



# Use of Information Communication Technology in Academic Libraries

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## Abstract:

*This article focused on use of Information Communication Technology in academic libraries. ICT application is most essential for academic libraries. Library staff and users can adopt electronics habits. They are used computers, Internet, Intranet, Web, Extranet etc. The Digital libraries movement is rapidly increasing and save the time, cost and manual labor of library staff. ICT success the five laws of library and information science.*

## 1. Introduction

In modern era, cause of Information explore ICT is most essential for academic libraries. Traditional libraries are collecting the information, stored and retrieval manually. The libraries played an important role in the political, social, economic and cultural development of society. Researcher, Businessmen, Policy makers, Students and other persons are achieving their goal through academic libraries.

Now a day libraries can deal with new media. Modern libraries can store the information and reading material in digital form. Information Technology is the modern technology for the collection, organization, analysis and dissemination of electronic information. Information communication is in electronic forms like text, audio-visual, picture, graphic and animation. Electronic Information is delivered through computer networks. Library collection is in computer accessible form. Electronic information services are providing OPAC, e-resources, e-journals, online purchase and subscriptions, online database access, CD ROM facility, scanner, Telephone, Telex, e-fax, World Wide Web and Internet service. The information communication technology is essential for libraries, because information is a growing resources and growing exponentially. It is reason of the exponentially growing nature of information; the Dr. Rangnathan formulated the fifth law of Library Science that the, Library is a growing organization'.

## 2. Definition

### 2.1 Information and communication Technology

Information and communication Technologies refers to technologies that provide access to information through computer, telecommunications, wireless networks, internet, cell phones, radio, satellite and other communication mediums. ICT is the technology required for information processing in use of computer and computer software to convert, store, protect, process, transmit and retrieve electronic information from anywhere, anytime.

### 3. Advantages of ICT

- Improving the productivity and efficiency.
- ICT makes library functions and services are easy, fast and effectively.
- Helps to manage information overload as information retrieval is made easy.
- Quality information and remote access is enabled through ICT tools. Library automation saving the space using the electronic storage.
- Inter loan library service and resource sharing make easy through ICT.
- Improves Quality of Library Services by round clock access to the user.

### 4. Disadvantage of ICT

Constant change of computer software, hardware and complex installation procedure.

Erratic power supply and insufficient bandwidth in area.

Lack of technical knowledge by library staff and users.

### 5. Challenging of ICT

Issue of copyright and intellectual property rights management.

Information policy between International countries.

limited funding of ICT infrastructures.

Lack of proper awareness and training on open source tools.

### 6. Applications of ICT in Academic Libraries

#### 6.1 Library Automation and Management

Library automation refers to the use of computer to automate the typical procedures of libraries such as cataloging and circulation and acquisition. Automation is a process of using the machinery for easily working and saving the human power and time. The main objective of library automation is, to improve the library services and quality of output.

#### 6.2 Library Networking and Resource Sharing

Library networking means a group of Libraries and Information Centers are interconnected for some common pattern or design for information exchange and communication with a view to improve efficiency.

#### 6.3 User Services in ICT Environment

Library users are adopting electronic habits, making increasing use of the new ICT including computers, the Internet, the Web, Intranet, Extranet and other technologies. As a result, library users are placing new demands on their libraries. They require access to the latest information, updated information resources and access to ICT facilities that they could use in their work.

Use of ICT in libraries enhances user's satisfaction. It provides numerous benefits to library users. Some of the benefits are:

- Provide speedy and easy access to information
- Provides remote access to users
- Provides round the clock access to users
- Provides access to unlimited information from different sources
- Provides information flexibility to be used by any individual according to his/her requirements
- Provides increased flexibility
- Facilitates the reformatting and combining of data from different sources

Libraries are also providing various ICT-based services to their user, including the following

- Provision of Web access to OPACs
- Electronic document delivery
- Networked information resources
- Delivery of information to user desktops
- Online instructions
- Online readers advisory services

Global-level information retrieval is fast and in recent years, increasingly more user friendly for library end users. The following ICT technologies have been used by many of the research and 250 development libraries in India: Approach by touch – Disseminate library services.

- Cellular Technology
- IOS Technology
- Smart card Technology
- Talking Computer Library – Robot
- Social Networking
- RFID and Smart card
- CDROM Searching
- Online Networking
- Photostat
- Online Information services
- News Clipping Scanning Services
- Online –Reservation Services
- Database Searching Services
- Audio Visual Services
- Internet Access
- E-Query Services
- E-Journals
- E-Books
- E-Lists
- Barcode technology
- Printing Technology
- Web Rings
- FAQs
- Digital Archives
- Bulletin Boards
- Web Exhibitions
- Virtual Help Desks

Use of ICT tools to provide and disseminate knowledge has been slowly adopted in a great number of libraries. This may be due to different issues such as inadequate ICT facility or funds and management reasons. Libraries should aggressively invest in ICT 251 technologies, applications and soft training skills in librarians. All the above ICT services are needed for the today libraries.

### **7. Internet for Academic Library**

Library is important for learning, research teaching and for generation preservation and transmission of knowledge, major portion of the current information is being produced right over internet in digital form instead of print or other traditional form. Moreover many information providers have started to provide information to end users from single workstations. Impact of globalization of knowledge and information internet is the need of the hour. Academic libraries are required internet for following aspect.

### **8. Application of Internet**

Internet being capable of offering the following services

- E-mail
- Mailing Lists
- Usenet News Groups
- WWW – World Wide Web
- Group Discussion
- One to one Communication, Video-Conferencing

- Information on Demand
- Miscellaneous Tools like FTP-File Transfer Protocol, Gopher, Archie, Veronica

## **9. Internet Resources for Libraries**

### **9.1 Online library catalogue**

The internet gives access to the bibliographic records of millions of books and details on the holdings of academic and research libraries around the world. Gopher offers access to the libraries with library catalogue in different countries.

### **9.2 Electronic Journals and Newsletters**

There are thousands of electronics Journals, Magazines; Newsletters are available on the Internet. The Journals and Magazines are like printed counterparts in that they appear on a regular schedule. Some Journals and Magazines are appearing in both paper and electronic editions. Now traditional newspapers and newsletters are also becoming available on the certain networks over the internet.

### **9.3 Discussion Lists**

There are numbers of electronic discussion lists and conference proceedings available over the internet. They give users direct access to scholars in disciplines they are interested. Discussion lists gives user to opportunity to ask or offer help.

### **9.4 Digital Initiatives of Academic libraries**

Digitization of information contents is the ultimate solution of library automation. Digital libraries are set of electronic resources and associated technical capabilities of crating, storing, searching and dissemination of information. Digital libraries can store and manage large amount of digital contents such as full text, course materials, library catalogues, image and audio video materials etc. Digitization of information is major changes in publishing technology. Today change agents such as technology, marketing, quality and cost have made big impact over the libraries. E-publishing and e-documentary sources have initiated digital libraries in a big way. Digital libraries provide an environmental to bring together collections, services and people in support of the full life cycle of creation, dissemination and preservation of data, information, and knowledge.

### **9.5 E-Documents**

The term e-documents is text that is presented with or without multimedia content on the computer screen. Copies of e-documents are equal or better than the original without any loss of quality. These documents can be distributed over the internet or intranet.

### **9.6 E-Journals**

E-Journals are full text Journals that are accessible over the internet. The process of developing content for both print and electronic journal is same but digital medium allows the editorial process to occur at a fast rate than in print.

### **9.7 E-Books**

E-book is digital reading material that user can view on desktop or notebook personal computer with large storage capacity and the ability to download new titles via internet or networks. E-books on diskette or CD-ROM are sold from the e-publishers, web sites, online booksellers and physical bookstores. E-titles cost about the same as their print equivalents.

## 10. Conclusion

The digital library movement in India is rapidly increasing and the traditional libraries are now on their way to digitization with the introduction of ICT application in the library sector, data of all libraries will be handled with facileness, accurately, great speed, high rate and more preponderant quality. It will preserve cost, time and labor of library staff and will avoid duplication of work. All libraries will be connected through networking, hence amassment will be shared. It will additionally avail to adopt the felicitous strategies for ameliorating accumulation building. Union catalogue and cooperative bibliographic accommodations, resource sharing among libraries, computerized information services to the users will be introduced. However ICT application/automation and networking is must require for any kind of library and information system.

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