

REVIEW ON AUTOMATION OF ACADEMIC LIBRARIES IN INDIA: STATUS PROBLEMS AND FUTURE

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INTRODUCTION

Library is Heart of any institution .It is soul of any learning institution, which is pivot of teaching-learning process. College library plays an important role in providing overall library and information services to the patrons. We have just entered in new millennium and we have a lot of challenges before us for keeping in pace with modern development in information technology which have brought information explosion and information revolution.

Computer is used in libraries to increase efficiency and effectiveness of their operation and services; they have also provided information management for taking effective decisions. Development and use of information and communication technology (ICT) enables the libraries not only to offer their clientele the appropriate information available within their Libraries but also gain access to catalogue of other libraries, both local and outstations.

Automation of libraries has helped the libraries to keep pace with the latest Development . This has also facilitated accuracy, flexibility and reliability in the library and information centre. Automation of libraries reduces the repetitive work and save time and bring accuracy and speed. It also increases efficiency in technical processing of library materials and improve the efficiency of library administration and manager.

ROLE OF LIBRARY

Knowledge Management leveraging on information science (IS) and information technology (IT) is the recent trend and strategy seen in the advanced academic and corporate environment. Libraries, especially academic and research libraries are perceived to be knowledge repositories of scholarly content. Scholarly communication is a complex mechanism acted up on by many stakeholders. Scholarly communication refers to the formal and informal processes by which the research and scholarship of researchers, faculty and independent scholars (freelance researchers) are created, evaluated, edited, formatted, distributed, organized, made accessible, archived, used,

and transformed. Publishing is the formal system whose key players include researchers, publishers (including scholarly societies), and libraries. Over the past two decades dramatic changes have fundamentally reshaped the entire system of scholarly communication eco system. Recent advancements in technology and the advent of computers, Internet and communication technologies have revolutionised the scholarly communication scenario drastically. The first and foremost among these changes is the phenomenal increase in the body of published knowledge.

NEED OF LIBRARY AUTOMATION

Library automation which started in late 70s in few special libraries has now reached most of the university libraries.

The factors necessitating automation of university libraries are the following:

- Explosion of knowledge resulting in numerous specializations and flow of almost non-stop information;
- Inability of users to explore unlimited literature; wastage of enormous precious time in handling routine and repetitive library operations; even the largest of the libraries cannot acquire and make available the entire published materials; and to facilitate easy, fast, and reliable sharing of resources between libraries, cutting across space and time.

LIBRARIES NETWORKING

Networking is the linkage of working procedures for the exchange of information resources. Presently, the term -computer network is used in place of -resource sharing or cooperative systems. Resource sharing or networking is defined as a mode of operation, whereby information resources are shared by a number of participants having the same objectives in mind. Thus the user of one library can have his requirements fulfilled by another library if the local library fails to serve his needs. Some of the essential prerequisites for effective resource sharing include

- Possession of shareable resources by the participating libraries;
- Willingness to share the resources;
- A planned mechanism of sharing;
- Precise understanding of the use and information potential of their respective collections; and,
- Common bibliographic access to the collections of the participating libraries.

Even libraries with good budgets or collections cannot have enough resources to be self-sufficient. In fact, interdependence has now become a way of life. In recent years we have witnessed the establishment of a great number of networks around the globe through which

technology is utilized to facilitate a vast flow of information. This ultimately will enable and support applications which influence people's daily lives. The major factors which have created the need for networking include the rise in the cost of publications, a lack of funds and adequate manpower, and the geographical dislocations of libraries, i.e., the fact that libraries are now located in remote and far-flung areas.

The ultimate aim of networking is to achieve maximum results with minimum input. This is clearly consonant with the nature of our economy, in which capital is scarce. Networking is inevitable in all types of libraries, for it enables users to have access to the resources of many other libraries, in addition to their own. The benefits which accrue from resource sharing are the following:

- Preparation of union catalogues;
- Preparation of the cataloguing data/catalogue cards for publications available in network libraries;
- Provision of bibliographies;
- Optimum utilization of rare collections;
- Cooperative exchange and distribution and storage of documents;
- Savings - of both technical work and collections;
- Reduction in the cost of library services, in the long run; and,
- Above all, the provision of more materials at low cost and in less time.

INFLIBNET

INFLIBNET started functioning in 1988 with the aim of optimizing the utilization of resources and avoiding their duplication. INFLIBNET has proposed to network 200 universities, 7,200 colleges, and over 200 research organizations attached to scientific, agricultural, medical, social science, and defence organizations. It would be a multiservice network aiming at providing catalogue-based services, access to databases and document supply services, and facilities for computer mediating. In the initial plan, the thrust is on linking the most remote and needy universities with rich and rare collections. In the later phases, other university libraries would be linked. These are some of the salient features of INFLIBNET:

- It shall contribute to pooling, sharing, and optimizing resources.
- It shall modernize libraries and information centers.
- It shall have multiple function/service networks.

- It is estimated that in India, Rs. 150 crores per annum are being spent towards books and journals by libraries concerned with higher education, and yet the needs of the users cannot be met fully.
- It shall help the libraries to develop unique collections.
- It shall help in avoiding duplication in procuring costly books and journals.
- It shall help to establish instant contact with other libraries in the country.
- It shall help libraries to improve their efficiency.
- It shall operate at different levels — national, regional, sectoral, and local.
- It will help libraries to update their catalogues, and all catalogues will be aggregated from the bottom up, i.e., from college and department to university library and regional centre.
- Users will be served mainly at local levels such as college, department, university, and R&D institutions.
- There will be a national centre for managing, overseeing, and coordinating affairs of the networks, and four regional centres (north, south, west, and east) to maintain union catalogues of library holdings.
- At the sectoral level, UGC information centres are included, and these centres will acquire, create, and access retrospective and current bibliographical databases.

DELNET

DELNET began its operation with the introduction of e-mail service in 1991, and has since then linked 35 libraries in the Delhi area. Participating libraries are using different software, such as CDS/ISIS, LIBSYS, CFS, DELMS, MINISIS, and dbase-LC-MARC. These libraries have saved a considerable amount by avoiding duplication of journals and other reading materials. The DELNET database has become one of the major bibliographic databases in India.

The network adopted Common Communication Format (CCF), developed by UNESCO, and AACR-2 as the code for developing cataloguing. H.K. Kaul, Director of DELNET, says that DELNET saved Rs. 25 lakhs in 1991, 25 lakhs again in 1992, and nearly Rs. 50 lakhs in 1993 through rationalization of foreign periodicals. NISSAT and the Department of Electronics played a vital role by providing free modems and e-mail software. More libraries in Delhi are joining DELNET and making inquiries about online access to the Union catalogue. The British Council and NIC have helped DELNET in providing necessary assistance. The DELNET Newsletter, first published in January 1994, provides information about its activities.

CALIBNET

This network links 38 science and technology libraries in the Calcutta metropolitan area. The plan focuses on the introduction of automated systems into the participating libraries before networking them. Each library will have to automate its book acquisition, cataloguing, serials control, fund accounting, and circulation control. Libraries participating in the CALIBNET will use AACR-2 for bibliographic description. The MAITRAYEE software, which supports MARC records, will enable records to be imported/exported through the CCF. CALIBNET will be linked to DELNET via dial-up access, and to external networks through the GPSS.

BONET

Another landmark among the library networks of our country is BONET, which was inaugurated on 6 November 1992 at the National Centre for Software Technology (NCST), Bombay. BONET is the latest project sponsored by NISSAT. The network has the following objectives:

- to build a low cost library information system which can possibly be used as a model for future expansion of this service even outside Bombay;
- to promote cooperation among libraries in Bombay with emphasis on interlibrary activities rather than computerizing individual libraries; and,
- to impart training related to library computerization and the networking of Bombay libraries.

This is just the beginning. In the years to come many libraries will be automated and linked to a network. This will result in reducing the expenditure incurred in purchasing journals, research materials, etc., and it will improve access to information

CHALLENGES AND ISSUES

The challenges of library automation are concerned with training programmes, standards to be selected for the bibliographical formats and records, retrospective conversion of the manual catalogue so that the library users will have access to the machine-readable catalogue for the entire collection, indexing policy, hardware and software. Another important challenge facing the profession is the design of automated systems, especially in the absence of computer culture and lack of funds. One of the important factors in the design is introducing 'interactive records', so that transaction in one record automatically causes changes in the other relevant and related records. In designing the system, the factors to be considered are:

- ⇒ Choice of the system
- ⇒ Mode of operation (e.g., PC-based, batch mode, LAN-based, online, etc.)

- ⇒ Method of inputting identification data (of documents and borrowers) for acquisition, circulation, cataloguing, etc.
- ⇒ Available hardware/software.
- ⇒ The major issues in evolving a policy on library automation can be summarized as
Managing IT resources Data security for transborder transfer of data, in databases, etc. Standards (difficult to introduce, because of the rapid growth as well as the changes in the information technology; it is however a necessity.) Problems due to the international networks (although there are many advantages, problems are many; for instance, domination of the multinationals, transfer of data in audio form, cultural issues, etc. Manpower development in IT sector with end-user point of view at university level to take care of annual maintenance (a mass programme may be required to take care of AM).

FUTURE OF LIBRARY AUTOMATION

Automation activities in academic libraries in India slowly picked up with the support from INFLIBNET, UGC, NISSAT and other similar agencies combined with increased awareness of IT and its applications among librarians. Academic librarians in India are beginning to use E-mail, CD-ROMs, LAN, machine-readable catalogue, etc for resource sharing. This change in academic libraries is due to a rapidly changing telecommunication and technological environment, a desire for progress and declining resources. Perhaps the key to change is the willingness to share resources and to work together to bring a 'change'.

Many metropolitan networks are fast emerging and they are taking keen interest on automation activities in their respective regions. DELNET, a well developed library network in New Delhi region, has created a unique catalogue of books, union list of serials and specialists' databases.

Until now library automation refers only to computerization of house-keeping operations. Because in the developments of IT, it also covers information services based on CD-ROM databases, E-mail, etc. In the immediate future, most of the academic libraries in India will have a number of both bibliographical and full-text CD-ROM databases, and access to Internet-users can access local, regional, national and international sources; such sources also will be used/accessed by librarians to answer a variety of reference queries. In such an environment, academic librarians must be familiar with Internet and its operations, availability of sources in Internet, operation of online databases-bibliographic, full text, CD-ROM, public access catalogue, and spreadsheet, DTP, etc.

Library automation seems to be inevitable. The major challenge now onwards will be providing sufficient resources to manage and operate an automated library.

CONCLUSION

Automation activities in academic libraries in India have slowly picked up. Funding agencies have now started providing hardware facilities. Software facilities are not adequate enough to start automation activities at a reasonable pace. Further, CD-ROM based information services and E-mail services are becoming popular. However, the challenges remain same over the last two-three decades-manpower requirements, preparation of machine-readable catalogues, free flow of funds, etc. Librarians have to overcome these challenges for a successful implementation of automation.

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