INTERNATIONAL MULTIDISCIPLINARY
R E S E A R C H   J O U R N A L

Application of information communication technology in college libraries

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Abstract
Libraries play a very important role in promoting the progress of knowledge. It is part and parcel of any learning institution. Library is associated with all academic or technical institution, which is pivot of teaching-learning process. College library plays an important role in providing overall library and information services to the students. We have just entered in new millennium and we have lot of challenges before us for keeping us in pace with modern development in information technology which have brought information explosion and information revolution.

Keywords: Information Communication Technology (ICT), Library Automation, Library Networking, INFLIBNET

INTRODUCTION

Information Technology has radically changed all aspects of modern human life. Information itself is so dynamic and its resources are unending. It helps in the educational process, research and developments. Technology also, in a broad sense, is very important to the development of information. Information Technology facilitates transfer of electronic data or information from one place to another, one person to another or one educational institution to another crossing all boundaries. It is the electronic means of capturing, processing, storing and communicating information. It covers any product that will store, retrieve, manipulate, transmit or receive information electronically in digital form.

ICT Stands for "Information and Communication Technologies." ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums.In the past few decades, information and communication technologies have provided society with a vast array of new communication capabilities. For example, people can communicate in real-time with others in different countries using technologies such as instant messaging, voice over IP (VoIP), and video-conferencing. Social networking websites like Facebook allow users from all over the world to remain in contact and communicate on a regular basis.

Modern information and communication technologies have created a "global village," in which people can communicate with others across the world as if they were living next door. For this reason, ICT is often studied in the context of how modern communication technologies affect society.

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COLLEGE LIBRARY

College performs an important function in the educational process. College education provides a totally different environment for boys and girls whom go for higher studies. Usually the classes comprise a large number of students and unlike school education, the college students get less individual attention from the teachers. The students therefore have to depend much more on the self - learning. Therefore the college library is the ultimate place for the students to supplement their class room teaching .In general, college is regarded as an institution of higher learning, which provide courses after school leading to Bachelor's degree. Some of the prominent colleges also offer courses leading to Post- Graduate degree and Research work leading to Ph. D. Degree

OBJECTIVE AND FUNCTION OF COLLEGE LIBRARY

The main objective of college library is to become instrument of instruction. In order to determine, how far it has succeeded in achieving the objective, one should determine the extent to which the user uses the library resource for their assignment as an integral part of the curriculum. In other words we can say that the teaching in the classroom must depend more on library than the textbooks.

Therefore library must become the integral part of teaching programme .A college library is expected to support the objectives of the college. Therefore the basic function of the college library is to provide study materials to its users in short possible time and serve the requirements of the students, teachers and researchers towards reading, study and research.

IMPACT OF INFORMATION COMMUNICATION TECHNOLOGY ON LIBRARIES

The Exponential rise in generation of new information, especially Scientific and Technological information since World War II has gradually reduced the effectiveness of the traditional tools and retrieval aids used by librarians. We are now in the age of information technology revolution along   with information explosion. Due to information explosion, automation of library service is imperative for efficiency and effective working of library and information center. The automation is defined as a technique of

making, a process or a system operates automatically. Though generally library automation may mean use of suitable machines to perform the activities of library mechanically without much manual or mental efforts by human beings, today library automation signifies "mechanization of library house keeping operations predominantly by computerization". The most commonly known house keeping operations are acquisition control, serials control, cataloguing and circulation control. In recent times, even the related topics such as information retrieval, semi-automation, automatic indexing and networking of automated systems are also treated as part of library automation. Although computers have a major role in library automation, telecommunication and reprographic technology have an equally important role because of the extent of support they offer. Most of the Library and Information Centres (LICs) of India have started using computers and Information Communication Technologies in organising their collections, housekeeping operations, processing, retrieval and dissemination of information to the end users. The use and impact of ICTs is now visible in Indian library and information centres which may be due to the drastic reduction /escalation of the cost of hardware and software and their easy availability in the markets with service support from the suppliers or venders.

The impact of IT is also evident on the activities of many LICs associated with universities and other institutions of the national importance. Thanks to University Grants Commission for establishing INFLIBNET which have been playing an important role since its inception for initiating the automation and networking activities of library and information centres of universities, colleges, R&D laboratories, and various institutions of higher learning. So far 142 universities have been covered under the INFLIBNET Programme which enables the university libraries to purchase computers, modem, printer, air –conditioner, software (Operating and application software) and get telephone connectivity etc. The recurring grant is also provided for meeting the expenses of data support work, salary of Information Scientist, telephone charges for accessing INFLIBNE Databases through Internet and maintenance charges for first five years from the date of installation of systems

WHAT IS LIBRARY AUTOMATION

The automation is defined as the technique; a process or a system operates automatically. According to the Encyclopaedia of Information and Library Science, " Automation is the technology concerned with a design and development of the process and systems that minimises the necessity of human intervention in their operation". Library automation may be defined in simple sense as " a process of mechanistion of library operations which are of a routine and repetitive nature. This covers usually house keeping operations such as acquisition, serial control, cataloguing, circulation, references and administration work".We may also say that computerisation of all library operation is known as Library Automation.

WHY DO YOU NEED LIBRARY AUTOMATION

Libraries are the lighthouses for information. The thirst of knowledge is increasing every day of various levels and on various subjects. There is a great demand to provide such information quickly   on demand for which an efficient and accurate devices or tools are introduced, which is based on mechanized process. Today

library automation is the need of the hour Use of information technology in libraries has become inevitable in an era of information explosion and the emerging of a wide range of new technologies in order to satisfy changing complex information needs of users. The factors necessitating automation of College libraries are the following:

- Capacity to handle any amount of data and information;
- Speedy processing of information and its retrieval;
- Flexibility in information search;
- Standardisation of library procedures ;
- Participation in network programming and resource sharing;
- Provide better bibliographic control at local, regional, national and international level;
- High rate and better quality in performance;
- Avoid/eliminates duplication of works;
- Facilitate interdisciplinary nature of research and information;
- Economic implications of latest information technology;
- Overcome geographical and other barriers to communication; and
- Improve the quality of existing services and to reduce routine and time consuming clerical works.

AREAS OF LIBRARY AUTOMATION

Following are the areas of Library Automation: Acquisition; Cataloguing and Indexing; Circulation ; Serial Control; Library Administration and Management ;On Line Public Access Catalogue ; CDROM Databases Searches; Resource sharing through Library; Network/INTERNET ; Desktop Publishing (DTP); Office Automation; Information Retrieval

SELECTION OF SOFTWARES FOR LIBRARY AUTOMATION

Following are some library application software used for database creation and library services CDS/ISIS (Computerized documentation system/Integrated set of information system)-Developed by UNESCO ; LIBSYS ; MAITRAYEE ; SANJAY ; LIBRARIANS ; TULIPS ; WINISIS – Window Version of CDS/ISIS soft ware ; WILISYS ; NIRMALS ;SOUL - Soft ware for university library ;   Library Suit ; TECHLIB Plus and many more. Selection of library software should be done as per the requirement and cost of the software. Before purchase and installation of software, the library professionals should do comparative analysis of various functioning of software and then come to concrete decision for long term benefit of the college library.

Role of INFLIBNET in Modernization of Indian University/ Institutional/ College Libraries

INFLIBNET centre is an autonomous Inter-University Centre of UGC (University Grants Commission) under the ministry of Human Resource Development, Government of India. It is national institute in the area of library and information science for promoting library automation, resource sharing and cooperative development among the academic libraries and other R & D libraries in India. The centre is directed towards modernisation of libraries and information centres with aims at establishing   a mechanism for information transfer and access to scholarship, learning and academic pursuits.

The objective of the centre is to establish a national network

of libraries and information centre's including universities, institutions of higher learning, research and development, sharing and its utilization at national level. It is basically a cooperative endeavors in resource development, sharing and its utilization at national level. Over the years, the programmed has progressed steadily and since May 1996 it is an independent autonomous Inter-University Centre under UGC. INFLIBNET is set out to be a major player in promoting scholarly communication among academicians and researchers in India.

Till date, 142 university libraries have been financed to establish the necessary infrastructure for computerization of their libraries and link them through network. More than 600 staff members/ library and information professionals have been trained through a series of workshops, training programmes and on-site training across the country. Every year the national convention helps to make them aware of the new technologies and latest developments in the area. Since its inception, considerable progress has been made in the area of library automation and networking of Indian Universities and institutions of higher learning. The important and significant achievements achieved by INFLIBNET are as under: Automation of University Libraries/ Institutions of Higher Learning; Development and Installation of SOUL in Various University Libraries; Manpower Development by Arranging Workshop and Training; Union Databases Developed at INFLIBNET; Setting up Standards in Database Creation; Provision of Information Services to the University Community; Development of University Home Pages; Initiation and Implementation of UGC- NET Project ;Retrospective Conversion of Five Major Libraries ; Provision of Document Delivery Service for the University Community/Academics/Researchers (Sinha, Murthy and Manoj Kumar , 2006A).

Though INFLIBNET had some teething problems, it was able to speed up the implementation of its activities during the last few years. Actually the involvement of INFLIBNET has created an IT culture in Indian university libraries. The Center has developed user-friendly software called Software for University Libraries (SOUL) for the comprehensive automation of participating libraries. Now SOUL is used by a number of libraries in Assam and reports reveal that it has been well accepted by the academic community. The development of SOUL will go a long way in standardizing library automation in the country. INFLIBNET has been providing regional level training programs to help librarians from colleges to automate their libraries using SOUL. It has developed bibliographic standards for data capturing. The INFLIBNET also conducted ten national conventions. These conventions known as CALIBER provide a platform for librarians and IT professionals to exchange their views and assess trends. The Center also provides various kinds of information services such as CD-ROM-based services, document delivery service, interlibrary loan, access to OCLC firsts earch service, and so on. INFLIBNET has also initiated two major projects—Retrospective conversion of Collections of Five Major Libraries and Document Delivery Service from six major libraries. Creation of a digital library of theses and dissertations submitted to Indian Universities is another recent venture of the INFLIB-NET. It has also taken up a program of digitizing manuscripts available in Indian universities. In X-Plan period, important autonomous colleges and prestigious colleges located in Assam have also been included under INFLIBNET Programme for receiving financial and technical support. INFLIBNET Centre has developed SOUL Software (College Version) and this software is being installed in many colleges of Assam in particular and North East India in general. The college

librarians and other library professionals being given one month training at INFLIBNET Centre for implementing automation and networking of college libraries of Assam and North East India in particular and rest of India in general. There is a provision of on-site training after the installation of SOUL library application software. INFLIBNET is extending state-of –the –art ICT support and training for successful implementation of the programme. Important college libraries have been included under UGC-INFONET Programme to access scholarly peer reviewed 4500+ e-journals and other on-line resources. During XI Plan period, there is proposal for extending financial and technical support to more colleges, which have not been included under this programme.

CONSTRAINTS OF LIBRARY AUTOMATION

Library automation is an expensive, complex and continuous process involving various constraints faced in its implementation. The computerization and networking of college libraries is very slow. There are so many factors are responsible behind this. The following are some major factors liable for proper library automation

- Inadequate financial resources
- Lack of proper guidelines and planning for automation of library activities
- Lack of well accepted and less expensive Standard software package
- Non-availability of IT trained personal
- Inadequate management support.
- Late implementation of library automation activities
- Non-availability of consultancy services
- Cumbersome purchase procedure for the acquisition of hardware and software
- Non-availability and under utilization of Campus LAN
- Erratic power supply, non-availability of heavy-duty UPS and Generators in many libraries
- Resistance of library staff
- Absence of university librarian in many libraries; and
- Lack of adequate qualified professional staff.

Future Plans and Proposals to Computerization and Networking College Libraries

Most of the libraries wants to purchase more computers for installing more terminals for users and wants toprovide Computerized SDI services and full text search through INFLIBNET. Most of the libraries wants to set up LAN and installed more computer for internet access. Some   library wants to digitize all old question papers of their University   and wants to provide access through OPAC terminal. Most of the libraries hope to complete of library automation,bar coding and digitalization and wants to offer full OPAC, CAS, and SDI to users in near future.The financial assistance for running the college is generally made available from the Govt. to all the Govt. Colleges . The Private Colleges are funded by the trust or some society and having partial Grant-in-Aid facility from the Govt.

The grants, which is made available by the state govt. in not received in time. Therefore due to financial crisis, the initiatives for developing information infrastructure and computerization of library activities are not being taken by most of the colleges, INFLIBNET should come forward to identify such colleges to extend helping hand for developing information infrastructure for the automation and networking of college libraries. This financial assistance may be made available directly or through University,

CONCLUSION

Information and Communication Technology (ICT) is changing the work of libraries and information centers. Library automation activities are gaining momentum throughout the state. It is quite a good sign that SOUL is now available at an affordable cost as a comprehensive library automation package. However, librarians should be prepared to meet the challenges. They should acquire adequate knowledge about the hardware and software options available. All libraries should use standard software packages for automation and database creation to facilitate the exchange of bibliographic records between libraries. Databases may preferably be created in the MARC21 format because most libraries at the international level follow this. There is need for continuous monitoring of automation activities for improvement of the situation and for meeting the future needs. Therefore, it is concluded that the Status of computerization of library housekeeping operations and computer based library services of college libraries is in nascent stage.

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