Applications of Information and Communication Technology in Library Services: Considerations for Life Long Learning and Staff Development

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Abstract:

This paper provides a brief overview of the advancements in Information and Communication Technology (ICT) and explores its applications in library services. With the rapid and ongoing development of ICT, it is crucial for library and information professionals to continuously learn and adapt to these applications. Therefore, the paper discusses the importance of designing effective lifelong learning practices and emphasizes the need to regularly assess the needs and requirements of LIS professionals through appropriate methods.

Keywords: Information and Communication Technology (ICT), library services, lifelong learning, staff development, training, LIS professionals.

1. Introduction:

Information and Communication Technology (ICT) has revolutionized the information handling activities in the libraries and information centres during the past few years. The Information Society demands that all the relevant technologies; that are involved in information processing, consolidation, repackaging, communication and retrieval be merged so as to evolve an integrated system; capable of providing diversified services. Information Technology involves finding, sharing, restructuring and communicating the information in various forms.

The development of the ICT applications to the libraries necessitated the continuous learning on the part of the library professionals. The learning must be need

based and the present paper is useful in assessing the learning needs of the LIS professionals and procedures and practices for the life long learning.

2. Information and Communication Technology (ICT):

Information and Communication Technologies is a complex and varied set of goods, applications and services used for producing, distributing, processing transforming information (including) telecoms, TV and radio broadcasting, hardware and software, computer services and electronic media.

They represent a cluster of associated technologies defined by their functional usage in information access and communication, of which one component is the Internet. Internet is truly a global infrastructure for new millennium. It has become an indispensable and essential tool for research scholars, academicians, information professionals and the students. Internet is the network of networks, scattered all over the world… It provides access to communication services and information sources to millions of users round the globe. Internet serves as an encyclopedia giving detailed information on a wide variety of subjects. The internet has improved the users' access not only to wide variety of information sources, but also to experts in the field. Further academic users can interact and collaborate jointly for a research project or publication with the global partners and experts.

3. Application of ICT to Library Services:

The Information and Communication Technologies (ICT) transformed and developed the library organization, functions and services as under:

- Automation and Mechanization of every function of the libraries;
- Compact Storage of Information, easy accessibility and faster communication;
- Subject databases particularly from academic institutions: Increasing number of institutions, especially academic and research institutes are making databases in their specialized subject made available;
- Automated Library Catalogue: Increasing numbers of libraries are making their Catalogue electronically available over the Internet which may extend the use of library resources.

- List Serves and discussion groups on a wide variety of topics. Participants have the opportunity to exchange and share current information;
- Document Delivery Services may be provided electronically using Internet Technology;
- Electronic Mails allow users to send messages or files to each other;

4. Transforming Libraries and Change in the Role of Library Professionals:

Developments in Information and Communication Technologies (ICTs), the libraries have been integrated at the electronic frontier to facilitate rapid transfer of information on a global scale. Advances in Computer Storage and Telecommunication methods, online access to databases, electronic journals, electronic knowledge banks, direct document delivery, teletext, teleconferences, bulletin boards, CD-ROMs, networks etc., have been the revolutionary developments in the last two/ three decades that have brought a great change in communication, storing and handling of information. The digital or electronic resources are dynamic in nature to share information globally and there has been an increased scope for automated delivery mechanism. Libraries today are termed as Digital Libraries and Hybrid Libraries. Knowledge preservation and dissemination have rapidly changed. Unlike simply providing access to holdings in print format, the electronic resources are procured to meet the information needs of the clientele. In the light of Information Bill 2002, it must be the fundamental professional concern of the Librarians to endeavor to predict, grasp, analyze and materialize such expectations and needs.

Considering the large volume of information generated and communicated through the web, there is confusion of getting accurate information for a specific need of the users. There is frequent and faster change in technological applications in information sector. The high rate of technological change within the information and library sector, the constantly changing demands of users and the ever increasing amount of information available, means that the staff needs to update and develop their professional skills.

The Continuing Education Programmes (Life Long Learning Practices) help the information professionals to cope up with technological convergence (change). The Training programmes are designed with the aims to develop the skills of the library and information professionals. 'The need to develop hybrid library skills applies to all those working in academic information services, whether converged or not. Organizational Convergence makes the need more urgent and the challenge in employing those skills greater.

In developing skills for managing, creating and providing services in the digital environment, training and education will become ever more important. There will be increased need for educational organizations to inform students of the new realities and the new skills that they will need in the digital environment.

Following are the advantages of the training programmes:

- Training may increase the confidence, motivation and commitment of librarians…
- Training may provide recognition, enhance responsibilities and bring the possibility of increased pay and promotion that may help to boost the morale of librarians.
- Training may give personal satisfaction and achievement of librarians and broaden opportunities for career advancement.
- Training may improve the quality of library staff and consequently the quality of delivery of services.

5. Life Long Learning Practices and Procedures:

There are various kinds of training, staff development and learning programmes such as Orientation Programmes, Refresher Courses, Workshops, Short-term courses, Conferences, Seminars and Symposia. Each of these programmes have their own advantages and disadvantages.

To say, Orientation Programmes, Refresher Courses, Conferences and Seminars are theoretical in nature and they are not suitable for getting practical knowledge in technological applications for the library

In making plans for the training programme, care to be taken to observe some principles that would ensure success and promote a lasting effect of the in-house training on staff performance … concerning such needs as assessment, defining objectives, clarifying procedures and following up with an implementation and evaluation of the programme. This is also echoed by Stewart (1994) in her classic training cycle model which noted the following

- Identifying performance shortfalls (Current and Potential);
- Identify ways in which training might rectify things;
- Implement Appropriate Training;
- Evaluate results; and
- Repeat process continuously.

Before designing a training programme, the organizational objectives, the real training needs of the library professionals, the development in Information and Communication Technology applications and such other factors must be considered. Further, the method of Training is also determined, so as to provide training effectively.

6. Objectives for Life Long Learning, Training and Promotion:

General objectives regarding the development, Learning, training and promotion of library staff can be expressed as to: [10]

1. Recruit, hire and retain the best professional, so that they may serve the academic community;
2. Find ways to work closely with the University administration and the teaching facilities in order to increase understanding of the changing nature of scholarly communication and assist the campus in its planning and development of information policies pertaining to the needs of students and facilities within the entire University community;
3. Seek ways of strengthening the library's programme of professional development;
4. Improve terms of service and the salary structure of the library personnel;

5. Provide staff with new skills which will assist them in achieving career advancement within both the library and the academic community;

7. Learning Needs of the Library Professionals:

To design training programme for specific organization, learning needs of the Library Professionals working in the organization should be given importance. Generally, the learning needs of the Library Professionals are as under:

Managerial Needs:

- The knowledge of Vision, Commitment and Leadership;
- Motivation and Team Spirit of all the Professionals;
- Optimum use of all the Library Resources i.e., Print and Electronic;
- Planning, Formulation of Objectives, Policy and Controlling aspects;
- Scientific Management of each work;
- Interpersonal and Human Relation Skills;
- Communication and Presentation Skills;
- Time Management Skills;
- Knowledge Organization and Management Skills.

Librarianship Needs:

- Knowledge about the Library users;
- Knowledge about the Organization;
- Knowledge about Conventional Systems/ techniques such as Library Classification, Cataloguing, Circulation, Book Selection etc;
- Knowledge about different kinds of services such as CAS, SDI, Reprography, Database Search Service, Indexing, Abstracting, Translation, Reference Service, Online Service etc;

8. Information and Communication Technology (ICT) Needs:

- Working knowledge about Library Automation Packages and computerization of the library;

- Working knowledge about Computer Networks i.e. LAN, MAN, WAN, Internet etc;

- Knowledge about the Operating Systems such as DOS, Windows, Linux (Red Hat), Unix, Novell Netware etc.

- Knowledge about different programming languages, i.e. MS-Office, C, C++, Java programming etc;

- Working knowledge about web browsers and web publishing i.e. HTML, XML, etc;

- Knowledge about searching of different information sources from the web.

Needs for Organizational Change:

- Knowledge about Digital Libraries, Hybrid Libraries and Information Systems;

- Knowledge about Electronic Information Sources and their retrieval;

- Knowledge about the Retrospective Conversion (RECON) of the library documents i.e., from print form to digital format.

- Knowledge about Electronic Catalogue Using CDS/ISIS, MARC-I & II formats and searching OPAC;

- Knowledge about Communication Protocols such as Z 39.50;

- Knowledge about Consortia to subscribe and share the information e.g. UGC-Infonet;

9. Methods, Practices and Procedures of the Programmes :

After ascertaining the learning needs, in the organization it is necessary to decide about the different methods and procedures for imparting these needs of the Library Professionals. The selected method/procedure must be effective in the sense, it should be included both class room and practical coaching. While selecting learning and

training methods, the trainers must know the psychology of the learners (Trainees). Because the method must be designed to provide education to the library professionals considering their present knowledge levels. The various training methods that may be adopted are In-house training, short-term courses by professionals' institutes and associations, Online learning and so on.

Now a days, online learning is popularly used all over the world. For training of the Library professionals in Information and Communication Technology (ICT) UNESCO is developed a training package. In June 2002, it launched six modules of a training package on Information and Communication Technology for Library and Information Professionals (ICTLIP). The package can be viewed and downloaded from Unesco's Web site or can be made available, for free, on CD-ROM. The six modules are:

1. Introduction to Information and Communication Technologies;
2. Introduction to Integrated Library Systems;
3. Information Seeking in an Electronic Environment;
4. Database design, information storage and retrieval;
5. The Internet as an Information resource;
6. Web page concept and design: getting a Web site up and running.

As already stated, the aim of ICTLIP is to produce a training package for developing countries based on "face-to-face" instruction through Online. There is necessity to arrange for such training for Library Professionals in developing countries like India.

Conclusion:

The technology is developing continuously and related applications to various fields are changing. This kind of change is more in case of Libraries and Information Systems. But technological development is faster and no library professional is perfect, in the technological knowledge that may be applied to the libraries. Hence, there is need to assess the needs and infrastructure of the workplace, such as services, kinds of users, technical infrastructure available in the library and so on. After which, it is essential to

know the level of knowledge of the library professionals to manage the libraries. Based on these factors, learning needs of the library professionals must be assessed and there is necessity to provide training to the library professionals on such needs. For this purpose, several training methods are useful. Among which, In-House staff development and Web based training is emphasized.

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