and Information Technology Singapore*, 232-236. Retrieved from http://greenstonesupport.iimk.ac.in/Documents/koha-gsdl.pdf

12. Uzomba E.C., Oyebola O.J. and Izuchukwu A.C. (2015). The use and application of open source integrated library system in academic libraries in Nigeria: Koha example. *Library Philosophy and Practice*, 1.

13. Ahammad N. (2014). Implementing the Koha integrated library system at the Independent University, Bangladesh: A practical experience. *The Electronic Library*, 32(5), 642-658. https://doi.org/10.1108/EL-04-2012-0036

14. Silvestre J.J.R., da Cunha L.A., Le Meur J.-Y. and Šimko T. (2010). An integrated library system on the CERN document server. Universidade de Évora. Retrieved from http://librarytechnology.org/docs/20845.pdf

15. Shuva N.Z. (2012). Building digital libraries in Bangladesh: A developing country perspective. *The International Information and Library Review*, 44(3), 132-146. https://doi.org/10.1016/j.iilr.2012.07.002

16. Alam M.S. and Islam M.S. (2011). Digital Library Initiatives in Bangladesh. Retrieved from http://www.academia.edu/download/30569738/5.pdf

17. Tella A., Dina N., Olaniyi O.T., Memudu S.A. and Oguntayo S.A. (2017). Assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria. *Journal of Applied Information Science and Technology*, 10(2).

18. List of medical colleges in Bangladesh (2019). Retrieved from https://en.wikipedia.org/wiki/List_of_medical_colleges_in_Bangladesh

19. BM and DC. (2019). New list of Recognized Medical and Dental Colleges and Dental Units (Govt. and Non-Govt.) | Bangladesh Medical and Dental Council (BMandDC). Retrieved January 27, 2019, from http://bmdc.org.bd/recognized-medical-and-dental-colleges/

20. BM and DC. (2019). New list of Recognized Medical and Dental Colleges and Dental Units (Govt. and Non-Govt.) | Bangladesh Medical and Dental Council (BM and DC). Retrieved January 27, 2019, from http://bmdc.org.bd/recognized-medical-and-dental-colleges/

21. Ahammad N. (2014). Implementing the Koha integrated library system at the Independent University, Bangladesh: A practical experience. *The Electronic Library*, 32(5), 642-658. https://doi.org/10.1108/EL-04-2012-0036

22. Tella A., Dina N., Olaniyi O.T., Memudu S.A. and Oguntayo S.A. (2017). Assessment of the Use of Koha Library Software in four Selected University Libraries in Nigeria. *Journal of Applied Information Science and Technology*, 10(2).