



Original Article

Library Computerization: Process, Methods and Systems a Practical Approach

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Manuscript ID:

IBMIRJ -2025-020739

Submitted: 15 June 2025

Revised: 04 July 2025

Accepted: 20 July 2025

Published: 31 July 2025

ISSN: 3065-7857

Volume-2

Issue-7

Pp. 186-192

July 2025

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Quick Response Code:



Web. <https://ibrj.us>



DOI: 10.5281/zenodo.17066833

DOI Link:

<https://doi.org/10.5281/zenodo.17066833>



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Abstract

This original research paper gives complete stress on practical approach to library computerization process, methods and systems applied for it. Hand on experience of the library computerization acquired by the researcher has explained with successful achievement. There are hundreds of research papers which have pointed out the obstacles like, insufficient funds ICT infrastructure, insufficient staff in the library, issue of training to staff, insufficient knowledge of computerization of the leader of the library and lack of support from the management. This paper explains how researcher has overcome across these obstacles to get successful achievement in library computerization Paper explains step by step actions taken in the library computerization

Library computerization is a vital step in modernizing information services and improving accessibility for users. This paper presents a practical approach to the process, methods, and systems of library computerization, based on hands-on experience. It highlights common obstacles such as insufficient funding, inadequate ICT infrastructure, lack of trained staff, and limited management support, and explains strategies to overcome them. The study outlines step-by-step actions, including planning, software selection, data entry, barcode integration, staff training, and user engagement. Emphasis is placed on the role of the librarian as a leader, requiring technical knowledge, communication skills, and effective management to ensure successful implementation. The benefits of a computerized library are demonstrated in terms of time efficiency, accuracy, enhanced user services, and improved institutional standards. Ultimately, the paper argues that library computerization, when executed with proper planning and leadership, not only enhances library operations but also opens the treasure of knowledge to users while elevating the status of the institution, librarian, and staff.

Keywords: Library computerization, Systems of library computerization, Success in computerization

Introduction

The growth and development of libraries are increasing in India from the time of collection perspective to connectivity environment. For the last two decades, libraries have applied latest technologies in their activities. The users of the libraries are looking technologically organized, processed and disseminated information for meeting their needs. The need of hour is that libraries should cater electronic information services to their users. In this electronic age, all the professionals are discussing at various levels about the applications of electronic, digital, virtual libraries, cloud computing, web 2.0 applications, social networking etc. At the same time more than seventy percent libraries are not yet automated their collections. It seems that they are not fully opened to the treasure of knowledge to their users. Managers of libraries should take steps in automation of their libraries in the electronic age to fulfil information needs of their users. Library computerization process is divided into two parts First is in detail planning of library computerization to implementation of it. And the second is to actual working in the library software, which is installed in the library

Objectives

1. To point out the required skills to the leader of the library.
2. To know the benefits of the library computerization to the leader of library.
3. To overcome the insufficient staff issue in the library.
4. To acquire the support from the management
5. To know the steps in library computerization

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How to cite this article:

Kshirsagar, S. R. (2025). Library Computerization: Process, Methods and Systems a Practical Approach. *InSight Bulletin: A Multidisciplinary Interlink International Research Journal*, 2(7), 186–192. <https://doi.org/10.5281/zenodo.17066833>

Librarian as a leader

Librarian should have complete knowledge of library operations and he should guide to the library staff very clearly. He should produce reliance in the mind of their staff by properly guiding them

Capable Knowledge of Library Computerization

Librarian should visit the computerized libraries and study the material on library computerization. He should know the various benefits of computerization towards the library, institution and users. He should inspire their staff to work hard by acquiring knowledge of library computerization.

Various types of skills

Skills are the useful for the grand success in any job. Librarian should be a good mentor, learn how to follow first, be Visionary, be a Good Servant, take risks, take care of yourself, maintain a positive attitude, learn how to motivate people effectively

Study of operations in software

Librarian should have knowledge of various modules in the software and their operations. He could operate all modules of the software. Masters in the software are very important. Data entries in the master module should be done by the librarian or by other library professional under the guidance of librarian Master data is not changeable when uses the computerized system. Withdrawal of books in the computerized system also done by the librarian.

Complete knowledge of data entries masters, book, member

There is necessity of arranging maximum stations for data entries of books and members. It helps to complete the data entry work of books and members with minimum period. Minimum stations for data entries of both leads to lethargy in the mind of library staff. Before entering data in the system, filling of data entry sheets on hard copy is the best procedure for the proper training to work for assigned staff. They should be verified by the librarian or trained professional.

Complete knowledge of handling system

There should be complete knowledge of handling the library software there arises various problems at the time of system operating by the human resource at various levels of working there is need of proper guidance to staff.

Responsibility of training to Library staff

Librarian should train the library staff to working in the system. He should check the work done by the staff in the system regularly and guide them.

Meetings with library staff regular

There should be arrangement of meetings with library staff within a week for discussion of progress in the work and inspire them. It helps the speed and accuracy in the work in a good manner.

Best communication

Good communication skill for best success in the work is required to the leader when there are errors in the work done by the staff, they should not be discouraged. There is need of helping and guiding them properly with best manner.

Presentation within ten days to Library staff and authorities

To inspire the working staff for doing a maximum and accurate work, within ten days in the first phase, there should be an arrangement of the demonstration of the computerized circulation. It should be presented to the college administration at this stage. The system helps to acquire more support from the staff and administration

After all Grand Success

Success is required at any work. It is achieved in the library computerization by using these skills by the library leader.

Benefits of computerized library towards:

Computerized library saves the time of users and staff. Accuracy in the library work, generates various types of reports as per requirements, opens treasure of knowledge to users and knows the daily library operations happened in the library in a quick in librarian etc.

College

Computerized library increases the standard of the college

Librarian

On the part of the librarian, various types of the psychological tensions are removed from the mind. There increases the self confidence in the mind of librarian to work in the library with catering best services to the users.

Library staff

Library staff inspires to work more and more. They work sincerely avoiding errors on the assigned job. It becomes easy to them providing services to users.

Users

Users get the right of seeking the information from library holdings through the OPAC They can locate the required information needs. They can get the required information with minimum time.

Library services

Users get proper and accurate services with minimum wastage of time in the library increases the reading habits and attractions to the library by the best services users.

Opens treasure of knowledge

OPAC opens all resources available in the library to the users. Various types of searches are available to locate the information from the library resources

Avoids obstacles by your leadership

Computerization of the library completely depends upon the leadership of the librarian by computerized services in the library obstacles of searching of books become easy and time consuming.

Status to every one

Computerization and computerized services in the library increase the status of the college library, librarian, library staff and users. All these benefits lead librarian to computerize his library which is need hour

First Step

To study the Infrastructure availability in the Library

The study of available infrastructure and requirement in the library should be done by the librarian. There is need of various types of IT infrastructure, human resources, in the library to do the computerization work

IT Infrastructure

Capable Server

Computerization creates the database in the hardware the capacity of hardware should be reasonable to store and maintain of database. There should not be discontinuation of creating database, storing and maintenance of it.

Computers (working stations)

Retrospective convergence is the very tedious job in library computerization process and systems. Keeping this view in mind library should arrange maximum working stations data entry work.

It helps to complete retrospective conversion work within minimum period. Also it increases working capacity of the library staff

Local Area Network Connectivity

All the stations are necessary to connect with Local Area Network.

Internet

Internet is the essential for giving remote to the producer of the software which is used in the library. It saves time of the computerization work by updating through internet

Barcode Printer

Clear and readable print of barcode gets only from the barcode printer. The proper size of the barcode label is used in the barcode printer. It saves time of pasting barcodes. Do not use regular printer for barcode printing and pasting

Barcode scanners

Barcode scanners are required in the circulation process there should be quick readable barcode scanners. It should be fixed at the place of circulation to avoid the wastage of time they are useful

Flat Scanner

Plain scanner is required for taking image of the book cover in the book management process

Stationary

Other stationary like barcode printer label, computerized marking label, cello tapes are required for the computerization process.

Library Management System (Software)

Proper selection of the library software is important factor in computerization. Support from the dealer or producer is required, whenever it is necessary. Timely updates should be done as per requirement of the library. All modules should be integrated in the software

Software Installation

Library software installation process should be done by the dealer or producer, because there should not remain any error in the installation process of software. It should be installed under the observation of technical assistant

Technical Assistance

Technical support is regularly required whenever errors raised. There should be a technical assistant in the college to solve the errors in the computers immediately to avoid the discontinuation in the library services

Circulation Counters

There should be arrangement of separate counters for the issuing, return of books, demand of books by the user, staff circulation and reading hall circulation in the large library. This system extends the more access to users in the large library. It saves the time and labor of the library staff and users. This system increases popularity about the library among the users

Human Resource

Human resource factor is very important in the library process. In computerization process of the library human resource is required as per size of the library, users and courses offered by the college. Without enough staff in the library, this job can't be done properly. There are various researches which say the inadequacy of library staff to do the library computerization

Appointed staff

There is no single college library, where the complete library staff is appointed as per the government resolution norms. The present situation of the appointed staff in the library is that, they have assigned jobs other than the library. But librarian should overtake this obstacle by applying some skills to achieve success in the library computerization.

Labor scheme students (Earn and Learn Scheme)

Educationalist Karmaveer Bhaurao Patil, the founder of Rayat Shikshan Sanstha, Satara in Maharashtra has applied the Earn and Learn Scheme for self-education for economically backward students. Now a day's various Universities in the Maharashtra have accepted this scheme for the students. Every college can apply this scheme and make use of these students for library business. This will help to computerization of the library.

Professionally trained students (Internship)

Various levels of courses in library and information science are available in India. These are certificate, diploma, degree, and postgraduate courses in LIS run by government, conventional and open universities. Huge number of students are securing knowledge of LIS education. These professionals are available at urban as well as in rural area in the country. They all can't get jobs in LIS profession.

The use of these forces is beneficial for the libraries through establishing internship for them. There is necessity of training of library computerization to upgrade their knowledge. Libraries can use these force for avoiding obstacles of inadequate human resource

Training to human resource

To trend available library force is very important job for library computerization Data entries in the computerization are made for book, member and masters of the system. Library can prepare the hard sheets for entering data entries for the same. Practice should be done by filling up these sheets up to fifteen each categories by each trainee. After confirmation of their success they can assign the data entry work of the computerization.\

Second step

To study the status of the Library and Users

Total collection

To see the total collection in the library is important to retrospective convergence. Library can make arrangement for retrospective collection to computerization of it. Planning should be done for this heavy work

Categories of the collection

Various categories of accession records are maintained in the library, like junior, senior, postgraduate, special departments etc. These categories should be taken into consideration in computerization work

Sections in the Library

There are textbooks, reference books recommended in program me and reserved books sections in the library in computerization work, it is essential to decide the sequence of the sections

Coverage of subjects

Collection of the books of some subjects is increases by having various courses in it. This observation helps to computerize these subject books in a first range

Classification system used

Maximum libraries have applied DDC classification system for classify their library collection. It is useful for computerization and on the part of users and library staff

Book Bank Scheme

Book bank systems are available in the libraries to issue a set of text books to students' users it is necessary to decide for it the circulation process separately.

Number of users

This observation is useful to start computerized circulation to which users in the first phase

Types of users

There are junior, senior, postgraduate students, faculty and staff users in the college.

Categories of users

There are junior, under graduate, postgraduate, research students and faculty as per college offers courses. The need of each category users is depends upon it. This study helps in computerization work process.

Courses in the college

Various types of branches of courses are in the college. There are junior college of two years having arts, science, commerce, MCVC, senior college three years course having with various streams like arts, commerce, science, IT, computer science, BMS.BBI,BAF, postgraduate course of two years in various subjects, streams and research departments This study is useful for deciding the sequence of membership data entries in the computerization process.

Third Step

Planning for computerization process and methods

To complete the computerization work there is need of planning for process, methods and systems in the library Planning is very necessary to avoid the obstacles in computerization process

Data entry in Masters

Database created in the masters of library software is important bibliographic record to use in the data entry process of library computerization. Due to its importance it should be filed by librarian or under the guidance of him. It is used in data entry process by selecting the field Again and again use of this bibliographic record is made in the computerization process

Data entry of Books

Data entries of books should be done in first phase of library computerization.

Data entry-from books not from Acc. registers

Data entries of books should be made from books only and not from accession registers Accession registers are not filled correctly as per the AACR-II rules and required information is not enough for the data entry in library software Once you take books for data entry, you can do the process of barcode and marking label pasting work on the books By this system books are ready for circulation through computerized system

Maximum stations

Retrospective convergence of the library holdings is the very tedious job. It should be done by arranging maximum LAN connected stations for data entries of the library holdings. It is useful to complete the work of data entries with minimum period of span Working stamina of human resource is maintained by inspiring them to see the huge quantity of work done

Barcode printing and pasting on the same day

For printing there should be used barcode printers should be used only Barcode printed from the barcode printers are separate labels role with gum pasted. This type of barcode printed labels saves labor and time of the library staff Barcode labels should be pasted at the books on the same day of data entries made If this work of pasting labels is done after all data entries books, it is very tedious job to search the book for concern number barcode This system is useful for circulation through software on the same day

Places for computerized marking label and barcode pasting

Barcode should be pasted on the front cover of the book. It saves the time in the circulation process do not think about the tearing of label by the users. There should stick the computerized marking label on the spine of the book for knowing the computerized books at a glance

Salving of books

After completing the data entries process, books are ready to salving and circulation through computerized system

Sequence of data entry

Data entries sequence of retrospective collection of library should be made in a systematic way to complete the work there should not be discontinuation in the circulation services in the library to their users. There should be taken consideration of the computerized circulation starting period fixed for users. There is no need to stop computerized circulation up to completion of data entries of all the library holdings. Library can start computerized circulation to their users after data entries completion of textbooks section and subject one by one.

Text books data entry

In data entries of retrospective collection of the library, should be done the data entries of text books in first phase. After completion data entries of text book section, you can start the computerized circulation to student users

Subject wise data entry of reference books

After completion of text books data entries, there should done data entries of main subject books in the library, which have more courses and users. This subject books becomes ready to computerized circulation to users. Library can complete the data entries of these books within minimum period of span.

In-between data entry of newly arrived books

In between newly ordered books are comes in the library regularly. The data entries of these newly arrived books in the library, should be done immediately and make it ready to circulation. This process should be done continuously of newly arrived books, in between data entries of retrospective collection of books in the library

Continuation in this process

Continuation of data entries by this way will be helpful to make ready the books for computerized circulation.

Fourth Step

Membership

Filled form collection of student members

During the period of data entries of text books, library can call the filled membership forms from students. Hard copies of membership forms should be prepared as per data entry fields in the membership module of software. Collected forms should be allotted member numbers.

Class wise data entry of students' membership

Membership forms should be sorted out class wise. Then the data entries of members should be done one by one class. By this procedure of membership data entry, library can make it properly and correctly.

Library card printing and issuing

After doing class wise data entries of members, library can print out the concerned library cards and issue to students with laminating it. These students can borrow the books from library through computerized circulation system.

Filled form collection of faculty subject wise

After completing data entries of specific subject reference books, library can collect the faculty membership forms of concerned subject. This procedure should be applied at the end of every subject reference books data entries.

Subject wise data entry of faculty

Collecting the faculty membership forms after completing data entries of every subject reference books, library should be done data entries of the faculty membership continuously

Library card printing and issuing

On the each stage of faculty membership data entries, library cards should be printed out and issued to faculty members.

Continuation in this process

Subject wise data entries of reference books, after subject wise data entries of concerned faculty members, printouts and issuing of the library cards, this system should applied for membership of faculty continuously.

Fifth Step

Computerized circulation

Book Bank books issuing to students

When we complete the data entries of text books and student membership, we can start the computerized circulation of book bank books to student users.

Faculty issuing subject wise

When we complete the data entries of a specific subject books and the faculties of the same subject, we can start computerized circulation to concerned subject faculties

Simultaneously closing the traditional issuing

Library should close the traditional circulation system of the concerned subject faculty, when computerized circulation comes enforce.

Demand of UN computerized books

Another issue arises that the possibility of demand of books comes of those book/s which has not data entered in the system. It is regular fact and you can issue the book/s to this specific subject faculty by applying a system,

Immediate data entry of same book

The demand of the non-computerized books should be completed by doing data entries of the same book/s immediately on the spot. This type of problem arises rarely

Issue same book

After completing the process of computerization of same demand, you can issue the book/s to faculty immediate.

Availability of OPAC stations

There should be made OPAC stations available to users, for searching the books required them

Assistance for searching books in OPAC

There is need of help to users for searching the required book in OPAC The assistant of the library should give the proper guidance and knowledge of searching books from OPAC in detail

Sixth step

Books issued to faculty on register

There is another tedious job that the books issued on register or any methods to faculty through previous system applied. These should be processed in the computerized system.

Subject wise notice to Faculty return of books issued on register

When library starts the issuing of books through computerized system to specific subject faculty, the library should notify to return these books issued by previous system to them

Data entry of returned books

Data entries of these returned books should be made immediately and prepared ready to issue, if they are required again by them. Barcode printing, sticking of barcodes and marking label should be made of it.

Remaining books on faculty account- Data entry from Accession Register

Data entries of books remained on the account of this faculty should make from the accession register. There is no another process of entering data for remaining books. This helps to recover the prices of these books through computerized system.

Seventh Step

Withdrawn books

Outdated or syllabus changed books are withdrawn from the accession register through the procedure of management approval. Those books which are lost by the users are also recovered from the users paying its price.

Data entry from Acc. Register

Data entries of these withdrawn books should be made from the accession registers. There should be entered data of withdrawn number and date of the concerned books.

Withdraw Acc. Numbers

Withdrawn process of these books from database should be done retrospective and also in regular withdrawn process Update of the database is maintained by this process

Conclusion

In computerization of the library the process, methods and systems should be applied to avoid the wastage of unwanted labor, expenditure, time. If a library has missed or used another process, methods and system, cannot get the success in the computerization of the library. If library have applied wrong process, method and system of computerization, without studying or knowing computerization systems, psychological burden of failure affects to the leader of the library and staff, Library cannot repair the failure in computerization by anyway. The failure affects best library services to users

Remember

Librarian is a leader of the library He should have capable knowledge of Library Computerization process, methods and systems He should have various types of skills, like study of operations in software, complete knowledge of data entries masters, books, members, complete knowledge of handling system, responsibility of training to Library staff, arranging regular meetings with library staff, best communication, computerized circulation presentation within ten days computerization work done, presentation and hands on experience of computerized circulation to Library force and presentation of computerized circulation to College Authorities After all library can get always Grand Success in the library computerization work. Benefits of computerized library towards College are contribution in the various achievements in future. On the part of librarian, control over all the daily operations of the library, providing best services, library staff inspires to work more by the applications of ICT, users get rights of services, availability of maximum library services, and opens treasure of knowledge to all users. Avoids obstacles raised by the poor leadership of the librarian and achieves status to everyone by the computerized library services.

Carol's Steps to Being a Great Library Leader

1. Be a good mentor
2. Learn how to follow first
3. Be visionary

4. Be a good servant
5. Take risks
6. Take care of yourself
7. Maintain a positive attitude
8. Learn how to motivate people effectively

Acknowledgment

I express my sincere gratitude to Rayat Shikshan Sanstha's Arts and Commerce College, Pusegaon, for providing the necessary facilities and encouragement to undertake this research work. I am deeply thankful to the college management and administration for their constant support and motivation in implementing the process of library computerization.

I also wish to acknowledge the valuable cooperation of my colleagues and library staff, whose active participation and commitment made it possible to overcome challenges in computerization. Their teamwork and willingness to adopt new technologies were crucial to the success of this initiative.

Finally, I extend my heartfelt appreciation to all students, faculty members, and users of the library, whose feedback and involvement inspired me to explore practical solutions and achieve effective implementation of computerized library services.

Financial Support and Sponsorship

Nil

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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