# Impact of Information Communication Technology (ICT) on Academic Library Services

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*Abstract -* 21$^{st}$ century world is "Information World". The concept "Information Explosion" is developed in this world. ICT (Information & Communication Technology) is playing a significant role in housekeeping activities and information retrieval in libraries ICT consists of three terms – Information, Communication & Technology. Information plays an important role in development of knowledge. Computer, communication & technologies impact on academic libraries management & services. With the help of ICT we can do our work in academic libraries like acquisition, cataloguing, classification, serial control, circulation, stock verification, information storage / retrieval, services of libraries like reference / information service & other services by using library software's. In academic libraries communication technologies used for their uses. Communication technology is developing at a rapid pace. The need to communicate more quickly and more efficiently has become essential in our technological society. We can provide our communication services by means of Audio, Audio Visual, Tele text, Fax, Online search, E-mail networking, Social sites, Search engines, Teleconferencing, Cellular phone, Voice mail. ICT are making their significant contribution in the development of academic libraries.

*Keywords -* Information, Information Technology, Communication. ICT – Information Communication Technology, Academic library, academic library services.

## I.    INTRODUCTION

Now a day information is most valuable thing in the world. Information is a commodity wealth & product. Information technology has transformed the whole world into a global village with a global economy which is increasingly dependent on the creative management, services and distribution of information ICT has been more essential need to progress in the life of a nation during the 21$^{st}$ century in addition to basic human needs. ICT may be defined as technology which is used to store, progress & communicate the required information on demand or in anticipation. ICT is a very broad term in the field of information technology which is brought to use in information & its communication.

ICT helps uses to manipulate store and transmit information. It involves elimination of telephone network which saves large sum of money of academic libraries. In this 21$^{st}$ century the development of library information science in India is dramatically improved with ICT in academic libraries. Impact of ICT on the services, working & professionals also. ICT assists the information professionals need to have knowledge and skills in ICT techniques and handling procedures. In this way academic libraries must continuously improve themselves with up-to-date computer technologies for knowledge transmission & networks. The old function of LIS has changed with improvement in ICT. Globalization & broad based networks have opened up different career options to LIS professionals.

ICT plays an important role in academic libraries & their professionals. Due to ICD professionals give quick service to user and they work with technologies. They use ICT in conventional work as well as services with the help of IT, communication, network and internets. ICT is more essential part of academic libraries now days.

## II.    ACADEMIC LIBRARY

Academic Library is library that provides library services to its students, professors, researchers & other reader in institute & non-teaching staff. There are three types of libraries.
1)    School Library
2)    College Library
3)    University Library

**Objective of academic library :**
- Give essential information to research
- Give current information to student professors and researchers
- Give books, periodicals and other library services to them
- Give textbook and references books to students

In this way academic library objective is to provide conventional and non-conventional material to all its students, professors and researchers and other uses.

### III. ICT

ICT is the Information communication technology. There are three concepts are involve i.e. information, communication and information technology.

**i) INFORMATION :-** Def$^n$ - The Communication or reception of knowledge or intelligence. – Websites new international dictionary.

Information is an organized data. Information also called as data, fact, intelligence & other knowledge. These concepts used in library science Information is commodity wealth & product. Information is regarded as an important resource for all human activities.

"The right information from right source give to right users at right time is every body's right".
- Information is representation of knowledge
- Information as a data in environment
- Information is a part of communication process
- Information as a resource commodity

Features of Information is
- Accuracy
- Latest (Currently up to date) & timely
- Comprehensiveness

**ii) IT (Information Technology) :** Def$^n$ "Information Technology is a process of creating, gathering, processing, storing, receiving & delivering of Information from one place to other."

The term it is recent origin & comprehensive term. It called in English, "Informatique" called in French & "Informatika" in Russian, is notation information handling. It is combination of information & technology.

It also includes the devices which makes this process. It includes hardware, software, databases, computer network, telecommunications micrographics, reprographics.

**Communication :** Communication comes from Latin word "Communis"

Communication is the electronic system that transmitted data over communication line from one location to other. (i.e. sharing of data & information, programs). Communication ways are transmitter, channel & receiver. Communication system divided into 5 types : i) Radio Communication, ii) Microwave Communication, iii) Saralite Satellite Communication, iv) Co-axial cable communication & v) Fiber optics communication. In this way above three terms when combines with each other to form ICT.

**Definition :**

**Carter (1987),** "The system & devices used for receiving, storing, analyzing & communication Information in all forms and their application to all aspects of our lives including in office, home, factory."

**UNESCO (2002),** ICT is "Combination of informatics technology with other related technologies to process of communicates information. ICT uses newest technologies to process and communication information. It deals with computer & computer software for store protects, process and transmit / retrieve information."

### IV. MAJOR COMPONENT / TOOLS OF ICT

Key components of ICT which are needed in library : A) Computer technology, B)Communication technology, C) Reprographic, micrographic printing technology.

e.g. (1) Computer, Laptop, (2) Printers, (3) Xerox Machine, (4) Scanner, (5) Library Management Software, (6) Mobile Technology, (7) Telephone And Fax Machine, (8) Power Point, MS Word, (9) Internet, (10) Local Area Network Or Other Network, (11) Consortia, (12)CD-ROM & Online Database, (13) Audio & Video Conferencing, (14) Trained Library Professionals, (15) Web 2.0 Technology – E.G. Blog, Facebook, Twitter.

Benefits from ICT cannot be derived without creating the proper technical infrastructure which provides the platform for delivery of application & services and access them. So academic libraries create proper ICT infrastructure in library, keeping views of user's needs and parent organization objectives.

### V. APPLICATIONS OF ICT IN ACADEMIC LIBRARIES

Now a day's ICT plays an important role in library. ICT is making their significant contribution in application, in academic library. ICT is essential for various housekeeping, Mgt & administrative functions of library, different electronic and digital media and computer aided electronic equipments, network & internet play an important role in retrieval & dissemination of information. ICT plays an important role in modernization of libraries.

**1) Library Automation :**
Library Automation is a major element of modern libraries which tends to reduce human influence in libraries so that an user can easily access to information comparatively with less amount of capital. The improvement in efficiency is major view of library automation.

**2) Library Network :**
Library networking means a group of libraries and information centers are interconnected for some common pattern or design for information exchange and

communication due to application of library networking in institute or group of institute can save a large sum of money by which they can further progress and give their vital contribution towards our library science sector as well as global human resource development. E.g. Library Consortium.

### 3) Library Management :
Library Management consists of different activities i.e. acquisition, classification, cataloguing, serial control, circulation, stock verification, indexing, database processing Due to application of ICT we can easily perform given above activities. The development of ICT has a great impact on overall collection development and services which (collection development) must be done with care so that it may easily fulfill the valuable needs of users. We use soul and other software for library e.g. E-Book, E-Journals, E-databases & Newspapers, audio-video materials, graphics, images and other library material via internet.

### 4) Technical communication :
Technical Communication including technical writing, editing, publishing and DTP systems.

## VI. ICT BASED SERVICES IN ACADEMIC LIBRARY

ICT plays an important role in giving services in academic libraries. For ICT based services internet network, computer, library software, digital repository are essential in academic libraries. Then we give library services based on ICT. Services are ___

- Document Delivery Service
- OPAC Service
- Internet Service / Network Service
- Online Reference Service
- Multimedia (Text, Graphics, Images, Audio / Video Animation)
- Library Consortia (Lib. Co-operation)
- Online Information Service (NUCSSIC, OCLC)
- Online Reservation Service
- Online / Offline Databases
- Electronic Mail
- E-Publication (E-book, E-journals, E-newspapers)
- Online Services – N List program of INFLIBNET
- News Clipping Scanning Service
- Social Networking Service (Facebook, Searching)
- Information Literacy
- CAS (Current awareness service) & SDI
- Abstracting & Indexing Services
- SMS Services

In this way ICT attracts the users and to reach out the users as never before. In academic libraries give quick services to their users with the help of ICT.

## VII. IMPACT OF ICT ON PROFESSIONALS

21th Century's libraries are not only store houses of knowledge but an effective mechanism to facilitate dissemination of knowledge promoting and sharing intellectual properties. The role of librarian as facilitator of information access and disseminator of information is well established.

LIS professionals in ICT world having Basic Skills And Soft Skills. Basic Skills I.E. Behavior, Attitude, Dressing Look, Body, Language, Time Management, Problem Solving Skill, Flexibility, Adaptability & Self Confidence, Team Work Skill. In Soft Skill Professionals Having Awareness Of Technology I.E. OPAC, ICT, Library Software, E-Resources, E-Libraries, Searching Knowledge, ICT Based Working In Conventional Work (Like Acquisition, Circulation, Serial Control, Processing, Ordering Books, Classification, Cataloguing, Data Entry, Electronic Works), Customer Service, Writing Skill, Library Services, Library Facilities, Teaching Skill, Communication Skill, Interpersonal Skill, Public Relation, Leadership Skill, Presentation Skill, Personal Skill, Marketing Skill And Knowledge Mapping Skill.

In 21st Century world librarian is called as information manager and staff called as a information offices. Librarian increases their knowledge with new concept in ICT so they attend workshop, seminars and ICT trainings. Well qualified library professionals are the "Backbone of Library" so successful introduction and knowledge of ICT requires their involvement and support.

Presently ICT impacts on different levels of librarians. Improvement in ICT & extensive use of ICT result in electronic information sources and digital media collection. Librarian makes a library in form of knowledge storage and retrieval LIS professional specially academic libraries plan and implementation services for future, they will need to ensure that use of information though the new information services, development of effective instructional / orientation program on ICT based to users and researchers. So ICT world librarian having multidimensional attitude in a LIS sector as a librarian.

## VIII. ADVANTAGES OF ICT IN LIBRARIES

- ICT makes library work easier, faster, cheaper and more effective.
- Helps to manage information overload as information retrieval is made easier in computerized system.
- Remote access is enabled through networked system.
- Computerization saves spaces and reduces paper.
- ICT work saves the time of user and librarians.

**CHALLENGES OF USING ICT IN LIBRARIES**

- Poor funding of ICT infrastructures.
- Constant change of software and hardware.
- Irregular power supply.
- Insufficient brand width.
- Lack of technical IT knowledge by library staff.
- Copyright & intellectual property eight mgt.

## IX. CONCLUSION

21st Century world is information world due to "Information Explosion". According to current requirement s it has been quiet necessary to involve a major vital element i.e. ICT in the curriculum of LIS schools in India. ICT has made library works easier, faster and more effective. It has save large sum of money which can help in the further development or library remote access is unable to access network systems. It has been turned eco-friendly as it trends to reduce paper work in academic library. In this information world, librarian has soft-skills and basic skills. New trends and technology accept the librarians in training of ICT, workshop seminars and conferences on ICT.

E-learning gives support to libraries and higher education and research and these are free from classroom based education. So they will create hybrid libraries. Next generation uses the digital libraries, paperless libraries and virtual libraries in the future.

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