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## Technical works of university library and its automation

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**Abstract:** Technical tasks are preferred to be performed by both human and machines in libraries and in information centers. Almost every activity was done manually in earlier times. But in present times it is not necessary, but essential to adopt the combination of man and machine i.e. new technology. From the experiences, it is learnt that adoption of new technology is costly in its initial stage. Later on by saving of time, money, space, energy with speed, accuracy and performing more works with less man-power it becomes cost effective.

**Keywords:** Library, University Structure, Technical Process, Manual Work, Automation Process, Cost Effective

**Introduction:** Technical works of library can performed through machines, is very important. Technical works means when a book enters in a library and reaches in the hands of its users. I mean to say this is the in-between process. Many tasks are to be performed in a library by the staff members in a planned manner, to work with team spirit. This process include minimum expense, involving less man-power, little space for keeping documents, though offering best and instant services to its users. The combination of technical tasks and computers i.e. the best use of man and machine are important and it is to get the best result. Let us get more clarification about Technical tasks

All the tasks carried on in a library that are concerned with the processing of library materials in order to make them accessible to the users of the library are known as library housekeeping functions.

Technical services traditionally handled those tasks associated with bringing materials into the library and making them ready for the general public or service population to use.

A clear-cut definition of technical tasks is given in the above paragraph. Thus, we can say that the in-house tasks of the library are called Technical tasks. Computer applications for libraries are comparatively of recent period. Some of the areas where computers can be used effectively are,

- Acquisition control
- Serials control
- Cataloguing, classification and indexing
- Circulation control
- Information retrieval
- Managerial applications

And these are all library housekeeping functions which is also known as library technical function. The following points are included in the list of technical tasks:

- Ordering, cataloging and receipt of library materials

- Cataloguing and classification
- Serial control
- Database and catalogue maintenance
- Marking of processed materials
- Shelving housing and retrieval
- Circulation (charging, retrieving and discharging)
- Binding and preservation
- Collection management
- Budgeting and planning for these activities

The above points are defined in terms of machines or computers.

Computer applications in libraries can in fact be categorized mainly into three types:

- For supporting clerical functions associated with technical processing and circulation work
- For information storage, retrieval and dissemination and
- For supporting management information services for librarians, especially in analyzing library statistics

Technical tasks are preferred to be performed by both human and machines in libraries and in information centers. Almost every activity was done manually in earlier times. But in present times it is not necessary, but essential to adopt the combination of man and machine i.e. new technology. From the experiences, it is learnt that adoption of new technology is costly in its initial stage. Later on, by saving of time, money, space, energy with speed, accuracy and performing more works with less man-power, it becomes cost effective/ less expensive.

It does not matter whether the library building is big or small, the technical works required to be performed remains the same. The in-house tasks / technical tasks are described as under:

### **Acquisition**

This include the work of selection of books, to tally the list of selected books with the existing books in the library, budget control, placing an order, receiving the books, checking it with the list of ordered books, maintaining the correspondence made with Publishers and Distributors, canceling the orders and review the cancellation of orders, managing financial transactions, sending reminders, receiving and sending recommendation letters etc.

For any library or Information centre, information is the main raw material/ resource as if a shopkeeper is selling different products keeping in mind the taste of consumers/ readers, a library has to purchase new books to make a rich collection. After all, good collection of book is the identity of an ideal library.

- To minimize manual labor from receiving of books to issuing it to the users,
  - To keep up to date, the sequence of ordering the book, receiving, indexing, bar-coding it and then issuing to the user,
  - Book order job and cancelled work orders are to be supervised and controlled properly,
  - Accurate and timely presentation of details of financial resources,
  - Managerial information can be provided as and when needed.

To fulfill the above objectives there are certain works required to be performed, and for that automation is proven blissful. The functions of an ideal acquisition system which are similar to most libraries are,

- To search a bibliographic file and to determine the status,
- To order for a duplicate copy,
- To search the book seller file so that it helps in deciding to order books of interest immediately through online with the book seller,
- The capacity to provide detailed financial information in a variety of ways,
- The capacity to select books from an external database (e.g. Whitaker's book bank on CD-ROM),
- The system needs to be capable of accommodating wide variety materials, including monographs, serials, government documents, book orders, gift and exchange materials.

### **Classification**

Classification is a process of division and merger which requires keen observation. In short, it is a psychological process of gathering or dividing the information / articles according to its similarity and contradiction.

Classification helps to decide books to be kept separately under different heading/ subjects. There are many types of classification scheme and the most suitable can be implemented. Also there are three stages of classification of document. In first and second stage, decisions regarding classification are taken. The main person has to decide about classification. Computer programmes are helpful in such classification process but these possibilities are very less. By this we know that whether classification is possible through the computer in the present circumstances? And if yes, up to what extent?

Many experiments and researches are done on library document at regular intervals and are found useful. In the U.S.A. this type of research through computers has done. The factor analysis method and experiments was carried out and that was initial stage. In India, D.R.T.C. Bangalore had conducted researches in this field. Also, Shri Nilmedhan and Venkatraman had conducted study on this subject in 1968. Computer is very useful in classification of respective details/books/ articles and to select the related titles and to arrange it in its proper place.

Procedure of classification by computers is a new concept, is in primary stage and implemented on experimental basis. Particularly it is used at micro-level of classification of document. From the above, it is seen that this process requires knowledge in depth, sharp intellect, understanding and fast decision. Which is only possible by a human being, computer is a man-made machine its I.Q. is zero, and cannot think independently. The limitation of a computer is that it cannot differentiate the heading and match it with similar types. To get the best result, a programmer has to prepare list of commands, is called software' through which the required results can be obtained from the details entered in the computer.

### **Cataloguing**

Classification and cataloguing are two sides of a coin. The work of cataloguing starts from where classification work ended. The main object of codification is to know how many books of particular subjects are in library.

For such work earlier traditional methods were in use, which were used in library from time to time, which includes printed catalogue, card catalogue, format catalogue, register catalogue, union catalogue and computer based catalogue.

As we now that in library catalogue work, library coding system viz MARC, MARC I, MARC 2, this international level projects has made the circulation work becomes very easy.

In library codification following are the main objectives for automation to enhance the speed of library literature collection,

- To minimize human mistake and stationary expenses,
- To have similarity in library cataloging,
- To enable a person, to find a book of which author or title or the subject is known,
- To show what the library has given by author or subject or various kind of literature,
- To assist in choosing a book or in edition (bibliographically) or as its characteristic.

To fulfill the above objective the following steps are to be done

- To enquire whether one or more libraries have documentation,
- Helps to prepare local catalogue from the national library catalogues,
- Helps to make and update national catalogue,
- Catalogue card are prepared in computer.

### **Circulation**

Circulation Section is the heart of the library work. This section includes circulate the books, reminder, renewals, reservations, fines, books lost or a list of broken books. Earlier, when the libraries were working by the employees, different registrars were prepared for different tasks. At the same time, its arrangement, maintenance, etc. were to be done. The process was to keep more employees on the job as well as the possibility of mistakes. But the automated library system is very fast and requires fewer employee supports. Presently the barcode system has been introduced. It is a good example of the mechanical method.

Records are automatically updated in many registrars, under this mechanical system and using barcode related software. The bar-coding system improves the library's functionality and accuracy. It can also be said that in automated libraries, bar-coding is a step forward feature. In addition, automation with barcode software is very useful in libraries where the number of members is high. Nowadays the use of RFID in the library has become commonplace.

The following things are usually more important in the circulation work.

- Exact and timely information of Received and issued books,
- To put proper control on refund and penalty,
- The detail of the book is in library or issued and to whom,
- To get statistical and managerial record according to the need

To fulfill the above objectives in automated library following works are performed

- To give the details of the book or article issued and where it is,
- To give details of whereabouts of Library articles/documents,

- To inform the member on arrival of the reserved book,
- To prepare a notice of the articles/documents not received since long i.e. Sending reminders,
- To call for the renewals at regular intervals,
- To collect dues on the books not returned after due date,
- To issue penalty receipts,
- Rules for special members like library staff, professors, lecturers, students etc. Whether to issue them books, magazines, news-letter, documents, cds, dvds, or not / or for how many days? For renewals for same books etc.,
- To prepare various files, to make arrangements of lost, canceled and ready to bind books and put demand to re-purchase those books,
- To prepare reports and statistical details according to various requirements.

Some important matter should be included in automated library issue-receive system.

- How many book-transactions have done during a day, a week, a month or a year?
- Book-transaction work done by the staff of the library on hourly or periodically,
- More books must not be issue according to rules, lost and non-available books must not reflect in available books list.

Library automation saves time money and energy and provides all statistical information of the users and thus completing the library network.

### **Serial Control**

The periodicals are published in regular interval and this is a continues process and such magazines are received in the library. Control on these magazines is called serial control.

Serial control plays important role in in-house works and library has to face difficulties in collecting periodicals viz change in publication time, change in dispatch schedule. Due to these a library has to suffer a lot and so to do this kind of work manually makes trouble and wastage of time.

There is a similarity of the work relating to serial control and adopted automation in the library. The process of automated serial control involves receipt of magazine, binding, adoption, search to issue, various reports and financial funding.

Automated serial control work is necessary because serials are very different from books which pose several problems like,

- 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 distributor,
- They may release many supplements, indexes and special issues,
- The serials sometimes are not bought but are gifted or exchanged,
- 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 i.e. for acquisition, dissemination and binding etc.

Serial control automation is essential and helpful in fulfilling certain objectives.

- Ordering periodicals, cancellation and having effective control over cancellation,
- Book binding of magazines and control on such activities,
- To provide exact and timely information of financial transactions,
- To provide necessary information and reports as and when demanded,
- To minimize human efforts and time for manual serial control.

### **Stock taking function**

In olden days books in libraries were kept closed in almirahs and the books were used as reference consequently the chances of their loss were very few. Now the concept of keeping the books locked was changed; the documents were kept open access in the library to make them available to the readers. But this open access system has led to some problems, such as misplacement and damage of books on the shelves and theft of the books and other reading materials in the library. So it became necessary to prepare verification of reading materials in the library. Thus stock verification came into existence for libraries.

Stock taking system and tallying system is useful in tracing out the lost, misplaced, destroyed reading material. There are some traditional methods for stock taking.

- A separate register is maintained on arrival of a reading material in the library,
- Work done through separate papers for receiving the library collection,
- The work done through statistical calculations,
- The work done with the help of receipt register,
- The work done with the help of catalog.

In modern period the above works are done by the computer and electronic equipment and it is essential.

### **Indexing**

The user of the library is the main pillar and it a responsibility of the library to provide reading material according to the readers' interest. As per the five basic topics/slogans described by Dr. S. R. Rananathan, indexing is one of them.

The broadcasting of the information and knowledge is collected very fast. There are many methods invented to acquire this information and indexing is one of them.

There are different types of indexing viz. Pre-coordinate, Post coordinate and Computer based system like, PRECIS, POPSI, Chain Indexing, UNITERM, KWIC, KWOC etc.

### **Other works of university library and automation**

Library and Information centers are very rich source of information. A university Library has to face following difficulties when the work is performed by manually or human efforts. Like,

- Receipt of instructions and information,
- Broadcasting of instructions and information,
- Exchange of instructions and information,
- Analysis of instructions and information.

To perform the above works smoothly, a university library has to adopt new technologies for automation to save time money and energy, minimizing man-power

and man-hours. In earlier chapters also we have learnt regarding use of machines where necessary. Now-a-days educational libraries are converted modern in all respects, than what about University Library? It is beyond doubt that libraries should be automated by machines. The related books/articles are provided without the waste of time. Following services are provided by the libraries

- Documentation services,
- Selective Dissemination service,
- Current Awareness Service ,
- Translation service,
- Reprographic service
- Abstracting service
- Library Co-operation and Resource Sharing,
- Information Search service,
- Network and Internet,
- OPAC.

In Present context, the above services are essential and to provide such services through man-power only is very difficult. But with the help of automation and moreover with the combination of man and machine, saves time, money, and energy. According to the father of Library science Dr. S. R. Rangnathan, who gave 5 laws to improve the level of Libraries in University or Higher Education Institutes, Information centers. This is possible only by applying modern concepts and latest technology to serve better to the users.

### **Conclusion**

Library and Information Centers are rich source of knowledge. Knowledge is wide-spread under different heads, in different form, and in many languages. If the above said information's could not be used or updated properly, then the society or the users could not get benefits of the main objectives of a library, because the aim of the library is to provide the required details/information fast and accurate. This is possible only when the library is well equipped, man-power is properly trained, books and periodicals are easily made available. So we can easily say that with the help of automation and moreover with the combination of man and machine we save time, money, and energy.

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