

# LIBRARY AUTOMATION IN VARIOUS FIELDS OF SERVICES

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**Abstract-** Follows quickly the historical backdrop of library robotization in India. Tries to dissect the different variables that straightforwardly or by implication influence the advance of library computerization, for example, administration issues, assets accessible with the libraries, level of aptitude of staff, accessibility of appropriate programming, geographic area region. Likewise examines the zones in which mechanization has occurred and why. Part of Infflibnet has likewise been examined. Infers that thing are improving as library robotization in scholarly libraries is presently being viewed as a critical need.

**Keywords:** Library, Automation, Acquisition, Serial Control, Circulation

## I. INTRODUCTION

During the early period of library automation, many libraries automated their procedure for ordering, receipt and payment of library materials. The early system were developed with an objective of order control or funds accounting, while only a few system combined these two functions of the acquisitions control. Further, most of the system were developed using the in – house main-frame computers of parent organization. On the other hand, the venter of the bibliographic utilities and development of software for their initial product and are extending their range of service.

In 1980's, the concerns of the acquisition libraries are not merely associated with ordering but with collection development and management of funds. Thus, the primary objectives of automated acquisition control system are likely to be towards realizing or cost containment, speeding the receipt of materials,

improving fund control, developing single function system into integrated systems and being in the forefront of librarianship.

## II. FUNCTION'S OF AN AUTOMATED ACQUISITION CONTROL SYSTEM

Designing an automated acquisition system is usually difficult since it is expected to perform certain managerial function in addition to certain clerical function (such as pre-order searching, creating purchase order, exchanges etc). The different functions are

- ❖ Pre-order searching, especially to avoid duplicate orders,
- ❖ Creating purchase orders
- ❖ Receiving materials
- Request for invoice, if necessary Sending orders letters if necessary, along with cheques/draft
- Sending the cheques/drafts (as and if necessary)
- Completion of accession list
- Announcement of recently received document
- Completion of cataloguing.
- Claim and / or cancellation notice
- Providing information on orders outstanding and sometimes on work in process.
- Maintaining books fund accounts and printing book fund reports.

## III. SERIAL CONTROL

Serials are defined as a publication in any medium issued in successive parts bearing numerical or chronological designations and intended to be continued indefinitely. Serials include periodicals, newspapers, annuals etc. of societies and number monographic series.

Most of the libraries are spending enormous amount towards payment of subscription to serials. Therefore it is essential to have careful monitoring o receipt of these serial.

There are several ways of maintain the serials manually such as three card system, methods etc. These methods, through useful for maintaining the serial it has its own advantages and disadvantages. Automation of serials helps us to handles processing of serials more easily, quickly and economically.

Serialcontrol is considered to be one of the most difficult complicated and time consuming of the libraryactivities. This notion is based on the fact that serial publications are issued in different formats and media, with varying frequencies with frequent irregularity in the publication of issues. The mode of subscription though mostly via subscription, includes exchange agreements with other libraries. Complexities around in respect of changes I other bibliographic details like titles etc.

Because of very nature of the serials, automated serials control systems are usually developed and designed independent of book ordering systems.

- a) To create an international file of serial publications; all serials entered in this file are assigned as ISSN.
- b) To assign an ISSN to each new serial.
- c) To create an international communications networks, with national ISDS centers in their cooperating with the internationalcentre in Paris and acting as a focus in their own countries.

CONSER (Conversion of Serials Records) in an American move towards building an on-line national serials database. Started in 1974, the project involved the Library of Congress, the National library of Canada, and other participants with a large serials collection. The database is accessible via. The OCLC network will eventually contain over a quarter of million titles.

NOTIS, an integrated serial control system of Northern University Library, covers nearly 50,000 current and retrospective serial titles. Searching of these titles is carried out by the general on-line public access module.

#### IV. FUNCTIONALOF CONTROL SYSTEMS

The main objectives of an automated serials control system are to handle serials and maintain holding list. In order to achieve these objectives, the system must perform the following functions.

1. Inputting serials data
2. Ordering new serials
3. Renewals of presently subscribed serials
4. Entries for the receipt of individualissues as and when the issues are received.
5. Sending remainder, if necessary
6. Claiming the missing issues.
7. Request for replacement defective copies, if necessary
8. Follow-up of missing issues.
9. Cancellation of presently subscribed serials, if necessary.
10. Preparation off various lists like ;
  - (i) List of periodicals received during a specific period
  - (ii) List of periodicals that re deleted from subscription list
  - (iii) List of holding of the library.
11. Keeping track of amount spend on serials and other related work such as binding etc.
12. Binding control

#### V. REQUIRED DATA FILE

In order to perform the above specified functions, it is essential to maintain the following minimum files :

- Order file
- Holding file
- Fund file

Processing of serial can be done either on batch processing system or on-line system.

#### VI. FACTORS TO BE CONSIDERED FOR SERIAL CONTROL

The serial control will pose several problems such as

- The serials change their names quite often, either they are divided into two or merged into one; the publication seized or lies inactive for quite long.
- The number of serials is generally large.
- To keep track of the large number of serials which are not received and the claim to be sent to the supplier or publisher or distributors.
- They may release many supplements, indexes and special issues.
- They may release many supplement, indexes and special issues.
- The serials are sometimes available on gift or exchange.
- The problem of storing and circulating individual issues.
- To overcome the problem of when and where to send for binding.
- To keep a track of the amount being spent for the serials.

In general Serials control monitoring system should be able to work in these areas:

- Monitoring periodical receipts, of whether they are being received in time or not.
- To keep track of subscription of renewal waning.
- Reminders to vendors for issues overdue/not received.
- To give a list of duplicate, missing and special issues.
- About bound volume areas.

- To process the various important articles.
- Circulation of serials.
- Bindery management.
- Men-drive – this should be user friendly.
- Flexible in nature.

Designing and developing automation support for serials control offers a challenge to ones programming abilities and professional knowledge. However the benefits of automated serials control systems outweigh the cost and efforts involved in developing them. Special libraries and the academic libraries are mostly using computer for serials control due to economic feasibility in broad outline the ordering and cataloguing systems for serials have much in common with those for monographs. However, the following five points summaries some of the features unique in serials control.

- a) Successive issues are received at regular or irregular intervals, and it is important to ensure that successive issues arrive.
- b) Subscriptions must be renewed recurrently.
- c) Catalogue data describes both the serial and the library's holdings of the serial and hence must be relatively extensive.
- d) Serials change their titles, are published under variant titles and change their frequency of population. References must be inserted between associated periodicals and titles.
- e) The system should help with binding by holding and printing at the appropriate moment instructions for binding.

A large amount of data must be held for each serial and frequent, repetitive record additions or amendment is necessary. For this reason

alone, computerization is an attractive proposition for serials control.

#### VII. AUTOMATION IN CIRCULATION CONTROL

In any library, big or small, the function of circulation is considered to be one of the most vital areas of operations, which needs to be controlled and managed effectively. The primary functions of any circulation system is to facilities access to the library materials and service by the users and to control the information and details pertaining to such usage.

It was way back in 1927 that J.M. Flexner defined circulation as “the activity of the library which through personal contact and a system of records supplies the reader with the materials wanted”.

All circulation control and document delivery systems impinge upon one of the primary function of a library, document availability. Library materials, including books and non-book materials, should be made available to all customers immediately or as soon after the demand arises as is practicable. Circulation systems are more concerned with controlling stock within one library or library system. Document delivery is generally associated with the delivery of documents to users in their home location, or from central store to local branch libraries.

While the acquisition systems deals with the inflow of library assets

like books, journals, periodicals, papers and other related materials, the circulation system deals with the temporary outflow (borrowing by the user) and subsequent recovery/inflow (returns by the users). The information arising out of this function serves as a vital input to the overall library information system.

#### VIII. FUNCTIONAL OF AUTOMATED CIRCULATION SYSTEM

Automated circulation system can be either traditional or broad in scope depending upon the design goals and objectives established by the library. It is usually performs some or all of the following functions:

1. Provision of information on the location of circulation items.
2. Identification of items on load to a individual borrower.
3. Printing recall notices for items on long term loan.
4. Renewal of loans.
5. Informing the overdue items and printing of overdue notice.
6. Calculation of overdue amount and printing of receipt of fines.
7. Printing of various types of circulation statistics.
8. Provision of handling special type of borrowers.

These functions are in addition to the primary functions such as Charging and discharging of books. In order to achieve these functions, circulation systems are designed to manipulate three kind of information such as :

- Information about the borrower.
- Information about the document.
- Information about the transaction.

#### IX. TYPES OF CIRCULATION SYSTEM

Information about the document can be recorded in two types. They are :

- Absence System
- Inventory System

##### (1).Absence System

In the absence system records are stores only when an item is absent from its normal location, that to the books that are issued to members. It is not possible to maintain records pertaining to the misplacement of books and loss of books.

##### (2).Inventory System

Inventory system in which the record is permanently stored in the file as long as the document is a part of the library collection.

**(3).ABSENCE SYSTEM VS INVENTORY SYSTEM**

The data structure and the mode of transactions depends on the above two system.

ABSENCE SYSTEM	INVENTORY SYSTEM
Records are stored only the documents absence from normal location	Records for all documents owned by the organization
Minimum information is sufficient for indentifying the document.	Full bibliography information pertaining the document is expected.
Memory capacity of the system is minimum.	Huge memory capacity is required.
Provides minimum information about library statistics.	More statistical information can be maintained.

**(4).PROCESSING MODE**

Normally data can be processed in two ways such as batch processing and online processing. Therefore in the case of circulation control one can have the following ways.

1. On-line absence system
2. On-line inventory system
3. Batch processing absence system.
4. Batch processing inventory system.

Data structure and media for storing the information may, therefore, depends upon a choice of one of the above four systems.

**(1).OPAC (ON LINE ACCESS CATALOGUE**

All the facets of library operations have been activated and rejuvenated with the impact of information technology. Cataloguing is not an

exception to this. Catalogue is one of several information seeking device and only one part of the total integrated library management system. Forgotten are the printed catalogues, card catalogues, punched card and the other early mechanical system. OPAC was a major development in the early eighties, which have been designed to be the principle means of catalogue access to the library collection, both in the reading rooms and externally over telecom networks. These OPAC have replaced and still replacing the traditional card catalogue in the developing countries like India, in early nineties web OPACs have appeared in the west as an improvement over OPACs by exploiting the facilities of INTERNET. In the west a large number of libraries have implemented such web OPACs with difference web interfaces (software).

**(2).Barriers of library automation :**

Following could be the few possible barriers of library automation :

- i. Fear of adverse impact on employment.
- ii. Apprehension that the technology could be too expensive.
- iii. The library staffs have to undergo extensive training.
- iv. Lack of support from the management, may be owing to budget constraints.
- v. Fifth reason could be retrospective conversion of data.

Let us examine each of the points. If we analyze the various jobs such as book acquisition, technical processing, circulation and reference service one can conclude that human interference is necessary at each and every step. The only area where substantial manpower can be saved is the cataloguing. The data entered at the time of ordering can be used for cataloging with some updating would eliminate multiple card preparation and subsequent filing. The manpower thus saved can be utilized in retrospective conversion and later on for analytical cataloguing or

introducing new services. Therefore, there will be no adverse impact on employment.

There is an apprehension that the technology, both hardware and software would be expensive and unaffordable. The cost of hardware and software depends on the level of automation. From the user point of view cataloguing system is most important and also forms the base for other library activities. Keeping these two points in view UNESCO developed a PC based software titled 'CDS/ISIS' and is available at a very nominal price to all the libraries in developing countries. For details librarians may contact ATIRA/NISSAT.

This software which works on a simple IBM compatible PC/XT is also available on UNIX and NOVELL platform. Recently the windows version has also been released. This software can export data in ISO 2709 format and therefore at later stage if one decides to go in for some other software, data transfer poses no problem. INFLIBNET has developed a public domain library software titled 'ILMS' which is available on DOS AND UNIX platform. With the recent government policy the PCs and other accessories have become affordable. The cost

of different hardware has been listed in the annexure I.

The in house training for handling the software is usually provided by the developers and one can choose the software which can suit their budget. However, training for CDS/ISIS is available at INSDOC, INFLIBNET and DRTC. For further information on training programmers one can contact NISSAT. The training of library staff also depends on the level of automation. If one decides to go only for cataloguing a minimum training of one or two week's duration will enable the librarians to develop a database and maintain it. With this basic training one can easily transfer the same data on a server/main machine in a network environment. The job becomes easy as most of

the institutions have system department with computer professionals maintain network.

Fourthly lack of support from the management, may be owing to budget constraints, will be one of the barriers. Here the role of librarians becomes crucial in convincing the management that the users of libraries will also be the major beneficiaries of automation. Also, the skill and initiative play a major role in convincing the management.

The fifth reason could be retrospective conversion of data. As mentioned earlier the manpower saved could be utilized for retrospective conversion and later on for analytical cataloguing. However, most of the libraries have taken time bound project for this purpose.

#### X. CONCLUSION

The main purpose of librarians is to provide the best solution of user problems and need through ill-researched collection and services and bring use nascent micro thought by the specialist's user pin-pointedly exhaustively and expeditiously. Development in information and communication technologies have a profound impact on every sphere of technical activity. Libraries and Info Tech is not an exception for this.

#### Reference

- [1] Akpoido Carol one, e. internet use in Nigerian suburban setting. *The Electronic Library*, 23(2), 2005.
- [2] Ali Amjad. *Information Technology and libraries*. ESS Publication, New Delhi – 2004.
- [3] AunishKhurshid. "Growth of Libraries in India". *International Library Review*. 4, 1992.
- [4] Bergstrom,(orl) and Bergstrom, Tehmdore C (2004). *The cost & Benefit of library site licenses to*
- [5] *academic journals*. Proceedings of the national academy of Sciences of USA. 101 (3).
- [6] Gayatri, D. and Kalidas N. "storage and Retrieval of information in digital libraries, in digital libraries, ed. By N.M. Malwad. New Delhi, New Age International 1996.

- [7] Ghosh (G.B.) the role of Computer in library and information services with particular reference to India. India journal of library science 1975.
- [8] Jas Nikhil Kumar, Das Nilay Chandra, Internet: The electr4onic mobile library in the cyberspace. Library science with a slant to Documentation and Information studies 36(2), 1999.
- [9] Handbook of research methodology by J.K. Khanna and S.Khurana, Y.K. Publishers, 2009 Reprint.
- [10] Gupta B.L. 1989 Library Science: Important Documents Pointer Publisher, Jaipur.