

## Emerging Information Communication Technologies to Modernize College Libraries

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**ABSTRACT :** This paper is based on application of Information Communication Technology in Library services to meet the user's requirement in present scenario and importance of information communication technology in college libraries provides instant and easy access to information that lead towards the modernization of college library services.

### I. INTRODUCTION

As we are aware a huge amount of information is being published every second through various application of information technologies in several medium. Throughout history, a number of technological advances have had great impact of society. These advances either provided a capability which was previously unknown or provided great improvement in efficiency of an activity. For example the invention of writing technology enabled accurate recording of knowledge. Emerging information communication technology refers to the phenomenon of mechanization of traditional library activities such as acquisition, circulation, serial control, Online Public Access Catalogues (OPAC) etc. Information communication technologies provide wide range of tools and service for the development and modernization of libraries in context of acquisition, technical process, storage, retrieval and dissemination of knowledge or information.

### II. EMERGING INFORMATION COMMUNICATION TECHNOLOGY

Now a days there are several information technology for various housekeeping, management and administrative functions of the library, different electronic and digital media, computer aided electronic equipments, networks and internet has provided significant role in retrieval and dissemination of information and playing a vital role for modernization of libraries main of them are :

#### A. Web technology

The world wide web was developed in 1989 by Tim Berners Lee and by 1995 web has expanded to global proportions. The website is composed of millions of websites and a website is a collection of web pages (HTML documents) that are linked together and stored on a server (host computer). Web technology includes client server technology, web browsers, document markup language such as HTML, XML, RDG, TIE etc. The web technology has enormous impact on modern library services for retrieving information world wide.

#### B. Importance in modernization

Several libraries has its own website to provide information regarding library, now website is working as a vibrant communication tool for librarians, various professional organizations developed website for better communication, web technology promote research and publication process, provide online access to catalogue and database. Web technology enables resource sharing among the libraries and plays a leading role in modernization of libraries.

#### C. Internet technology

Internet is a world's largest computer network. It comprises of a vast international network of computer networks that enables computer for all kind of share services and communicate directly. Internet provides access to graphics, database, documents, software, archives, picture and sounds.

#### D. Importance in modernization

Internet enables libraries to world wide search within a few seconds and provides access to a large volume of information for communication. Internet supports for multimedia information exchange with open standards and few rules. Internet connects universities, colleges, schools and other educational institutions for information sharing and exchange. Libraries and information centers embracing email services and incorporating it into various information related service as it plays an important role in the dissemination of information.

#### E. Networking technology

Networking means different things to different people in different context. Martin defines networking as a group of individuals or organizations, which are interconnected to form a system to accomplish some specific goal. Library network is a specialized library co-operation for centralized development of co-operative program and services. Networking technology uses telephones lines, satellite communication, microwave communication, public switching telephone network and pocket switching data network etc. Networks are categorized into star network, hierarchical

network and distributed network exists, LAN (Local Area Network) that helps in library housekeeping and resource sharing WAN (Wide Area Network) that allows electronic communication among remote user's DELNET, INDONET, INFLIBNET, MALIBNET, NICNET, ADINET etc are major WAN in India.

#### F. Importance in modernization

Network technology promotes library co-operation, library consortia, and library networks which are the basis for modernization of libraries networks maximizes the effective uses of library resources, improves efficiency in library operations, increases communication and idea sharing. Network encourages applying systems techniques to all library operations and lead improved management of library operation and library resources.

#### G. Library automation

Automation is the basic need for modernization of any library, library automation is usually distinguished from related fields such as information retrieval, automatic indexing and abstracting, automatic textual analysis. However, now a days clear distinction is not maintained and library automation may some time include related fields as well. Although computers have a major role in library automation, telecommunication and reprography technology have equally important role because of the support they offer to library automation for mechanization of library functions. To modernize the library services advanced hardware and software are required some main of the them are :

#### H. Optical disc storage technology

Optical disc storage technology is among the most recent computer technology to enter the library community. The CD ROM, a laser optical disk storing of 780 MB, has become increasingly important as a medium of storage and dissemination of information. CD ROM has ability to represent various media such as text, graphics, animation, vide clips and sound files into a digital environment. Digital video disk or digital versatile disk (DVD) is the next generation of CD. The main feature of DVD is the compression technology and storing data on multi layer sides, stores 17 GB data is currently the only credible true multimedia format. CD's and DVD's has become ultimate storage devise due to high density storage, low cost, inexpensive hardware requirement.

#### I. Scanning technology

Scanner is important equipment in modernization of library. It is useful for scanning text, image and content pages of books for display in the OPAC (Online Public Access Catalogue) and also used in optical character (OCR) applications. Scanned document may be circulated and accessed easily. Scanner are providing great help for

#### J. Bar-coding technology

Bar-coding is compulsory activity in a modern library, almost all the library automation software packages are compatible with barcode readers and are capable for generating barcodes for library materials. Using barcode equipments for circulation and stock verification is becoming more common, efficient and time saver.

#### H. Digital and virtual libraries

The basic concept of digital and virtual libraries is the sharing of information and resources globally for providing right and nascent information to the right user at the right time. It is the computing terminals having linkage to different sources of information in electronic or digital form. Digital library is a collection of information that is both digitalized and organized and which offer capabilities beyond those of the traditional libraries. Larson defined a digital library as a "global virtual library- the library of thousand of networked electronic libraries". Digital libraries generate new types of information resources, new approaches to acquisitions, classification and cataloguing and ensure intensive use of electronic systems, networks, dramatic shifts in intellectual, organizational and electronic practices. Virtual library is a library with little or no physical collection of books, periodicals, reading space and support staff, but one that disseminates selective information directly to distributed library, usually electronically. The virtual library resources are better than one might find through a regular search engines; we have to come into the virtual library to search research. Virtual and digital library provide a rapid access to electronically stored information that lead the modern library services.

#### I. RFID technology

**RFID** (Radio Frequency Identification) is the latest technology being used in modern library's theft detection system. Unlike EM (Electro Mechanical) and RF (Radio Frequency) systems which have been used in libraries for decades, RFID – based systems moved beyond security to become tracking system that combines security with more efficient tracking of materials throughout the library, including easier and faster charge and discharge, inventorying and material handling. RFID is a combination of radio frequency based technology and microchip technology. The information contained on microchips in the tag affixed to library materials is read using radio frequency technology regardless of item orientation or alignment and distant from the item is not a critical factor except in the case of extra wide exit gates. The corridors at the building exits can be as wide as four feet because the tag can be read at a distance of upto two feet by each of two parallel exit sensors. The target used in RFID systems can replace both EM or RF theft detection targets and barcodes. RFID is necessary requirement for modernization of college libraries.

### III. CONCLUSION

Application of information communication technologies in the college libraries are erupting and moving faster than ones imagination resulting in information explosion crossing geographical boundaries. Information communication technologies will help to remove barriers of distance and time. There will be no limit of variety of ways in which modern technology is applied in speedy retrieval of information most consistently. It is the power and capacity of modern technologies that helps every reader to get the information he or she seeks.

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