



Problems of Library Automation

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Abstract:

This paper discussed the library automation problems in some different point of views as like technological, economical and attitudinal problems. Technological problems include both the hardware and the software problems of library automation. Economical problem faced each and every library in all over the world. The initial cost of establishing a computer system is beyond the reach of most organizations and institutions. The last problem here discussed is attitudinal problem, in this approach the common thing is that among librarians there are two groups often give insufficient thought to the real value of the computer to the organization/institution and make uneconomical, haphazard use of the facility. Here in this article mentioned some recommended improvements for betterment of the automation in library and information field.

Keywords: Automation, Computerized library, Library automation, Library Services

Introduction

Modern society is characterized by an increasing need for specialized institutions in various fields of activity for the performance of their day-to-day functions as well as research and consultancy work. These institutions require speedy access to qualitative published information. Exposure, the methods of storage and dissemination of information are changing fast, so no library can store all published information and can provide efficient services with its old manual operations. (Alabi GA 1984). Therefore, "Automation" is important and necessary to handle the vast amount of information and for providing faster, accurate, precise, efficient, and effective information and services as well.

This is the era of computerization, but still tradition manual working system exists in Indian libraries especially in undeveloped area. In the series of development of library world is acclimatized to computer environment in daily routine as well as information storage and retrieval. Automation to a greater extent can reduce pressure of library workload. It also shelters from work stress and fatigue. It not only offers efficient services and opens a new era in bibliographical control but provides access to required database in the country and abroad as well. Computerized library service is likely to be beset with technological, economic and attitudinal problems peculiar to most developing countries. There are some problems raised in library automation as bellows:

1. Technological Problems

Technological problems include both the hardware, i.e., the computer as an instrument for

information processing and the software, i.e. the methodology which is applied. The major problems faced today in terms of the hardware are due to the variety of computers being used in different types of research and business institutions. The computers, manufactured by various firm are not compatible. Developing countries sometimes receive sophisticated technology like computers as gifts from more developed countries; these often become obsolete from the manufacturer's point of view.

Such machines are not only unsuitable for most complex work but any technical problems which come up cannot be repaired. Information retrieval work requires machines more sophisticated than those manufactured indigenously and few imported machines are capable of handling information retrieval applications. The random access facility and disks large enough for storage of bibliographic information are not readily available.

In most institutions, organizational goal receive priority over the library's requirements, meaning that the librarian must use the computer available rather than what is actually required according to specifications. Library activities in all institutions are done through sharing disk space as well as computer time. Therefore, when the storage capacity is not large enough to accommodate various types of data, bibliographic data are given the lowest priority. On-line facilities are rare in India. In fact, only TIFR's library has access to an on-line terminal for bibliographic data, the DEC-1077 computer of the National Centre for Software Development and Computing Techniques.

The communication infrastructure of India is still not suitable for extensive on-line information facilities; the telephone system is not reliable enough to support an effective network facility. Software problems arise because programmes must be developed in terms of the machine on which they are to operate. Therefore, the incompatibility of equipment tends to make the software incompatible as well, especially when programmes are written in machine or assembly language. While using languages which are not machine bound, such as FORTRAN, COBOL, ALGOL, etc, may seem like a solution, in actual practice such languages cannot be interchanged without suitable modifications.

A software package developed for the IBM 360 model 30 would require many changes not only in the programme but also in the programming language if it were to run on any other computer. Development of a programme suitable for the available machine is therefore preferable to acceptance of a package programme. This makes the development and use of package programme difficult and leads to a lack of standardization in programming language as well as in output. Machine-readable databases are byproducts of international information network systems and are available on magnetic tapes.

These are useful in building information resources and for retrospective search and current awareness services. Again, however, the tape service is expensive and suitably sophisticated computers are scarce. The databases have a standard format which requires extensive changes to fit existing hardware and other system requirements. Also, relevant bibliographic information has to be selected from the databases and stored. Often this storage space is scarce and expensive.

2. Economic Problems

The major obstacle for any innovations in developing countries is the lack of resources. The initial cost of establishing a computer system is beyond the reach of most organizations and institutions. Library and information processing is done either with spare computer capacity made available by the institution itself, or with computer time hired from another institution. The cost of hiring computer time and storage space is very high and often cannot be justified at the management level by cost-benefit analysis. At IIT, for example, CPU time per hour cost ₹ 1000 for educational purposes and ₹ 2000 for business and industrial use.

Moreover, the computer provides only paper printout, and the paper often cost more than the processing. Few developing countries can afford the machine-readable databases, either. The tapes are very expensive and because foreign exchange is involved in subscribing to them, it is even more difficult for most organizations in India and other developing countries to afford them. The annual subscription rate of one database is now approximately \$ 8000. Library tasks often overlap and their peculiar nature seldom makes the advantages of computerization seem very convincing in the light of cost benefit analysis.

In India, libraries and information centers are attached to government organizations or research institutions, so library services cannot be calculated on a profit/loss basis. Long term benefits have to keep in mind while justifying such services. The libraries that have computerized some of their services or operations often have not taken such steps as a result of serious thought. Computerization has glamour of its own in the minds of many librarians. Overly enthusiastic librarians often run uneconomical programmes, producing lengthy listings for instance in the name of computerized service.

Often the manual method is used concurrently with the computerized system because of a lack of faith on the part of staff and users. The duplication of work and the cost involved in these cases is obviously unjustifiable; the librarian should know which aspects of service should be mechanized. An example of an economically visible computerized library activity is the centralized acquisitions but also eliminates the cost of duplicate purchasing.

3. Attitudinal Problems

Computers appear very awesome to developing countries. They are powerful machines which can perform many functions and therefore offer a solution to the many types of manual inefficiency which often plague the developing countries. Among librarians there are two groups often give insufficient thought to the real value of the computer to the organization/institution and make uneconomical, haphazard use of the facility.

The other group, still the majority in developing countries, lacks knowledge of the potential and consequences of library automation. There is constant tension between this traditional librarian group and the 'new wave' librarians. Professionals of the majority group do not realize that computers cannot replace human intelligence. Due to the accuracy essential for data input in library services, the librarian/information scientist is indispensable. The National Library of Calcutta conducted an experiment to computerize the Indian National Bibliography in 1968.

The scheme failed, however, because labour unions opposed it fearing retrenchment of library staff. Among developing countries, the attitudes of India's librarians are typical. They are not confident about automated services. Library staff should therefore be trained in programming and thus be made aware of the work involved in automation. They will then realize that automation will not take away their jobs. They will also realize that computers are machines which have their limitations as well as their advantages. The communication gap between the librarian and the computer specialist is another major hindrance in establishing any effective automated system in a library.

There is often disagreement among the librarian, the programmer and the systems analyst. Librarians should be trained in computer programming and computer specialists should be versed in the special needs of library automation. Only then can a common language evolve among the three and projects are started. Administrative personnel assume a very important role in decision making. Their enthusiasm, support and conviction can help realize any new plan, just as their apathy and lack of understanding of the need for accurate and speedy information can jeopardize any effort. Although many things have taken a favourable turn in India, the majorities of those at the management level unfortunately are not conversant with the development of information science and are unaware of the important role of information in all areas of national development.

This very often results in insufficient planning, which in turn curbs the enthusiasm of imaginative information scientists and librarians. Due to this lack of appreciation, priorities are poorly ordered and funds are not well allocated. Administrators also have a tendency to underestimate or overestimate the capacity of automation. Any information system or service is planned for the best possible benefit to its users. Unless the users are mentally prepared to accept a new system, however, it cannot be effective. Indian users are still unfamiliar and overawed by computers, so computer awareness and interest has to be fostered to enable proper utilization of a system.

They should neither overestimate computer capabilities nor be afraid of interacting with the computer systems. Another obstacle is that, because batch processing systems are still in use in India, there are bulky printouts in monotonous type faces and formats which prove to be a headache not only for the librarian, but also for the user. There is no dearth of manpower in systems analysis and computer programming in India. We are already exporting software packages to countries that find them less expensive than developing their own. Library automation is still neglected, however; it is an area which has not attracted young people with appropriate expertise. Training should be given to both the librarian and the computer specialist about each other's functions and possibilities. Both INSDOC and DRTC conduct courses on automation systems in libraries. Under the forthcoming NISSAT plan, steps are being taken to be building the requisite technical manpower.

Moreover, the Indian government's Department of Electronics is developing training programmes for the National Informatics Centre. There are two main objectives in training for library automation: to orient the programmers and system analysts to writing programmes suitable for automating library facilities, and to persuade librarians to accept the utility of automation and teach them to prepare accurate inputs to make the system worthwhile.

4. Recommended Improvements

- The computers used in India should not vary so widely. Production of computers with special capacity for library automation should be taken into consideration
- Government policy has taken a positive step in establishing large computer systems, with one sophisticated central computer capable of handling complex information to indigenous minicomputers. The National Informatics Centre project dealing with agricultural and other governmental data processing is designed along similar lines. Such plans should be pursued.
- Indigenous, inexpensive library package programmes are very necessary. These should be usable on a large variety of machines and be capable of handling different activities in the library. The MARC format would be ideal if it could be adapted for the smaller indigenous computers. DRTC is currently involved in preparing software packages for information retrieval.
- The international databases are being used by some organizations. However, these are expensive and often not applicable to Indian research needs. Indigenous databases with our specific requirements should be prepared. Core periodicals in each subject relevant to India, and literature from important periodicals, should be used as input for such databases.
- A national standard or common language for bibliographic information exchange is necessary. Efforts are being made to achieve a standard language compatible with any international standard.
- Training of personnel, i.e., proper communication among the librarian, computer programmer and systems analyst is very important. Courses offering training in library automation are being taught, but there is a general need for better understanding among these three architects of library automation.
- User awareness and orientation is very much needed. The users comprise managerial policy makers as well as the research scholars and regular clientele of a library. The need for, as well as the possibilities of, automated library facilities have to be highlighted by professionals and experts in this area. A few seminars and workshops have been conducted at New Delhi and Bangalore, namely the UNISIST workshop in August 1975 and the Indo-U.S., seminar in 1977; however, little else has been accomplished in this area.

5. Conclusion

Do we need library automation now? In developing countries the problems are many and though they are not insurmountable, they are certainly very difficult to face and live with. The most pertinent question for our profession in this regard, however, is whether we really need computerized library services on a large scale. A colleague from Bangladesh said: "The library and information sciences are a 'least-priority area' in this country. Only 20 % people can write their names. There is an acute shortage of readers... Most of the nation's resources are utilized for food, shelter, flood control and health problems."

Although the Indian situation differs from that of Bangladesh in many ways, the first priority of any developing country is to provide the basic necessities to its people. Literacy and education are still at the primary level. Information of a very basic nature, such as the essentials for

healthful living, must be presented in simple terms and communicated through media which will reach the people. Library activities of even the most primitive nature will not be within the intellectual grasp of most people unless the library is turned into a proper communication centre. We cannot take as our model the community information centre as developed in the West. The economic and social problems here are so acute and diverse that no one model for all parts of the country can be established.

Library facilities may have to cater to a sophisticated and highly academic clientele in different organizations even though it is a minority. Libraries have had a long tradition here, but academia has yet to develop a tradition of data-oriented search for knowledge. The concept of libraries as storehouses of books remains very strong. Information is still sought in books rather than in microform. Because profundity in knowledge is the tradition of Eastern culture, the modern trend towards fast, accurate information is still not expected.

That is exactly what a computer is supposed to provide for a scholar. Information is often treated as a commodity in the West. In industrially developed countries it is believed that any information which is economically profitable should be considered worthwhile and made quickly available. Can the same be said of the Indian situation? In highly developed industries, such as Hindustan Machine Tools, Ltd., a survey of the information needs of engineers revealed that the time factor was not important. Even if the information were received a day or two after it had been requested it would still be accepted and used. The competition in the industrial field is not sufficiently keen to require immediate information. Industrial research is done in a relatively leisurely fashion in India.

At the documentation centre of SIET, the need for computerizing library and information work has not been perceived. I quote: "As of today, there does not seem to be adequate justification for computerizing library and information work here. Our intake is not that sizable, nor are the demands on us yet so enormous that we should think of using computers."

The genuine need of the country is to provide usable resources for spreading literacy and to develop libraries at the school and college levels in order to give students the opportunity to acquire the taste for information. I do not intend to belittle the efforts to build a sophisticated information system such as NISSAT. India is a country in which the levels of proposals for development are varied in different areas. Its planners must therefore cater to the needs of each area in its own right. On the whole, however, our priorities still differ. Both librarians and clientele must be made information-conscious before anything as expensive, sophisticated and dumb as a computer can become a tool in their hands.

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