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Adoption and Functionality of Koha Integrated Library Management System in Indian Institute of Technology: A Comparative study between Bombay and Bhubaneswar

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Abstract

The study explores the adoption of Koha ILMS in the Indian Institute of Technology Bombay (IITB) and Indian Institute of Technology Bhubaneswar (IITBBS). The particular study researcher adopted the survey method and questionnaire tool used for data collection. The finding of the study shows both institutes are using commercial software before adopting Koha. Institutes migrate their data from old ILMS to Koha; Only IITBBS faces data quality problems during migration. Almost all of Koha modules have well received by both institutes. They are satisfied with only the acquisition module. The function of serial modules is unclear to IITB; however, open-source, user-friendly, source code and ease of use are compelling reasons to implement Koha and overall experience with Koha is excellent by the institutes.

Keyword: Koha, Open-source, Integrated library management system, Library Automation, Data Migration

Introduction

In recent years Open-source software is gaining popularity in the library profession. Koha is the open-source integrated library management system developed by katipo communication, New Zealand, in 1999. The popularity of the software is gaining day by day in the family of open sources. This particular software provides a better service for the libraries with fewer prices. Koha performs all the library

housekeeping operation like acquisition, circulation, serial, Patron, etc. Therefore, this paper evaluates the use of Koha integrated library system service at the Indian Institute of Technology (IITB) and Indian Institute of Technology Bhubaneswar (IITBBS).

Objectives

- To know the reason for the implementation of Koha.
- To know the data migration measures and challenges faced
- To see the satisfaction level of functionality of every module of Koha.
- To know the module customization.

Research Methodology

The paper entitled "'**Adoption and Functionality of Koha Integrated Library Management System in Indian Institute of Technology: A Comparative study between Bombay and Bhubaneswar**' is an effort to explain the qualities before selecting KOHA, the reason for the adoption of KOHA, level of implementation and customization of KOHA modules and experience with KOHA software etc. For this study, researchers have taken two IITs, i.e. Indian Institute of Technology, Bombay and Indian Institute of Technology, Bhubaneswar. A survey method used for this study and questionnaire is the main tool used by the researchers for data collection. Looking at covid pandemic situation, questionnaire was prepared in Google form and sent on Librarian's e-mail ID and both Librarians have given 100% response.

Literature Review

Omopupa et.al (2019) Study described the adoption of Koha in Ilorin university library and use of Koha library system in the Library. The total sample taken for the study was 28 library professionals were data collected from 26. A finding of the study shows that Koha improves the functionality of the library. Library facing some problems like supports higher authority, funding and lack of technical knowledge of the software.

Vimal Kumar (2019) the study entitled data migration from legacy system to Koha and the University of Nebraska was migrated the data from legacy system to Koha. The libraries are moving from proprietary to free software, but migration of data is not an easy job due to vendor lock-in and data is not in a proper format, and better teamwork and technical knowledge also required for successful data migration from proprietary software to Koha ILS.

Joel (2018) Use of Koha software has become a burning issue amongst academic libraries in Nigeria. Using Koha in the library is extremely necessary to achieve or implement library automation concepts.

Koha cannot function at full strength if required tools and accessories not incorporated for appropriate applications. Computerization of library processes is the only way to ensure that the librarian will perform its task efficiently and improve its services to the library and perspective users. Now librarians realize that there is no way to escape the use of Koha in the library. It expected that the planners and policymakers' findings realize the importance of Koha in library automation so that the LAUTECH library would provide a scientific need-based library and information services. The libraries will therefore have to play an increasingly important role in functioning as information servers. To play this role more effectively and efficiently to reduce the challenges of the 21st century, Koha should be introducing fully in library services without any delay

Gerhard Bissels (2008) this article describes the selection process of open sources software Koha at the royal London homoeopathic hospital library. The study's finding shows that Koha is adopted because it is available with a General public license (open source code). The freedom to customization in software attracts library professionals, who are more likely to install Koha ILMS.

Data Interpretation and Analysis

Table No-1 Library Staff

S.N	Category	IITB	IITBBS
1	Librarian	1	
2	Deputy librarian		1
3	Assistant librarian	2	1
4	Professional Staff	4+	2
5	Semi-Professional staff		
6	Library Assistant		1
7	Technical Staff	1	
8	Library Attendant	4+	

Table -1 shows the human resources of both institutions; IITB has more staff than IITBBS.

Table No-2 Steps taken before selection of Koha ILMS

S.N	Category	IITB	IITBBS
1	Permission from higher authority	✓	✓
2	Consult with expert	✓	X

3	Relevant literature	✓	X
4	Proposals for vendors	X	X

Table-2 depicts that IITBBS has taken permission from higher authority only, but IITB has taken permission from higher management and expert consultation and reviewed relevant literature.

Table No-3 Qualities seen before selection of library software

S.N	Category	IITB	IITBBS
1	Cost	X	✓
2	Adaptability	✓	✓
3	Security	✓	
4	User-friendliness	✓	✓
5	Proper documentation	X	✓
6	Reputation	✓	X
7	Services	✓	X

Table-3 reveals that these institutions have seen the qualities/features of library software at the selection time. IITB focused on software adaptability, security, user-friendliness, reputation and other services, while IITBBS focused on software cost, adaptability, user-friendliness and proper documentation at the time of selecting software.

Table No -4 Library software used earlier before shifting to Koha

S.N	Institutes	Software
1	IITB	Libsuite
2	IITBBS	Libsys

Table-4 shows that IITB used Lib-suit and IITBBS used Libsys before shifting to KOHA for library housekeeping.

Table No-5 Reason for the adoption of Koha ILMS (S.A-Strongly agree A-Agree, U-Undecided, D-Disagree, SD-Strongly Disagree)

S.N	Particular	Institute	SA	A	U	D	SD
1	Open-source	IITB	✓				
		IITBBS	✓				
2	Available with source code	IITB	✓				
		IITBBS	✓				
3	Easily available	IITB	✓				
		IITBBS		✓			
4	Easy installation	IITB	✓				
		IITBBS		✓			
5	Easiness to use	IITB	✓				
		IITBBS		✓			
6	Compatibility with hardware	IITB		✓			
		IITBBS		✓			
7	User friendly	IITB	✓				
		IITBBS		✓			
8	Suitable for library housekeeping operations	IITB	✓				
		IITBBS		✓			
9	Customization facility	IITB		✓			
		IITBBS		✓			
10	Web compatibility	IITB	✓				
		IITBBS		✓			
11	Multilingual	IITB	✓				
		IITBBS		✓			
12	Price of Propriety software high	IITB		✓			
		IITBBS			✓		
13	Escape vendor lock-in	IITB		✓			
		IITBBS		✓			
14	Freedom from maintenance and licensing fee	IITB		✓			
		IITBBS			✓		
15	Graphical interface	IITB	✓				
		IITBBS	✓				
16	Support to RFID	IITB		✓			
		IITBBS		✓			
17	Backup facility	IITB	✓				
		IITBBS	✓				

Table 5 shows that the reasons behind adopting KOHA. IITB is strongly agreed with mostly reasons. In other side, IITBBS is agreed with mostly reasons which are given in the above table.

Table No-6 Data migration measures taken by the institution

S.N	Measures	IITB	IIBBS
1	Backup the data before executing	✓	✓
2	Stick to the strategy	✓	X
3	Proper testing of data	✓	X

Table-6 shows that IIB has taken a backup of data stick to the strategy and adequately test data while IITBBS has only taken backup data before migration.

Table- 7 Level of implementation of Koha ILMS

S.N	Modules	Institutions	Fully	Partially
1	Acquisition	IITB	✓	
		IITBBS		✓
2	Circulation	IITB	✓	
		IITBBS	✓	
3	Cataloguing	IITB		
		IITBBS	✓	
4	Serial	IITB		✓
		IITBBS		✓
5	Patron	IITB	✓	
		IITBBS	✓	
6	OPAC	IITB	✓	
		IITBBS	✓	
7	Report	IITB	✓	
		IITBBS	✓	
8	Other	IITB		

Table 7 shows the implementation level of KOHA modules in the library. IITB and IITBBS both institutions have fully implemented KOHA modules in their library except for only a few modules. IITB partially has implemented serial modules, while IITBBS has partially implemented acquisition and serial modules

Table No-8 Customization of Koha modules

S.N	Modules	Institutions	Customization	
			Yes	No
1	Acquisition	IITB	✓	
		IITBBS	✓	
2	Circulation	IITB	✓	
		IITBBS	✓	
3	Cataloguing	IITB	✓	
		IITBBS	✓	
4	Serial	IITB		✓
		IITBBS	✓	
5	OPAC	IITB	✓	
		IITBBS	✓	
6	Report	IITB	✓	
		IITBBS	✓	
7	Other	IITB		✓
		IITBBS	✓	

Table 8 shows that IITBBS customized all the modules of Koha. IITB almost customized all modules except serial and others.

Table No-9 Services rate by the library (VS- Very satisfied, S-satisfied, U-Unsure, Ds-Dissatisfied, VD- Very Dissatisfied)

S.N	Modules	Institutions	VS	S	Un	DS	VD
1	Acquisition service	IITB		✓			
		IITBBS		✓			
2	Circulation service	IITB	✓				
		IITBBS	✓				
3	Cataloguing services	IITB	✓				
		IITBBS	✓				
4	Serial services	IITB			✓		
		IITBBS		✓			
5	OPAC services	IITB	✓				
		IITBBS	✓				
6	Tools services	IITB	✓				
		IITBBS	✓				
7	Other	IITB	✓				
		IITBBS	✓				

Table 9 shows that both institutes are very satisfied with circulation services, cataloguing services, OPAC services, and tools services. IITB and IITBBS are satisfied with acquisition services. With serial services, IITB is undecided, and IITBBS is satisfied.

Table No- 10 Overall satisfaction level of Koha ILMS (VG-Very Good, G-Good, A-Acceptable, P-Poor, and VP-Very Poor)

S.N	Modules		VG	G	AC	P	VP
1	Installation of software	IITB	✓				
		IITBBS	✓				
2	Technical aspect	IITB	✓				
		IITBBS	✓				
3	Database Management	IITB	✓				
		IITBBS	✓				
4	Functionality of module	IITB	✓				
		IITBBS	✓				
5	Updates in software	IITB		✓			
		IITBBS	✓				
6	Statistical report	IITB		✓			
		IITBBS	✓				
7	User response	IITB	✓				

Table -10 depict that the overall satisfaction level with Koha features of both institutions is very good. Only updates in software and statistical report features, the satisfaction level of IITB is good.

Table No-11 Experience with Koha ILMS

S.N	Particular	IITB	IITBBS
1.	Excellent		✓
2.	Very good	✓	
3.	Good		
4.	Fear		
5.	Very poor		

Table 11 shows that overall experience is very good and excellent of IITB and IITBBS, respectively.

Major Findings

- The study's finding shows that the workforce of IITB was more than IITBBS; both of the intuitions had taken permission from the higher authorities before the selection of the software and seen the quality of software.
- Before adopting Koha software, both libraries are using commercial library systems like Libsys & Libsuite.
- Open-source, user-friendly source code is the primary reason to choose Koha ILMS in both institutions.
- Data shows the libraries migrated their data from previous library software; both institutions have taken a backup of their data. After data migration, IITB does not find any difficulty, but IITBBS faced a data quality problem.
- The intuitions use the entire module Koha, but the Serial module partially used in IITB and Acquisition, and serial partially used in IITBBS.
- The IITB & IITBBS are satisfied with the services of acquisition and very satisfied with the other modules of Koha and IITB is unsure about the services of Koha
- IITB and IITBBS are satisfied with all the modules of Koha; they both are not want to change anything in any module, and both are satisfied with the Koha services; experience with the software is very excellent

Conclusion

Library automation has become a necessity in this current era. Adopting KOHA in libraries is increasing day by day, whether from other software or new implementation. Due to its excellent feature, KOHA is becoming the priority for those who use open-source software. It concluded that IITB and IITBBS have shown a positive attitude toward KOHA adoption. Both institutions said that open-source; user-friendly source code is the major reasons to choose KOHA. Both institutions use all modules except serial modules. IITB and IITBBS are also satisfied with all modules, and their experience is excellent with KOHA. IITB has suggested that the up-grade KOHA version match earlier customization and IITBBS have indicated that to be an expert in KOHA, one need more practice on KOHA ILMS. Researchers have suggested that to provide proper training to avoid issues.

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