

**COLLEGE LIBRARIES**

Vol. 39 No. 04 December 2024 pp. 53-61

## Assessment of KOHA Open-LMS at MKSSS Group Libraries: A Critical Study

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### Abstract

The study presents a critical assessment of the KOHA Open-LMS (Library Management System) implementation, across the 13 higher educational institute libraries within Maharshi Karve Stree Shikshan Samstha (MKSSS), Pune, Maharashtra. By adopting a comprehensive methodological approach that includes empirical data collection and analysis, the study evaluates the effectiveness of KOHA in these academic libraries. A descriptive method of research was selected for the present study and a detailed survey was conducted through a questionnaire distributed to 13 library professionals, also focus group meeting was held and the problem was discussed amongst all Librarians and Library In-charge staff. The study examines various aspects of KOHA implementation such as customization options for KOHA, integration capabilities, user experience, technical support, and cost considerations. The findings reveal that KOHA is highly valued for its cost-effectiveness, accessibility, and cloud-based hosting, Union Catalogue feature with the Circulation and OPAC modules being the most frequently used. By addressing the identified challenges and leveraging the system's strengths, libraries within the MKSSS Group can enhance their operational efficiency and service delivery with KOHA to their patrons and library cooperation as well.

**Keywords:** Academic Libraries, KOHA, Library Management System, Maharshi Karve Stree Shikshan Samstha (MKSSS), Open Source Software

### 1. Introduction

With the rapid developments in Information Communication Technology (ICT) after the 1970s, Library Automation became part of all types of Libraries including Academic Libraries. Library management systems were developed, which play a pivotal role in higher education institute libraries by facilitating efficient cataloguing, circulation, and resource management. The adoption of Open

Source Software (OSS) solutions in this domain offers various advantages, including flexibility, cost-effectiveness, and community support. Among these OSS options, Koha has emerged as a popular choice for its robust features and customizing capability. This is community-developed LMS. The problem statement is developed to check the feasibility and understand the challenges in implementing KOHA as a universally adoptable



LMS for MKSSS institutional Libraries. It will be a best practice to have a Union Catalogue of all MKSSS libraries and promote resource sharing as well as contribute to interdisciplinary studies.

This article provides an in-depth Assessment of KOHA Open-LMS at MKSSS Group Libraries. The major finding shows that the hardware required for KOHA installation is at par with the requirement. The human resource has the basic knowledge to operate the LMS effectively. With proper training and operational understanding, KOHA is the most suitable LMS for all 13 Institutional Libraries of MKSSS.

## 2. Literature Review

While proposing the need for KOHA at MKSSS, a background study on a similar topic was done. Some major research papers are mentioned here in the Literature Review to support the present study. Vandana, & Singh, R. K. (2024) provided a comprehensive analysis of the role of open-source software in library automation, with a particular focus on KOHA. It highlights how KOHA has become a preferred Library Management System (LMS) due to its cost-effectiveness, scalability, and adaptability.

Olowoporoku, I. O., Oketunji, I., & Makinde, O. B. (2024) investigated service quality and user satisfaction with Koha in Nigerian university libraries. The majority of respondents expressed satisfaction with Koha's performance but noted dissatisfaction with specific modules, such as acquisitions and user notifications. The study concludes that service quality significantly influences user satisfaction with Koha.

Kampa, R. K., Karna, N., Gouda, J., & Sohail, M. (2024) examined the key drivers and barriers to adopting Koha in Indian academic libraries. Key motivations include low cost, vendor independence, and customization options.

Bouis, S. (2024) examined with particular attention paid to the implementation of KOHA, its historical development, and its difficulties. France was an early adopter, and ABES and the

KohaLa association were instrumental in its growth. Its popularity is fuelled by its affordability, adaptability, and open-source nature; yet, integration difficulties and continuous technological advancements pose difficulties.

Devi, P. (2022) explored the functionalities and advantages of Koha, an open-source integrated library system. It highlights how Koha facilitates library automation, enhances resource accessibility, and streamlines operations such as cataloguing and circulation. Neupane, R. (2023) evaluated the usability of the KOHA Integrated Library System (ILS) in military libraries in Nepal. The findings indicate that customizing the KOHA interface significantly enhances efficiency, user-friendliness, and overall satisfaction. Bwalya, T., & Akakandelwa, A. (2021) clarified the challenges and issues that HEI libraries confront when it comes to Koha utilization. It emphasizes how crucial it is to solve the lack of proficiency, upgrade infrastructure, and strengthen support systems.

Omopupa, K. T., Adedeji, A. A., & Shakirat, O. (2019) offered valuable insights into the adoption and use of Koha in the University Library, highlighting areas for improvement and providing actionable recommendations for enhancing the system's effectiveness and addressing challenges. The study identified issues and utilization of Koha and improved library services for its users. Tripathi, D.P. and Pandey S.R. (2019) investigated the awareness and challenges surrounding Koha among LIS professionals, emphasizing the importance of technical expertise and ongoing learning for successful implementation and utilization of the system. By heeding the study's. Oladokun, T. A., & Kolawole, L. F. (2018) have pertinent to librarians KOHA OSS adoption in Nigeria and abroad. It makes a substantial contribution to our understanding of the factors influencing the sustainability of KOHA Open Source Software in Nigerian libraries. Punchihewa, C. N. D., & Kumara, A. D. B. (2015) provided valuable insights into the issues and challenges involved in transitioning from proprietary to open-



source library management systems. It emphasizes the importance of careful planning, effective communication, staff training, and technical expertise in ensuring a smooth migration process and successful integration of OSS into library operations.

### 3. Objectives of the Present Study

- To know the status of adoption of open-source software for library management in higher institution libraries of MKSSS.
- To discover the reasons for adoption of the Koha open-source software.
- To access the functionalities of KOHA in MKSSS Libraries
- To find out the advantages and challenges of KOHA open-source library management software for libraries at MKSSS Institutes.
- To know the technical support available for KOHA open-source software
- To study the perceptions of the library professionals regarding the training of Koha.

### 4. Research Methodology

This critical study adopts quantitative research methods to comprehensively assess the implementation of KOHA Open-LMS at all MKSSS Libraries of Higher Education. The study has adopted a survey method and a Google form questionnaire was taken as a tool for research design, which implies the use of quantitative methods. A survey questionnaire in google form was sent to 13 librarians of higher education institutions of Maharshi Karve Stree Shiksha Samstha (MKSSS) with the aim to collect quantitative data on their perceptions, experiences, and satisfaction with KOHA Open-LMS. The collected data was analyzed using an Excel spreadsheet to quantify responses and identify trends, and patterns of KOHA usage. Also, a focus group interview was conducted to know their opinion about KOHA Open LMS.

### 5. Data Analysis and Interpretation

5.1. The data was collected from the respondents

through a Google form questionnaire. It was distributed to the MKSSS's institute libraries. All 13 questionnaires were received duly filled and they were analyzed further using Excel Spreadsheet. The Questionnaire was subdivided into four sections for the Data Analysis is illustrated below:

#### 5.2. Demographic Details

It had questions regarding the demographic information of each intuitional library. Table no 1, describes the designation of the Library head. Table to deals with the data of total book collection of each library.

**Table No.1: Designation of Library Head.**

Designation	Respondent
Librarian	4
Assistant librarian	4
Library In charge( Clerk)	5

**Table No.2 : Total Book Collection of the Library**

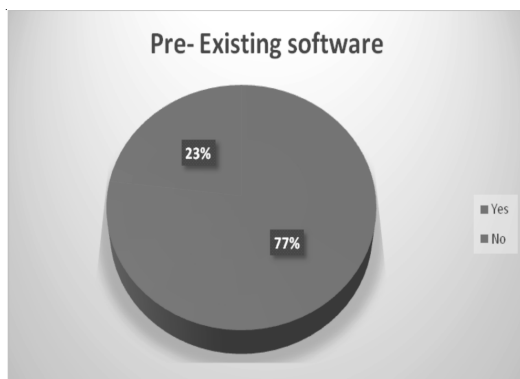
Collection	Respondent	Percentage
1-10000	7	53.84
10001-20000	3	23.07
20001-30000	2	15.38
30001-65000	1	7.69

Maximum number of 7 Libraries (53.84%) have the collection in range of 1 to 10,000. Only one Library has collection more than 30000 volumes.

#### 5.3. Other Information about Library and LMS

**Table No.3 :Names of pre-existing Software's before implementation of Koha**

Open source LMS	Proprietary LMS
KOHA	Slim21, Autolib, LibraryEasy



**Graph 1: pre-existing LMS in place before installation of Koha**

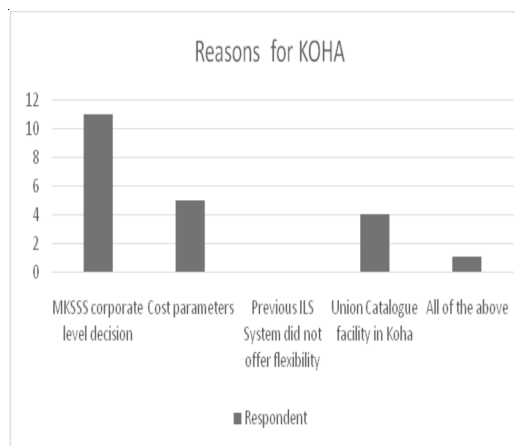
Table No. 3 and Graph No. 1 give an illustration of the pre-existing LMS at MKSSS Libraries. Before implementing the KOHA software libraries are using various other library management systems like Slim21, Autolib, and Library Easy. In the MKSSS institutional libraries, 77 % (10) of libraries were using pre-existing LMS libraries whereas 23.1 % (3) libraries were not using any software before the installation of Koha. SLIM. They were namely - Slim 21, Auto Lib, and Library Easy.

#### 5.4. About KOHA Implementation and functionalities

Table no. 4, and graph 2- show that among 13 libraries, 11 libraries gave reasons to adopt Koha as it was a corporate-level decision taken for 13 Libraries through a Central Committee.

**Table 4: Reasons for implementation of Koha at MKSSS Libraries**

Reasons	Respondent
MKSSS corporate level decision	11
Cost parameters	1
Previous ILS System did not offer flexibility	-
Union Catalogue facility in Koha	-
All of the above	1



**Graph 2: Reasons for implementation of Koha at MKSSS Libraries**

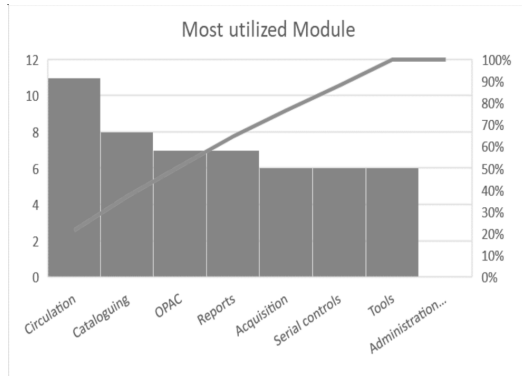
#### 5.5. KOHA Modules Actively utilized

It was asked which modules of KOHA are actively utilized by these Libraries. The response is mentioned below in table no. 5 and graph no 3:

**Table 5: KOHA Module Actively Utilized**

Sl. No.	Module	Respondent
1	Acquisition	6
2	Cataloguing	8
3	Serial controls	6
4	Circulation	11
5	Administration / Authorities	0
6	OPAC	7
7	Reports	7
8	Tools	6

The above table shows that the actively utilized modules of KOHA in MKSSS libraries are the Circulation Module, followed by the Cataloguing Module by 8 Libraries, OPAC is used by users in 7 Libraries, and Reports are actively used by 7 Libraries. Acquisition, tools, and serial control are utilized by 6 libraries. 2 of the Libraries have not started using KOHA yet.



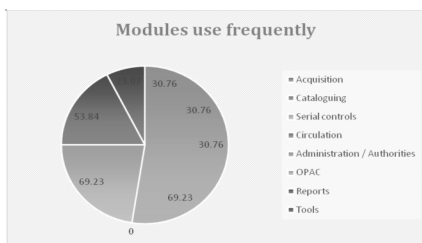
**Graph 3: KOHA Modules Actively utilized**

**5.6. Modules Use Frequently**

**Table 6: Modules you use frequently**

Sl. No.	Module	Respondent	Percentage
1	Acquisition	4	30.76
2	Cataloguing	4	30.76
3	Serial controls	4	30.76
4	Circulation	9	69.23
5	Administration / Authorities	0	0
6	OPAC	9	69.23
7	Reports	7	53.84
8	Tools	3	23.07

Based on above table no 6 and Graph no 4, Circulation and OPAC are the most frequently used modules, with 9 69.23% of respondents each. Acquisition, Cataloguing, Serial Controls, and Reports are used frequently by 4 30% to 54% of 7 respondents. Administration / Authorities and Tools are less frequently used



**Graph 4: KOHA Modules use Frequently**

**5.7. Modules you find difficult to understand and implement**

**Table no.7: KOHA Modules which are difficult to understand :**

Sl. No.	Module	Respondent	%
1	Acquisition	4	30.76
2	Cataloguing	2	15.38
3	Serial controls	3	23.07
4	Circulation	0	69.23
5	Administration / Authorities	0	0
6	OPAC	0	0
7	Reports	2	15.38
8	Tools	3	23.07

Acquisition, Serial Controls, and Tools appear to be modules that respondents find most difficult to understand. Cataloguing and Reports modules are mentioned by a smaller number of respondents, Circulation, Administration / Authorities, and OPAC are not highlighted as difficult modules to understand and implement.

**5.8. Advantages of KOHA Usage:**

**Table 8: Advantages of KOHA Usage**

Sl. No.	Advantages	Respondent
1	KOHA is easy to access from any PC	7
2	Webbed Access and no local server required	5
3	Satisfactory Service support form Supplier	4
4	Copy Cataloguing facility	3
5.	Union Catalogue for cross Library resource sharing	5
6	Autoback-up facility	5
7	Various Customized Reports	2
8	Cost effective Software	5
9	24/7 access dues to cloud hosting	8



Table no 8, shows that the most valued features of KOHA are its 24/7 access(8 Responses ) due to cloud hosting and ease of access from any PC, reflecting a strong preference for accessibility and convenience. Cost-effectiveness (5 Responses) and auto back-up (5 Responses) facilities are also important but slightly less so. Webbed access (5 responses), union catalog responses), and satisfactory service support are recognized but not as highly prioritized. Customized reports and copy cataloguing are less critical to respondents.

### 5.9. Challenges Faced

**Table 9: Challenges faced while using KOHA**

Sl. No.	Challenges	Respondent
1	Too much Internet dependence and bandwidth utilization	9
2	Downtime frequency	4
3	Customization Issues	3
4	Lack of Proper Knowledge of KOHA	3

In every change, some of the factors affect the adoption and use of the technologies in use if they are not well planned and managed. Cognizant of this, the researcher investigated the challenges that MKSSS libraries face in using Koha ILMS. Findings presented in Table No.9 show that KOHA is too dependent on internet and bandwidth utilization. Some of the factors noted respondent downtime frequency affected library use. Table no 9 also highlighted that customization is the challenge faced by the libraries. Lack of proper knowledge of KOHA impacts the proper functioning of Koha: library patrons primarily access Koha.

### 5.10. KOHA Training and support/ AMC

**Table no.10 :Types of training resources available for library staff**

Sl. No.	Resources	Respondent
1	On-site training session	9
2	Online tutorials/ documentation	3
3	Shared Access like Any Desk	6

**Table No. 10, provides information about the types of training resources available for library staff for Koha**

**On-site Training Session (9 respondents):** This is the most utilized resource, indicating a strong preference for in-person, interactive training. It provides immediate feedback and hands-on experience, which is particularly effective for complex systems like Koha.

**Shared Access like AnyDesk (6 respondents):** Remote tools like AnyDesk are also significant for offering real-time support and troubleshooting. This method complements on-site training by providing flexible, interactive remote assistance as on demand.

**Online Tutorials/Documentation (3 respondents):**These are the least utilized, suggesting that while they offer flexibility, they may not meet the needs of all users who benefit more from direct, interactive training.

The data regarding training indicates that the current Koha training provided by the vendor is largely successful, with 10 out of 13 respondents expressing satisfaction. The single case of dissatisfaction should be explored to address any specific issues, ensuring that all users benefit from high-quality training.

### 6. Major Findings

**Findings:** KOHA has been implemented at MKSSS as single instance software, because of this some functionalities affect the entire KOHA



working. Software efficiency, occasionally, observes downtime.

**Suggestion:** Multiple instances for each library-Implementation of separate LMS for each library branch may be recommended. This approach improves efficiency and allows independent customization for each library's unique needs, also improves data security.

**Finding:** On-site training is only once and imparted in groups for 2 days and after that, only online support is extended.

**Suggestion:** Library staff training needs - In open-source LMS, staff training has great value. Providing library staff with comprehensive training programs on the use of new technology. Training should include system functionality, best practices for optimizing workflows, troubleshooting common problems, and obtaining technical support. It ensures staff competence and promotes a culture of continuous improvement. On-site and personalized training is preferred for better understanding.

**Finding:** Though the organization is one(MKSSS), all the units cater to different subject disciplines, according to this customization needs of each library are a little different.

**Suggestion:** Customization to meet library requirements - Customization of KOHA library management systems to meet the specific needs of each library. This includes customizing user interfaces and user experiences based on library preferences, integrating local services and databases, and optimizing workflows to improve operations. Personalization improves service delivery and increases library user satisfaction.

**Finding:** Downtime observed while using KOHA

simultaneously.

**Suggestion:** Mirror server to mitigate downtime-Deployment of mirror servers for redundancy and high availability of library services. Mirror servers replicate data and services from the primary server, enabling smooth operation during maintenance or unexpected downtime. This arrangement improves reliability, facilitates rapid recovery from interruptions, and balances the server load for optimal performance.

## 7. Conclusion

In summary, the assessment of KOHA Open-LMS implementation at MKSSS Group of Higher Educational Libraries offers insightful information about the advantages and challenges faced using KOHA open-source library management system. As the survey was conducted, a number of important findings became apparent. The first and foremost advantages of KOHA include its cost-effectiveness, customizable abilities, and cloud server implementability, which have been emphasized the most. The KOHA system is found flexible in meeting the requirements of the MKSSS Group Libraries. The technology has made library personnel more capable of cataloguing and circulating materials, increased client accessibility, and enabled increased operational efficiency. In conclusion, it can be said that KOHA is an all-encompassing LMS that a group of Libraries like MKSSS can adopt. It is as the word meaning suggests in the Mouri Language "a gift" with proper customization.

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