Technological Innovations in Library Resource Circulation: Evaluating the Effectiveness of Koha, LibSys, and SOUL as Automated Library Management Systems

	
Dr. Bipul Chakraborty, Principal , St. Genius Model School, Uttar Bhayna , Hanskhali, , Nadia, West Bengal. Mail – bipul2geo@gmail.com	**Sougata Das, Librarian , St. Genius Model School, Uttar Bhayna , Hanskhali, , Nadia, West Bengal**

Abstract

This chapter examines technological innovations in library resource circulation with a focused comparative evaluation of three widely used Integrated Library Management Systems (ILMS): **Koha (open-source), LibSys (proprietary/enterprise), and SOUL (SOftware for University Libraries)**. Emphasizing circulation functions—membership management, check-in/check-out workflows, renewals, reservations, fines/fees, interlibrary loans (ILL), RFID/SIP/NCIP support, reporting, and user-facing discovery services—the chapter integrates literature review, technical feature analysis, usability assessment, implementation challenges, and empirically grounded recommendations (**Madhusudhan, 2020; Patel & Shah, 2022**). Prior studies highlight the growing role of automation in enhancing efficiency, reducing human error, and improving patron satisfaction (**Gaur & Tripathi, 2019; Sharma & Singh, 2018**). By systematically comparing Koha, LibSys, and SOUL, this chapter provides librarians, administrators, and policymakers with a clear and practically useful roadmap for selecting and optimising an ILMS to improve circulation efficiency, patron satisfaction, and long-term cost-effectiveness (**INFLIBNET, 2021; Kumar & Verma, 2021**).

Keywords

Koha; LibSys; SOUL; circulation; library automation; ILMS; RFID; NCIP; SIP2; OPAC; usability; library management

Introduction

Library automation has moved from novelty to necessity in the 21st century, becoming a cornerstone of modern information management (**Gaur & Tripathi, 2019**). Circulation—the set of routines by which libraries lend materials, manage memberships, track returns, and enforce borrowing policies—sits at the operational heart of any library (**Madhusudhan, 2020**). Technological innovations, from barcode and RFID tagging to networked authentication protocols and integrated discovery layers, have reshaped how circulation is executed, measured, and experienced by patrons (**Kumar & Verma, 2021**). Integrated Library Management Systems (ILMS) are thus not only tools of efficiency but also strategic enablers of user satisfaction and resource optimization (**Sharma & Singh, 2018**). This chapter explores three prominent systems—**Koha, LibSys, and SOUL**—assessing how their circulation modules translate policy into practice and how effectively they meet the needs of diverse library types (**Patel & Shah, 2022; INFLIBNET, 2021**).

Rationale of the Study

The rapid expansion of digital resources and user expectations in academic and research environments has made library automation indispensable. Circulation services, being the most visible and user-centric component of a library, require reliable and efficient Integrated Library Management Systems (ILMS) to ensure seamless operations. However, the diversity of available systems—such as **Koha, LibSys, and SOUL**—creates challenges for institutions in selecting the most suitable platform. Comparative studies are necessary to evaluate these systems on parameters like functionality, technical features, usability, and implementation challenges to guide evidence-based decision-making (**Madhusudhan, 2020; Singh & Verma, 2021**). This study is rationalized by the need to bridge the gap between technological availability and institutional adoption in Indian libraries, where financial, technical, and infrastructural constraints often influence automation outcomes (**Gaur & Tripathi, 2019**).

Significance of the Study

This study holds significance for library professionals, policymakers, and educational institutions as it provides a structured comparative analysis of **Koha, LibSys, and SOUL**. By identifying strengths, weaknesses, and contextual applicability, it enables libraries to make informed choices that balance cost-effectiveness, efficiency, and user satisfaction. The findings will also support training and capacity-building initiatives for staff by highlighting usability and workflow considerations (**Patel & Shah, 2022**). Furthermore, the study contributes to the existing body of knowledge on library automation in India, aligning with the national agenda of digital transformation and knowledge dissemination as outlined in **INFLIBNET (2021)** and higher education modernization efforts (**Sharma & Singh, 2018**). Ultimately, the research advances both theoretical and practical perspectives by linking technological innovations with real-world library operations.

Literature Review

Author(s)	Year	Title	Objectives	Findings	Relevance to Present Study
Cholin, V. S.	2005	Study of the application of IT for effective access to resources in Indian university libraries	To assess IT adoption for resource access in Indian university libraries	IT significantly improves circulation efficiency; challenges include staff training	Supports evaluation of circulation workflow improvements and challenges in Indian libraries
Ghosh, S. B., & Das, A. K.	2006	Open source integrated library management systems: Comparative analysis of Koha and NewGenLib	Compare features of open-source ILMS in Indian context	Koha offers flexibility and cost advantages; NewGenLib has standard modules but limited customisation	Highlights comparative functional analysis for Koha, relevant for present study's comparison
Kaur, K., & Rani, S.	2008	Comparative features of Koha, LibSys, and SOUL	To compare core modules of three ILMS	Koha is flexible and cost-effective; LibSys offers turnkey solutions; SOUL fits university needs	Directly aligns with present study's comparative evaluation objectives
Madhusudhan, M.	2010	RFID technology implementation in two university libraries in India	To examine RFID use in circulation	RFID improved transaction speed and reduced errors; staff training required	Relevant for evaluating RFID integration in Koha, LibSys, and SOUL
Singh, J., & Sanaman, G.	2012	Open source ILMS: Comparative analysis of Koha and ABCD	To compare open-source ILMS features	Koha more flexible and user-friendly; ABCD limited reporting	Supports functional and usability comparison of Koha in present study
Krishnamurthy, M.	2012	Integrated library management systems: Evolution and trends in India	To review evolution of ILMS in India	Emphasises circulation modules, standardisation, and workflow improvements	Helps contextualise ILMS adoption trends in Indian libraries

IFLA	2012	RFID in libraries: A recommended good practice	To provide standards and best practices for RFID implementation	Guidelines ensure interoperability, security, and circulation efficiency	Guides technical capability and protocol eva
Patra, A., & Pani, S.	2015	User satisfaction in Koha implementation: A case study	To examine user satisfaction in Koha-implemented libraries	High satisfaction when local technical support exists; OPAC and circulation modules well-received	Supports assessment of user experience and workflow efficiency in Koha
Jayaprasad, P. N.	2015	Adoption of SOUL in Indian academic libraries: A case study of Kerala	To study SOUL implementation outcomes	SOUL improved workflow efficiency; some training required for staff	Provides empirical evidence of SOUL circulation effectiveness and challenges
Breeding, M.	2015	Library services platforms: A maturing genre of products	To review evolution and features of modern library services platforms	Identifies trends in integrated library management systems and highlights circulation innovations	Provides background on ILMS evolution and circulation functionality trends
Reddy, K. M., & Kumbar, B. D.	2017	Automation in Indian university libraries: Issues and challenges with SOUL	To identify challenges in automating circulation	Challenges include data migration, staff training, and policy re-engineering	Relevant for implementation considerations and change management in SOUL
Oyewole, O., Adetimirin, A. E., & Olorunsola, R.	2017	Comparative analysis of Koha and proprietary ILMS in Nigerian universities	To study usability and adoption differences	Proprietary systems offer support; open-source systems provide flexibility but need technical capacity	Aligns with usability and implementation evaluation in present study
Khan, A., & Bhatti, R.	2017	Application of open-source ILMS in academic	To survey adoption of Koha in universities	Koha adoption led to increased user satisfaction;	Supports analysis of open-source ILMS

		libraries in Pakistan		technical support is crucial	performance and usability
Breeding, M.	2017	Library technology guides: Comparative analysis of library automation systems	To guide library technology selection based on features	Provides detailed feature mapping and vendor comparisons	Forms methodological reference for structured evaluation in present study
Reddy, V., & Rao, P. N.	2018	RFID-enabled circulation services in university libraries	To evaluate RFID in circulation workflows	RFID reduced check-out/check-in time and increased accuracy	Provides empirical data for evaluating circulation efficiency improvements
Muneja, M. S.	2018	Evaluation of Koha and Evergreen open-source ILS	To compare open-source ILMS on workflow efficiency	Koha supports flexible circulation rules; Evergreen is less customisable	Supports functional comparison of circulation features in Koha
Parabhoi, L., & Naidu, G. T.	2019	Implementation of SOUL software in university libraries of Odisha	To assess SOUL adoption and operational outcomes	SOUL improved reporting and circulation efficiency; some modules required customisation	Provides region-specific insights into SOUL implementation effectiveness
INFLIBNET Centre	2019	SOUL 3.0: Software for University Libraries – User Manual	To document SOUL features, circulation module, and technical specifications	SOUL provides standardised circulation, book-bank, and ILL functions for Indian universities	Serves as primary reference for SOUL's circulation capabilities in Indian higher education
LibSys Ltd.	2020	LibSys 10 – Integrated Library System: Product brochure	To document features and circulation workflows of LibSys	Enterprise solutions provide advanced patron management, ILL, and reporting	Provides up-to-date technical details for LibSys, aiding comparative study

Research Gap

Although numerous studies have examined Integrated Library Management Systems (ILMS), significant gaps remain in the context of circulation management. Most research tends to focus on a single system—such as Koha or SOUL—without providing a **comparative evaluation of multiple systems** including Koha, LibSys, and SOUL (**Ghosh & Das, 2006; Kaur & Rani, 2008**). While feature comparisons and user satisfaction surveys exist (**Patra & Pani, 2015; Oyewole, Adetimirin, & Olorunsola, 2017**), **empirical evidence on circulation efficiency metrics** such as transaction throughput, turnaround time, and fulfillment rates is limited (**Reddy & Rao, 2018; Madhusudhan, 2010**). Additionally, **usability and workflow assessments** for both staff and patrons across these systems are underexplored (**Singh & Sanaman, 2012; Muneja, 2018**). Comparative evaluations of **technical integration, including RFID, SIP2, and NCIP support**, are also insufficient (**IFLA, 2012; Breeding, 2017**). Furthermore, most studies are either region-specific or fragmented, lacking **holistic, actionable recommendations** for system selection, circulation optimization, and long-term cost-effectiveness, particularly in the Indian higher education context (**INFLIBNET, 2019; Jayaprasad, 2015**). This study aims to address these gaps by providing a **comprehensive, empirically grounded comparison** of Koha, LibSys, and SOUL, focusing on circulation features, usability, technical capabilities, and implementation considerations.

Objectives of the Study

1. To **compare the circulation functionalities** (check-in/check-out, renewals, reservations, fines, ILL, and book-bank) of Koha, LibSys, and SOUL.
2. To **assess the technical capabilities** of these ILMS, including RFID, SIP2, NCIP, barcode integration, and APIs.
3. To **evaluate usability and workflow efficiency** for library staff and patrons in each system.
4. To **identify implementation challenges** such as data migration, training needs, and policy adaptation in libraries using these ILMS.
5. To **provide evidence-based recommendations** for libraries regarding ILMS selection, optimization, and cost-effectiveness in circulation management.

Research Questions

1. How do Koha, LibSys, and SOUL differ in their **circulation functionalities**?
2. What are the **technical capabilities and integration features** of each ILMS, particularly for RFID, SIP2, and NCIP support?
3. How do library staff and patrons **perceive usability and workflow efficiency** in each system?
4. What are the **major challenges** faced during implementation and adoption of Koha, LibSys, and SOUL?
5. Based on comparative evaluation, which ILMS is **most suitable for improving circulation efficiency** and cost-effectiveness in Indian libraries?

Null Hypotheses (H_0)

1. **H_{01}:** There is **no significant difference** in circulation functionalities (check-in/check-out, renewals, reservations, fines, ILL, book-bank) among Koha, LibSys, and SOUL.
2. **H_{02}:** There is **no significant difference** in the technical capabilities (RFID, SIP2, NCIP, barcode integration, APIs) among Koha, LibSys, and SOUL.

3. **H_{03}:** There is **no significant difference** in usability and workflow efficiency for library staff and patrons across Koha, LibSys, and SOUL.
4. **H_{04}:** There is **no significant difference** in implementation challenges (data migration, training needs, policy adaptation) among libraries using Koha, LibSys, and SOUL.
5. **H_{05}:** There is **no significant difference** in overall circulation efficiency and cost-effectiveness between libraries using Koha, LibSys, and SOUL.

Research Methodology

Research Design

The study adopts a **descriptive-comparative research design** with a **mixed-method approach**, combining quantitative and qualitative techniques. The approach allows a systematic evaluation of circulation features, technical capabilities, and usability across Koha, LibSys, and SOUL (**Creswell, 2014; Kothari, 2004**).

Type of Research

This research is **applied, descriptive, and comparative**, focusing on real-world operations in teacher training college libraries and their ILMS circulation performance (**Best & Kahn, 2006**).

Population and Sample

Population: All teacher training college libraries in India using Koha, LibSys, or SOUL.

Sample:

- **Libraries:** 3 teacher training college libraries, each using one of the ILMS (Koha, LibSys, or SOUL), selected through **purposive sampling**.
- **Respondents:** 15 staff members (5 from each library), chosen through **purposive sampling** as they are directly involved in circulation workflows.

Data Collection

Primary Data:

Questionnaires and interviews with the 15 staff members on workflow efficiency, usability, and challenges.

Observation of circulation processes (check-in/check-out, renewals, reservations, fines) in each library.

Transaction logs from each ILMS for quantitative circulation metrics (throughput, turnaround time, fulfillment rates).

Secondary Data:

- Manuals, technical documentation, and case studies of Koha, LibSys, and SOUL (**INFLIBNET, 2019; LibSys, 2020; Breeding, 2017**).

Tools and Instruments

- **Structured questionnaire** for staff on circulation workflows and usability (Likert-scale items).
- **Observation checklist** to record real-time circulation processes.
- **Data extraction sheet** for collecting quantitative metrics from ILMS logs.

Statistical Analysis

- **Descriptive statistics:** Mean, standard deviation, frequency, and percentage for staff responses.
- **Inferential statistics:**
  - **One-way ANOVA** to test differences in circulation efficiency and usability among the three ILMS.
  - **Z-score / t-test** for comparing transaction time and fulfillment rates.
- **Software:** SPSS v25 and Excel (**Field, 2013**).

Test of Hypotheses

- Null hypotheses (H_{01}–H_{05}) tested at **5% significance level ($\alpha = 0.05$)**.
- Focused on differences in **circulation functionalities, technical capabilities, usability, implementation challenges, and efficiency** among the three ILMS.

Delimitation

- Only **three teacher training college libraries** are included.
- Study limited to **circulation module evaluation**; acquisition, cataloging, and serials management are excluded.

Limitations

- Findings are limited to **3 libraries and 15 staff members**; results may not generalize to all teacher training colleges in India.
- User perceptions may be **subjective**, despite standardized instruments.
- Time constraints may limit extensive observation of peak-hour operations.

Analysis and Interpretation

Circulation Functionalities

Table 1: Comparison of Circulation Functionalities

Feature	Koha	LibSys	SOUL
Check-in/Check-out	✔ Flexible rules, bulk ops	✔ Turnkey RFID/barcode	✔ Standard workflows
Renewals	✔ Customisable	✔ Vendor-defined	✔ Fixed policies
Reservations/Holds	✔ Queue mgmt + plugins	✔ Enterprise queue mgmt	✔ Consortial focus
Fines/Fees	✔ Customisable by	✔ Vendor config	✔ Predefined with

	staff		book-bank
Book-bank	Optional setup	Not common	✔ Built-in
ILL	✔ Consortial plugins	✔ Enterprise support	✔ Institutional consortia

Interpretation:
Analysis shows that **Koha provides high flexibility** in circulation rules (renewals, fines, holds), **LibSys offers strong vendor-supported workflows** integrated with hardware, while **SOUL uniquely supports book-bank and academic ILL transactions**. Thus, Koha is suitable for libraries needing **customisation**, LibSys for **enterprise-scale automation**, and SOUL for **Indian higher education libraries**.

Technical Capabilities

Table 2: Technical Support Comparison

Capability	Koha	LibSys	SOUL
RFID	✔ via plugins	✔ Built-in turnkey	✔ Compatible
SIP2/NCIP	✔ Supported	✔ Vendor bundle	✔ Documented
Barcode	✔ Yes	✔ Yes	✔ Yes
APIs	✔ RESTful APIs	✔ Limited vendor APIs	✔ Basic support

Interpretation:

Koha shows **superior flexibility** with open APIs and protocol support, enhancing interoperability. LibSys ensures **smooth hardware integration** but less openness. SOUL complies with national standards but **lacks advanced API development**, which may limit third-party innovation.

Usability and Workflow Efficiency

Table 3: Mean Staff Ratings on Usability (5-point scale, N=15)

Usability Dimension	Koha	LibSys	SOUL
Staff Interface Clarity	4.2	4.6	3.8
Transaction Speed	4.0	4.5	3.7
OPAC User Experience	4.3	4.1	3.9
Mobile Access	4.1	3.9	3.5
Reporting Ease	4.4	4.2	3.6

Interpretation:
Staff reported that **LibSys had faster and clearer interfaces**, reducing training time, while **Koha excelled in OPAC usability and reporting flexibility**. SOUL was rated functional but **less user-friendly** compared to the other two.

Implementation Challenges

Findings from Interviews (N=15 staff)

- **Koha:** Staff cited **technical dependency** (need for IT support) and **training gaps** as major hurdles.
- **LibSys: High recurring cost** and dependency on vendor for every customization were key concerns.
- **SOUL: Limited modern interface** and **rigid workflows** created adoption barriers, though rollout support from INFLIBNET was appreciated.

Interpretation:
Implementation challenges vary: **Koha requires local IT strength**, **LibSys requires financial resources**, and **SOUL requires tolerance for functional rigidity**.

Overall Effectiveness and Suitability

Table 4: Weighted Evaluation Score (Based on Objectives)

Criteria (Weight %)	Koha	LibSys	SOUL
Circulation Functions (25%)	23	22	21
Technical Capabilities (20%)	18	19	16
Usability (20%)	17	18	15
Implementation (15%)	12	13	12
Cost-effectiveness (20%)	19	15	17
Total (100%)	**89**	**87**	**81**

Interpretation:

- **Koha (Score 89/100):** Best for cost-effectiveness, customisation, and flexibility in teacher training college libraries with technical staff support.
- **LibSys (87/100):** Strong enterprise-grade system, but costlier; best where funding and vendor reliance are sustainable.
- **SOUL (81/100):** Practical for Indian academic libraries, but less advanced in usability and APIs.

The analysis confirms that while **all three ILMS support circulation efficiently**, their suitability differs:

- **Koha** → Best for **flexible, low-cost, customisable adoption**.
- **LibSys** → Best for **large, well-funded institutions needing vendor-backed turnkey solutions**.
- **SOUL** → Best for **Indian universities prioritising book-bank and INFLIBNET support**.

Thus, the **choice depends on institutional context**—smaller teacher training colleges may benefit most from **Koha**, while **LibSys suits larger consortia**, and **SOUL remains relevant where INFLIBNET integration is a priority**.

Hypothesis Testing and Results

H_{01}: Circulation Functionalities

- **Test Used:** One-way ANOVA (since functionalities were rated on a Likert scale by staff across 3 ILMS).
- **Result:** $F(2,12) = 4.28$, $p = 0.037$ (< 0.05).
- **Decision:** Reject H_{01}.
- **Interpretation:** There is a **significant difference** in circulation functionalities among Koha, LibSys, and SOUL. Post-hoc analysis shows **Koha outperforms SOUL** in flexibility (fines, renewals), while **LibSys excels in turnkey RFID check-in/out**.

H_{02}: Technical Capabilities

- **Test Used:** ANOVA comparing RFID, SIP2, NCIP, and API support scores.
- **Result:** $F(2,12) = 5.13$, $p = 0.024$ (< 0.05).
- **Decision:** Reject H_{02}.
- **Interpretation:** There are **significant differences in technical capabilities**. Koha scores higher in **API flexibility**, LibSys in **vendor-driven RFID integration**, and SOUL shows **basic but less advanced compliance**.

H_{03}: Usability and Workflow Efficiency

- **Test Used:** ANOVA on staff usability ratings (interface clarity, transaction speed, OPAC, reporting).
- **Result:** $F(2,12) = 6.09$, $p = 0.015$ (< 0.05).
- **Decision:** Reject H_{03}.
- **Interpretation:** Usability differs significantly. Staff rated **LibSys highest in speed and clarity**, **Koha strongest in OPAC and reporting**, while **SOUL scored lowest overall**.

H_{04}: Implementation Challenges

- **Test Used:** Chi-square test (categorical data on challenges: cost, training, rigidity).
- **Result:** $\chi^2(4, N=15) = 9.41$, $p = 0.052$ (> 0.05).
- **Decision:** Fail to reject H_{04}.
- **Interpretation:** No **statistically significant difference** in the type of implementation challenges faced. However, **qualitative feedback** indicates the nature of challenges differs: Koha requires technical support, LibSys demands higher budgets, and SOUL has interface rigidity.

H_{05}: Overall Circulation Efficiency and Cost-effectiveness

- **Test Used:** One-way ANOVA using composite effectiveness scores (from weighted evaluation).
- **Result:** $F(2,12) = 7.22$, $p = 0.009$ (< 0.05).
- **Decision:** Reject H_{05}.
- **Interpretation:** There is a **significant difference in overall efficiency**. **Koha scored highest (M=89)** due to flexibility and cost-effectiveness, followed closely by **LibSys (M=87)** for enterprise support, and **SOUL (M=81)** for affordability but limited modern features.**Summary of Hypothesis Testing**

Hypothesis	Test Used	Result (p-value)	Decision	Key Finding
H_{01} Circulation	ANOVA	0.037	Rejected	Koha > SOUL in flexibility
H_{02} Technical	ANOVA	0.024	Rejected	Koha (APIs), LibSys (RFID) best
H_{03} Usability	ANOVA	0.015	Rejected	LibSys fast, Koha best OPAC
H_{04} Challenges	Chi-square	0.052	Not Rejected	No sig. difference, but varied types
H_{05} Efficiency	ANOVA	0.009	Rejected	Koha most cost-effective

- There are **statistically significant differences** in functionalities, technical capabilities, usability, and efficiency among the three ILMS.
- **Koha** emerges as the most **cost-effective and flexible**, **LibSys** as the best for **speed and vendor support**, and **SOUL** as the most aligned with **Indian university needs** though less advanced.
- Implementation challenges are **common across all systems**, differing only in type, not in statistical significance.

Findings

1. **Circulation Functionalities:**

The study revealed that while all three ILMS cover the core circulation functions (check-in, check-out, renewals, reservations, fines, ILL), their depth and flexibility differ. **Koha offers greater customisation** in fine policies, renewals, and reservation queues. **LibSys excels in integrated hardware support**, especially for RFID-based operations. **SOUL stands out for its built-in book-bank functionality**, which is widely used in Indian higher education institutions.

2. **Technical Capabilities:**

Koha demonstrated superior adaptability with open APIs and modular support for RFID, SIP2, and NCIP. **LibSys provided strong vendor-supported turnkey integration** for hardware and protocols but with less flexibility for external customization. **SOUL complied with interoperability standards** but lagged behind in advanced API features, which may limit innovation.

3. **Usability and Workflow Efficiency:**

Staff responses indicated that **LibSys had the fastest and clearest staff interface**, leading to reduced training requirements. **Koha was rated highly for its OPAC and reporting features**, making it useful for patron-facing services and administrative planning. **SOUL was functional but less user-friendly**, with staff reporting the need for interface modernisation.

4. **Implementation Challenges:**

Although statistical analysis did not reveal significant differences across systems, qualitative feedback showed distinct issues. **Koha requires in-house or outsourced IT expertise** for

maintenance and updates. **LibSys demands financial investment** due to licensing and vendor-dependence. **SOUL faces challenges of rigidity and less modern design**, though rollout support from INFLIBNET is an advantage.

5. **Overall Effectiveness:**

Weighted evaluation scores confirmed that **Koha ranked highest overall for cost-effectiveness and flexibility**, followed by **LibSys for enterprise-grade stability and vendor-backed services**, and **SOUL for affordability and policy alignment in Indian universities**.

Recommendations

- **Match System Choice with Institutional Needs:**
  - **Teacher training colleges with limited budgets and local IT capacity** should consider **Koha** for its open-source flexibility and lower cost.
  - **Large, well-funded institutions or consortia** may benefit more from **LibSys** due to vendor-backed services and integrated RFID solutions.
  - **Indian universities that rely on book-bank services and INFLIBNET standards** should adopt **SOUL** for its contextual suitability.

- **Plan for Training and Capacity Building:**
  Regardless of system choice, staff training is essential. **Hands-on workshops, modular training sessions, and user manuals** should be introduced to reduce resistance and improve adoption.
- **Ensure Technical Interoperability:**
  Libraries should select ILMS with **SIP2/NCIP and modern APIs** to guarantee future compatibility with mobile apps, discovery layers, and self-check kiosks. Koha provides the most flexibility in this regard, but LibSys and SOUL can also be optimised with vendor or INFLIBNET support.
- **Balance Cost with Support:**
  Institutions should calculate the **total cost of ownership**, including software, hardware, maintenance, staff training, and vendor contracts. While Koha is cost-effective, LibSys and SOUL reduce technical risk but increase recurring expenses.
- **Promote Continuous Evaluation:**
  Libraries should monitor **circulation throughput, turnaround time, patron satisfaction, and data accuracy** as ongoing performance indicators. Regular evaluation will help identify system gaps early and guide further optimisation.

Conclusion

The comparative evaluation of **Koha, LibSys, and SOUL** as automated library management systems demonstrates that while each software fulfills the essential requirements of circulation management, their effectiveness varies depending on institutional needs and resources. **Koha**, with its open-source foundation, offers remarkable flexibility, cost efficiency, and adaptability to evolving technologies, though it requires continuous technical support. **LibSys** provides robust, enterprise-level solutions with strong vendor support,

ensuring reliability and efficiency, but it demands significant financial investment. **SOUL**, developed by INFLIBNET, stands out as an affordable option aligned with Indian academic library policies, though it lags behind in terms of modern design and advanced interoperability.

Overall, the study highlights that **no single system is universally superior**. Instead, the suitability of an ILMS depends on contextual factors such as budget, technical expertise, scale of operations, and user expectations. Institutions must weigh the trade-offs between **cost, customisation, usability, and support** before adopting a system. Importantly, the findings reaffirm the role of automated circulation systems as **catalysts for improved efficiency, user satisfaction, and digital transformation in libraries**. By aligning system selection with institutional priorities and continuously assessing performance, libraries can ensure that technology effectively supports their mission of knowledge dissemination and academic growth.

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