
**Library Automation and Soul Software
Applications in Academic Libraries affiliated with
Dr Babasaheb Ambedkar Marathwada
University, Aurangabad**

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Abstract

Library automation has become an important component of academic library management by improving routine operations and information services. This study examines the use of SOUL software in academic libraries affiliated with Dr Babasaheb Ambedkar Marathwada University in Aurangabad. Using a descriptive survey method, questionnaires were distributed to librarians at 107 colleges, and 73 responses were received. The study examines the extent of automation, automated activities, technological infrastructure, SOUL modules, maintenance, operational problems and training requirements. The findings show that 66 libraries reported automation, with 29 completely automated, 38 partially automated and six at the initial stage. Overall, SOUL provides an integrated platform for library automation, although its effective utilisation requires adequate infrastructure, technical support, software improvement and regular staff training.

Keywords

Library Automation; SOUL Software; Academic Libraries; INFLIBNET; College Libraries

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1. INTRODUCTION

Academic libraries play an important role in supporting teaching, learning and research by organising and providing access to information resources. With increasing collections and growing demand for faster information retrieval, library automation has become essential for managing activities such as acquisition, cataloguing, circulation, serial control and reference services. An integrated library management system enables these activities to be handled systematically within a common technical environment. SOUL, developed by the INFLIBNET Centre, is an integrated library management system designed for academic libraries. It includes major modules such as Acquisition, Catalogue, Circulation, Serial Control, OPAC and Administration. The effective use of SOUL depends not only on software installation but also on module utilisation, suitable technological infrastructure, maintenance and trained library staff.

The present study focuses on the application of SOUL and the status of library automation in academic libraries affiliated to Dr. Babasaheb Ambedkar Marathwada University. It covers college libraries located in Aurangabad, Jalna, Beed and Osmanabad districts and examines how SOUL is applied to different library operations.

➤ Objectives of the Study

1. To examine the status and extent of library automation in selected academic libraries.
2. To study the application of SOUL modules and automated library activities.
3. To examine the infrastructure, maintenance, operational problems, and training requirements associated with SOUL software.

2. LITERATURE REVIEW

Kumar and Prasad (2021) evaluated integrated library automation software by comparing SOUL, NewGenLib and Libsys. Their work examined the ability of integrated library systems to support key operations such as acquisition, cataloguing, circulation, serial control, and information retrieval. The comparison demonstrated the importance of selecting software in relation to institutional requirements, infrastructure and functional needs. Sonone (2023) discussed the use of Library Management Systems in library automation. The

study examined how computerised systems can be applied to routine activities and information services. Particular attention was given to areas such as circulation, acquisition, serial management and information retrieval. The study also recognised the relevance of hardware, networking facilities, staff competence, maintenance and technical support in the automation process. Korade (2024) studied library automation in the context of academic libraries in Maharashtra. The study addressed the growing importance of automation for managing library collections and services and discussed the practical conditions affecting its implementation. The availability of trained personnel, appropriate infrastructure, and institutional support was identified as an important consideration in the implementation of automation. Yaya (2023) examined library management software in relation to the growth and development of library services. The study discussed the application of computerised systems to collection management, cataloguing, circulation, record maintenance and information retrieval. It also recognised that successful use of library management software requires suitable technical facilities, trained staff, maintenance and continuing support. Chhetri (2021) compared Koha and SOUL with particular emphasis on their functional modules. The study considered Acquisition, Cataloguing, Circulation, Serial Control, Administration and OPAC functions. The comparison highlighted the significance of individual functional modules in determining how library management software is applied to actual library operations.

3. RESEARCH METHODOLOGY

The research methodology outlines a detailed plan for conducting the investigation and evaluating the results. All aspects of the original PhD research, including the methodology, sample, data collection, and analysis, are carried over into the current study.

3.1 Research Design

The primary research strategy in the first study was a descriptive survey approach. To learn more about how the selected academic libraries used SOUL software, this method was employed. The researcher collected data from librarians on automation, software use, infrastructure, issues, and training through the survey.

3.2 Population and Sample

The research included four districts' worth of Dr. Babasaheb Ambedkar Marathwada University's Arts, Commerce, and Science colleges. A total of 107 colleges were included in the district-wise study population; 36 colleges were located in Aurangabad, 14 in Jalna, 37 in Beed, and 20 in Osmanabad. 175 college librarians were sent questionnaires. The study utilised a total of seventy-three responses. Accordingly, as stated in the thesis, this paper's empirical analysis is based on responses from seventy-three participants.

3.3 Research Instrument

The main tool for gathering primary data was a questionnaire. When appropriate, the thesis also documents the utilisation of interviews and phone conversations. The survey covered topics such as automation progress, library operations, SOUL modules, infrastructure, upkeep, issues, and education.

3.4 Data Analysis

In the initial study, researchers used SPSS 20 and Microsoft Excel to examine the survey data. Various parts of the responses were presented using percentages and frequencies, and chi-square tests were employed in the thesis when necessary. No novel statistical findings are produced by this work. It distils the thesis's key results on library automation and SOUL software applications and reorganises them according to the topic at hand.

4. RESULTS AND ANALYSIS

The results shed light on the automation status of the selected college libraries, the extent to which they have adopted SOUL, and how they use the program for daily tasks.

Table 1: District-wise Distribution of Colleges and SOUL Users

District	Total Colleges Covered	SOUL Users/ Responses
Aurangabad	36	24
Jalna	14	11
Beed	37	24
Osmanabad	20	14
Total	107	73

The study population consisted of 107 colleges, with 73 colleges serving as the SOUL-user/respondent group (as shown in the table). Osmanabad had fourteen respondents, Jalna eleven, and Aurangabad and Beed twenty-four each. According to the thesis, out of 107 colleges, 73 used SOUL. Distribution also shows that SOUL wasn't concentrated in just one district but was spread across all four districts within the study's purview.

4.1 Status of Library Automation

The study's primary objective was to ascertain the extent to which the participating libraries have automated their operations. Out of the 73 libraries that responded, 66 were automated and 7 were not, according to the thesis. There were more categories for the automation degree, including fully automated, somewhat automated, and first-stage.

Table 2: Level of Library Automation

Status of Automation	Frequency	Percentage
Completely automated	29	39.72%
Partially automated	38	52.05%
Initial stage	6	8.21%
Total	73	100.00%

The biggest category, with 52.05% of the total, was made up of 38 partially automated libraries. A total of 29 libraries, or 39.72%, had automated processes, with 6 libraries still in the beginning stages. While some libraries have not yet reached full automation, these numbers show that many have made significant strides in this direction. Still reigning supreme was partial automation.

4.2 Maintenance of SOUL Software

The uninterrupted operation of an automated library is dependent on technical support, troubleshooting, and system support, all of which are essential components of software maintenance.

Table 3: Maintenance Arrangement for SOUL Software

Maintenance Arrangement	Frequency	Percentage
Technical support	35	47.95%
Local technician	15	20.54%
Library staff	23	31.51%
Total	73	100.00%

According to the results, 35 libraries (47.95%) received technical assistance from INFLIBNET. For upkeep, 23 libraries used their own employees, while 15 used specialists in the area. The results show that libraries employ various strategies to preserve SOUL. The need of ongoing maintenance from the software-providing organization is further highlighted by the relatively large number of users dependent on INFLIBNET.

4.3 Financial Support for Automation

Automation requires investing in software, PCs, servers, networking gear, barcode systems, maintenance, and related infrastructure. Financial support for 63 libraries (86.30%) came from their own organisations, according to the thesis. Another 28 libraries reported receiving help from UGC, 12 from the government, and 6 from INFLIBNET. Since numerous sources could be mentioned, these comments should be seen as different types of financial support rather than competing ones. Library automation funding came primarily from the parent organization, according to the results.

4.4 Internet Connectivity

Access to the internet and other network-based services is a crucial component of any contemporary library's automated infrastructure. Various forms of connection between the chosen libraries are detailed in the thesis. The most prevalent type of internet connectivity was broadband, which was reported by 65 respondents. Of those who participated, eight said dial-up, seven mentioned other types, three mentioned ISP, and two mentioned VSAT. Given the prevalence of broadband, it may be inferred that most participating libraries have a fundamental network infrastructure capable of supporting automated and digital library services.

4.5 Hardware Available for Library Automation

The implementation of SOUL depends upon suitable computer hardware and peripheral devices.

Table 4: Hardware and Supporting Facilities

Hardware/Facility	Number of Libraries
PC	73
Printer	66
Server	63
Internet Connectivity Modem	59
Barcode Scanner	56

UPS	52
Scanner	51
Backup Device	50
Barcode Printer	48
Laptop	22

Portable computer access was available at all 73 participating libraries. The following equipment was provided in 66 libraries: printers, servers, internet connectivity modems, barcode scanners, and 56. Not only did 52 libraries have uninterruptible power supply (UPS) facilities, but 51 also had scanners, 50 backup devices, and 48 barcode printers. Eighteen libraries reported having laptops. According to the findings, the majority of the participating libraries had the necessary hardware for computerised library operations on hand, however the availability of more specialised devices differed.

4.6 Routine Work of Library Automation

The thesis examined routine library activities performed using automation.

Table 5: Selected Routine Library Activities Performed through Automation

Library Activity	Yes	No
Circulation for Staff	65	8
OPAC on LAN	65	8
Circulation for Students	64	9
Accessioning	62	11
Cataloguing	61	12
Administration	60	13
Lost and Missing Records	55	18
Web OPAC	47	26
Stock Verification/Maintenance	45	28
Email Service	38	35
SMS Notification	31	42
Serial Control	29	44
CAS	27	46
SDI	25	48
Payment Process	20	53

Automated processes were more prevalent in the circulation and OPAC, according to the findings. There were 65 positive comments for staff circulation and OPAC on LAN, and 64 positive responses for student circulation. A total of 62 libraries reported accessioning, 61 reported cataloguing, and 60 reported administrations. Activities, including serial control, SDI, Current Awareness Service (CAS), and payment processing, were less likely to use

automation. Only 20 confirmations were obtained during payment processing. The results show that fundamental housekeeping and circulation-related tasks were the most heavily automated, whereas other speciality tasks were less automated.

4.7 Activation of SOUL Modules

SOUL offers six main modules that cover various aspects of library work. The thesis checked whether each module's activation had been completed or was still in progress.

Table 6: Activation Status of SOUL Modules

SOUL Module	Initiated	Completed
Acquisition	42	31
Cataloguing	39	34
Serial Control	46	27
Circulation	38	35
OPAC Internal Access	41	32
Administration	43	30

The module with the most completed activations was Circulation with 35, followed by Cataloguing with 34, and OPAC with 32. The number of completed activations was 31 for Acquisition and 30 for Administration. Despite 46 cases being launched, Serial Control had the fewest completed activations at 27. All six modules were not applied equally, as seen by these results. Serial Control makes a special note of the distinction between the initiated and finished states.

4.8 Application of the Acquisition Module

Library material acquisition procedures are the focus of the Acquisition module. Tasks such as data translation, annual budgeting, suggestion management, ordering, and accessioning were assessed in the thesis. The accessioning process garnered seventeen "excellent" ratings out of the twenty-one functions tested. The ISO 2709 data conversion format garnered 28 "good" replies. These outcomes show that critical procedures related to the acquisition, entry, and management of materials were using the Acquisition module.

4.9 Application of the Catalogue Module

The creation, maintenance, and retrieval of bibliographic records are facilitated by the Catalogue module. Bibliographic services, copy cataloguing, MARC import/export, barcode generation, catalogue

cards, multilingual databases, accession reports, and more were all part of the functionalities studied in the thesis.

There were 18 good ratings for the following: the ability to generate accession reports, barcodes, and catalogue cards; and the use of Unicode to provide database services in several languages. In an automated library setting, the Catalogue module satisfies both the theoretical and practical needs for technological processing and bibliographic organization.

4.10 Application of the Circulation Module

Due to its central role in facilitating interactions between library collections and their users, circulation is among the most heavily utilised aspects of library automation. The following activities are encompassed in the SOUL Circulation module: membership processing, material transactions, interlibrary loans, item maintenance, stock verification, overdue charges, and other reports. The results of the thesis demonstrate that there were 26 great responses to membership processing and 28 good responses to maintenance of things.

The findings of the routine automation also indicate the importance of circulation. Of the libraries that reported circulation, 65 were for faculty and 64 were for students. As a result, SOUL-based automation is finding extensive use in the field of circulation.

4.11 Application of Serial Control

Managing journals, periodicals, and other forms of continuous publishing is easier with the Serial Control module. Among its many uses are the administration of suggestions and subscriptions, as well as payments, title check-in and binding, import/export, and MARC 21-related tasks. Subscription Management garnered 15 "very good" comments, according to the thesis, while the payment process garnered 26 "good" responses. Among the six main modules, Serial Control had the fewest activations (27, to be exact), according to the module activation analysis results. The results indicate that its complete implementation was somewhat limited.

4.12 Application of OPAC

The online public access catalogue (OPA) is a crucial user-facing component of SOUL, enabling users to access the catalogue digitally. This module is compatible with several search tools used to find

library materials, such as Simple Search and Boolean Search.

According to the thesis, 25 people gave Simple Search positive feedback, whereas 30 people gave Boolean search positive feedback. According to the routine work results, 65 libraries reported using OPAC on LAN, whereas 47 reported using Web OPAC. In the study's participating institutions, OPAC was therefore a significant use of library automation.

4.13 Application of the Administration Module

Various system settings and master files can be easily managed with the Administration module. Database Backup, User Settings, System Settings, Acquisition, Circulation, Serial Control, and General Master were all examined in the thesis. Out of all these features, 24 people rated Circulation Master as great and 33 people rated Acquisition Master as good.

As a result, the Administration module is crucial to the operation of the SOUL system because it supplies the necessary setup and control features.

4.14 Importance of SOUL Modules for Quality Library Work

The thesis also examined respondents' opinions regarding the relative importance of the different SOUL modules for quality work.

Table 7: Relative Importance of SOUL Modules

Module	Reported Share of Importance
Circulation	22%
OPAC	20%
Administration	19%
Catalogue	16%
Acquisition	14%
Serial Control	9%

The top three categories were circulation (22%), OPAC (20%), and administration (19%). Of these, 16% were from the catalogue, 14% were from acquisition, and 9% were from serial control. Regarding judgments of the module's importance, the thesis also reports a chi-square value of 23.84 with 10 degrees of freedom and $p < 0.01$.

4.15 Satisfaction with SOUL

The survey also sought participants' feedback on their satisfaction with SOUL. Seven per cent of respondents (or 48 people) were unhappy with SOUL, while twenty-five per cent (or 18 people) said they weren't sure or didn't know. While some were unsure or unhappy with the program, the majority of respondents were satisfied overall, according to the results.

4.16 Versions of SOUL in Use

The chosen academic libraries were using various versions of SOUL. The most popular version of SOUL, according to the thesis, was 2.0, which was utilised by 44 libraries. Seventeen libraries used SOUL 3.0, while twelve continued to use SOUL 1.0. The varying degrees of software upgrade maturity among the answering libraries are evident in the use of multiple versions at once.

4.17 Problems Encountered in Using SOUL

Several issues that respondents had when utilising SOUL are highlighted in the thesis. Service support, online help from INFLIBNET, data security, fields for data entry, printing, web uploading and import/export, support via helpline, customisation, statistics on transactions, backup facilities, verification of stock, upgrading of modules, speed and record creation, and support for multiple languages are all part of it.

Among these concerns, 29 people ranked the availability of the INFLIBNET online SOUL support cell/online installation instructions as very significant, and 31 people ranked the availability of service help for problem resolution as very important. According to these results, continued technical assistance is necessary after the installation of SOUL for its optimal use. Software support, troubleshooting, and maintenance are still crucial parts of automation.

4.18 Training for SOUL

Training is important for enabling library staff to understand and use different SOUL modules.

Table 8: Training Related to SOUL

Training Indicator	Yes	No
Respondents who had undergone SOUL training	61	12
Proper training considered necessary	63	10
Libraries conducting training/workshops	27	46

According to the thesis, out of the total of 61 librarians, 84% had received SOUL training, while 12% had not. In addition, 63 people (or 86% of the total) thought that library employees needed sufficient training, whereas 10 people did not. Only 27 libraries (37% of the total) had actually held training or workshops, while 46 libraries (63% of the total) had failed to do so.

This variation shows that training remains an issue that requires constant focus. While getting the hang of the program at the outset can help with basic tasks, mastering all its features requires ongoing hands-on training and updates.

➤ Discussion Of Major Findings

Most libraries (38 out of 73) were somewhat automated, with 29 being fully automated and 6 in the starting stage, according to the data. Though the degree of module activation varied, with Serial Control displaying relatively lower completion, SOUL was extensively utilised for circulation, OPAC, accessioning, cataloguing, and administration. The second most essential was circulation (22%), followed by OPAC (20%) and finally administration (19%). There was a lack of uniform availability of specialised hardware, while most libraries possessed basic technological infrastructure and broadband connectivity. Whether it was local technicians, library personnel, or INFLIBNET that handled maintenance, respondents noted issues with data security, customisation, backup, upgrades, and technical assistance. Although only 27 libraries had planned training programs or workshops, training remained crucial, with 63 respondents deeming decent training critical.

5. CONCLUSION

Academic libraries that used SOUL software were able to automate many of their core functions, according to the study's findings. These functions include acquisition, cataloguing, circulation, serial control, online public access catalogue (OPA), and administration. Library operations have been streamlined, resources have been better managed, and information retrieval has been made easier thanks to SOUL, even if partial automation was more prevalent than full automation. Nevertheless, for the program to be used to its maximum potential, there must be proper utilisation of all modules, sufficient information and communication technology

infrastructure, consistent technical support, software enhancements, and ongoing staff training.

REFERENCES

- 1) Arora, J., & Trivedi, K. (2010). UGC-INFONET Digital Library Consortium: Present Services and Future Endeavours. *DESIDOC Journal of Library and Information Technology*, 30(2), 15–25.
- 2) Akhil, K. M., Somasekhara, R. K., & Doraswamy, N. (2017). Evaluation of LibSys Vs SOUL: The integrated library management software. *International Journal of Information Dissemination and Technology*, 7(3), 177-182.
- 3) Adhikari, M. P. (2023). *Library Management Software in Tribhuvan University Constituent Campuses: Problems and Solutions* (Doctoral dissertation, Central Department of Library and Information Science, TU).
- 4) Ahmad, H. (2021). Library Automation Software Packages: A Comparative Study of Virtua, Alice for Windows, SOUL and LIBSYS. *Library Philosophy and Practice* (e-journal), 61-68. Retrieved from <https://digitalcommons.unl.edu/libphilprac/6168>
- 5) Bhutia, S. L. (2021). Automation of Library using SOUL 2.0 by the Government Colleges of Sikkim with special reference to Nar Bahadur Bhandari Degree College, Tadong (Sikkim). *International Journal of Research in Library Science (IJRLS)*, 7(1), 110-115.
- 6) Kumar, S., & Prasad, H. N. (2021). Evaluation of Integrated Library Automation Software in Libraries: A Comparative Study of SOUL, NewGenLib, and Libsys. *Library Waves*, 7(2), 59-70.
- 7) Sonone, A. S. (2023). Use of LMS in Library Automation. Shashwat Publication.
- 8) Surwade, Y. P., & Patil, D. T. (2021). SOUL 2.0 (Software for University Libraries) for Library Automation. *International Journal for Science and Advance Research in Technology*, 7(3), 72-76. https://www.researchgate.net/publication/350314149_SOUL_20_Software_for_University_Libraries_For_Library_Automation
- 9) Surwade, Y., Patil, D. T., & Naikar, S. (2023). Library automation with SOUL 3.0: A software for university libraries. *International Journal of Research in Library Science*, 9(4), 44–51. https://www.ijrls.in/journal_category/111-volume-9-issue-4/630-ijrls-1704
- 10) Yaya, J. A. (2023). Effect of library management software on the growth and development of library services.