Unavoidable Use of ICT in Bibliotheca

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Abstract - *Effectiveness of a library service is now largely depends upon the Information and Communication Technology (ICT). The word bibliotheca is derived from latin language, means library. This study attempts to explore the gradual advancement of modern technologies in bibliotheca (library) distinguishing old and new technologies. The study endeavors to identify various components of ICT which are used or being used in libraries and information systems. The study identifies exact reasons to use computer and related technologies in libraries. It also explains the functions, Benefits and uses and problems of ICT based library system.*

Keywords: ICT, Libraries, use of ICT, Bibliotheca, Information Communication Technology

Introduction

The availability of right information at the right time and in the right form is of utmost importance for their knowledge and developmental activities. Developments in information communication technology have greatly changed the method of handling information in libraries. Information and Communication Technologies (ICT) are being increasingly being used in library and information services for the acquisition, processing and dissemination of information. Libraries and Information centers have been using ICT based resources and services to satisfy the diverse information needs of their users. However, these resources and services are not fully utilized. Under utilization of these resources and services has been a cause of concern to librarians worldwide. The use of Information and Communication Technologies (ICT) has become increasingly important in special libraries. Special libraries are switching over to ICT based resources and services at an accelerated pace. E-Journals, CD-ROM databases, Online databases, e-books, web based resources and a variety of other electronic resources are fast replacing the traditional resources of bibliotheca . Internet and CD-ROMs for example, have greatly enhanced access to a range of current information resources. In sum, ICTs have improved provision of bibliotheca services by overcoming time, distance and other barriers. However, is widely agreed that ICT adoption in bibliotheca is not a panacea to all bibliotheca problems as initially presumed. Despite their tremendous potential, ICTs have also brought new challenges that must be overcome in order to increase effectiveness and efficiency of bibliotheca in developing countries. Information and Communication Technologies (ICT) is a comprehensive concept and parallel concept with Information Technology (IT), that denotes not only a single unit of technology but an assemble of technologies like telecommunication equipments, data processing equipments, semi conductors, consumer electronics, etc. The concept has brought a phenomenal change in

the information collection, preservation and dissemination. Using ICT, libraries are also playing a very important role in facilitating access to global information and knowledge resources.

Review of Literature

A huge volume of literature is available focusing the gradual development of computerization and use of ICT in university libraries in India. At the very first time in India Kumar (1987) had surveyed the university libraries of India and found that the Delhi University library conducted stocktaking using computer in 1970, Andhra University produced the list of additions in 1970s, SNDT University obtained computer in 1985 and Marathawara University library acquired minicomputer for library operations in 1985. In 2001, 36.84% state agricultural university libraries and 56.75% ICAR libraries of India were developing their own computerized bibliographic databases (Jain and Goria, 2001). During the year 2002, libraries of the central universities of India had developed the basic infrastructure for the use of ICT for the house keeping operations and online services to the users (Venkata Raman and Chandrasekhar Rao, 2003). University libraries of Punjab, Haryana, and Chandigarh in India had initiated their automation project in early nineties. All university libraries of these states are using ICT for library and information management, services to users, resources sharing through networking and creation of bibliographic database (Dabas and others, 2003). Vyas (2003) has made a survey of 12 university libraries of Rajasthan and IIT library Delhi. His findings reveal that, most of the libraries have implemented the technique of ICT to their in-house activities and services, to automate and digitize resources and to share resources at local and national level. Central library of university of Jammu has implemented the modern ICT including RFID technology. Library is following National Assessment and Accreditation Council (NAAC) Standards and obtained ISO Certification for the better services (Malhan, 2006). In the conclusion of Babel (2011) Rajasthan University libraries have been applying ICT for providing efficient services and resources, but efforts are yet not enough. INFLIBNET is providing the financial and technical assistance to Indian university libraries to create basic infrastructure, networking, training and use of ICT for library operations and services. University libraries of Rajasthan are getting e-resources with the help of INFLIBNET. (INFLIBNET, 2012).

Concept and Meaning of ICT

ICT incorporates a range of technologies used to support communication and information. ICT includes both networks and applications. Networks include fixed, wireless and satellite telecommunications, broadcasting networks. Well known applications are the Internet, database management systems and multimedia tools. ICT includes consideration of telecommunications policies, information policies and human resource development policies. Information and Communication Technologies (ICT) is a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information.

Marcelle argues the ICT sector is a heterogeneous collection of industry and service including information technology equipment and service, telecommunication equipments and services, media and broadcast, Internet service provision, bibliotheca, commercial information providers, networked based information services and related professional specialized services. Hamelink provides a useful and clear definition of ICT indicating ICTs are those technologies that enable the handling of information and facilitate different forms of communication. These include capturing technologies, storage technologies, processing technologies, communication technologies and display technologies.

ICT in Bibliotheca: A gradual Development

With the availability of general purpose computers for performing traditional bibliotheca activities. Some of the significant developments regarding ICT in bibliotheca are as follows Bibliotheca entered into information and communication technology era in 1960s to a great extent with the success of INTREX and MARC projects. During this online, real time interactive computer systems were introduced in the library and information field. In 1967 both OCLC and BALLOTS became operative. In the early 1970s, online systems were in operation in several libraries, for example, Bell Telephone Laboratories, Eastern Illinios University etc. In a guidebook for young professional librarian, Rowley and Lea pointed out that Information Technology is a comparatively a recent term to be found in the literature of library and information science. It is first appeared in 'Library and Information Science Abstracts' (LISA) in 1975, but didn't assume regular use until the early 1980s. Libraries and information centers have witnessed landmark development in ICT culture during last decade of the last millennium.

Branscomb one of the pioneer who played leading role to transfer the concept of traditional library into ICT based library, have compared traditional library functions with new technology based library.

Need of ICT in Bibliotheca

Various factors have contributed to bring about change from traditional to ICT based bibliotheca operations. Basically ICT is needed in bibliotheca for the following reasons
1. In terms of various problems faced by the traditional library systems
2. The size of recorded information is ever growing whereas space available at the disposal of each library is limited. No library can think of getting additional space every year,although the collection will grow continuously
3. Due to knowledge explosion or information explosion storage of information has become a challeng for lirarians
4. Library operations, due to potential growth of information, could take hours to perform manually
5. Due to information explosion, all sorts of house keeping jobs and information works can be performed by manually with less effective and less accuracy
6. In terms of various of various facilities provided by computers and related technologies
7. The advantage of using computers and other telecommunication media in managing libraries are
8. A computer can help in finding the required information, compilation of bibliographies, preparation of current awareness bulletians indexing and abstracting and sorting can be done
9. Computers can store voluminous data and can perform functions very accurately. The data gathered in it are reliable
10. A computer can be used repetitvely to process information and it will not occupy much space also.

Benefits by Implementing ICT in Bibliotheca

Computers in libraries have been used and in most cases are still being used to automate the following functions:

- Acquisition and budget
- Cataloguing and short loans
- Circulation
- Serial control
- Provision of access to online catalogue
- Improving the efficiency of internal operatons
- Improving access to local library resources
- Providing access to resourcesoutside the library
- Interoperability of information systems

Use of ICT for User Services:

Use of ICT in libraries enhance users satisfaction. It provides numerous benefits to library users.
- Provide speedy and easy access to information
- Provides remote access to users
- Provides round the clock access to users
- Provide access to unlimited information from different sources
- Provides easy access to individual user ata time
- Provision of Web access to OPACs
- Electronic document delivery
- Networked information resources
- Delivery of information to users desktops
- Delivery of online information at a time to many users

Problems in Implementation of ICT

- Inadequate Finance
- Lack of Planning
- Inadequate Management Support
- Lack of IT Trained Staff
- Lack of Willingness of Staff
- Lack of Consultancy Service for ICT
- Lack of Less Expensive Standard Software
- Inadequate Hardware
- Lack of Training Facility
- Taken More time for Retro-Conversion & Barcoding
- Lack of Awareness/ Hesitation in Users ICT
- Low Priority to ICT
- Lack of Control Over Library Staff
- Lack of Motivation
- Vacant Post of Librarian and Staff
- Frequently Change in IT

Conclusion

The ICT has fulfilled its promise in academic libraries, there is remarkable rise in the use of ICT, many of the libraries activities are now ICT driven. This has led to the speed on

acquisition, processing, storage, retrieval and dissemination operations. ICT has also help to curb the problem of information explosion in this information era.

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