Short Communication

Application of information technology and its impact on modern Indian Library/Information Science –An overview

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Today, libraries have become multimedia due to adoption of technological advancements and changing nature of their services. Automation has helped libraries in improving library operations and accelerating their working. Information technology is being used in advanced countries to its fullest. "Information age" which was imagined in the recent past has become paperless offices already at threshold. The impact of Information technology on Indian library is discussed in this paper.

Key words: Information technology, information explosion, automation, information storage and retrieval, circulation control system.

INTRODUCTION

Information technology means application of various technologies such as computer, Telecommunications, fiber optics, lasers, reprographics and micrographics for effective information handling. Considerable advances have taken place in the field of information technology due to several new inventions emerging regularly in the areas of computers, telecommunications, reprography and Micrography etc. It is true that all these develop-ments took place outside the library, but the libraries have utilized these developments for providing better and improved services to their clientele. Majority of libraries in developed countries and devices/techniques for auto-mation of their systems and services. In fact, it has become a necessary and inevitable need to provide efficient and fast information service through automation, in the age of 'Information explosion' (Gupta 1979; Janak and Sachdeva 1979).

Changed concept of library due to information explosion

The goal of the early library was to store and preserve recorded knowledge in various formats. The information contained in such documents was strictly for a few privileged users than for dissemination to all. Doors of the library were opened only at the will of the owner of the collection. After the invention of movable type and printing press resulted in starting proliferation of literature and spreading of education which has completely changed the concept of library. The rate of growth of information was accelerated to such extent that manual or semi-manual methods of information handling were not enough to meet the situation and were providing in-effective quality service. This led to further innovations for making libraries and information services more relevant and effective (Mukherjee 1976).

The present day need is how speedily and efficiently information could be communicated to the users. Unless libraries actively keep pace with information revolution and needs of emerging information society, there is a danger of being considered obsolete and become a piece of history. The information referred here is that which is contained in published as well as unpublished do-cuments.

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IMPACT OF INFORMATION TECHNOLOGY ON LIS PROFESSION

It will be justified to review how old communication system has advanced through the ages and how new technologies have come up from time to time to form present Information technology. There are developments in the field of telecommunications from telegraph, telephone, Radio, Television and laser.

The laser technology, though still in its infancy, has created quite a stir; it is used in several fields and also as an alternative storing media. Storing density in the laser disc in the form of pits is far more than a magnetic memory device.

Facsimile transmission

According to Mackeans, facsimile is only non surface mail document delivery method which can handle graphics as an integral part of the text, which transmits non roman alphabets with ease, and which can convey signatures, hand written drafts, sketches etc.

ELECTRONIC MAIL

Facsimile transmission is used to deliver message and documents to remote location electronically which is known as telex machines; communicating word processors along with displayed system and computer terminal with printing facility can form an electronic mail network, where message can be obtained on display screen, in the form of paper document, computer output microforms.

REPROGRAPHY

Through reprography today, fast plain paper copies are being produced in the world market by many countries including Japan, America and India. The latest plain paper copier Xerox 9500 can give two copies per second. This invention has accelerated the information transfer process and has become boon for information technology.

MICROGRAPHY

This is one of the most important techniques used for information storage and retrieval. Here copies are produced in highly reduced formats called microforms: microfilms, micro card, microfiche, roll film of 8mm, 16mm and 35mm etc. Micrography has also enabled libraries to preserve deteriorating collections, to conserve shelf space and provide other libraries with copies of scholarly material.

INFORMATION STORAGE AND RETRIEVAL

Use of computers for information retrieval started in the 1960s. Manual or semi-manual searching of literature in the field of science and technology was becoming impossible both for the librarians and the users as it was time consuming and also never exhaustive.

In 1961, Luhunof of IBM, U.S.A. carried out an experiment of indexing some of the articles of chemical abstracts. This initiated lot of research work in this field, which resulted in inventions of different indexing systems such as KWIC, KWOC, KWAC, PRECIS etc. These indexing systems are used for selective dissemination of information and other related activities.

On-line information retrieval system

Recent development in the fields of computer and telecommunication has provided a number of on-line information systems (Raizada, 1976). A person sitting near computer terminal can have access to any data base located anywhere on the earth in a matter of second through on-line system and obtain hundreds of latest references on the given topic of his interest (Ghosh, 1975).

Off –line information retrieval system

Use of computer made it possible to produce retrospective bibliographic indices on various subjects or projects profiles, when such data were available in cumulative form for some years. It is also possible now to renew the historical development of any subject in a few seconds or get state of the art repost, thus it has reduced a lot of load on the part of library. MEDLARS (currently known as MEDLINE) is one of such earliest systems in this area.

CIRCULATION CONTROL SYSTEM

Circulation section of a library is very important as it controls and regulates the entries and exits to the library (Figure 1). It deals very delicately with the user community. The various results or outputs or the circulation control system are relevant to the expansion or development of library directly, for instance, the total number of relationship indicates the extent to which library is utilized. The total number of transactions of issue and return per day indicates the dynamism of the library material per day. The transaction of issue and return per day in a specific subject proves the importance of the subject in the library. The statistics include total number of books per day, total number of users/per day, total number of transactions/ per day and importance to

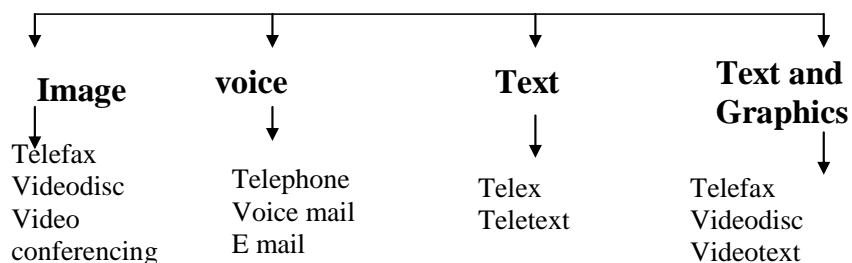**Office Automation and Computer-based Electronic Message System (CBEMS)**

Figure 1. Office automation and computer-based electronic message system (CBEMS).

indicate the intensity of library services and extent of its utilization. The total number of book collection in that area gives a utility ratio and thus enables the librarian to take decision for budgetary control.

Conclusion

The future of the automated libraries in the developed/developing countries seems to be very promising and it can be hoped that more and more libraries will adopt automation techniques/systems in the very near future, sooner rather than later. The new generation of computers and its use in libraries is not only modernization but it has become a necessity. In coming times, computers hold good future. It is expected they would be found useful in handling information explosion and respective routine jobs in libraries economically.

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