

Applications of Koha in Maulana Azad Library, Aligarh Muslim University, and the Central Library and Knowledge Resource Centre, Teerthanker Mahaveer University, Moradabad: A Comparative Study

Hafsa Naim^{1*}, Mehtab Alam Ansari², Naseem Eqbal³

Abstract

The present study analyzes the use and application of the Koha open-source integrated library management system in two academic libraries: Maulana Azad Library, Aligarh Muslim University, Aligarh, and the Central Library and Knowledge Resource Centre, Teerthanker Mahaveer University, Moradabad. The study examines the level of implementation and effectiveness of major Koha modules from the perspectives of both library staff and users. A descriptive survey method was adopted, and data were collected through structured questionnaires administered to library professionals and users. The study primarily focuses on core Koha modules such as acquisition, cataloging, circulation, serials, and online public access catalog (OPAC), along with users' satisfaction regarding search facilities and interface usability. The findings indicate that Koha has positively influenced library housekeeping operations, improved information retrieval, and enhanced overall service efficiency in both libraries. Most library staff expressed satisfaction with the functionality and ease of use of Koha modules, while users reported favorable experiences with OPAC features and search results. However, issues related to regular training, technical support, and infrastructure were also observed. The study concludes that Koha is a cost-effective and flexible solution for academic library automation and emphasizes the need for continuous training and system support to ensure its effective utilization in the digital library environment.

Keywords: Academic libraries, Aligarh Muslim University, integrated library management system, Koha, library automation, open-source software, Teerthanker Mahaveer University

*Author for Correspondence

Hafsa Naim
E-mail: hafsanaimamu@gmail.com

¹Master of Library and Information Science, Department of Library and Information Science, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

²Professor, Department of Library and Information Science, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

³Senior Research Fellow (SRF), Department of Library and Information Science, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

Received Date: January 20, 2026

Accepted Date: January 29, 2026

Published Date: March 25, 2026

Citation: Hafsa Naim, Mehtab Alam Ansari, Naseem Eqbal. Application of Koha in Maulana Azad Library, Aligarh Muslim University, and Central Library & Knowledge Resource Centre, Teerthanker Mahaveer University, Moradabad: A Comparative Study. Journal of Advancements in Library Sciences. 2026; 13(1): 33–47p.

INTRODUCTION

Rapid advances in information and communication technology (ICT) have reshaped library operations, establishing automation as a core element of contemporary library management. Library automation involves the use of computer-based systems to efficiently execute traditional functions, such as acquisition, cataloging, circulation, serial control, and user services [1, 2]. The exponential growth of information resources, increasing demand for immediate access, and inefficiencies of manual processes have made automation essential for effective information organization, retrieval, and service delivery [3]. Automation improves library efficiency by minimizing repetitive manual work, strengthening bibliographic control, enabling real-time resource access, and supporting informed decision-making

through automated reports [4, 5]. Additionally, the integration of ICT has facilitated networked and web-based library services, extending access beyond physical spaces and enhancing user satisfaction [6, 7].

With the advancement of integrated library systems (ILS), libraries increasingly depend on specialized software, either proprietary or open source, each offering distinct benefits and limitations [8, 9]. Open-source library management systems have gained wider acceptance because of their affordability, flexibility, customization options, and community-based development [10, 11]. Koha has emerged as a globally adopted solution. Introduced in 1999, Koha offers integrated modules for acquisitions, cataloging, circulation, serial management, online public access catalog (OPAC), and reporting, while supporting international standards such as MARC21 and Z39.50 [12, 13]. Empirical studies suggest that Koha delivers functionality comparable to that of proprietary systems at substantially lower licensing and maintenance costs, making it especially suitable for academic and research libraries in developing countries [14, 15].

Despite its advantages, the implementation of Koha presents challenges, including limited technical expertise, data migration issues, inadequate training, and infrastructural constraints, such as poor internet connectivity [16]. Understanding the benefits and challenges of Koha implementation is essential to maximize its effectiveness in automated library environments. Accordingly, this study contributes to the library automation discourse by examining Koha's role, features, and implementation challenges in contemporary library systems. In this context, the present study focuses on the use and applications of Koha in two academic libraries: Maulana Azad Library, Aligarh Muslim University, Aligarh, and the Central Library and Knowledge Resource Centre, Teerthanker Mahaveer University, Moradabad. Both institutions have adopted Koha to automate their library operations, making them suitable cases for comparative analysis. By examining the implementation status, functionality of various Koha modules, and perceptions of library staff and users, the study aims to assess the effectiveness of Koha as an open-source library management solution in academic libraries. The findings of this study are expected to contribute to the existing literature on library automation and provide practical insights for libraries considering Koha as an automation solution.

REVIEW OF RELATED LITERATURE

Hindupur and Khan (2024) [17] highlighted that open-source library management systems offer flexible and cost-effective solutions for library automation. Since its introduction in 1999, Koha has been widely adopted worldwide, providing web-based access to core modules such as cataloging, circulation, acquisitions, and serial management. Eqbal and Ansari (2024) [18] noted that library automation plays a vital role in improving library services by enabling faster access to resources and efficient information management. The use of ICT has led to the increasing automation of routine housekeeping operations, such as cataloging, acquisitions, circulation, and serial control. Jabeen (2024) [19] found that social influence did not significantly affect Koha adoption among Pakistani librarians, despite its cost-effectiveness and usability, while low personal innovativeness hindered adoption, underscoring the need for stronger institutional support in university libraries.

Eqbal and Ansari (2024) [18] reported that the IWST library adopted E-Granthalaya for automation, resulting in notable improvements in cataloging, circulation, and authority control. Although challenges such as limited funding and software constraints existed, effective staff support significantly enhanced user satisfaction, demonstrating that library automation streamlines operations and reduces manual effort. Kampa et al. (2024) [20] investigated the factors affecting the adoption of Koha among academic librarians in India and identified key drivers such as low ownership costs, freedom from vendor lock-in, customization, and in-house technical expertise. Although Koha's benefits outweighed its limitations, barriers including inadequate documentation, usability issues, limited features, and low IT proficiency were noted, which the study suggested could be mitigated through targeted training and hands-on workshops.

Eqbal and Ansari (2024) [18] reported that the Forest Research Institute and Rain Forest Research Institute adopted Koha after discontinuing Libsys because of high maintenance costs. While FRI implemented all major Koha modules, RFRI limited its use to cataloging and circulation because of budget constraints, highlighting Koha's cost-effectiveness and suitability for efficient library automation. Ansari et al. (2024) [21] emphasized that information technology is central to modern library operations, influencing the acquisition, processing, storage, and dissemination of information. Library automation involves the systematic use of computer-based technologies to perform routine tasks, enhancing service efficiency, accuracy, and speed while reducing manual effort. Despite challenges such as limited funding, data migration, and staff training needs, effective planning and continuous capacity building are essential for the sustainable implementation of automated library systems.

Kulkarni et al. (2023) [22] explored effective strategies to optimize the use of Koha by identifying key factors influencing its SMART implementation. Koha enhances collaboration between library staff and patrons while fostering ICT skill development among library professionals. As an educational technology platform, it supports cost-effective knowledge sharing and promotes a cooperative learning environment. Garg et al. (2023) [23] examined the use of Koha's electronic resource management (ERM) module to improve the management of digital resources in libraries.

The study highlighted the need for a centralized ERM system to organize licenses, contracts, and usage data, noting that while Koha's ERM streamlines workflows and reporting, it remains at an early stage of development compared to established ERM platforms.

Omopupa et al. (2020) [24] examined Koha implementation at the University of Ilorin Library and Bowen University Library and found higher adoption levels at Bowen University. While Bowen University utilized all major Koha modules for service delivery, the University of Ilorin mainly limited its use to cataloging and circulation functions. Lingam and Dukare (2019) [25] highlighted Koha as an innovative open-source integrated library system continuously developed by a global community, making it suitable for libraries of varying sizes. Their study examined the implementation, cost aspects, and functionality of major Koha modules and concluded that Koha is an effective and reliable solution for ILS in academic institutions.

Uplaonkar et al. (2019) [26] described Koha as an open-source integrated library system developed in New Zealand in 1999 for the Horowhenua Library Trust. Continuously upgraded over time, Koha is globally adopted for its web-based accessibility, supporting key functions such as cataloging, circulation, acquisitions, and financial management across public, academic, and special libraries. Its flexibility has led to its increasing adoption by large institutions worldwide. Chaputula and Kanyundo (2019) [27] noted that Koha is widely preferred over proprietary library systems because of its low installation and maintenance costs, flexibility to local requirements, and rich functionality.

However, effective system maintenance may require considerable effort, especially in regions lacking professional technical support, and libraries may incur additional costs when relying on paid services. Recent versions of Koha offer comprehensive features such as administration, circulation, serial control, cataloging, and barcode generation comparable to proprietary systems.

McGarvey (2018) [28] reported that the implementation of open-source library management systems requires substantial institutional commitment and adjustment; however, it provides significant advantages, such as greater customization, innovation, and lower licensing costs. These benefits position Koha as an effective option for libraries seeking system modernization while retaining control over technological development.

OBJECTIVES OF THE STUDY

The present study has been undertaken with the following specific objectives:

- To analyze the use of Koha software by librarians and users.
- To compare how many modules of Koha are used by both libraries.
- To determine how many users have used the OPAC of both libraries.
- To determine how many users of both libraries know about the Koha software.
- To find out the satisfaction level of selected libraries in using Koha.
- Factors influencing the selection and use of Koha ILS by higher education institutions' libraries.
- Examine challenges experienced by libraries using Koha ILS.
- To record librarian perceptions about the performance of the Koha modules.

SCOPE OF THE STUDY

This study is limited to examining the application of the Koha open-source integrated library management system in two academic libraries: the Maulana Azad Library at Aligarh Muslim University and the Central Library and Knowledge Resource Centre at Teerthanker Mahaveer University. It focuses on the implementation of key Koha modules, such as acquisitions, cataloging, circulation, serials, and the OPAC, and analyzes the perceptions of library professionals and users regarding system usability, effectiveness, and service delivery. By adopting a comparative approach, this study identifies similarities and differences in Koha usage between the two institutions. The findings, based on data collected during the survey period, provide practical insights into Koha's application in academic library environments and may guide libraries considering open-source library management systems.

METHODOLOGY

This study employs a descriptive and comparative survey design to examine the use and application of Koha, an open-source integrated library management system (ILMS), in two academic libraries: the Maulana Azad Library at Aligarh Muslim University and the Central Library and Knowledge Resource Centre at Teerthanker Mahaveer University, Moradabad. The survey method facilitated the collection of primary data from library professionals and users regarding their experiences, perceptions, and satisfaction with automated library services. Both libraries have implemented Koha across core modules, including acquisitions, cataloging, circulation, serials control, and OPAC, making them appropriate for comparative analysis. By assessing implementation practices, module functionality, and stakeholder perceptions, this study evaluates Koha's effectiveness as an open-source library management solution and contributes practical insights to the literature on academic library automation.

The study population included library professionals and registered users from both institutions. Two structured questionnaires were developed: one for professionals and one for users. The professionals' questionnaire examined Koha implementation status, module functionality, system effectiveness, training, and operational challenges, whereas the users' questionnaire focused on OPAC use, search behavior, accessibility, satisfaction, and overall service quality.

Purposive sampling was used to select library professionals directly involved in the operation and management of the Koha system, whereas convenience sampling was employed to survey library users who accessed services during the study period. The questionnaire primarily comprised closed-ended items, including Likert-scale, multiple-choice, and limited dichotomous questions, to ensure uniformity and ease of analysis. Prior to final distribution, the instrument was reviewed and refined for clarity and precision. The validated questionnaires were personally administered to professionals and users during library hours with institutional approval, and sufficient time was provided for completion. Follow-up visits were conducted when necessary to enhance the response rate. The collected data were systematically tabulated, coded, and analyzed using simple statistical techniques, such as frequency counts and percentage analysis. Comparative tables were used to highlight similarities and differences between the two libraries. The results were presented in tabular and graphical forms to facilitate clear interpretation and meaningful comparison of findings related to Koha implementation and usage.

Table 1. Acquisition module

S.N.	Acquisition module	AMU	TMU
1.	Enter Title	Yes	Yes
2.	Approval Process	Yes	No✖
3.	Place Order	Yes	No
4.	Receiving	Yes	Yes
5.	Invoice Processing	Yes	Yes
6.	Budget	Yes	No✖
7.	Queries	Yes	Yes
8.	Record Keeping	Yes	Yes

Data Analysis

The collected data were coded, tabulated, and analyzed using basic statistical methods, including frequency and percentage analyses. The analysis focused on assessing the implementation and application of the Koha open-source ILMs in selected academic libraries and comparing the responses of library professionals and users. The results are presented thematically under staff-related and user-related sections.

Part A: Library Staff Data Analysis

Applications of the Acquisition Module

Table 1 presents a comparative analysis of the use of the acquisition module at Aligarh Muslim University (AMU) and Teerthanker Mahaveer University (TMU), illustrating the extent to which each institution implements specific acquisition functionalities. Both universities employ the core features of the module, namely, enter title, place order, receiving, invoice processing, queries, and record keeping, demonstrating a shared emphasis on fundamental acquisition operations.

However, AMU adopts a more comprehensive utilization of the module by integrating additional components, such as the approval process and budget management, which are absent in TMU's implementation. This suggests that AMU employs a more structured and administratively robust acquisition workflow. Conversely, TMU's reliance on essential functions alone indicates a streamlined or potentially less centralized approach to acquisitions management.

Applications of the Cataloging Module

Table 2 illustrates the utilization of the cataloging module at AMU and TMU, highlighting the extent to which each institution engages with its various functionalities. Both universities make use of fundamental features, including online searches, print ID cards, reports, record creation, and record editing, demonstrating a shared reliance on essential cataloging operations. Notably, AMU extends its usage to encompass advanced functionality, such as duplicate checking, a feature not employed by TMU. Nevertheless, several significant features remain underutilized at both universities, including maintenance, current awareness, bibliography, housekeeping, data import/export, stock verification, and authority control. This indicates that although AMU exhibits a more extensive application of the module's capabilities than TMU, neither university fully utilizes the comprehensive potential of the cataloging module.

Applications of the Circulation Module

Table 3 presents a comparative analysis of the utilization of the Circulation Module at AMU and TMU, highlighting both commonalities and differences in their library operations. Both institutions consistently employ core circulation functionalities, including check-in, check-out, interlibrary loan, reports, online searches, fines and overdue notices, and renewal, underscoring a strong commitment to managing standard circulation processes effectively. AMU further enhances its service provision by integrating advanced features such as inquiries and self-check, reflecting commitment to greater interactivity and user convenience in its library services. In contrast, TMU does not employ these features, indicating a more conventional approach to circulation services. Notably, the reservation

function remains unused at both institutions, which may indicate limited user demand or an opportunity for future enhancement in user access and resource management.

Applications of the Serials Module

Table 4 presents an analysis of the implementation of the Serials Module at AMU and TMU, demonstrating that both institutions effectively utilize all available functionalities, including new subscription, claims, check expiration, manage frequencies, manage numbering patterns, and search subscription. This comprehensive engagement signifies that both libraries have established well-structured and systematic frameworks for managing serial publications. The full adoption of these features reflects efficient processes for tracking, managing, and accessing serial materials, suggesting the presence of a well-organized serials management system at both AMU and TMU.

Table 2. Cataloging module.

S.N.	Cataloguing module	AMU	TMU
1.	Maintenance	No✖	No✖
2.	Online Searches	Yes	Yes
3.	Current Awareness	No	No✖
4.	Bibliography	No ✖	No✖
5.	Print ID Card	Yes	Yes
6.	Reports	Yes	Yes
7.	Housekeeping	No✖	No✖
8.	Data Import/Export	No✖	No✖
9.	Stock Verification	No✖	No✖
10.	Authority Control	No✖	No✖
11.	Duplicate Checking	Yes	No✖
12.	Record Creation	Yes	Yes
13.	Record Editing	Yes	Yes

Table 3. Circulation module

S.N.	Circulation module	AMU	TMU
1.	check-in	Yes	Yes
2.	Check-out	Yes	Yes
3.	Interlibrary loan	Yes	Yes
4.	Enquiries	Yes	No✖
5.	Reports	Yes	Yes
6.	Online searches	Yes	Yes
7.	Self-check	Yes	No✖
8.	Reservation	No✖	No✖
9.	Fines and overdue notice	Yes	Yes
10.	Renewal	Yes	Yes

Table 4. Serials module

S.N.	Serials Module	AMU	TMU
1.	New Subscription	Yes	Yes
2.	Claims	Yes	Yes
3.	Check Expiration	Yes	Yes
4.	Manage Frequencies	Yes	Yes
5.	Manage Numbering Patterns	Yes	Yes
6.	Search Subscription	Yes	Yes

Applications of the OPAC Module

Table 5 presents a comparative analysis of the utilization of the OPAC module at AMU and TMU, demonstrating a wide adoption of standard search functionalities across both institutions. These features include title, author, keyword, publisher, class number, accession number, barcode, subject, year of publication searches, as well as basic and advanced search capabilities. This extensive usage reflects a solid foundational structure for user access and information retrieval at both universities. Notably, AMU extends its OPAC functionality by integrating advanced features, such as status inquiry and faceted search filters, whereas TMU remains inactive in these features, which facilitate real-time availability checks and more precise search refinement. These enhancements indicate that AMU provides a more sophisticated and user-oriented OPAC interface than TMU.

Koha Knowledge and Training

Table 6 presents a comparison of Koha knowledge and training at AMU and TMU. Both institutions reported high levels of agreement (rating 4) regarding receiving formal Koha training and confidence in using the system for library operations, reflecting effective foundational training. However, TMU staff expressed stronger agreement (rating 5) on the sufficiency of Koha training for job responsibilities, suggesting more intensive or better-focused training compared to AMU. Both universities also acknowledged the need for additional Koha training (rating 4), highlighting a mutual recognition of evolving technological demands. Overall, while both AMU and TMU ensured effective Koha training, TMU demonstrated slightly higher staff satisfaction and perceived adequacy.

Effectiveness of Koha Module Usage in the Library

Table 7 compares the effectiveness of Koha modules at AMU and TMU. AMU staff rated the core modules cataloging, circulation, OPAC, acquisition, and serials management as effective (rating 4), while TMU staff rated them as very effective (rating 5), suggesting higher satisfaction and efficiency at TMU. A significant difference was noted in the reporting module, which was rated ineffective (rating 2) by AMU but very effective (rating 5) by TMU, indicating potential underutilization at AMU. Overall, TMU demonstrated a stronger perception of Koha module performance.

Table 5. OPAC module

S.N.	OPAC Module	AMU	TMU
1.	Title	Yes	Yes
2.	Author	Yes	Yes
3.	Keyword	Yes	Yes
4.	Publisher	Yes	Yes
5.	Class No.	Yes	Yes
6.	Accession No.	Yes	Yes
7.	Barcode	Yes	Yes
8.	Subject	Yes	Yes
9.	Year of Publication	Yes	Yes
10.	Basic Search	Yes	Yes
11.	Advanced Search	Yes	Yes
12.	Status Enquiry	Yes	No*
13.	Faceted Search Filters	Yes	No

Table 6. Koha knowledge and training

S.N.	Statements	AMU					TMU				
		1	2	3	4	5	1	2	3	4	5
1.	I have received formal training on Koha.				Yes					Yes	
2.	Koha training is sufficient for my job responsibilities.				Yes				Yes		
3.	I feel confident in using Koha for library operations.				Yes						Yes
4.	Additional Koha training sessions are needed for staff.				Yes						Yes

Scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5)

Table 7. Effectiveness of the Koha module you use.

S.N.	Modules	AMU					TMU				
		1	2	3	4	5	1	2	3	4	5
1.	Cataloging				Yes						Yes
2.	Circulation				Yes						Yes
3.	OPAC				Yes						Yes
4.	Acquisition				Yes						Yes
5.	Serials Management				Yes						Yes
6.	Reporting		Yes								Yes

Scale: Very Ineffective (1), Ineffective (2), Neutral (3), Effective (4), and Very Effective (5)

Table 8. Challenges faced while using Koha.

S.N.	Statements	AMU					TMU				
		1	2	3	4	5	1	2	3	4	5
1.	Lack of proper staff training.					Yes					Yes
2.	Slow system response affects work efficiency.					Yes					Yes
3.	Technical support for Koha is insufficient.			Yes				Yes			
4.	Koha's user interface needs improvement.				Yes					Yes	

Table 9. Improvements enhance Koha's use in the library.

S.N.	Areas of Improvement	AMU					TMU				
		1	2	3	4	5	1	2	3	4	5
1.	More training for staff				Yes					Yes	
2.	Enhancements in Koha's user interface				Yes			Yes			
3.	Faster system performance and fewer technical issues				Yes					Yes	
4.	Increased promotion of Koha services among users				Yes					Yes	

Scale: Not Needed (1), Slightly Needed (2), Neutral (3), Needed (4), and Highly Needed (5)

Challenges in Koha Implementation

Table 8 compares the challenges faced by AMU and TMU in using Koha. Both institutions strongly agree (rating 5) that a lack of proper staff training and slow system response are major issues. AMU also rates technical support as Neutral (rating 3), whereas TMU rates it as disagree (rating 2), suggesting fewer difficulties. Both universities agree (rating 4) that the Koha user interface needs improvement. Overall, AMU experiences broader challenges than TMU, which reports relatively fewer issues.

Suggestions for Improvement

Table 9 compares the suggested improvements for Koha at AMU and TMU. Both institutions rated more training for staff and faster system performance as needed (4), reflecting shared concerns over training gaps and technical efficiency. User interface enhancements were also prioritized, with TMU rating it slightly needed (2) and AMU marking it as needed (4). Additionally, both universities agreed that increased promotion of Koha services was needed (4), highlighting the importance of user engagement.

Part B: Library Users' Data Analysis

Frequency of Library Visits

Table 10 presents the frequency of library visits among AMU and TMU users. The findings of the study reveal that the majority of AMU respondents (36%) visit the library "rarely," while the highest percentage of TMU users (36%) visit "once a week." A notable difference is seen in "daily" visits, with TMU (30.67%) surpassing AMU (26%). However, AMU has a significantly higher percentage of "fortnightly" visitors (8%) than TMU (1.33%). For "occasionally," TMU users (14.67%) are more frequent than AMU (7%).

Table 10. Frequency of library visits.

S.N.	Frequency	AMU	AMU (%)	TMU	TMU (%)
1.	Daily	26	26.0%	23	30.67%
2.	Fortnightly	08	8.0%	01	1.33%
3.	Once A Week	23	23.0%	27	36.0%
4.	Occasionally	07	7.0%	11	14.67%
5.	Rarely	36	36.0%	13	17.33%

Table 11. Purpose of library visit.

S.N.	Purpose	AMU	AMU (%)	TMU	TMU (%)
1.	For reading materials	73	48.99%	56	74.67%
2.	To borrow/return books	35	23.49%	21	28.0%
3.	To spend leisure time	21	14.09%	06	8.0%
4.	Other	05	3.36%	04	5.33%

Table 12. Preferences for searching library material.

S.N.	Search preferences	AMU	AMU (%)	TMU	TMU (%)
1.	Through OPAC	22	13.66%	40	53.33%
2.	Ask librarian	47	29.19%	37	49.33%
3.	Consult the library	36	22.36%	05	6.67%
4.	Search shelves on your own	22	13.66%	02	2.67%
5.	Other	01	0.62%	0	0%

Purpose of Library Visit

Table 11 illustrates the purpose of library visits by AMU and TMU users. The findings of the study reveal that the majority of TMU respondents (74.67%) visit the library primarily “For Reading Materials,” significantly higher than AMU users (48.99%) for the same purpose. In contrast, AMU has a larger percentage of users visiting “To Spend Leisure Time” (14.09%) compared to TMU (8.0%). For the purpose of “To Borrow/Return Books,” TMU (28%) slightly exceeds AMU (23.49%). The “Other” category remains minimal for both universities, with TMU at 5.33% and AMU at 3.36%.

Preferences for Searching Library Material

Table 12 presents the preferences for searching library materials among AMU and TMU users. The findings of the study reveal that the majority of TMU users (53.33%) prefer searching for materials “Through OPAC,” which is significantly higher than AMU users (13.66%). In contrast, AMU users are more inclined to “Ask Librarian” (29.19%) and “Consult Library Catalog” (22.36%) than TMU users, who recorded 49.33% and 6.67%, respectively. Both universities show a percentage (13.66%) for “Search Shelves on Your Own” at AMU, while TMU stands much lower at 2.67%. The “Other” category is minimal for AMU (0.62%) and non-existent for TMU.

OPAC Interface

Table 13 illustrates the satisfaction levels with the OPAC interface among users of AMU and TMU. The findings of the study reveal that the majority of TMU respondents (52%) expressed a “Neutral” opinion regarding the OPAC interface, which is higher than AMU’s 39%. In contrast, AMU showed a stronger positive inclination, with 16% “Strongly Agree” and 35% “Agree,” while TMU recorded only 1.33% and 29.33% for the same categories. On the negative side, 17.33% of TMU users “Disagree,” compared to 8% of AMU users. Furthermore, “Strongly Disagree” was noted only at AMU (2%), and none at TMU.

Table 13. Satisfaction level with OPAC interface.

S.N.	Satisfaction level	AMU	AMU (%)	TMU	TMU (%)
1.	Strongly agree	16	16.0%	01	1.33%
2.	Agree	35	35.0%	22	29.33%
3.	Neutral	39	39.0%	39	52.0%
4.	Disagree	08	8.0%	13	17.33%
5.	Strongly Disagree	02	2.0%	0	0%

Table 14. Purposes of using OPAC.

S.N.	Purposes	AMU	AMU (%)	TMU	TMU (%)
1.	Search the library material	73	37.06%	41	54.67%
2.	To know the location of the book	66	33.5%	17	22.67%
3.	Availability of the book	52	26.4%	25	33.33%
4.	Other	06	3.05%	06	8.0%

Table 15. Access points for searching documents.

S.N.	Accessed points	AMU	AMU (%)	TMU	TMU (%)
1.	Title	81	32.27%	31	41.33%
2.	Author	69	27.49%	15	20.0%
3.	Subject	49	19.52%	38	50.67%
4.	Keyword	40	15.94%	05	6.67%
5.	Boolean Operator	07	2.79%	0	0%
6.	Truncation Search	05	1.99%	0	0%

Purposes of Using OPAC

Table 14 illustrates the primary purposes for which AMU and TMU users utilize the OPAC. The findings of the study reveal that the majority of TMU users (54.67%) utilize OPAC mainly to “Search the library material,” significantly higher than AMU users (37.06%) for the same purpose. In contrast, AMU users (33.5%) use OPAC more frequently to “Know the location of the book” than TMU (22.67%) users. For checking the “Availability of the book,” TMU leads slightly with 33.33% compared with AMU at 26.4%. In the “Other” category, TMU also records a higher percentage (8%) than AMU (3.05%).

Access Points for Searching Documents

Table 15 presents the access points used by AMU and TMU users to search for documents. The study’s findings reveal that TMU users (50.67%) primarily rely on “Subject” as the main access point for searching, while AMU users show a lower preference at 19.52%. In contrast, AMU users (32.27%) prefer searching by “Title” compared to 41.33% at TMU. The “Author” category also shows a higher preference at AMU (27.49%) than at TMU (20%). For “Keyword” searches, AMU records 15.94%, significantly higher than TMU’s 6.67%. Access points such as “Boolean Operator” (2.79%) and “Truncation Search” (1.99%) are used exclusively by AMU respondents, with no representation at TMU.

Search Results from OPAC

Table 16 presents the satisfaction levels of AMU and TMU users concerning the search results from the OPAC system. The findings of the study reveal that the majority of users at both AMU (53%) and TMU (53.33%) expressed being “Satisfied” with the OPAC search results, making it the most chosen

category. In the “Neutral” category, AMU holds a higher percentage (31%) than TMU (22.67%). TMU users, however, reported a greater level of “Very Satisfied” responses (25.33%) than AMU (9%), suggesting stronger approval of search outcomes at TMU. For negative feedback, 7% of AMU users indicated that they were “Dissatisfied,” whereas TMU reported a minimal 1.33% dissatisfaction rate.

Frequency of Using the OPAC for Searching Documents

Table 17 illustrates the frequency of OPAC usage for searching documents among users from AMU and TMU. The study’s findings reveal that 36% of AMU users accessed OPAC “Sometimes,” the highest percentage among the categories, whereas 32% of TMU users reported the same. For the “Usually” category, 28% of AMU users and 29.33% of TMU users indicated frequent usage. This reflects a similar pattern of regular interaction with the OPAC system at both institutions. Regarding constant use, 20% of AMU respondents stated that they “Always” used OPAC, slightly less than the 26.67% of TMU users who reported it. The “Rarely” category recorded 12% of AMU users and 9.33% of TMU users, signifying occasional access to the system. Lastly, the “Never” category accounted for the lowest percentages, with 4% of AMU users and 2.67% of TMU users indicating that they did not use OPAC at all.

Advanced Search Features in OPAC

Table 18 presents the responses from AMU and TMU users regarding the advanced search features in OPAC to refine search results. The findings of the study reveal that 50% of AMU and 18.67% of TMU users rated the advanced search features as “Neutral,” indicating a more balanced view on the usefulness of these features in AMU. In contrast, 44% of TMU and 4% of AMU users rated as “Dissatisfied,” suggesting that many TMU users find these features less satisfactory. The “Very Dissatisfied” rating was given by 3% of AMU users and 21.33% of TMU users, reflecting a higher dissatisfaction with the advanced search features at TMU. On the other hand, 37% of AMU users rated the features as “Satisfied,” while only 4% of TMU users shared this opinion, indicating a more positive perception of these features at AMU. A small percentage of university users rated the advanced search features as “Very Satisfied,” with 6% from AMU and 12% from TMU.

Table 16. Satisfaction level regarding search results from OPAC.

S.N.	Satisfaction level	AMU	AMU (%)	TMU	TMU (%)
1.	Very Dissatisfied	0	0%	0	0%
2.	Dissatisfied	07	7%	01	1.33%
3.	Neutral	31	31%	17	22.67%
4.	Satisfied	53	53%	40	53.33%
5.	Very Satisfied	09	9%	19	25.33%

Table 17. Frequency of using the OPAC for searching documents.

S.N.	Frequency	AMU	AMU (%)	TMU	TMU (%)
1.	Never	04	4%	02	2.67%
2.	Rarely	12	12%	07	9.33%
3.	Sometimes	36	36%	24	32.0%
4.	Usually	28	28%	22	29.33%
5.	Always	20	20%	20	26.67%

Table 18. Advanced search features in the OPAC to refine search results.

S.N.	Search features	AMU	AMU (%)	TMU	TMU (%)
1.	Very Dissatisfied	03	3%	16	21.33%
2.	Dissatisfied	04	4%	33	44.0%
3.	Neutral	50	50%	14	18.67%
4.	Satisfied	37	37%	03	4.0%
5.	Very Satisfied	06	6%	09	12.0%

Relevance of the Search Results

Table 19 presents the responses from AMU and TMU users regarding the relevance of the search results in the OPAC. The findings of the study reveal that 43% of AMU users rated the relevance of search results as “Usually,” the highest percentage among the categories, while 37.33% of TMU users gave the same rating. In the “Always” category, 13% of AMU users and 37.33% of TMU users rated the search results as highly relevant, reflecting a more positive view of the results at TMU. The “Sometimes” category was rated by 37% of AMU users and 17.33% of TMU users, indicating that AMU users found the search results relevant more neutrally or inconsistently than TMU. The “Rarely” category accounted for 4% of AMU users and 5.33% of TMU users, with both universities showing low dissatisfaction. Finally, the “Never” category had the lowest percentages, with 3% of AMU users and 2.67% of TMU users indicating that they found the search results irrelevant.

OPAC Terminals are Available in the Library

Table 20 illustrates the availability of OPAC terminals in the AMU and TMU libraries. The findings of the study reveal that the majority of the respondents from both institutions confirmed the presence of OPAC terminals in their libraries. Specifically, 69% of AMU respondents reported availability, while a higher percentage, 78.67%, was recorded at TMU. Conversely, 31% of AMU and 21.33% of TMU respondents stated that OPAC terminals were unavailable.

Facing Problems While Using the OPAC

Table 21 presents data on whether users at AMU and TMU face problems while using the OPAC system. The study’s findings reveal that most respondents from both universities reported not facing issues while using OPAC, with 63% of AMU users and 60% of TMU users indicating no problems. On the other hand, 37% of AMU and 40% of TMU respondents reported encountering difficulties.

The Training Session Requires the Use of Koha’s OPAC

Table 22 presents the responses from AMU and TMU users regarding the need for a training session on using Koha’s OPAC. The findings of the study reveal that the majority of users from both institutions expressed the need for training: 68% of AMU respondents and 66.67% of TMU respondents indicated that a training session is required. In contrast, 32% of AMU and 33.33% of TMU participants felt no such requirement.

Table 19. Relevancy of the search results.

S.N.	Relevancy	AMU	AMU (%)	TMU	TMU (%)
1.	Never	03	3%	02	2.67%
2.	Rarely	04	4%	04	5.33%
3.	Sometimes	37	37%	13	17.33%
4.	Usually	43	43%	28	37.33%
5.	Always	13	13%	28	37.33%

Table 20. OPAC terminals are available in the library.

S.N.	Availability	AMU	AMU (%)	TMU	TMU (%)
1.	Yes	69	69%	59	78.67%
2.	No	31	31%	16	21.33%

Table 21. Facing problems while using the OPAC.

S.N.	Facing Problem	AMU	AMU (%)	TMU	TMU (%)
1.	Yes	37	37%	30	40.0%
2.	No	63	63%	45	60.0%

Table 22. Training session required on the use of Koha's OPAC.

S.N.	Requirement	AMU	AMU (%)	TMU	TMU (%)
1.	Yes	68	68%	50	66.67%
2.	No	32	32%	25	33.33%

Table 23. Rating of the behavior of library staff.

S.N.	Rating	AMU	AMU (%)	TMU	TMU (%)
1.	Very Dissatisfied	03	3%	17	22.67%
2.	Dissatisfied	08	8%	16	21.33%
3.	Neutral	34	34%	27	36.0%
4.	Satisfied	43	43%	17	22.67%
5.	Very Satisfied	12	12%	04	5.33%

Behavior of Library Staff

Table 23 presents user responses from AMU and TMU regarding the behavior of library staff. At AMU, most respondents rated staff behavior as Satisfied (43%), with 12% marking it as Very Satisfied. Negative responses were less prominent, with 8% rating it Dissatisfied, 3% Very Dissatisfied, and 34% selecting Neutral. At TMU, the highest proportion of users (36%) gave a Neutral rating. However, negative ratings were more pronounced than at AMU: 21.33% rated staff behavior as Dissatisfied and 22.67% as Very Dissatisfied. Only 5.33% rated it Very Satisfied, and 22.67% marked it as Satisfied. Overall, the data suggests that AMU users have a relatively more positive perception of library staff behavior than TMU users, where dissatisfaction is notably higher.

CONCLUSION

The present study examined the use and applications of Koha, an open-source ILMS, in two academic libraries: the Maulana Azad Library at AMU and the Central Library and Knowledge Resource Centre at TMU. The analysis of data clearly indicates that Koha has played a significant role in automating core library operations and improving overall service delivery in both institutions. The findings reveal that all major Koha modules—acquisition, cataloging, circulation, serials, and OPAC—are actively used in both libraries, although the extent of utilization varies. AMU demonstrates a comparatively broader and more advanced use of specific modules, particularly the acquisition and OPAC modules, reflecting a more structured and centralized approach to automation. TMU, on the other hand, shows an efficient use of core functionalities with relatively simpler workflows. These variations highlight that institutional policies, infrastructure, and staff expertise strongly influence the effective use of Koha.

From the perspective of library professionals, the study shows a generally positive attitude towards Koha. Most staff members expressed satisfaction with the system's functionality, ease of use, and reliability in managing routine library operations. Training emerged as a critical factor, as both libraries recognized the need for continuous skill development to fully leverage the advanced features of Koha. Challenges such as technical support issues and system performance constraints were also reported, particularly at AMU, highlighting the need for sustained institutional and technical support. User-related findings further strengthen the relevance of Koha in academic libraries. A majority of users regularly rely on the OPAC to search for library materials and expressed satisfaction with the search results and access points. However, mixed responses regarding advanced search features and the need for OPAC training sessions suggest that more user-oriented programs and interface enhancements could further improve the user experience. Differences in user behavior and satisfaction between AMU and TMU also underline the importance of user awareness and support services in automated library environments. Overall, the study concludes that Koha is a cost-effective, flexible, and reliable solution for academic library automation. Its open-source nature, comprehensive modules, and adaptability make it suitable for libraries with varying resource capacities. However, the effective and optimal use

of Koha requires continuous staff training, improved technical infrastructure, proactive system maintenance, and regular user education programs. The comparative insights drawn from AMU and TMU may serve as a useful reference for other academic libraries planning to adopt or strengthen Koha-based automation systems, thereby enhancing library services in the digital era.

Note: This paper is based on the unpublished M.L.I.Sc. Dissertation submitted by Mohd. Munis is under the guidance of Prof. Mehtab Alam Ansari in the Department of Library and Information Science, Aligarh Muslim University.

REFERENCES

1. Muniraja A. Library automation – an introduction. *Int J Res Libr Sci.* 2021;7(2):192–. doi:10.26761/IJRLS.7.2.2021.1413.
2. Kumar R. Library automation: an empirical study. *Libr Waves.* 2016;2(1):36–41.
3. Nimbhorkar SP. Library automation in universities and colleges libraries in India and abroad. *ShodhKosh.* 2024;5(7):325–333. doi:10.29121/shodhkosh.v5.i7.2024.2674.
4. Fatoki OC. Library automation in Nigeria: the Kenneth Dike Library experience. *Lagos J Libr Inf Sci.* 2006;2(2):109–118. doi:10.4314/ljlis.v2i2.35509.
5. Haneefa M. Application of information and communication technologies in special libraries in Kerala (India). *Library Review.* 2007;56(7):603–620. doi:10.1108/00242530710775999.
6. Uddin J, Hasan N. Use of information technology in library service: a study on some selected libraries in northern part of Bangladesh. *Int J Libr Inf Sci.* 2012;4(3):34–44. doi:10.5897/IJLIS11.023.
7. Olagoke DP, Kolawole JA. Effect of library automation on performance of librarians in private universities in South-West Nigeria. *Inf Knowl Manag.* 2019;9(5):1–7.
8. Breeding M. Major open-source ILS products. *Library Technology Reports.* 2008;44(8):16–31.
9. Dhir S, Dhir S. Adoption of open-source software versus proprietary software: an exploratory study. *Strategic Change.* 2017;26(4):363–371. doi:10.1002/jsc.2137.
10. Subramanyam R, Xia M. Free/libre open source software development in developing and developed countries: a conceptual framework with an exploratory study. *Decis Support Syst.* 2008;46(1):173–186. doi:10.1016/j.dss.2008.06.006.
11. Bradley DA. The divergent anarcho-utopian discourses of the open source software movement. *Can J Commun.* 2006;30(4):585–612. doi:10.22230/cjc.2005v30n4a1642.
12. SenthilKumaran P, Sreeja KP. A study on managing Koha open-source library management system in the University Library, Central University of Kerala. *Int J Res Libr Sci.* 2017;3(1):91–101.
13. Koha Community. (2026). Koha manual documentation [Online]. Koha Library Software. GNU General Public License version 3. Available from: <https://koha-community.org/manual/20.11/en/html/intro.html>
14. Pruett J, Choi N. A comparison between select open source and proprietary integrated library systems. *Library Hi Tech.* 2013;31(3):435–454. doi:10.1108/LHT-01-2013-0003.
15. Eqbal N, Ansari MA. Status and application of automated system in Forest Research Institute Library: an evaluative study. *J Indian Libr Assoc.* 2024;60(2):284–298.
16. Bwalya T, Akakandelwa A. Challenges of using Koha as a library management system among libraries in higher education institutions in Zambia. *DESIDOC J Libr Inf Technol.* 2021;41(2):82–87. doi:10.14429/djlit.41.02.15877.
17. Hindupur JTK, Khan NZA. Koha integrated library in out tracking with advanced search and retrieval systems. *JIMS8I Int J Inf Commun Comput Technol.* 2024;12(2):749–754. doi:10.5958/2347-7202.2024.00013.6.
18. Eqbal N, Ansari MA. Assessment of library collection and services in automated system in Institute of Wood Science and Technology: issues and challenges. *Indian J Libr Inf Sci.* 2024;18(2):155–164. doi:10.21088/ijlis.0973.9548.18224.7.
19. Jabeen M. The adoption footprints of Koha as a library management system in university libraries of Pakistan. *J Inf Sci.* 2024;0. doi:10.1177/01655515231214980.

20. Kampa RK, Karna N, Gouda J, Sohail M. Perceived key drivers and perceived key barriers of adopting and using Koha by academic libraries in India. *Sci Technol Libr.* 2024;44:120–128. doi:10.1080/0194262X.2024.2407307.
21. Ansari MA, Eqbal N, Akbar D. Library automation and networking of an academic library: an overview. *J Adv Res Libr Inf Sci.* 2024;11(3):18–22.
22. Madhav Kulkarni A, Pandiyan M, Prabhas Patankar G. Smart usage of Koha: an open-source library management system. *Am J Inf Sci Technol.* 2023;7(1):30–37. doi:10.11648/j.ajist.20230701.14.
23. Garg M, Hasan N, Gupta A. Implementation of Koha in managing the e-resources of the library. *J Inf Knowl.* 2023;60(2):127–132. doi:10.17821/srels/2023/v60i2/170972.
24. Omopupa T, Adedeji AA, Kehinde AA, Abdulsalam AU, Abubakar H. Comparative study of Koha usage in Bowen University and University of Ilorin libraries. *Universite Arastirmalari Dergisi.* 2020;3(3):98–106. doi:10.32329/uad.741713.
25. Lingam AS, Dukare DA. Survey on Koha usage in India. *IP Indian J Libr Sci Inf Technol.* 2019;4(2):92–94. doi:10.18231/j.ijlsit.2019.022.
26. Uplaonkar S, Kattimani MMV. Application of Koha open-source software in University of Agricultural Sciences, Dharwad. *Res J Philos Soc Sci.* 2019;45(1):38–48.
27. Chaputula A, Kanyundo A. Use of Koha-integrated library system by higher education institutions in Malawi. *Digit Libr Perspect.* 2019;35(3–4):117–141. doi:10.1108/DLP-07-2019-0028.
28. McGarvey V. Staffordshire University's Koha journey: taking an integrated approach to supporting an open source library management system. *Insights.* 2018;31(1):1–7. doi:10.1629/uksg.411.