



## INFORMATION COMMUNICATION TECHNOLOGY (ICT) CHALLENGES FOR LIBRARY PROFESSIONAL: A PROFESSIONAL APPROACH

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### Abstract

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*The web environment, advancement in technology, options of sources, formats of information and flow of information has great impact on role of libraries as well as role of library professionals. Its create a lot of challenges for library professionals and LIS professionals are forced to change the way they are functioning in providing information needs of users. These new roles required ICT skills and knowledge. This paper discussed about ICT and its impact on library professionals and also highlights about the ICT skill requirements of LIS professionals.*

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**Key Words:** *ICT, Challenges of ICT, Librarian, Library Professionals and Librarianship*

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### Introduction:

Since the beginning of 21<sup>st</sup> century, it is observed that Information and Communication Technologies (ICT) have transformed the way in the process of generation, organisation and dissemination of information and its flow. Further, the wider availability of ICT has led to the rapid advanced in several activities which have brought revolutionary changes in library services and operations. Again, the application of ICT is transforming the role of library professionals from custodian of library books to information solution providers and knowledge manager or the information facilitator. But the success of ICT implementation depends on the availability of competent library professionals because library professionals are the key to successful use and implementation of any new technology in a library. This paper present some

of the new emerging challenges exist among the librarians in ICT era and the solution how to cope up with them to be sustained in society.

### **The development of library:**

The development of libraries started in the 21<sup>st</sup> century moving from traditional library to digital library providing information on the cloud server to get 24/7 access to all the users. Automation and computerization tasks are taken up and completed by the libraries to provide immediate services to the users. The libraries provide multiple access and started promoting the poly-media, electronic, digital and virtual libraries. The use of television, satellite transmission, computer, microprocessors are replaced by the floppies, diskettes, CD-ROMs, DVDS, Pen drives, Portable Hard Discs to provide countless storage space of information. Day by day new technologies are introduced for storing and dissemination of information. The internet technology is the development for accessing universe of knowledge available in multiple metadata forms, and users can get information sitting at any place. For these, the role of the staff in the library should have proper skills to process the information and disseminate to the users, where the world is under globalization, privatization and liberalization. The revolutions have brought many changes in the library activities as well as manpower requirement. It has transformations different phases like print libraries, microform libraries, electronic libraries, digital libraries, virtual libraries, networked libraries and cloud libraries etc. These transformations are basically due to application of technologies prevailing during the period.

### **The role of librarian in the ICT Era: -**

In the ICT, era students and the users are familiar with the electronic resources and are dependent on the print publications as well as on electronic and digital information. The librarian has to play a crucial role in the acquisition and dissemination of both print and electronic resources of information. The major impact of ICT on the libraries is shifting the collection from print to digital libraries. The library services are changed and have based on the digital libraries or network and internet resources etc. The technologies are now more used and caused changes in the practices in libraries. Users demands are rapidly changing with the invention of new resources and technologies. Librarians and the library staff are trying to provide information services to the users over the desk top with the help of limited staff. The role of librarian and library staff is performing advanced duties for users are changing with the change in technologies. For support, users the libraries have to acquire knowledge of networking, advanced computer applications, managing e-resources etc. Librarians have to help and support users to find out information in all sequences appearances providing desired results

for the benefit of the organization. Libraries have to dynamic infrastructure which creates an environment for study of virtual information to carry out the research activities. Library should provide immediate information with huge reading space, and reference section.

Librarians should have to perform their duties in different environment like technical skill in computing and telecommunication, commitment in solving organization and user's information needs knowledge of information seeking, and information use and communication for information access and dissemination. Librarians are now facing difficulties and challenges due to new trends in information access and ICT. In the present digital era the Librarians have to change themselves. The roles of the modern librarians are library manager, technical processor, information provider and taking care of information quality in digital era. Librarian needs to know not only the acquisition and processing of digital material but also to learn new skills. Since most of the data available in digital libraries is in digital form. The services changed to virtual reference service and different information services using digital resources. Librarian needs to know enough to ensure that the work is being done well. The basic role of library and librarian to provide access to information to needy users. For successful implementation of digital library, it is essential that librarian have to be trained and possess requisite knowledge and skills in this regard.

### **ICT Skills for LIS Professional:**

The implementation of new and advance technologies in the libraries requires competent staffs with different ICT skills. One of the important factors for successful implementation of ICT is the level of competence of the staff working knowledge of ICT skills for library professionals for handling various library functions to make full use of this potential for handling various library functions. To make full use of this potential in library management it is essential that should have adequate professionals who have through knowledge of ICT application in libraries but in practice most of the library professionals do not have adequate skill of ICTs. The knowledge, skill & interest in various aspect of ICT need to be constantly upgraded among the library professionals. The skill is an ability or proficiency in execution or performance, which is required for a person to plan and execute an action designed to achieve some goal or accomplish a particular task. A skill person has the ability to perform any task successfully. The basic goal of library and information profession has always been to provide access to information for those who need it. The activities realizing this goal have evolved and transformed over the years. Information activities have been guided by the developments in the field of information storage, presentation and archiving of knowledge, information explosion and computers in information retrieval and dissemination on one hand and on the other hand

the computer specialist who support the LIS professionals are partners in this endeavor. For successful implementation of ICT tool and services in library, It is essential that LIS professionals are well trained and possess, requisite knowledge and technical skills in this respect.

The technical skills means those skills which are required to handle ICT based tolls and routines used for library services like computer operation, knowledge of software, telecommunication media, creation of online databases and content management software, information retrieval techniques through internet etc. Digital library is nothing but advance application of ICT based tools and techniques in the library. Hence LIS professionals have to familiar with the relevant skills to handle ICT and its application in the present digital environment. Some basic ICT skills which required by LIS professionals to apply these ICT technologies in their libraries are:

- Basic of ICTs
- Operating systems
- General Purpose Programming, Networking
- Data base Management System including the skills in Bibliographic Database Management system
- Web page development and content management.
- Information Retrieval software for online.
- Library software packages, acquaintances with digital library portal.
- Open source software
- Electronic resource management
- Virtual reference service

Library professional should updating themselves at regular intervals via attending at seminar, workshop, training, short term, symposium and conference etc. to handle modern ICT technology. They are acquire to know how create linking data, how to do content management, retrieving, sharing and preserving digital information. Due to the fast changing technological developments continuous in service training for working librarian is essential not only to keep them well informed about the latest development in their fields but also to learn new skill in the use of modern technology.

**Impact of ICT on Library Staff Attitude:** The library staff attitudes play a vital role for the success of library services in automated environment. Positive attitude and action of staff involved in ICT uses are regarded as crucial inputs for the successful implementation. As per

the attitude of library staff towards automating library, majority of the staff member are open minded, reasonable and enthusiastic showing genuine interest in learning more and to be included in training & orientation. According to Luquire (1983), “To deal with new technology and maintain balance between human considerations & technology and maintain balance between human consideration and the technology of library automation, better understanding of the complexities of the perceptions and attitudes of people is mandatory.

Klerk and Euster (1989) found that the technical services staff accustomed to the detail and specified required by a computer are adopting easily. Prince and Burton (1998) found that senior academic related staffs was largely unbiased in technology while more recently qualified staff being more positive adopter of innovation.

Jones (1999) conducted a survey on 218 support staff perceptions and opinions about technological changes in three university libraries and received response from 118 respondents (54%). Most have now experienced a high tech work environment. Regarding personal reactions to working with new technologies, out of 118 respondents, 39 respondents checked positive terms (excitement, enjoyment, pleasure, and competency), 22 checked negative terms (frustration, inadequacy, dislike, irritation. Tolerance) while 57 checked a mixture of positive and negatives terms.

### **ICT Challenges for Library Professionals:-**

In ICT era, information in the digital form is rapidly replacing the traditional printed counter parts. Gaddagimath, et al. (2006) sated that librarianship is caught in the midst of dynamic changes with respect to collection, preservation; control and dissemination of recorded knowledge appear to be at risk in a world where uncertainty, contingency and the transforming nature of information communication and technology impact especially electronic media and internet are increasingly dominated. Librarians now face difficulties and challenges due to new trends in information access. There are a number of challenges facing information professionals on the use of ICT in providing information in their libraries. The challenges are:

- **Inadequate technological infrastructure:**

To support the integration of ICTs in libraries, always libraries are facing challenges technological infrastructure. This refers to issues such as lack of national ICT policy, low internet connectivity, inadequate no of PCs and inadequate supply of electricity etc. there need for policies that regulate satellite communication and other telecommunication links, regulate ISPs and cross boarder data flows etc. ICTs policies

can help address stringent tax regimes that still treat computers, communication equipment and other peripherals as luxury items thus imposing import duties on them and therefore they become very expensive.

- **Compatibility with state -of -Art Technology:**

After introducing ICT which is simple to handle and more facilitating in performing any given task, the libraries and librarians also required to assess the computability of their own employees in regard of the technology introduced. There are several libraries who had upgrade themselves with new ICT technology to maintain the state of art and to attain the competitive advantage over their counterpart but some times all their efforts ruined only because the employees working with these technology are not able to find the advantage they are getting by new technology and they are reluctant to work on the newly adopted technologies which finally lead to growth and wasted investment. It happens because the professional interacting with new ICT technology are neither habitual nor provided with any training which later becomes a huge source of errors and more time consuming than the earlier used method of production or completing the task.

- **Sustainability of Technology:**

Technology sustainability is another problem of library professionals. The technology is growing and changing very fast and within year, the existing technology become old and absolute and replaced by new technology.

- **Funding:**

This is major non technical constraint in libraries. Almost all libraries decry the issue of funding in most of its functions. The rapid pace and transient nature of technological development requires sustained funding.

- **Expertise:**

There is still a serious need for technical support with high level expertise in application of ICT in libraries and its maintenance. The poor maintenance and insufficient skills to identify system problems and swap parts, there are many out-of- commission equipments which could easily be repaired and re-used. The problem of technical expertise is two faceted- 1) There are not enough professionals qualifying or attaining ICT specialist skills at the speed at which the technologies are adopted and 2) the problem of brain drain where by few experts opt for better paying jobs and left old libraries.

### **ICT in LIS Education:**

Information technology is dynamic in nature. It is worth noting advocacy for educational reforms as they relate to technology are among the trends. Trends in LIS educational technology are follows;

- Advocacy for Educational technology
- Computers in Departments/Institutions
- Networking by internet
- New delivery system for educational technology
- Satellite broadcasting
- Video conferencing
- World Wide Web

### **Need for ICT in LIS Teaching:**

ICT has ushered a dynamic change in libraries which has gradually led the transformation of libraries from tradition to hybrid and virtual libraries. To cope up with the change the LIS teachers have to develop their own capabilities and at the same time, make the students and as well as practicing professionals to help themselves to acquire knowledge in utilizing the potential tool of ICT for enhancing the knowledge of the society. Utilizing the opportunity to establish their own status in the same society.

### **Conclusion:**

With the advancement of ICT, the way libraries acquire, store and provide information has changed. ICT revolution posed many challenges and opportunities for library professionals. It is not only important that digital information production is increasing day by day, the most important things is that with the advancement of www and ICT, the way of searching for information become too complex and advance and the roles and expectations from the librarians also become very important and high. Library professional have to match the user information need with correct information source. Library professionals have to identify not only the users' information need and problems in accessing information but also have to develop themselves according to changes in Library environment in ICT era.

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