

# An Overview on Advancement And Development Of Technologies Adapted In Libraries

<sup>1</sup>Ravinder D, <sup>2</sup>Srikanth Reddy P, <sup>3</sup>R Anil Kumar  
<sup>1</sup>Librarian, <sup>2</sup>Polytechnic College Lecturer, <sup>3</sup>Assistant Professor  
<sup>1</sup>SIMS, India

**Abstract:** *As how air is essential for the survival of all living organisms on earth, in similar way information is an indispensable for development of the society. As the time passes on, the human society is developing at rigorous speed and evolved many new information technologies which have been major effect on the way human society lives, work, and play worldwide. The rise of the information technology had played major role in the development of library services for an active reaction to the challenges of the information service providing. This paper depicts about advancement and development of Information Technology and its application in the library services. Today libraries are equipped to accomplish the newly Information Technology based services. For the ease to user needs and fulfill the information needs of the users, the information is accessible in quite a quick time at desired place and for a desired person.*

**Index Terms -** *Information Technology, Libraries, Electronic Library, Digital Library, E Resources*

## I. INTRODUCTION

Information technology have transformed the whole world into a global village with a global economy, which is increasingly dependent on the creative management and distribution of information. Over the past decades the world has been experiencing significant changes in which the need to acquire, utilize and share knowledge has become increasingly essential. Now, in the 21st century, the age of knowledge and information is in its higher gear. This is an age when invisible knowledge and information take the role of prime movers leading all sector [1].

The fundamental resource for the advancement in today's emerging world is the collective information through various sources. The developments in information and communication technology have undergone drastic changes over the years. It is a vital ingredient for socioeconomic and cultural development of any nation or individual. The implementation new techniques of Information technology are being used by the libraries for various uses in the library for information processing, storage, communication, dissemination of information, automation etc.

## II. INFORMATION

Information is universal- it is known to all men in all languages, there may or may not be precise or apt word in a language to describe the term 'information' but surely it is there. We receive the information throughout the day. According to Shannon and Weaver. 'Information is any stimulus that reduces uncertainty'. Another definition by Ching- Chin Chen and Peter Hernon defines information as "all knowledge, ideas, facts, data and imaginative works of mind which are communicated formally and or informally in any format"[2]. This information that is so vital to human life, where does it come from? An in-depth study of how information is generated would be a difficult task, but is it can be safely be concluded that research is one of the better known areas where information takes root. Most of what we know today is a result of research. The work of experts in the fields of science, technology, social science and the humanities continue to give birth to information that is beneficial to the whole society[3]. The government, understanding the major role that R&D plays, also continues to pour funds into these fields as a result of which more and more information is generated- so much so that the world is being bombarded with information leading to the phenomenon termed 'information explosion' [4].

## III. INFORMATION NEED

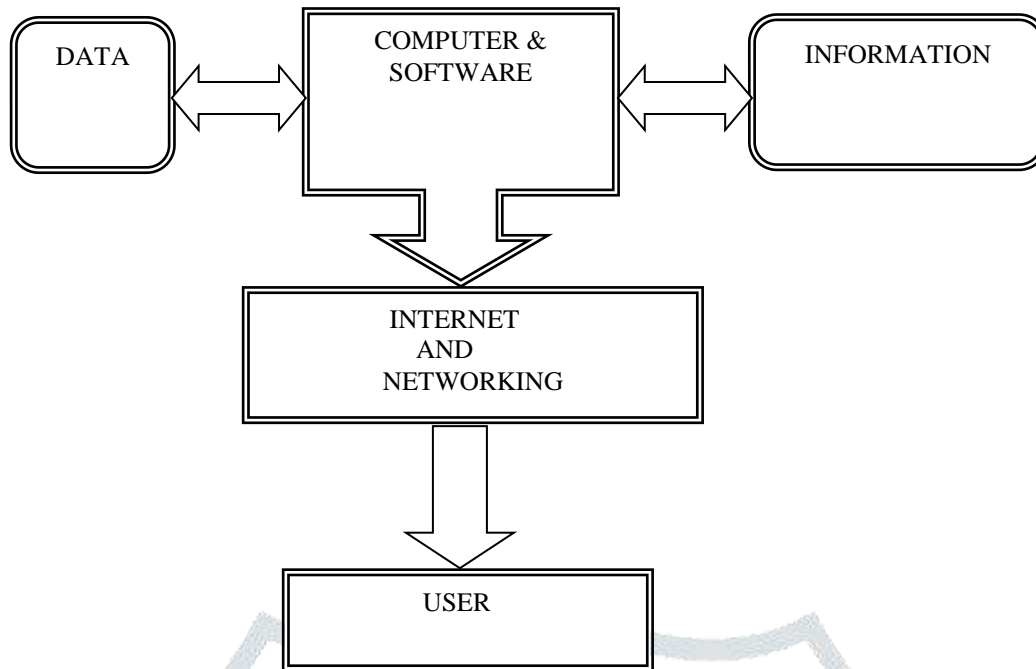
The Librarian's Thesaurus defines information need as "that need which library services or materials are intended to satisfy" [5]. Maurice B. Line has defined information need as, "what an individual ought to have for his work, his research, his edification, his recreation etc" [6]

## IV. INFORMATION TECHNOLOGY

The major role of information technology in process of globalization. As it started with development of computer hardware and software and immense growth in the field of telecommunication had provided an ease in accessing the information around the world in a quick span of time. Advancements in internet had begun new era for the development of the human society by making connecting the world in a click and to gather or know the information from any part of the world.

## V. COMPONENT OF INFORMATION TECHNOLOGY FOR LIBRARIES

Information Technology component is especially helpful to distant learners who have limited time to access the libraries from outside by internet access to commonly available electronic resources, mainly CD-ROM, OPACs, E-Journals, E-Books, ETD and Internet, which are replacing the print media. The librarian preference of IT should include all those technologies which are expected to be used in the library activities and other library services for collection, processing, storage, retrieval and dissemination of recorded information, the fast developing information technologies have showered almost every areas of application including libraries.[7]



### 5.1 Library Automation:

The use of automatic machines or processing devices in libraries called library automation. Today's users expect the automated library system to provide access to the cataloguing, circulation, public catalog (OPAC) and acquisitions modules of the library and also to provide access through the system to Information in other libraries, CD-ROM databases on a network and the Internet[8]

### 5.2 Audio Visual Technology

AV Technology means Audio Video Technologies. In it we use all devices which are use for the same work in library to make it attractive and easy to access on network in remote location. Photography, microfilms, microfiches, audio and tapes, printing, optical disk etc are used in this techniques.

### 5.3 Networking

The use of online networks by libraries is also increasingly prevalent and a growing tool that is being used to communicate with more potential library users, as well as extending the services provided to individual libraries. Most of the library weblogs had some kind of statement of aims or purposes for the weblog or something about the intended audiences. Sometimes this was just a few words, sometimes a formal statement or short paragraph. Therefore in present networking is more important for libraries and information organizations. In it we make a network between libraries to another library and also connect users with this network. With the use of this technique we have a lot of information's of different libraries on a network.[8]

### 5.4 Radio frequency identification

RFID is a term used for technologies utilizing radio waves for identifying individual items automatically. The most common way is storing a serial number identifying a product and related information on a microchip attached to an antenna. RFID is used very similar to bar codes [9].

### 5.5 Barcode

A barcode reader (or barcode scanner) is an electronic device for reading printed barcode. Like a flatbed scanner, it consists of a light source, a lens and a light sensor translating optical impulses into electrical ones. Additionally, nearly all barcode readers contain decoder circuitry analyzing the barcode's image data provided by the sensor and sending the barcode's content to the scanner's output port[10]

### 5.6 OPAC

An Online Public Access Catalog (OPAC) is an online database of mater held by a library or group of libraries. Users search a library catalog principally to locate books and other material physically located at a library.

### 5.7 Photocopy:

A photocopier is a machine that makes paper copies of documents and other visual images quickly and cheaply. Most current photocopiers use a technology called xerography, a dry process using heat. Photocopying is widely used in library.

### 5.8 Database

A database is an organized collection of data for one or more purposes, usually in digital form. The data are typically organized to model relevant aspects of reality, in a way that supports processes requiring the information.

### 5.9 Library website

Library website helps to recognize the facilities and information sources available in the library. In most of the library website online catalogue is included. Online catalogue helps to ascertain a client whether the information is available in the library[10].

**VI. Advantages of Information Technology in libraries**

- 1) Time Saver - It is very easy to search information in libraries with the help of information technology. User can save his time to get information and it is also very useful for remote users. They can get information from remote areas and there is no time bound for them.
- 2) Quick Access: - Use of technology in libraries makes work very fast in comparison of human. All the information which is required by user is easily access on their won IT machine like computer, laptop, Mobile phone or Tab etc.
- 3) Multiple accesses: - With the use of technology the same information can be used at the same time by a number of users.
- 4) Attract the users: - With the help of different presentations tools we can make information attractive and it will helpful to attract the users. It is all possible with the help of IT.
- 5) Remote Access: - In the present world the time is much important for everyone. The users though have no much time to go library and get information, use network technology to get the information offside the library anytime. IT makes it very easy and help to save time for this type of users. With the help of information and technology users can get information's from the library 24 X 7 and 365 days offside of the campus of the library.
- 6) Preservation and conservation: - An exact copy of the original can be made any number of times without any degradation in quality
- 7) Newest information: - IT will make a library up to date. The library can retrieve the information's form different sites or others paid sources time to time and forwarded to the users this updated information by mail or instant massaging timely or once they wants. It is automatic process and no any human resources need to do this time to time. Every user's wants updated information and a library can make it with the help of IT.
- 8) Efficiency: - Everyone knows that there are fewer chances for a mistake with the use of technology. Everyone knows the diligence power of a technology is much batter then human. So it is very useful to increase efficiency of a library work.

**VII. Disadvantages of Information Technology in libraries**

- 1) Expensive: - It is very much costly. Different type of electronic equipments and components are required to build this type of facility in a library. And a technology always required cost to update itself. Any type of technology requires services and maintenance time to time. It is also payable to make an interconnection every time with their users on any network. So the cost value which is used to spend on library is increased.
- 2) Quick Access: - As more and more computer are connected to the Internet its speed of access reasonably decreasing due to enormous data or information available in future it will be dependent on speed of internet for availability of particular information in short of span of time
- 3) Band width: - Digital library will need high band for transfer of multimedia resources but the band width is decreasing day by day due to its over utilization.
- 4) Domain: - Digital libraries cannot give the as comfort as the environment of a traditional library. Most of the people also find reading printed material to be easier than reading material on a computer screen.
- 5) Copyright: - Digitization violates the copy right law as the thought content of one author can be freely transfer by other without his acknowledgement. So One difficulty to overcome for digital libraries is the way to distribute information.
- 6) Time Consuming: - With the much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult.

**VIII. CONCLUSION**

Utilizing the various components of information Technology libraries for better user experience is a never ending process. As a human being invaded many ways in his life for ease or comfort since origin of human being. As advancement in the field of Information technology and new techniques is great benefit for improvising library in greater extent for user. The future holds many new developments that need to be addressed. IT in libraries is desirable. It is however, a complex project and needs to be carefully planned. Planning ensures success and further development. Application of Information Technology in today's libraries is one of the optimistic to gain right information at the right time in the right place and at the right cost. Information Technology helps to improve the comfort and grade of the library and it condense the work stack of the library professions. The initial Expense of digitization is high but experiment shows that once digitization is introduced then the cost to manage this collection will be cheaper than that of any traditional library. Day to day the expense of use of Digital mode is decreasing, the online publication is increasing, the needs of user are shifting towards a different environment so it's needless to say that after one or two years my library or your library will go to be digitized so it's the pick time to all informational and library professional that they geared themselves to take the challenge.

**REFERENCES**

- [1] D K Singh, Mohammad Nazim "Impact of Information Technology and Role of Libraries in the Age of Information and Knowledge Societies"
- [2] Pujar, S.M." Information use by economists: A Study", Annals of Library and Information Studies, Vol.54, December 2007, p190-194
- [3] Uwaifo, Stephen Osahon." The role of information technology in local government administration in Delta State Nigerai: A case study of Aniocha North and Aniocha South Local Government area", Library Hitech News, No: 2, 2006, p17-21.
- [4] Ashok Babu, T. "Modern Information technologies: Their impact on Library Services", Library Information Technology in modern era: Libraries and Librarians in New Millennium, New Delhi; Commonwealth, 1999, p 65-72.
- [5] Devarajan, G. "Applied research in Library and Information Science", New Delhi; Ess Ess Publications, 2005, p 74. Indra Kaul "Internet services for library and information centres.
- [6] "Dr. P.S.G Kumar festschrift Library and Information Profession in India, Vol-1, Part-2, Delhi; B.R. Publishing Corporation, 2004, p725. Kawatra P.S. "Dictionary of Library Science", New Delhi: Crest Publishing House, 2002, p 3-155.
- [7] Kumar, PSG, "Information Technology: Basic Concepts", New Delhi: BR publishing Corporations, 2003, p9- 17.
- [8] Singh, Mahendra Pratap., "Use of Information Technology in Library and Information Science", New Delhi: Ess Ess Publications, 2008, p 21.
- [9] Sharma, Chetan "Use and Impact of E-Resources at Guru Gobind Singh Indraprastha University (India): A Case Study",

Electronic Journal of Academic and Special Librarianship, Vol. 10, No. 1.2009. Available from [http://southernlibrarianship.icaap.org/content/v10n01/sharma\\_c01.html](http://southernlibrarianship.icaap.org/content/v10n01/sharma_c01.html).

- [10] Tariq Ashraf. "Library services in electronic environment: Changes, Challenges issues and strategies", New Delhi: Kaveri Books , 2004, p130.
- [11] "Use of IT in Modern Era of Libraries" Asian Journal of Multidisciplinary .Pinki Librarian, Jat College, Kaithal (Haryana).
- [12] Mehrjerdi, Yahia Zare "RFID: the big player in the libraries of the future" The Electronic Library Vol. 29 No. 1, 2011, pp. 36-51.

