

## **COMPUTER APPLICATION IN LIBRARIES**

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### **Introduction:**

At present we are living in the computer era. Many of the routine activities of today's society are performed by Computers. As in the active field of human endeavour, information has now been widely recognised as an important resource for development in the field of education and research. Now a days we consider the knowledge of Computer as the second literacy. Today we are in the age of advanced world which is evolving from industrial/Machine age to the era of electronics. In this era Computer technology and other scientific communication devices have taken over many human functions. In library the electronic distribution processes are being used to transmit information, deliver messages and documents; keep records; etc.

Mostly, libraries depend on data-bases. Computer terminals are being introduced into the repertory of services provided. Government of India is also doing a great job for the people to get acquainted with this technology for automation with the help of different sources like National Information Centre (NIC), University Grants Commission (UGC), Department of Science and Technology (DST) etc. Other national bodies as well as private Computer training programmes are being conducted in order to push forward the wheel of this second literacy programme.

The electronic machine that eases the burden of thinking about problems in a mathematical way are called Computers. A digital Computer performs calculations in an arithmetic way using a binary system of arithmetic and possesses a memory for storing information. Analogue Computer works on a different principle from digital Computer. The difference may be understood initially by considering two simple mechanical Computers- namely, the abacus and the slide rule.

The smooth availability of information has been hindered due to a variety of problems like-

- (i) information explosion at an exponential rate.
- (ii) scatter of information due to variety of information packages.
- (iii) increasing complexities in the use pattern.
- (iv) overall growth in the number of users.

Library automation or use of technological advancements in library and information activities are the natural consequences of the preliminary attempts to find out a meaningful solution to these long sustaining problems in information services.

In respect of training courses in Computer application for library automation-NISSAT (National Information system in science and Technology) is collaborating with INSDOC (Indian National Scientific and Documentation Centre, New Delhi) DRTC (Documentation Research and Training Centre, Bangalore), ILA (Indian Library Association, New Delhi) and



IASLIC (Indian Association of Special Libraries and Information Centres, Calcutta). To facilitate creation of machine-readable on-line network of bibliographical databases for instant pin-pointed, exhaustive and expeditious retrieval of references of documents available in far places sitting before a computer terminal and enhance resource sharing.

Moreover, house-keeping operations like acquisition, cataloguing, circulation-control, serial-control, account keeping etc. also may be done smoothly, accurately and promptly by application of Computers. INSDOC, and DRTC, in collaboration with NISSAT are conducting regular short-term courses.

**Computer Moves In:** The computers have rolled into the area of library and information activities in a big way. The irresistible invasion of them into the library scene has triggered a revolution in our traditional methods of library operations. Now computers can successfully be put to use for providing library services efficiently.

**Computer Hardware and Software:** Selection of computer hardware and software depends upon the nature of activity and the nature of the library. As for example, UNESCO's micro version of CDS/ISIS may conveniently be used for creating a machine-readable bibliographical database. The data base will facilitate storage of information for records and thus retrieval of references of documents mechanically by Boolean processes under different aspects or combination of aspects along with printed lists. The software is available free of charge to all non-commercial institutions in UNESCO's member countries; in India through NISSAT/DSIR, New Delhi.

The software is designed for management of structural non-numerical database, the structure consisting of four components-

- i) F.D.T. defining the fields and the respective parameters. (1) Data Entry Worksheet i.e., the screen lay out used to create or edit the records of the database,
- ii) FST defining the fields to be made searchable through the file, and the inverted (iv) Display Format defining precise formatting requirements for either display of records in the monitor during searching or for generation of printed output accordingly.

D-Base III plus provides for fixed fields and which may conveniently be used for databases which needs not handle variety of information's for the records as in the case of a register of students addresses. Micro CDS/ISIS is not usable to a multiuser system. This software may be used for other housekeeping operations like acquisition, cataloguing, circulation, serial control, SDI (selective dissemination of information) service etc. It is not advisable for a big library like a university library. A big library requires an integrated multi-user system with several terminals working upon a single database along with appropriate programme package.

**Impact of New Information Technology:** The process in which the impact of information technology is transforming library and information services is expected to continue. The information storage and retrieval capability of most of these electronic devices have been highlighted. The developments will have serious and lasting impact upon library and its services. According to Dowlin "The library has the opportunity to not only continue serving its present user group but to expand important and relevant services to a large number of users. The library could-



- I) Provide access to complicated or seldom used databases;
- ii) Provide community conferencing and message centre programmes;
- (iii) Provide on-line access to information on library resources, information to the community, a location for referrals,  
high demand Information and materials via computer or video disc;
- (iv) Provide service to its community.....
- (v) Provide mediated approaches to library instructions or use through use of closed circuit television.

The following library operations can be mechanized or automated:

(A) Acquisition Work:

- (i) Preparation of acquisition slips/cards
- (ii) Sending orders to vendor (s)
- iii) Updating the record file ie. documents on order.
- (iv) Verification of books with order file and invoices.
- (v) Printouts of received documents and non-supplied documents.

Maintenance of Accounts:

- (i) Income expenditure and balance of allocated funds.
- (ii) Budget control.
- (iii) Printout of result.

Cataloguing:

- (1) Preparation of catalogue cards.
- (2) Preparation of Authority file/subject heading list.
- (3) Arrangement of catalogue cards into classified, alphabetical system or subject-wise alphabetical or into any other desired sequence for filing or for any other purpose.

Computerised catalogue can be developed as a bye-product of book ordering system. The advantage of computerising the catalogue of various library units with the help of high-speed printers and can be circulated among other branch libraries.

Circulation: Circulation, as it mainly concerns with the clerical function of keeping track of documents taken out on loan can be probable functional area for computerisation.

Serial control: Computerisation of serial control system would certainly help us to handle serials more easily, quickly and less expensively. This particularly relevant in our context as serials also make the serial control system a priority area for computerisation.

Stock Verification:



- (1) Preparation of list of accession number of all documents in the library.
- (2) Preparation of accession numbers of documents available in the library.
- (3) Printout of list of accession number of documents missing.
- (4) Printout of list of missing documents after key punching bibliographical details of all missing documents and feeding the input to computer system.

Moreover, in a computerised library system it is possible to offer regular CAS and SDI services.

**Need for computerisation:** The capability of a computer to handle records rapidly and efficiently which forms a major part of the work in any library has made it relevant to use the computer the routine work.

To carry out of computerisation of library activities has been feuded to the ever-increasing work load in libraries in all spheres of day-to-day activities resulted from the above-mentioned general problems. We are certainly moving towards a time in which it be practically difficult to do away with the computer and to keep be house-keeping functions well done providing a conducive environment for improved library services.

Libraries prefer the most efficient services at the least cost and effort. Thus using a computer for carrying out routines that c...

management statistics which enables the librarian to have evaluation of library services, selection of library materials, streamlining management procedures, proper utilization of funds, assessing users needs etc.

The decreasing cost of computer made the process of compute- irisation economically viable and now even a small library can purchase a multifunctional computer with small investment.

**Problems:** Computerised information processing is beset with social, economic and technical problems.

(a) **Social Problems:** The major social problems are the availability of vast manpower and apprehension that the use of computer will result in the retrenchment of a large number of employed persons.

(b) **Economic Problems:** The initial cost of the establishment of computer system is prohibitive and is beyond the capacity of many organisations and institutions.

(c) **Technical Problems:** The technical problems involved in computerised information processing in India are concerned manly with two aspects, namely, the computer and information.

(d) **Hardware Problems:** The hardware problem concerns the computer as a machine and the limitations it imposes.

(e) **Software Problems:** Software is concerned with writing programmes, instructing the computer step by step, how to work through a particular job or solve a particular problem.



(f) Machine-Readable Data bases: The major handicap is the cost of data bases which is not within the reach of many libraries and information centres in the country.

(g) Standardisation Problem: Standardisation is the basic foundation of computerised information processing. It yields high savings in cost and efforts.

(h) Non-availability of equipment: The major technological problem is the non-availability of equipment and spare parts. There is also lack of research in the area of the new-technology.

#### Conclusion:

Concl we can say that computer-technology has made enormous strides. It is still marching forward promising even more wonderful advancement within the next few decades. The microcomputer is the latest of the current development. The developments taking place, the future in our country is turning out to be better, in so far as computer application to bibliographical information handling is concerned. The data activities in India need to be co-ordinated under the NISSAT programme, promoting the development of data centres in different sectors.

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