



# **BHARATHIDASAN UNIVERSITY**

## **Tiruchirappalli- 620024, Tamil Nadu, India**

**Programme: M.Lib. I.Sc., Library and Information Science**

**•Course Title** : : Information Technology in Libraries **Course Code**  
: : P21MLS5

**Unit-I**

**INFORMATION TECHNOLOGY IN LIBRARIES**

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# Introduction

- To identify the IT infrastructure facilities available in the libraries.
- To identify the IT based software implemented in the libraries.
- To find out the various types of electronic resources available in the libraries.
- To find out whether sufficient staff is available to carry out automation.
- To find out the barriers to automation faced by libraries.
- Hardware.
- Software
- Technologies
- Electronic

# Information

The American Heritage DIctionary of the English Language:

- Knowledge derived from study, experience, or instruction.
- Knowledge of specific events or situations that has been gathered or received by communication; intelligence or news.
- A collection of facts or data: statistical information.
- The act of informing or the condition of being informed; communication of knowledge.
- Computer Science. Processed, stored, or transmitted data.

# Communication

- The word „Communication“ originated from Latin word „Communis“ meaning „Common“.
- “Communication is imparting, conveying or exchanging of ideas and knowledge whether by speech, writing or signs” – Oxford English Dictionary.

# What are IT?

- Information Communication Technologies
- Information and Communication Technology (IT) is a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information.
- IT are the hardware and software that enable society to create, collect, consolidate and communicate information in multimedia formats and for various purposes.
- IT applications need effective information networking evenly distributed over the country and supported by personnel skilled in IT.
- IT include both networks and applications, Networks include fixed, wireless and satellite telecommunication, broadcasting networks. Well known application are the Internet database management systems and multimedia tools.

# Component of IT in Libraries

1. Computer Technology
2. Communication Technology
3. Reprographic, Micrographic and Printing Technology

# IT Application in Libraries

- Information Technology means a variety of technological applications in the process of communication of information. The term “information technology” has been used as collective term for the whole spectrum of technologies providing the ways and means as to acquire, store, transmit, retrieve and process information.
- According to the Webster’s New Encyclopedia, information technology is the collective term for the various technologies involved in the processing and transmission of information.
- Thus information technology includes computer technology, communication technology, multimedia technology, optical technology, networking and barcode technology, etc.

# Computer Technology

- Computer can store every variety of information recorded by people, recall it whenever need arises and can calculate millions of times faster than the human brain. Thus, computer can do precisely all those jobs in the library for which we use many devices with a set detailed instructions.
- **Computer Technology can be divided into two categories:**
- **Computer Hardware** A computer is an electronic device that processes data, converting it into information that is useful to people.
- **Computer Software**
- Software consists of the step-by-step instruction that tell the computer what to do.



# Cont....

- Computer hardware that can further be divided into following categories:
- Computers for Organizations
- Network Servers
- Mainframe Computers
- Minicomputers
- Supercomputers
- **Computers for Individual Users**
- Desktop computers
- Workstations
- Notebook computers
- Handheld computers
- Smart phones

# Cont....

- Computer software that can also be divided into following categories:
- System software
  - Windows/Linux/Unix
- Application software
  - Word processing software
  - Spreadsheet software
  - Presentation software
  - Graphic and Multimedia software
- Database Management Softwares

# Why IT in Libraries?

- Speed
- Storage
- Accuracy
- Reliability
- Ease of use
- Repetitiveness
- Compactness

# IT in Libraries

- The first and foremost IT component, which can be adopted in the libraries, is the computer for library automation and to have an in-house database of library holdings in electronic form.
- As many primary journals and being published in CD form, it becomes necessary to equip the libraries to optimize the use of information.
- E-mail, online retrieval networking, multimedia and internet are the other important technologies, which can be used for faster access to information.

# Advantages of IT's in libraries

- Opportunities to deploy innovative methodologies and to deploy more interesting material that creates an interest in the librarians;
- | Enables better management of library a librarian thereby improving the productivity of the tutor as well as the taught;
- | Enables the librarian to concentrate on other tasks such as research and consultancy;
- | Enables optimum utilization and sharing of resources among institutions thereby reducing the costs of implementing IT solutions.

# Impact of IT in Libraries:

- To capture, store, manipulate, and distribute information;
- To introduce and provide new services, revitalize the existing services by providing faster access to the resources, by overcoming the space and time barriers;
- To provide need-based, browsing and retrospective search services to the users;
- To have large number of databases in CDs;
- To utilize the staff for providing better information services;
- To encourage networking and resource sharing at local level;
- To digitize the documents for preservation and for space saving;

# Cont...

- To support library functions such as circulation, serials control, acquisition control, stock maintenance and other routine office works and developing in-house database;
- To retrieve and disseminate the information in user- defined format;
- To access library catalogues databases of other libraries through library networks;
- IT made networking and sharing of information resources possible;
- Digital information may be free or cheaper than print equivalents
- Digital information can be sent in multiple copies simultaneously over information networks in fractions of a minute or even of a second.

# Impact of Libraries and librarian

- The digital information environment changed the way information is created, collected, consolidated, and communicated. Library services became automated and information services became electronic.
- Librarians had to learn new knowledge and skills in order to meet user needs for new information services using IT and e- resources.



# Preference of IT User

- Preference in using IT for fast efficient comprehensive search for information.
- Efficient global communication results in frequent personal interaction among IT researchers. IT competent users



# Why do librarians need to know about IT and acquire skill in its use

- IT tools to create, collect, consolidate and communicate information are not yet used in the majority of libraries. Libraries are seldom included in the technology vision of institutions because librarians have not been able to convince management that libraries need IT.
- Uses of IT in the library:
  - Management
  - Processing of library materials
  - Developing online resources
  - Accessing online resources
  - Developing offline resources
  - Accessing offline resources
  - Providing service to clients

# Functions in IT Based Library Systems

- **IT is used in various fields of library activities.**
- **Acquisition**
  - Acquisition/Accession list
  - Order file / report
- **Serial Management**
  - Serial check-in/out and claiming
  - Union/holding list
- **Cataloging/classification**
  - Catalogue card/label production
  - Retrospective conversion
  - Online catalogue
- **Circulation**
  - Issuing- Interlibrary loan -  
Reservation -Over dues
- **Management**
  - Accounting/budgeting
  - Word processing / mailing
  - Scheduling/planning
  - Statistics/report
- **Information storage/retrieval**
  - Database construction
  - Online database searching
  - Down loading/uploading
  - Indexing and abstracting
- **Reference/Information services**
  - Bibliographic listing
  - Library instruction
  - Public access/computer literacy

# IT-Based User Services

- Web access to OPACs / Web OPAC
- Electronic document delivery (EDD)
- Networked information resources
- Delivery of information to users' desktops
- Online instruction
- Online readers advisory services

# Impact of IT-Based User Services

- 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
- Breakdown the distance barrier
- Ensure the right information to the right reader at the right time

# Impact of IT on Libraries

- **Library Management:** Under this, classification, cataloguing, indexing, database creation, CAS, & SDI works are affected by the IT.
- **Library Automation:** Under this, organizing databases, automating library, and various house-keeping operations are coming which are affected by the IT.
- **Library Networking:** Under this, resource sharing and information dissemination are coming which have been affected by IT.
- **Technical Communication:** Under this, technical writing, editing, and desktop publishing works are included which are affected by IT.

# IT in Libraries: various challenges

- The development of IT and their application in library and information centers has changed the nature of collections; the needs of users; the library environment and the roles of LIS professionals. The old concept of book centered librarianship has changed to the user-centered librarianship. ITs have paved path to new roles for LIS professionals. The LIS professionals as creators, communicators, leaders, mentors, and lifelong learners are monitoring the trends in technology continuously to provide global information instantaneously to end-users through ITs.
- Changing role of libraries and librarians
- Funding of libraries
- Copyright management
- Information access
- Preservation of digital information resources
- Legal deposit

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