Status and Application of Automated System in Forest Research Institute Library: An Evaluative Study

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ABSTRACT-

This study aims to investigate the status, usage and barriers faced by the library during library automation. It also identifies the staff behaviour and students' perceptions regarding the Forest Research Institute (FRI) library services. The study employed a case study approach and a survey methodology to achieve the research objectives. The survey was conducted both offline and online, involving a personal visit to the FRI library by one researcher. In online mode, the questionnaires were shared via Email and WhatsApp to FRI library users. The study focused exclusively on the FRI library in Dehradun, conducting an in-depth analysis. Data collection relied on a carefully crafted questionnaire with two sets: Set A covered library software, modules and hardware usage, while Set B targeted user perspectives. Microsoft Excel was chosen for data presentation, tabulation, and analysis due to its versatile and user-friendly interface. The findings reveal that the central library is fully automated using KOHA software. Before KOHA software, the library used Libsys software, and due to the high Annual Maintenance Charges (AMCs) of Libsys, they shifted to KOHA. Furthermore, this study reveals that most respondents were satisfied with the OPAC interface, searching facility, and staff behaviour. Moreover, the study recommended that the library expand the opening hours, update collections, and improve the reading halls' comfort. The findings emphasize the obstacle of strategic budget allocation, staff training and infrastructure enhancements to facilitate an efficient and user-centric library environment.

Keywords: Library Automation, Library Management, Library Housekeeping Operations, Library Software, KOHA, Libsys, Forest Library, FRI, NFLIC, ICFRE, Dehradun, Uttarakhand, India

INTRODUCTION

Communication and Information Technology encompasses a wide range of resources and technological tools that facilitate communication, organization, storage, and dissemination of information (Matonkar and Kumar, 2021). An essential aspect of ICT is automating libraries'

housekeeping operations. Library automation involves computerizing old-fashioned library services and activities such as cataloguing, acquisition, circulation, and serial control modules (Nayana, 2019). The primary objective of automating libraries is to free up the library and its staff, enabling them to disseminate information and knowledge (Tripathi, 2023) actively. By automating library services, it becomes easier to access information resources and staff can provide improved assistance to users and handle responsibilities (Bwango and Mubofu, 2019). A library system facilitates information access by consolidating diverse resources into a single platform, offering a comprehensive information collection across various subject areas. However, the effectiveness of this process depends on carefully selecting and utilizing suitable library software (Ogbenege and Adetimirin, 2013). The current study aims to assess the level of library automation in the forest library, including the usage of library automation software and the application of software modules. Additionally, the study examines factors such as the frequency and purpose of library visits by users, the utilization of the OPAC, and the attitudes and behaviour of library staff towards serving the user community. The study also provides information about the total collection and services offered by the Forest Research Institute (FRI) library in Dehradun. By considering various aspects of the library from the perspective of users, services, and collections, this study aims to provide a comprehensive understanding of the library's functioning.

Forest Research Institute (Fri), Dehradun

FRI has a rich history dating to its establishment as the Forest School in 1878. It was later renamed the Imperial Forest Research Institute in 1906. Over time, the research and training centres evolved into independent institutes as part of the reorganization of Forestry Research in the country. Recognizing the institute's importance and achievements, the FRI received the status of a Deemed University in December 1991 based on recommendations from the University Grants Commission (UGC) and the Ministry of Human Resource Development (MHRD) of the Government of India. This designation further solidified FRI's position within the framework of ICFRE and its role as a premier institution in forestry research and education (FRI, 2023).

National Forest Library And Information Centre (Nflic), Fri

NFLIC was established in 1986 and has become a prominent repository of forestry-related documents. With the establishment of the Indian Council of Forestry Research and Education (ICFRE) as an independent administration under the Ministry of Environment, Forest, and Climate Change (MoEF&CC), the library witnessed a significant expansion in its collection of books and journal subscriptions. The NFLIC embarked on a computerization initiative to keep pace with technological advancements, acquiring bibliographic databases in the form of CD-ROMs. Currently, the library operates with full automation, implementing the KOHA library automation software. Recognizing the importance of continuous professional development, the library staff has been encouraged to participate in training programs focused on library software and information technology to enhance service delivery quality (NFLIC, 2023).

REVIEW OF LITERATURE

Several studies have been performed on library automation across various educational institutions. This paper provides a selective review of some relevant studies in the field. Shehu and Singh (2022) revealed that North-

Central university in Nigeria had implemented email, internet, search, and e-library services to upgrade library activities. Khan and Ayesha (2022) emphasized that full support, reliability, user-friendly interface, web-based services and technical support were characteristics of automation in university libraries in Pakistan. Whereas Tripathi (2023) highlighted that automation played a vital role in handling extensive data, saving time and avoiding duplication of work. Azhar and Siddiqui (2022) found that technical skills, costs, module complexity and supervision issues were the challenges in adopting Koha at University of Karachi, Pakistan. Sharma and Kandari (2021) investigated technical institutions and found that librarians were satisfied with the automation services in Delhi NCR. Olatunji and Tiamiyu (2022) found that users were satisfied with the ILS services in private university in Osun State, Nigeria. Meanwhile, Madhusudhan and Singh (2016) critically analyzed the features of Libsys, NewGenLib, Koha and Virtua. Iqbal et al. (2023) specified that academic libraries in Sialkot prefer LIMS software due to its user-friendly interface, affordability and multilingual support.

In contrast, Chaputula and Kanyundo (2019) discovered that the cost, technical support and inflexibility of previous software led to the adoption of KOHA in Malawi. At the same time, Asim and Mairaj (2019) found that the availability of Web-OPAC, MARC 21 support, multilingual capabilities and the popularity of Koha were reasons for adoption in Punjab, Pakistan. Naveed et al. (2021) stated that most private and public universities used LIMS and Koha to automate their library activities in Lahore, Pakistan. Otunla et al. (2022) found that most libraries adopted Koha due to its open-source nature, customization and upgradation in Nigeria. Bhawan and Mahawar (2021) explored the Indian Institute of Technology (IIT) Bombay and Bhubaneswar were migrated to Koha with the positive reception of most modules. Whereas Omeluzor and Oyovwe-Tinuoye (2016) revealed that academic libraries in Edo and Delta states in Nigeria adopted Koha for automation. Olatoye (2022) scrutinized that libraries were fully automated using Koha in the Baptist Theological Seminary in Nigeria. Jamogha, Owoeye, and Godwin (2022) revealed that most university librarians in southern Nigeria agreed with the automated systems of Koha. Jayamma and Krishnamurthy (2021) found that acquisition and cataloguing modules were fully automated in college libraries in Karnataka. Ansari (2019) highlighted the automated acquisition in central university libraries in North India. At the same time, Jahangir et al. (2021) examined automated circulation services in university libraries in Lahore, Pakistan. Bala et al. (2023) examined and identified newspapers, magazines, and scholarly journals as serial materials in academic libraries in Niger State, Nigeria.

In all the above studies, application of software in the library has been discussed along with the name of integrated library software and its different modules. However, in the present study, authors have also covered the viewpoints of users. In addition to this aspect, the given study is related to forest research library. It is important mentioning here that very few studies, so far, have covered forest research institutes library in India.

OBJECTIVES OF THE STUDY

The core objectives of this research are such as:

- To assess the current status of library automation in the central library.

- To observe the applications of different modules of the library software.

- To identify the significant problems encountered during the automation.

- To analyze the satisfaction level of respondents while using OPAC.

- To evaluate the behaviour of library staff while serving the users.

METHODOLOGY

The researchers employ a case study method to investigate the status and usage of automated systems in the Forest Research Institute Library (FRI) located in Dehradun, India. A case study approach allows for an in-depth examination of specific library automation practices, offering valuable insights into its processes, challenges, and user experiences. A quantitative research approach using the survey method was adopted to gather comprehensive data. This method enables data collection from a sizeable and diverse sample of respondents, facilitating a holistic understanding of the research objectives. A structured questionnaire served as the primary data collection tool. The questionnaire is designed to encompass both library staff and users' perspectives on automation. The questionnaire will be carefully crafted to elicit information about the library's automation processes, software modules in use, user satisfaction, challenges encountered, and more. The questionnaire will undergo a pilot test at the FRI Library before collecting primary data. The pilot test aims to identify any ambiguities or issues in the questionnaire, ensuring its clarity and effectiveness. Feedback from the pilot test participants was used to refine and improve the questionnaire for the final survey. The questionnaire related to the library consists of two sets. Set A is focused on gathering data about the library's automation infrastructure, software, and modules. This comprehensive coverage will provide a holistic view of the library's automation status. Set B of the questionnaire was distributed to the respondents, covering library usage, their satisfaction level while using library services and staff behaviour while assisting them. The collected survey data is analyzed using Microsoft Excel, a widely used spreadsheet software. Excel's features for data organization, tabulation, and visualization are leveraged to process the collected data.

ANALYSIS AND INTERPRETATION OF DATA

The investigators collected data from the Forest Research Institute, Dehradun. Analysis of data and their interpretation of the library and users part are made available through diagrams and tabulations such as:

Strength of Library Staff

Table 1: Number of Library Staff

S. No.	Library Staff	Total	Percentage (%)
1.	Professional	01	8
2.	Non-professional	07	54
3.	Others	05	38

Table 1 represents the National Forest Library and Information Centre (NFLIC) library staff, FRI. This table shows that NFLIC has thirteen (100%) library staff, and out of them, one professional staff (8%), seven non-professional staff (54%) and five other staff members (38%), i.e., peon, clerk and others in the library.

Figure 1 presents the total library budget for the past five years, covering the period from 2018-19 to 2022-23. The highest total library budget was recorded in 2019-20 at 45,42,159₹, while the lowest was in 2021-22 at 2,11,539₹. The library budget is meticulously prepared by the library-in-charge of NFLIC and submitted to the Ministry through FRI administration for approval. The library operates within the allocated budget to fulfil its various needs.
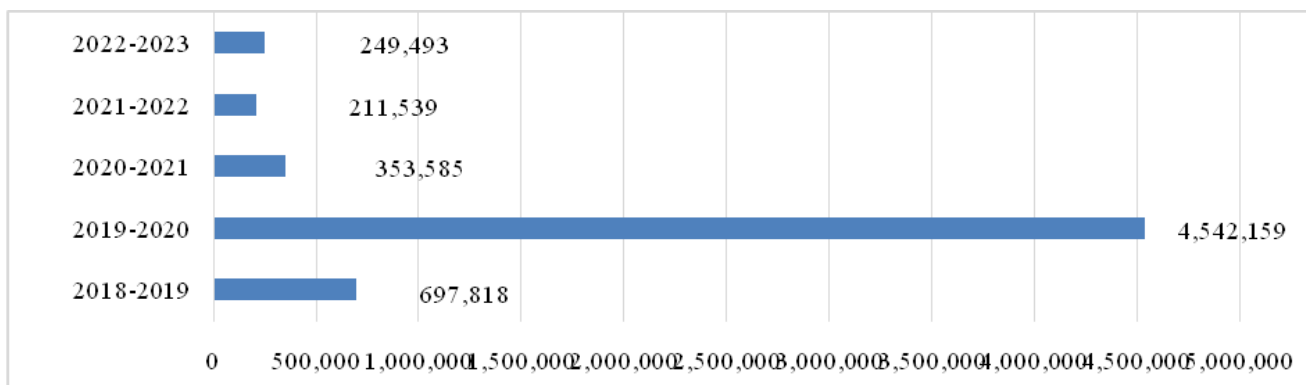
Annual Library Budget

Figure 1: Last Five-Year Annual Budget of the NFLIC Library

Library Collections

Table 2: Total Number of Library Collections of NFLIC

. No.	Collections	Total
1.	Books	99,144
2.	Indian Journals subscribed	26
3.	Bound vol.	44417
4.	Theses & Dissertations	2250
5.	Reference Books	4915
6.	CD/DVDs	865
7.	Reports	1666
8.	Newspapers/Magazines	24
9.	**Total Collections**	**1,53,257**

Table 2 indicates the comprehensive collection of the FRI library, encompassing various disciplines relevant to forestry education. The library boasts extensive materials covering areas such as forestry, environment, silviculture, biotechnology, genetics and tree improvement, entomology, plant protection, and wood science & technology. The total collection at NFLIC amounts to 1,53,257 items. Within this collection, there are 99,144 books, 26 subscribed Indian Journals, 44,417 bound volumes, 2,250 thesis and dissertations, 4,915 Reference Books, 865 CDs, 1,666 Reports, and 24 Daily Newspapers and Magazines.

Status of Automated Systems in the NFLIC Library

During the investigation, the investigator inquired about the level of automation in the library from the library-in-charge. In response, the library-in-charge stated that the library is fully automated. The Central Library of FRI, known as NFLIC, utilizes KOHA library management software for automation. Previously, they had employed Libsys software. However, due to the high Annual Maintenance Charges (AMC) associated with Libsys software, they transitioned from Libsys to the open-source KOHA software in 2012. KOHA is freely available and easily accessible, making it a more cost-effective choice for the library.

Automated Acquisition Module

The analysis of Table 3 shows the features and capabilities of the acquisition module in a library system. It includes features such as dup-

Table 3: Application of Acquisition Modules

S. No.	Acquisition	Tick
1.	Pre-order duplicate checking.	✓
2.	Possess up-to-date vendor database.	✓
3.	Formulation of purchase orders.	✓
4.	Downloading of bibliographic records from CD-ROMS, databases or vendors' catalogues.	✓
5.	Electronic collation and quick book selection.	✓
6.	Accepts the books in gifts/exchange.	✓
7.	Sending timely remembrances and letters for order withdrawal.	✓
8.	Maintaining up-to-date fund utilization accounts.	✓
9.	Accessioning and invoice processing.	✓
10.	Preparation of vendor performance report.	✓
11.	Sending letters to banks for foreign exchange drafts.	✓

-licate checking before placing orders, maintaining an updated vendor database, easy preparation of purchase orders and the ability to download bibliographic data from different sources. The system also facilitates electronic ordering, simplifies book selection and allows accepting books through gifts or exchange arrangements. It supports timely reminders and letters, tracks fund utilization and provides features for accessioning new materials and handling invoices. Additionally, the system assists in generating reports on vendor performance and enables communication with banks for foreign exchange drafts.

Automated Cataloguing Module

Table 4: Application of Cataloguing Module

S. No.	Cataloguing	Tick
1.	Supports MARC21-based data entry.	✓
2.	Export and import of records in international formats like MARC21/CCF	✓
3.	Copying and downloading catalogue records from bibliographic databases.	✓
4.	Supports international standards.	✓
5.	Make full use of RFID features.	✓
6.	Compiling of Union Catalogues.	✓
7.	Generate and maintain authority files.	✓
8.	Prepare shelf list and index files.	✓
9.	Creates spine and barcode labels.	✓
10.	Maintaining thesaurus and accessibility of dictionary for inserting records and selecting terms.	✓

Table 4 represents the features and proficiencies of the cataloguing module in a library system. The module supports data entry in the MARC21 format and allows for importing and exporting data in international formats, promoting interoperability. Users can efficiently copy and download catalogue records from bibliographic databases. The system complies with international standards, ensuring compatibility with other library systems. It fully utilizes RFID technology and enables the compilation and management of Union Catalogues. The module also supports generating and maintaining authority files for consistent and accurate data entry. It facilitates the organization and retrieval of library materials through shelf lists and index files. The system creates spine and barcode labels for proper item identification. It includes a thesaurus and dictionary to assist users in selecting appropriate terms.

Automated Circulation Module

Table 5: Application of Circulation Modules

S. No.	Circulation	Tick
1.	Making membership databases of different groupings with different parameters.	✓
2.	Generating Users' ID cards with photographs, barcodes and blocking the membership.	✓
3.	Manipulation of users' accounts, adding new patron accounts and reducing fines.	✓
4.	For lost, stolen and expiry cards, immediate generation of duplicate cards	✓
5.	Barcode-enabled services.	✓
6.	Integration with security arrangement that compliments the self-check-in/out/issue.	✗
7.	Easy for staff to handle loans, yields library resources.	✓
8.	Automatic creation of due date slips and prompts for overdue items.	✓
9.	Creation of fines automatically.	✓
10.	Facilitates ILLs and makes it easy to possess records of both inner and outer loans.	✓
11.	Stock verification, printing and calculation of various forms of statistical reports.	✓

The table (Table 5) outlines the features of the circulation module in the library system. It supports the creation of membership databases, generates user ID cards with photos and barcodes and allows for blocking memberships. The system provides user-friendly tools for managing user accounts, including fines adjustment and duplicate card generation. Barcode technology facilitates the loaning and returning of library resources. However, it lacks integration with a security arrangement for self-check-in/out/issues. The system generates due date slips, reminders, and fines automatically. It supports interlibrary loans, stock verification, and statistical reporting.

Automated Serials Control Modules

The table (Table 6) frameworks the features for

Automated Serials Control Modules

Table 6: Application of Serials Control Module

S. No.	Serials Control	Tick
1.	Input of serials records for check-in.	✓
2.	Subscriptions to latest journals originated through the library and avoided repetition.	✓
3.	Renewal, withdrawal and extension of subscriptions.	✓
4.	Accessioning of separate issues.	✓
5.	Keeps record of misplaced issues.	✓
6.	Invoice processing for both latest and renewal subscriptions.	✓
7.	Send automatic remembrances to assertion issues not acknowledged.	✓
8.	Preparation of a list of holdings with their status.	✓
9.	Uphold and utilize financial records for subscription and binding.	✓
10.	Printing of barcode labels for both separate and bound issues of serials.	✗
11.	Union list of periodicals with	✗
	another library.	
12.	Retrieval and search and facility for library staff.	✓

managing serials in the library system. It supports quick input of serials records during check-in and facilitates subscription management, including preventing duplication and efficient handling of new journals. The system assists in renewing, cancelling, and extending subscriptions and maintains a comprehensive record of individual serial issues. It tracks and records missing issues processes invoices, and sends reminders for unclaimed items. The system helps prepare holdings lists and manages fund accounts for journal subscriptions. However, it does not support printing barcode labels or creating union lists of serials with other libraries. The system provides a search and retrieval facility within the module.

ICT Infrastructure of Library

Table 7: Availability of ICT Infrastructure

No.	ICT Infrastructure	Total Number
1.	Computer Server	02
2.	Fax Facility	01
3.	Printer	04
4.	Bar Code Scanner	04
5.	Photocopy Machine	01
6.	LCD Projectors	02
7.	UPS/Power Backup	02

The data presented in Table 7 shows the ICT infrastructure available in NFLIC. The library has two computer servers, one fax facility, four printers, four barcode scanners, one photocopy, two LCD projectors and two UPS or power backup systems to ensure uninterrupted power supply.

Obstacles Faced During Library Automation

Library automation is a complex and challenging process that often presents various difficulties. To gain insights into the barriers faced by libraries during the automation process, the investigators interviewed library personnel. The library staff highlighted several significant obstacles, including funds, IT-skilled staff and library resources. Insufficient funds pose a challenge in acquiring necessary technologies and resources, while the non-availability of IT skilled staff hinders the proper management and utilization of automation systems. Additionally, the lack of library resources can limit the library's ability to fully embrace and maximize the potential of automation.

Users Library Visits

Table 8: Frequency of User Library Visits

S. No.	Frequency	Total	% age
1.	Daily	40	25%
2.	Weekly	71	44.38%
3.	Fortnightly	11	6.87%
4.	Monthly	38	23.75%
5.	**Total**	**160**	**100%**

Based on the data presented in Table 8, the frequency of users' library visits in the present study can be analyzed. Out of 160 respondents, 44.38% (71) of the users visit the library weekly, 25% (40) visit the library daily, 23.75% (38) of respondents visit monthly, and 6.87% (11) visit the library fortnightly.

Time Spent in the Library

Table 9: Total Amount of Time Spent in the Library

S. No.	Amount of time spent	Total	% age
1.	Less than 3 hours	77	48.13%
2.	3-5 hours	52	32.50%
3.	5-8 hours	23	14.37%
4.	8-10 hours	8	5%
5.	**Total**	**160**	**100%**

The data presented in Table 9 provides insights into the amount of time users spend in the library, shedding light on their engagement with library resources. Out of the total 160 respondents, 48.13% (77) of users spend less than 3 hours in the library, 32.50% (52) of respondents reported spending 3-5 hours in the library, 14.37% (23) reported spending 5-8 hours in the library and only 5% (8) spent 8-10 hours.

OPAC Interface in the Library

Table 10: Rate OPAC Interface in the Library

S. No.	Response	Total	% age
1.	Excellent	20	12.50%
2.	Very Good	43	26.87%
3.	Good	71	44.38%
4.	Satisfactory	26	16.25%
5.	**Total**	**160**	**100%**

Table 10 illustrates the satisfaction level of users with the Online Public Access Catalogue (OPAC) interface in the library. The analysis of the data, based on responses from 160 participants, reveals that 44.38% (71) of the users rate the OPAC interface as good, 26.87% (43) of respondents rate it very good, 16.25% (26) rate it as satisfactory, and 12.50% (20) consider it excellent.

Search Technique Used for Searching on OPAC

Table 11: Prefer Search Techniques

S. No.	Search techniques	Total (Out of 160)	Total %age
1.	Title search	92	57.50%
2.	Author search	73	45.63%
3.	Keyword search	51	31.88%
4.	Subject search	50	31.25%
5.	Boolean operators	81	50.63%
6.	Proximity search	64	40%
7.	Truncation search	56	35%

Table 11 presents the various search techniques employed for information retrieval, including simple and advanced methods. Among the 160 respondents, 92 (57.50%) utilized Title searches, 73 (45.63%) respondents opted for the author search technique, 51 (31.88%) respondents employed keyword searches.

Similarly, subject searches were performed by 50 (31.25%), 81 (50.63%) users effectively used Boolean operators and Truncation searches were embraced by 56 (35.00%) and 64 (40.00%) respondents harnessed the advanced technique of proximity searches.

Search Response while Using OPAC

Table 12: Response Regarding Searching on OPAC

S. No.	Response	Total	% age
1.	Excellent	20	12.50%
2.	Very Good	44	27.50%
3.	Good	62	38.75%
4.	Satisfactory	34	21.25%
5.	**Total**	**160**	**100%**

Table 12 presents the rate of search response as reported by respondents while using the Online Public Access Catalogue (OPAC) for their searches. The data gathered from 160 participants indicates that 38.75% (62) of respondents rate the search response as good, 27.50% (44) of participants rate it very good, 12.50% (20) rate it excellent and 21.25% (34) rate it as satisfactory. Most respondents expressed satisfaction with the search responses obtained from the OPAC system.

Action Taken when Searching Option Fails on OPAC

Table 13 displays the responses of participants regarding the actions taken when their search option fails on the OPAC. Out of the 160 respondents, 76 participants (47.5%) asked library staff for assistance, 54 participants

(33.75%) changed search techniques, 24 participants (15%) checked spelling mistakes and 6 participants (3.75%) decided to stop their search altogether when faced with a failed search option on the OPAC.

Table 13: Action Taken by Users while Searching Option Fails on OPAC

S. No.	Action taken while searching option fails	Total	% age
1.	Ask library staff	76	47.5%
2.	Change the search techniques	54	33.75%
3.	Check spelling mistakes	24	15%
4.	Stop search	6	3.75%
5.	**Total**	**160**	**100%**

Staff Behaviour while Assisting

Table 14: Rate Library Staff Behaviour while Assisting

S. No.	Response	Total	% age
1.	Excellent	42	26.25%
2.	Very Good	48	30%
3.	Good	48	30%
4.	Satisfactory	22	13.75%
5.	**Total**	**160**	**100%**

Table 14 presents the response rate of NFLIC respondents regarding the behaviour of the library staff while assisting users. The data collected from 160 participants reveals that 30% (48) of respondents rate the staff behaviour as good, while another 30% (48) rate it very good. Additionally, 26% (42) rate it excellent, and 14% (22) rate it satisfactory. Most participants expressed satisfaction with the staff behaviour, emphasizing that the staff members are humble and kind-hearted in their interactions with users.

FINDINGS AND CONCLUSION

The study findings uncovered that the library is staffed (Table 1) with 13 individuals, most of whom, 54% (07), hold non-professional roles. Notably, the highest recorded library budget (Figure 1) was in 2019-20 at 45,42,159₹, while the lowest occurred in 2021-22 at 2,11,539₹. The NFLIC library-in-charge oversees the meticulous preparation of the library budget and subsequently submits it to the Ministry through FRI administration for approval. Importantly, the library budget remains subject to change, contingent on the Ministry of Environment, Forests, and Climate Change, Government of India.

The collection at NFLIC (Table 2) comprises a total of 1,53,257 items. Within this, there are 99,144 books, 26 subscribed Indian Journals, 44,417 bound volumes, 2,250 theses and dissertations, 4,915 Reference Books, 865 CDs, 1,666 Reports, and 24 Daily Newspapers and Magazines. FRI's Central Library fully automates, leveraging KOHA library management software. A transition from Libsys software to the open-source KOHA software occurred in 2012, primarily due to the substantial Annual Maintenance Charges (AMC) associated with Libsys software. The study also delves into automated library housekeeping operations, outlining the comprehensive features and functions incorporated in FRI's system, encompassing acquisition (Table 3), cataloguing (Table 4), circulation (Table 5), and serials control (Table 6) modules. The library's technological infrastructure (Table 7) includes two computer servers, one fax facility, four printers, four

barcode scanners, and one photocopy machine for document replication. Moreover, the library is equipped with two LCD projectors and two Uninterruptible Power Supply (UPS) systems, providing backup power. This ICT infrastructure constitutes the essential arsenal for smooth library operations and services. However, it is vital to acknowledge that library automation is an intricate and demanding, often challenging process. The staff pinpointed several notable barriers, including inadequate funds, a shortage of skilled IT personnel, and a deficiency of library resources. These obstacles can hinder the seamless transition and effective implementation of library automation endeavours.

The findings indicate that a significant portion of users, 44.38% (71), visit the library on a weekly basis (Table 8), demonstrating a consistent commitment to utilizing library resources. The analysis unveils that 48.13% (77) of users spend less than 3 hours (Table 9) during their library visits, implying relatively shorter durations, potentially influenced by restricted opening hours or other time constraints. Furthermore, the results reveal that 44.38% (71) of users rate the OPAC interface (Table 10) as good. Among the 160 respondents (Table 11), 92 (57.50%) opted for Title searches, while 73 (45.63%) selected the author search technique to access pertinent documents. Additionally, 81 (50.63%) users adeptly employed Boolean operators. Truncation searches were embraced by 56 (35.00%) respondents. Significantly, 64 (40.00%) respondents utilized the advanced technique of proximity searches. The results (Table 12) also shows that 38.75% (62) of respondents rate the search response as good. Moreover, the analysis further reveals that the most common actions taken (Table 13) by users were asking library staff for assistance (47.5%) and switching search techniques (33.75%). Notably, the study underscores (Table 14) that 30% (48) of respondents assessed the staff behaviour as good, while another 30% (48) deemed it very good.

Suggestions And Recommendations From Users

The respondents' recommendations for enhancing library services at NFLIC encompass a range of aspects. They underscored extending the library's opening hours to cater to diverse user schedules. Additionally, they suggested augmenting the staff count to elevate the quality and efficiency of services. The respondents called for improved internet connectivity and additional seating arrangements to facilitate smoother access to online resources and offer comfortable study areas. Refinements in the collection were also proposed, including updates to materials, an expansion of the issued book count, and enhanced organization of dissertations and theses to ensure better accessibility. The survey participants also emphasized the creation of well-appointed, air-conditioned reading spaces and implementation of self-check-in and check-out systems to streamline the borrowing process. Upgrading library cards to smart cards equipped with barcodes was recommended to boost transaction efficiency. These suggestions provide invaluable insights to enhance library services, cater to user requirements, and foster a user-centric environment at NFLIC. Incorporating these recommendations can lead to improved offerings and better alignment with the needs of the library's patrons.

Library automation has significant implications for the development of library services, and the NFLIC has fully embraced this process by implementing KOHA software. This software automates library modules. The migration to KOHA was prompted by the high Annual Maintenance Charges (AMCs) associated with the previous Libsys software. The NFLIC has

essential ICT infrastructure, including a computer server, telephones, printers, barcode scanners and printers, photocopier machines, LCD projectors, and UPS/power backups. The study highlights that most library users spend less than three hours in the library, primarily due to the overlapping of library opening hours and class schedules. During this limited time, they visit the library to prepare for exams and access course-related materials. Most users rely on the OPAC due to its user-friendly interface for searching documents. In cases where materials cannot be located, users may seek assistance from library staff, change their search strategies, or explore alternative methods to find the desired materials. Notably, the users have perceived the library staff as polite and helpful. Overall, the implications of library automation at NFLIC have improved access to resources and streamlined library operations. The user-friendly OPAC interface and helpful staff have created a positive user experience.

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