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A STUDY OF ASSESSING THE COMPETENCIES OF LIBRARIANS SKILLS IN DIGITAL ERA

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ABSTRACT

The entire information landscape has changed dramatically in the twenty-first century. Then, with the help of digital instruments, it will be feasible to send large amounts of data over enormous distances in seconds. Rapid technological advancements have brought a new wave of potential for employing information virtually in all human pursuits, posing enormous challenges to the current information age. The rapid growth in the field of digital era has resulted in a communication revolution, which has given rise to a new social situation known as information society. The revolution of web 2.0, web 3.0 tools, and social networks, as well as information communication technology capabilities and web enabled mechanisms, have thrown a lot of opportunities and challenges in developing larger library and information systems without boundaries to enable information users and the general public around the world.

KEYWORDS: Librarians Skills, Digital Era, digital instruments, human pursuits, communication revolution, information society

INTRODUCTION

Information is an asset for more than the actual hardware that houses it. We are in the information age and our society is moving through a cyber-culture. Digital information and new forms of Information Technology have become a potent force in transforming social, economic and political environment globally. The impact of Information Technology has paved way to paperless society. This excitement is seen not only in the business world and the general society, but also in the field of academics where computer scientists, cognitive and social scientists are thinking about information and the social impacts of information technology in a new way. Availability of the information is very much important for the users to updating their knowledge. Development in

Information and communication technology has made greater impact on print media. In 1990's CD-ROM Technology emerged as a tool, storing vast amount of data in a small optical disc and has inroads into library and information centers. The information explosion has opened up electronic information to the masses. Latest developments of IT contribute to the significant improvement in the library services. Information Communication and Technology developments tremendously improved the types of information handling. A mix of tools and procedures of ICT facilitate generation, acquisition, storage, organization, retrieval, searching, viewing, updating and transmission of information using electronic data. Some of the methods involved in ICT are databases,

programming languages, computer programs, communication networks, artificial intelligence, knowledge bases, analysis and design methodology, etc. Information Communication and Technology influences most of the human activity in daily life. Past two decades libraries has seen dependent increasingly on the revolutionary impact of developments in ICT on their key functions. It provides easy and instantaneous access to data information . It gives more chances to libraries for widening the scope of their resources and services to develop their existence in the organization. Rapidly growing of information in machine readable form helps requirements of library readers to be satisfied with the involvement of libraries. Even vast information is investigating for the application of ICT in libraries; our study tries to focus on ICT skills among LIS professionals working in University libraries in Karnataka. ICT developments have led to made changes in almost all field. The improvements identified as information society, information age, digital age and information superhighway. Movements in the ICT over the world, and its influence on our day to day life and each area of knowledge. Present scenario, library has grown in the context of study resources, furniture, space, staff, users, etc. Due to information explosion and rapid developments in ICT, library resources are shifting from print to machine readable and now web media. In addition to, there is change in the need, requirement and interest of the readers. Hence, there is a dramatic change in the role of library and information professionals. To fulfill the overall demands of the readers, LIS

professionals have to do many jobs in the rapidly changing IT environment. The role of LIS Professionals has changed rapidly in recent years in response to new forms of information technology and new methods of teaching and learning. Thus ICT based University libraries have created virtual environment in the modern digital environment.

EMERGENCE OF DIGITAL ERA

The past two decades have witnessed an unprecedented emergence of modern technology related to process of information storage, processing and transmission. Among them, computer may possibly be the most spectacular technological invention widely used by many new electronic technological changes that go well beyond the computer appearing in quick succession. Information dissemination process will induce significant transmission in various bibliographical information databases. Digital transmission is the latest in the information era. The ways of communication of available information from the various sources to end-users are among the major challenges of our times. Now-a-days, information cannot only be stored, retrieved and disseminated in enormous quantities, but also at phenomenal speed. The main features of recent developments in digital era can be summed up as follows

- Advancement in computer technology leading to speedier and cheaper computerized data processing, data storage of low cost optical storage media, CD-ROM, pen drive.
- Digitization of information text, graphics, photographs, speech, sound, video, etc.

- International / National library and information networking made possible better resources sharing among library information centers.
- Decrease in size and cost of electronic devices.
- Increased reliability of hardware and software.

These have led to the development of international, national and local on-line systems, automated library systems, public access catalogues, the electronic journals publishing, e-mails, CD-ROMs and emergence of virtual and digital libraries.

Computerization had its beginning in India when punched cards were used during the 1950's and early 1960's for some application in the insurance sector and census operations. However in 1960's computer came to India as hard disk drives. Mini computers started penetrating the market in late 1970's while microcomputers were introduced in the 1980's in the country. With the introduction of minis during late 1970's and micro later in 1980s many of the libraries and information centers started using computers for their work. However with the arrival of microcomputers into the Indian market in the 1980's library automation picked up momentum.

The information society has its main thrust in the information management, the acquisition, processing provision and instantaneous dissemination of information an information society it will be desirable to have a look at the criteria for the development of information society . Today concerted efforts are being made by various agencies in this direction to develop information products and services with a suitable provision of their speedy

communication through a wide range of media mostly electronic media and its effective and efficient management.

According to an approximate estimate, science and technology information has now increased to 13% per year, which is likely to jump to perhaps 40%. Therefore, information in these fields will double every year electronic database and data banks have proliferated. It is estimated that more than 4000 online data bases are available. Conservative estimate over 100 million records are growing at a rate of 8 million records per annum, thus the overwhelming mass of available information and its ever increasing characteristics create really difficult problem for searching or locating information pin pointedly and expeditiously . The quality of information rarely improves with the quantity. The impact of digital era has been seeking new roles and skills in the human resource to man these institutions thus the universities' main challenges at present has been to integrate the knowledge and skill of using information communication technology in order to fulfil their aims and objectives teaching, study, research and extension activities. This implies that every wing of the university has a challenging task of inspiring its manpower with the technical knowledge and skills among in order to provide services to the expectation of its teachers, students and administrators. The library and information professionals are also required to acquire such knowledge and skills as the library is one of the highly influential services wings of all over the world.

The library in the Universities' education is increasingly being influenced by IT that

profiles the convergence of several technologies. The empowerment of library and information professionals with information technology skill is aimed at providing services that are expected of from the clientele in the new environment. These kinds of considerations are more important as they are promoting the universities in the developing nations to begin restructuring themselves to better their services and meet the needs of the present learners. The shift from the traditional methods of delivery of information providing seamless access to information via electronic media has been the focal point. This demands, that the library and information professionals especially from developing nations make efforts to acquire the right and renewed skills responding to the needs of modern technology that has influenced libraries greatly. In this context, it is apt to quote from ERIC digest on trends in library and information professions.

They have important emerging roles and responsibilities for information professionals. Two themes related to the expanding roles of information professions are:

- a. The possibilities for information professionals to take a proactive approach to sum-up their traditional activities; and
- b. The possibilities for information professionals to take on new roles which are often stimulated by emerging information technologies. (Eisenberg et al., 1989)

Even though the remark as above was made in 1989 but still the need for the second theme continues to be felt especially by the information professionals for the developing countries, as skills

compatible to the roles and responsibilities are perpetually changing. It is once again evident from the fact that the special library association has revised its 1997 document on competencies for information professionals (IP) for the 21st century in 2003 .

The core idea embedded in this document is “IP harnesses technology as a critical tool to accomplish goals.” It states further the proliferation of newer and more powerful IT’s continuing into the 21st century. Thus, there is real need for individuals and organizations to devise new ways of identifying, learning and implementing new technologies. Three prolonged shifts in application of innovation to library and information profession can be attributed to the following changes which emanated in the last two decades.

Shift 1

- Shift from human dependent operations to dependency on machines.
- Mechanization (data processing) of knowledge.
- Stand-alone system to network computing.
- Local LAN to wireless access protocol - systems.

Shift 2

- Document centered information to user (Access) centered information.
- Print media to electronic (Access) media.
- Data capture methods human to machine oriented.

Shift 3

- Library automating (in-house) to web enabled services.
- Online information retrieval to CD-ROM database to internet.

It is well recognized that libraries all over the world are undergoing transformation, especially owing to the development in information and communication technologies. Traditional libraries are changing to digital libraries and new libraries that are being set up are increasingly of the digital kind. As a result, there is widespread interest and consequently, a lot of research and development activities are being carried out in this area world over. In India a number of institutions are also in the process of setting up digital libraries and many scholars and practitioners are conducting research on digital libraries. Most of the nations are utilizing these tools effectively and making their societies knowledgeable one. Half of the 147 million people are living on the net in United States. One fourth of the Australian population has been connected with wire. In Africa, 1:4000 of the population is on the Net. China and India have started globalization in information industry and are investing heavily in fiber-optic cabling. More over India produces nearly 50000 information technology professionals every year.

REQUIREMENT OF SKILLS IN LIBRARY MANAGEMENT

Skill is defined as a co-ordinate series of actions that service to attain some goal accomplishes a particular task. Operationally, skills are defined widely as over response and controlled stimulation. Over responses may be verbal, motor or perceptual. Verbal responses typically stress on speaking (which requires memorization of words); motor response stress on movements of limbs and body while perceptual response stress on

understanding of sensory response. Controlled stimulation on the other hand is energy input to the workers, which we express in units of frequency, length, time and weight. Technological changes and skill requirements have been made a subject of investigation in many studies across the world. There is a general consensus that technological change alters the job but the observation differs in its nature and form. The neo-classical economic theory advocated technological changes, requiring broader variety of skills and higher average skills from the workers. New forms of skill and responsibility along with technological change have been studied in continuous process industry and chemical manufacturing units, petroleum refining, metal working industries, banking operation and in many other industries which used advanced mechanization.

Transformations in skill due to technological change occur along two tracks: 1) compositional shift, i.e., structural change in pattern due to creation or elimination of jobs of a given skill level and the distribution of persons to job in a set of oral economy, and 2) change in work content (the technical nature of work and the role relation surrounding work performance).

Internationally, the careers of the future will require grater education (more in the form of institution knowledge) at the job entry level and will also demand continuing education to keep pace with technological dynamism. Greater level of technological literacy even for lower skill pay occupation will be on demand in future .

Tracing back history, we find that the Indian social had definite orientation towards developing and maintain different social groups in terms of certain crafts. The quality elements in a particular craft and the necessary skill were the deciding factor for the purpose of ranking that craft along with others in order importance. There was a time when carpenters, goldsmith and weavers were the craftsmen groups in India who enjoyed the highest status. However, it is pertinent to mention that Indian psychology - philosophy attaches more value than formal occupational skills. It is, therefore the value -laden skills, to which actually Indian psycho-philosophy gives more importance than skills. From the above perspective, we can therefore, categorize skill either as genre of technical; entry level or advanced levels. Conventionally skill can be defined as that knowledge of attributes, when are deemed vital to organizational success.

There are four general types of skills:

Technical skills: which relate to specific concepts, methods and tools specific to an organization?

Supervisory skills: which enable one to effectively supervise others?

Interpersonal skills: which enable people to communicate and interact effectively.

General business skills: lines of business and support infrastructure.

Technical skills are observable, demonstrable and testable. The other skill types are softer, more subjective and difficult to quantify. Any organization going for skill renewal or skill - change exercise, needs to undertake the following tasks:

- Profile the skills required by jobs.

- Assess the skill level acquired individuals, and

- Conduct gap analysis between required and acquired skill.

Training should ideally occur before the skill is needed so that daily work can reinforce training.

SKILLS FOR LIBRARY SCIENCE

In the digital environment, today library professionals are called for various skills. Since the study here is skill for handling digital era equipments, the required skills are listed below:

- Operating systems: basics of Dos, Windows, Network and UNIX

- Word processing, graphics, spread sheets and presentation.

- General purpose programming systems including the skills in bibliographic database management system.

- Interface / interactive tools: HTML, XML, Visual Basic

- Information retrieval software for online, CD-ROM and internet

- Library software packages, acquaintance with digital library tools.

In the light of the above, a close look at the use and application of ICTs by developing countries is likely to reveal that except a few cases in which positive developments have taken place, still remains much to be achieved and to overcome the identified gaps that are related to conceptual, operational and instrumental in nature for instance the task of library automation in developing countries has been slow due to lack of knowledge of operational skills in using the library software packages. The information professionals in this context have to be accommodated to the basic

structure and content of a library automation software package and related operations. It is stated that this task has been handicapped by some operational needs such as “financial constrains, lack of trained manpower, ineffective infrastructure, hardware and software cost and so on considering all the above aspects on the need of knowledge and skill are very much warranted in digital era in the light of the identified gaps.

NEED FOR UPGRADING COMPETENCIES OF LIBRARIANS SKILLS IN DIGITAL ERA

William Gadi, a sociologist at Columbia University, published the result of his studies in 1961 in which he compared libraries with the set of characteristics he considered appropriate to activities. Against this assumption he measured the libraries professionalism and recommended five activities to enhance their professional's nature:

- Heighten the calibre result,
- Increase the number of years of formal education,
- Ensure that professionally qualified person do not spend time on purely clerical tasks,
- Increase funding for library research to develop the knowledge base, and
- Change the view of the library from museum or store house to service oriented organization.

Successful progress in library and digital era demands certain related competencies with the digital era developments, such as:

- The library field must advance the technological state of art

- The professional work force must not become outdated in rapidly developing technological fields.
- The academic degree in library and information sciences should be earned by intellectually active person.
- The professionals should be trained to tackle the tasks with mechanical aids like computers and information retrieval techniques using electronic gadgets.
- The funding agencies of academic libraries should be upgraded to invest to upgrade the traditional library activities with technological aids.
- The academic librarians should strive to retain their positions which are now challenged by the computer specialists.

CONCLUSION

As the application of technology to the library services is encouraging every aspect of library functions and services to a larger extent, the LIS schools should also revise their syllabus so as to cover the present need based trend of ICT applications. Teaching and training programs are becoming more and more technology oriented and practice oriented. The main aim here is to make the students adequately skillful and knowledgeable in handling the ICT based services in libraries, especially in technical and research libraries in the country. All India Council of Technical education has planned to elevate the quality of engineering education at the international level and there by suggest engineering colleges to go for accreditation and quality management systems. Hence, it is prerequisite condition that LIS professionals have to be aware of the recent trends in information services.

Further, the professionals need to be trained on modern lines so as to enable them to install and extend ICT based information services. On account of this trend, it is found essential that the engineering colleges have to have the library advisory committee to oversee the functioning of library and to improve upon the services on continual basis to meet the needs of the students, faculty and other users. The library committee helps in judicious allocation of budgets, acquisition of need based information sources, development of infrastructure facility and deputation of staff for acquiring knowledge and skills. The committee will also recommend for improvements from time to time based on the feedback analysis report. It is also to be highlighted that librarians are treated on par with teachers who are working in engineering college, they are treated as teaching staff, and therefore it's essential that on one hand they have to be knowledgeable and skillful in handling IT information facilities for extending information services.

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