MORPHOLOGY OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE PRESENT DIGITAL ERA IN THE CONTEXT OF LIBRARY

Ramanik S. Lengure
Librarian, Renuka College,Nagpur
E-mail:ramaniklengure@gmail.com

ABSTRACT :

The paper gives an overview of various tools and techniques of Information Technology as well as those of Information and Communication Technology like computers, Information networks, Internet etc. It also discusses the ways in which all these new methods have affected the entire face of the libraries in term of information generation, its processing, its storage methods, retrieval of information and its dissemination. How the traditional forms of information services have been augmented using computers, World Wide Web and Internet paving way to new forms of information services has also been elaborated upon. So, It is access a great revolution and huge advantage in the field of Library.

Keywords: ICT, Information and Communication Technology, Library

INTRODUCTION:

Everyday new technological advances affect the way information is handled in libraries in every aspect. Computing technology, communication technology and mass storage technology are some of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to users. The ICT revolution is well under way across the globe. It is not a revolution in technology, machinery techniques, software, speed or convergence; it is a revolution in concepts. ICT is both an industry and a modernizing force. It is changing the way we work, communicate, organize, conduct business, gather and process information, even how we play and entertain. Developments in close to five decades of computing and a centre of telecommunications topped up with a decade of the internet have brought about the current ICT revolution. ICT has now taken the centre stage, influencing all facets of functioning of

governments, organizations and individuals, Even social delivery of goods and services such as education, health, rural development, etc., gets a new opportunity of efficient distribution and consumption through ICT.

ICT has one of the major factor causing changes in the field of Library and Information Science which people or user can communicate, retrieve and disseminate and used information. Libraries have been using ICT based resources and services to satisfy the diverse information needs of their users. However, these resources and services are not utilized fully. Under utilizations of these resources and services has been a cause of concern to libraries worldwide. The use of information and communication technologies has become increasingly important in libraries. The libraries are switching over to ICT based resources and services at an accelerated pace. E-Journals, CD-Rom, databases, online databases, e-book, web based resources and a variety of other electronic resources are fist replacing the traditional resources of libraries.

The role of ICT is diverse in the delivery of good and highly competitive in all the four areas of education. It cannot be separated from any of the areas. Increasingly available ICT materials facilitate the Lerner as well as the teacher to enhance their horizon of knowledge in order to meet out the challenging competitive educational environment. Curriculum for the various levels should be modified in accordance with the changing ICT environment.

Information Communication Technology

Information and communication technology or information and communication technology, usually abbreviated as ICT, is often used as an extended synonym for information technology (IT), but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and viewless signals), computers, middleware as well as necessary software, storage- and audio-visual systems, which enable users to create, access, store,

transmit, and manipulate information. In other words, ICT consists of IT as well as telecommunication, broadcast media, all types of audio and video processing and transmission and network based control and monitoring functions. The last two decades have witnessed a revolution caused by the rapid development of Information and Communication Technology (ICT). ICT has changed the dynamics of various industries as well a influenced the way people interact and work in the society. The various kinds of ICT products available and having relevance to education, such as teleconferencing, email, audio conferencing, television lessons, radio broadcasts, interactive radio counseling interactive voice response system, audio cassettes and CD ROMs etc have been used in education for difference purposes.

Today ICTs- including laptops wirelessly connected to the Internet, personal digital assistants, low cost video cameras, and 3G cell phones have become affordable, accessible and integrated in large sections of the society throughout the world. It can restructure organizations, promote collaboration, increase democratic participation of citizens, improve the transparency and responsiveness of governmental agencies, make education and health care more widely available, foster cultural creativity, and enhance the development in social integration.

Adeyoyin (2005) cited Bayode who defines ICT as "the acquisition, processing, storage, and dissemination of information by means of computers and other telecommunication equipment."

The wikipedia free Internet encyclopedia defines "informatin technology (IT) or information and communications(s) technology (ICT)" as the" technology required for information processing. In particular the use of electronic computers and computer software to convert, store, protect, process, transmit, and retrieve information."

From these definations, some of the applications of ICT have become clear such as video conferencing and distance learing, both of

which can be facilited by the academic library. Other applications of the ICT specific to libraries could include: access to online resources on the internet such as e-journals, e-book and e-magzines, e-publishing; using CD-ROM for literature searches, access to local or network data bases on LAN (Locak Area Network) or WAN (Wide Area Network), the opportunities for the application of the ICT in library and information centre especially in a developin nations.

Information and Communication Technology (ICT) emerged as a giant in the communication world forming a network in business, education, tourism, travel, medicine, banking, finance and others. In the Education sector ICT, is considered to be the core aspect. Technology has presented itself in various forms ranging from instructional technology inside the classroom to open learning or distance education outside the classroom. Thus offering students with flexible courses and accessibility. ICT has given birth to various innovative practices in teaching learning. ICT has now been acknowledged as a single catalyst for the growth and development of a nation. It has brought technology based learning viz e-learning online learning, web based communicating, digitizes libraries etc. it has played an important role in bonding students across the world.

Motivate the Staff for Using ICT for Day to Day Activities

With the advent of new technologies, majority of the employees in Library have started to learn and use them, Still, there are number of people in Library who do not use ICT due to various reasons, for example, some simply resists the use of technologies without any specific reason; some do not have trust about potential of technologies; some do not have training to sue technologies, some feel that use of technologies; feel that use of technologies will make them redundant, and so on. Many Librararies must adopt a policy to train and motivate the employees to use technologies for their own and institutional benefit. The institutions

must organize workshops, seminar, and hands on activities on regular intervals to train the staff in the use of technologies. The institutions can also take help of ICT proficient students to train their staff. They can assign students as personal counsellors and trainers to motivate and train the staff for use of ICT. This motivated and ICT trained staff will certainly be helpful to bring revolution culture in Library domain.

Component of ICTS:

ICT is a broad term that covers wide range of technologies. It is the convergence of computers, communication and microelectronic-based techniques. The technologies and devices like Radio, Telephone, Telegraph, Fax, TV, and Telephone, Mobile phone, Internet, WWW, Email, LAN, ISDN, Videoconference and Satellite communication Techniques are major part of the ICT. With the help of LAN, Library and Information centre users community easily shares the information. Telephone and another device play important role in library services like SDI ,Inter library loan, rererence services, and online information retrieval. ISDN has increased the capacity for data transmission which facilitte introduction of new services such as E-mail, Fax etc. cheaper data storage media has increased the storage capacity of libraries (Antherjanam and Sheeja 2008).

- WWW
- RADIO
- TELEPHONE
- TV
- MOBILE
- FAX
- LAN

Changing Role of Libraries Through ICT

In the modern knowledge society libraries have a new role and there are various types of library models. In the modern society, where the use of electronic services and Web-based information sources constantly increases, libraries are managed in a more democratic way, have more flexible communication system and work organization, and their service development is based on the quality and user-orientations of services. In the modern knowledge society libraries have a new role and there are various types of library models. These are as follows:

-Traditional library as a memory institution.

-Library as a learning and research centre

-Library as a cultural and communication centre

-Electronic library

-Digital library

-Virtual library as library without walls

In the 21st century, libraries have to perform pivotal roles in disseminating and sharing the culture of knowledge. In this age of knowledge libraries should be repositories of all of the knowledge and information accumulated by human kind. They will have to store all kinds and forms of material and information and disseminate beyond the geographical boundaries. Today's advanced information technology is enabling libraries to accomplish this immense task.

Libraries in the 21st century should fulfill more dynamic role. They should exchange knowledge and information with users inside and outside their country, thus going beyond their traditional reference and lending services. This would possible when libraries agreed to expand their roles beyond the geographical boundaries by using sate of art technologies. Libraries can play significant role in providing a good education and knowledge of high quality. Individuals around the world, no matter how poor they may be, can access whatever knowledge and information they need by visiting libraries via the internet.

Information Technology Enabled Services in College Libraries:

Information Technology and Libraries publishes material related to all aspects of information technology in all types of libraries. Topic areas include, but are not limited to, library automation, digital libraries, metadata, identity management, distributed systems and networks, computer security, intellectual property rights, technical standards, geographic information systems, desktop applications, information discovery tools, web-scale library services, cloud computing, digital preservation, data curation, virtualization, search-engine optimization, emerging technologies, social networking, open data, the semantic web, mobile services and applications, usability, universal access to technology, library consortia, vendor relations, and digital humanities.

Information Communication Technologies & Services

The Information Communication Technologies Division supports the mission of the university by providing the technology tools (equipment, software, training and support) and information access needed for its teaching, learning, research, outreach, and administrative functions.

Areas of responsibility include: academic and administrative computing; library and instructional media services; computer center; telecommunications; voice, data, and video networking; information and user support services; and technical aspects of instructional technology and distance education on and off campus. The division also coordinates and advises on the purchase and efficient use of technology with affiliated units.

We cannot think of any library services, without the components of Information Technologies in libraries. The following are some of the services, we may think for the college library in the present day context.

- Networking and making the library services under the concept of 24×7 uninterrupted services
- Computerized issues and returns
- Creation of the OPAC for the members
- Networking with other libraries across the country
- Building E-Resources
- Forming consortia and deriving maximum benefits
- Online access to remote resources through INTERNET
- Developing and accessing digital library content
- Providing CD's for reading
- Making the library services more effective

Application of information technology has been on priority in the modern era of technological revolution with an objective to improve the efficiency and effectiveness of library services. The IT revolution has screamed an unprecedented increase in the pace of change.

The areas of impact of Information Technology on libraries are

- One of the foremost effects on library is automation. We can automate serial, circulation and acquisition sections, which helps in avoiding duplication of work, saving time, increasing accuracy and saving manpower.
- In the era of shrinking library budgets and escalating price of books and journals the networking of resources can supply the needed browsing facility to the students and teachers.
- Networking also helps in accessing resources form remote places.
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- World Wide Web also gives access to the desired information at the mere click of the button.

- We can get information in CD ROMs, pen drives other than the print-formats

Information And Communication Technology & Libraries :-

. Today people use the internet as a primary source of information, often relying on books as a last resort due to the issues of time and money. In terms of infrastructure, libraries now devote space to public computer facilities and librarians undergo additional training in order to be well-equipped to deal with queries related to modern research techniques and online resources as well as the traditional questions related to finding and borrowing books. Library archives and records are also now computerized meaning a more efficient and effective borrowing and returns system and a faster method of locating resources and assessing availability of items. In terms of administration, running a library is now much simpler than before, thanks to the aid of computerized systems. Modern systems are also beneficial to customers who are able to reserve and renew items online as well as being able to explore the extensive library catalogue. In terms of ecological impact, the new system of computerized records saves using a considerable amount of paper, which, on a national scale could contribute significantly to helping the environment.

ICT has transformed the way of collection, storage, pocessing, dissemination and access to informatin. Recent technological developments such as explosive growth of internet and WWW , sophisticatd search engines, fast processing power and reducing cost of the computers, high bandwidth networks and increasing number of electronic publications assist the libraries in providing extensive access to the variety of information sources and provide a way to enrich the teaching and learning environment. Accessibility to the required information at a fast rate as well quick response to the quety is the

expectations of users. These factors are responsible for the changes in library environment.

ICT have transformed Library and Information services globally. It has changed the traditional practices of library and information centers in distribution of services to the end users. Now users can access to a variety of information and scholarly journals through online. ICT literacy is the ability to use digital technology, communication tools, problems including the ability to use technology as a tools to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the information more easily than ever.

In ICT environment, every library grows in terms of reading material, equipment, space, staff, readers, etc. The library and information scenario is changing at a dynamic pace there is a paradigm shift form print media to web media; from ownership of documents to access to information, intermediary to end-user model of services, and from location of specific libraries to digital/virtual/hybrid libraries. Similarly, there is a change in the needs and interests of the readers. Hence, the role of library and information professionls has also changed dramatically. To meet the current requirements, library professionals must be able to perform various tasks coping up with the changes in technological environment. However, the ICT has mowadays become an importan technology in libraries and information centers as it plays a very important role in meeting information needs of the researchers and institution as a whole.

Advantage of ICT:-

IT reduce labor and save time of staff and users too. LAN provides cost effectiveness in various services and allows secured resource sharing through link to a variety of different communication devices. Internet and E-mail system enable the students and scholars to remote

access, worldwide communication among library and information science societies has become easy with the help of E-mail.

Some of the advantages and future prospect information technology includes:

a. Easy to capture different library activities.

b. Collaboration and creation of library networks

c. Avoid repetition of efforts within a library

d. Increase the range of services offered

e. Save the time of users

f. Increase efficiency

g. Speedy and easy access of information.

h. Improve the quality of library services

i. Enhance the knowledge and experience

j. Integration within the organizations

k. Improve the status of the library

l. Improve the communication facilities

m. More stable

n. Helps to attract the users

o. Remove access to users

p. Round the clock access too users

q. Access unlimited information from different sources

r. More up to date information

s. Information flexibility to the users

t. Reforming and combining of data from different sources

u. Reduce the workload of the library staff

Computer is being used in several libraries either partially for data storage and retrieval   or fully covering entire library operations.

v. Increased access

w. Flexibility of content and delivery

x. Combination of work and education

y. Development of new learning resources

z. Sharing of costs and of training time with the employees

CONCLUSION:

Present paper is very useful for library and its domain. ICT based service performance in library will be efficient and improved positively. ICT based services is very useful for the development of library. ICT is very necessary to make the changes in library by using these latest technological enviornments. Modern technology has radically altered the nature of our society and style of working of the people. Information Communication Technology helps to progress the rank of the library and it condens the work stack of the library professions. Information Communication Technology has broken the worldwide barriers, new apparatus and methods help to provide better services to our users. ICT is not only a technology but it manages with the library objectives with the adoption of IT, libraries can face the new and modern information techniques. ICT has greatly affected the information environment in library. Information Technology has functionally affected the operations of library and information services. ICT has provided new media and conservation while offering efficiency and ease of use. Impact of IT is very appreciated in digital era.

Technology is here to stay. The information professionals need to match their pace with it. No doubt, it calls for a great deal of efforts and resources in terms of funds and expertise, however, deployment of ICT tools and techniques like computers, networking and internet will ensure not only speed but also low costs in form of simultaneous global reach. It is also bringing about lowering demands in terms of physical spaces required for information storage and dissemination. ICT has provided new media and modes of information acquisition, information processing, its storage, information dissemination, its preservation and conservation while offering efficiency and ease of use. It has helped to remove barriers

of communication, distance and time. The advances in technology will continue to improve effectives of information centers.

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