Technological competencies of professionals and challenges in using and implementing *koha* in Indian libraries

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The study analyses the awareness about *koha* among LIS professionals and assesses the challenges in implementing and using *koha*. A structured questionnaire was used to collect data from 167 LIS professionals. The study concludes that library must appoint or hire a professional having sound technical skills in order to minimize the error handling and dependency on others for addressing *koha* related issues. LIS professionals have to upgrade their knowledge by attending training programs, workshops, and spend more time on practicing the technical part of *koha*.

Keywords: Library automation; Open source software; Library Management System; *koha*

Introduction

A computerized library enables users to find the information and documents available in the library with ease. According to Kent[1], "Library automation is the use of automatic and semiautomatic data processing machines to perform such traditional library activities as acquisitions, cataloguing, and circulation. These activities are not necessarily performed in traditional ways, the activities themselves are those traditionally associated with libraries; library automation may thus be distinguished from related fields such as information retrieval, automatic indexing and abstracting and automatic textual analysis".

Ever since the library automation came into being, there have been many library automation software including many commercial and some open source software. *koha*, a very popular open source ILMS was developed in 1999 in New Zealand and has gone on to become a popular integrated library management system (ILMS) globally. *Koha* has all features for managing libraries, allows customization of its different functional modules, follows international standards such as MARC, Z39.50, OAI-PMH for easy data management, andhas multilingual online public access catalogue for data searching. It is a platform independent software with robust RDBMS MySQL as backend along with Apache Web Server. In spite of *koha* being freely available, the statistics available on *koha* community site (http://wiki.koha-community.org) says that less than 450 Indian libraries are using *koha*.[2]Adoption rate of open source library management system in India is comparatively slow due to various reasons ranging from lack of awareness among professionals to low computer literacy skills[3].

This study is an attempt to find the technological competencies of professionals and challenges in using and implementing *koha* in Indian libraries and also to identify the requirements for wide spread implementation of *koha* in Indian libraries.

Review of literature

Bansode and Viswe[4] conducted a study on ICT literacy among library professionals working in the university libraries in Maharashtra, India. This study included 149 library professionals belonging to 17 state universities in Maharashtra. The study concluded that to efficiently function in an ICT environment, library professionals need to enhance their literacy of various ICT-based tools and technologies. Babu and Thomas[5] conducted a survey on use of *koha* in India. The study based on survey of 160 respondents concluded that although *koha* is being used there is limited contribution being made by the *koha* user community for the development of the software.

Narayanswamy and Kumar[6] investigated about the ICT proficiency level of library professionals in the Karnataka state. A questionnaire survey revealed that the library professionals have average skills to perform ICT related tasks in libraries. They found that *koha* was used in most libraries and identified inadequate training in ICT applications as an issue. Seena and Pillai[7]stated that library professionals do not efficiently use technologies in the libraries that they surveyed. Thankachan and Moore[8] reported that lack of adequate

resources to train the professionals was the single biggest challenge in the adoption of FOSS.

From the foregoing it is evident that inadequate technology skill is an impediment in the technology adoption and implementation in Indian libraries. Here we look the issues concerning *koha* implementation in Indian libraries.

Objectives of the study

- To find out the awareness among library professionals about *koha*;
- To identify the satisfaction level of different libraries in using *koha*; and
- To understand the challenges in using *koha* in Indian libraries;

Methodology

An online structured questionnaire was prepared using QuestionPro and was circulated among library professionals working in Indian libraries. The online questionnaire was administered via social media, online forums, multiple library professionals WhatsApp groups and emails. Seven hundred and fifty-five library professionals viewed the survey link out of which 457 professional spartially filled the questionnaire that were unusable. One hundred and sixty-seven library professionals completed the questionnaire and these were considered for the study.

Results

Out of the 167 LIS professionals, 55 (33%) were from university libraries, 50 (30%) from college libraries, 24 (14%) from special libraries, 10 (6%) from public libraries, 9 (6%) from school libraries and 19 (11%) from other libraries.

Knowledge about ILMS *koha*

One hundred and forty-seven out of the 167 professionals mentioned that they are aware about integrated library management systembut had not used *koha*. Majority of those using *koha* expressed that *koha* is easier than the previous library management system they had used. One hundred and twenty (82.19%) professionals out of 146 are satisfied with the various modules in *koha.* For smooth operation of *koha,* 101 (68.71%) professionals believe that professionals must have technical skills (Table 1).

Advantages of *koha*

One hundred and fifty-two (97.44%) professionals out of 156 indicated that *koha* is very useful. As to if '*koha is reliable and secure*', 122 (78.71%) out of 155 professionals agree with the same. About 94% have agreed that *koha* has helped to improve their library services. Although *koha* is an open source software, only 76.28% of the respondents have said that *koha* is a cost effective software. About 84% of the LIS professionals have indicated that *koha* is easy to operate (Table 2).

Satisfaction level of libraries in using *koha*

Koha includes all modules required in any academic library including the acquisition,

Table 1 — Knowledge about ILMS *koha*				
Questions	Total Count	Count & Percentage		
		Yes	No	N/A
Have you ever heard about Integrated Library Management System *koha*?	147	142 (96.6%)	5 (3.4%)	0
If you have used *koha*, do you find *koha* easier than previous library management system?	147	126 (85.71%)	14 (9.52%)	7 (4.76%)
Do different modules of *koha* satisfy your all library needs?	146	120 (82.19%)	17 (11.64%)	9 (6.16%)
Do you get all reports from *koha* required in your Library?	147	102 (69.39%)	30 (20.41%)	15 (10.2%)
Does *koha* essentially require technical skills to operate?	147	101 (68.71%)	41 (27.89%)	5 (3.4%)

Table 2 — Advantages of ILMS *koha*				
Questions	Total Count	Count & Percentage		
		Agree	Don't Agree	Somewhat Agree
koha is very useful.	156	152 (97.44%)	0	4 (2.56%)
koha is reliable and secure.	155	122 (78.71%)	8 (5.16%)	25 (16.13%)
koha has helped to improve library services.	156	146 (93.59%)	2 (1.28%)	8 (5.13%)
koha has reduced the time to access the library resources.	157	141 (89.81%)	6 (3.82%)	10 (6.37%)
koha is very cost effective.	156	119 (76.28%)	28 (17.95%)	9 (5.77%)
koha is easy to operate.	154	129 (83.77%)	13 (8.44%)	12 (7.79%)

cataloguing, circulation and serial control modules. Out of 155 LIS professionals who responded to the questions related to the satisfaction level with various modules, 79 (50.97%) professionals reported that they are highly satisfied with the acquisition module available in *koha*. As for cataloguing modules, 125 respondents (79.62%) are very satisfied, 20 (18.74%) are somewhat satisfied and 3 (1.91%) are less satisfied. One hundred and forty-three professionals (91.08%) indicated that they are very satisfied with the circulation module and 11 (7.01%) are somewhat satisfied and 3 (1.91%) are less satisfied. Responses to the rest of the modules are given in Table 3.

It is seen that nearly 91% of the respondents are very satisfied with OPAC. But it needs to be remembered that OPAC is used by the users and it is assumed that the high satisfaction rate stated here by the library professionals are would be reflective of the user feedback.

Problems and challenges in using *koha*

The problems and challenges encountered by the library professionals while using acquisition, cataloguing, circulation, serials, report generation etc., were captured through the feedback. It is seen that difficulty to use these modules were in the range of 5% to 14% for most of the modules except updating *koha* that about 33% of the respondents found it difficult (Table 4).

Problems and challenges in implementing *koha*

Out of 156 professionals, 131 (83.97%) have responded that they had faced problems in operationalizing the hardware with *koha*. The LIS professionals also faced problems and challenges with regard to technical and skilled manpower, institutional support, etc., with 70-83% respondents facing problems and challenges. With regard to migrating data too nearly 60% of the LIS professionals faced problems (Table 5).

Table 3 — Satisfaction level of libraries in using *koha*

Questions	Total Count	Count & Percentage			
		Very Satisfied	Somewhat Satisfied	Less Satisfied	Dissatisfied
Acquisition Module	155	79 (50.97%)	59 (38.06%)	15 (9.68%)	2 (1.29%)
Cataloguing Module	157	125 (79.62%)	29 (18.47%)	3 (1.91%)	0
Circulation Module	157	143 (91.08%)	11 (7.01%)	3 (1.91%)	0
Serial Control Module	147	63 (42.86%)	59 (40.14%)	22 (14.97%)	3 (2.04%)
Alert Services (Overdue, Issue/Return, Hold etc.)	150	110 (73.33%)	34 (22.67%)	6 (4%)	0
Online Public Access Catalogue	155	141 (90.97%)	10 (6.45%)	3 (1.94%)	1 (0.65%)
Current Awareness Services	149	73 (48.99%)	58 (38.93%)	17 (11.41%)	1 (0.67%)

Table 4 — Problem and challenges in using ILMS *koha*

Questions	Total Count	Count & Percentage		
		Yes	Sometimes	No
Difficulty in acquisition of book	152	19 (12.5%)	76 (50%)	57 (37.5%)
Difficulty in cataloguing document	153	12 (7.84%)	39 (25.49%)	102 (66.67%)
Difficulty in circulation - issue / return/ renewal	155	9 (5.81%)	20 (12.9%)	126 (81.29%)
Difficulty in serial management	153	21 (13.73%)	71 (46.41%)	61 (39.87%)
Difficulty in report generation	154	21 (13.64%)	69 (44.81%)	64 (41.56%)
Difficulty in searching book details via OPAC	155	8 (5.16%)	28 (18.06%)	119 (76.77%)
Difficulty in reserving/renewing books via OPAC	154	11 (7.14%)	40 (25.97%)	103 (66.88%)
Difficulty in updating *koha*	153	50 (32.68%)	59 (38.56%)	44 (28.76%)

Table 5 — Problem and Challenges in implementing ILMS *koha*

Questions	Total Count	Count & Percentage	
		Yes	No
Required Hardware (Server, Printer, Internet, Barcode Reader etc.) available	156	131 (83.97%)	25 (16.03%)
Adequate technical skilled manpower in library	157	115 (73.25%)	42 (26.75%)
Adequate skilled library professionals available	155	110 (70.97%)	45 (29.03%)
Support of Management	155	117 (75.48%)	38 (24.52%)
Support of Library Staff	154	122 (79.22%)	32 (20.78%)
Difficulty in data migration	156	93 (59.62%)	63 (40.38%)

Conclusion

Even as *koha's* popularity continues to grow throughout the world, its adoptability in India is rather slow. As reflected in this and other previous studies, lack of requisite ICT based technical competencies remain a hurdle. Libraries require to appoint or hire skilled professionals to handle *koha* or the existing library professionals should be retrained to enable them to implement and handle *koha*. It would also help if *koha* is taught exhaustively in BLISc and MLISc programmes.

References

1. Kent A, *Encyclopedia of Library and Information Science*. New York: Marcel Dekkar, 1997
2. Koha Library Software Community, Available at: http://www.koha-community.org (Accessed on July 01, 2019)
3. Vimal Kumar V and Jasimudeen S, Adoption of user perceptions of Koha library management system in India, *Annals of Library and Information Studies*, 59 (2012) 223-230.
4. Bansode SY and Viswe RR, ICT literacy among library professionals working in the university libraries in Maharashtra, India: astudy, *DESIDOC Journal of Library & Information Technology*, 37 (5) (2017), 353-359.
5. Babu H and Thomas P J, Use of koha in India: problems and prospects, *IASLIC Bulletin*, 62 (4) (2017) 243-249.
6. Narayanaswamy BV and Kumar K D, Knowledge and utilization of ICT and open source software among the library professionals of Karnataka: a case study, *International Journal of Applied Research,* 3 (6) (2017), 39-45.
7. Seena, ST and Pillai KGS, A study of ICT skills among library professionals in the Kerala University library systems, *Annals of Library and Information Studies,* 61 (2) (2014), 132-141.
8. Thankachan B and Moore DR, Challenges of implementing free and open source software (FOSS): evidence from the Indian educational setting, *International Review of Research in Open and Distributed Learning,* 18 (6) (2017) https://doi.org/10.19173/irrodl.v18i6.2781
9. Antony S M, Vijayakumar A, Sweety M Antony and Vijayakumar A, Status of technological competencies of library professionals in colleges of Kerala: an analytical study, *International Journal of Library & Information Science*, 5(3) (2016) 133–140.