Emerging Technological Innovations in Library Knowledge Management and Services

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Abstract

Emerging technology identify, evaluate and implement the application of current and emerging technologies for use in the library management and services Challenges emerging out of library services and in management, technological advancements has to be updated at regular times to compete the faster growing environment. This paper elaborates on how technological innovations have led to the improved information management and library services. The overall purpose is to share the resources using new technologies with the facilities available that would provide a variety of features to save time, promote community development and drive better services for the library users. This paper fills a gap in the digital library project management literature by providing an overview of the issues related to implementing and using emerging technology and innovative practices within libraries

Keywords: Evaluate; Challenges; Environment Technological innovations; Innovative practices

1. INTRODUCTION

Generally speaking, the management level of the library has enhanced. Firstly, the thought and the service idea of the library management have transformed from the traditional library to the modern library, gradually regarding the reader as the first.

Secondly, the methods of the computer management have been used in library. But looking from the present tendency we can get that the management of the university library has the big disparity and the inelasticity. At present, the competition of the libraries is very tense, so introducing the talented person massively, along with spouse's working arrangement, is first consideration of the university leader, which causes irregular culture level of the library staff, the unreasonable specialized structure, few personnel with the specialized library science. This kind of unreasonable structure of the library management causes difficulty to the university. Few development opportunities causes that the university library personnel is inferior to the teaching unit's personnel in the study, the further education, the research opportunities and the working condition. Therefore, the high ambitious and the specialized ability stuff always go to other working place, which makes the talented stuff outflow unceasingly. Moreover, the library work is one kind of redundant and former work, which causes the staff to be lack of the competitive spirit, the sense of responsibility and the UN enterprising sense. Lastly but not the least, the library personnel's overall quality dropped gradually.

LIBRARY MANAGEMENT

The librarian has to devote most of his time to handing such functions of the library. He does not get time to guide the people to the right books for their information needs. Libraries go on for Automatic identification tracking books and other accessories. Library Automation System is designed to meet the needs of all information seekers. Academic researchers can search the world's library collections using a seamlessly integrated client. Library Automation System provides simple interfaces to catalog new books, manage patrons; create reports and control budgets and acquisitions. The library Management includes maintaining Library infrastructure, Staff Management and System Management. These are considered to be the most valued things in the library management which determines the quality of libraries. A proper maintenance has to be done at regular intervals.

IMPLICATION OF THE LIBRARY MANAGEMENT

The development and the interaction of the science and the technology have created the fast growth of the human knowledge. The knowledge and the information has becoming the key point of the social development, which makes the knowledge innovation become the hot spot of the global attention. But the library management is the important means of the knowledge dissemination and the knowledge innovation, which arouses the people's attention in the world. The library management can transform kinds of information from the organization into the knowledge, which relates the human. The library management carries on the official management to the knowledge in order to produce, gain and use the knowledge. The library management provides the new way to realize sharing between the dominant knowledge and recessive knowledge for the organization. Moreover, the library management is used

to carry on the collection, the processing, the organization, the dissemination and the creation of the knowledge.

There has been a considerable growth in the technology and trends in library in the past. The forthcoming emerging technologies will have a deep impact on library administrations, resources, services and instructions. Collections of information has to be assembled that were not otherwise accessible or usable because of technical barriers, distance, size, system fragmentation, or other limits. New technologies must be created and understand them to make it possible for a distributed set of users to find, deliver, and exploit such information. The impact of this new technology and its international benefits has to be evaluated.

BASICS TASKS IN LIBRARY MANAGEMENT

- Planning the acquisition of materials
- Negotiating borrowing material from other libraries
- Selection of library materials
- Stacks maintenance
- Fee collection
- Membership management
- Responding to challenges
- Approving and designing events
- Fundraising

Library Facilities

The library infrastructure has to be designed in such a way that the facilities available are easily accessible to everyone that meets the changing needs of communities. This helps to provide quality infrastructure and ensures to attract the users. This kind of infrastructure will allow members to access shared knowledge, services and computational resources in a secure, coordinated way and make the study environment pleasant. Technologies have to be integrated to exploit shared knowledge and available resources which will result in an innovative level of functionality providing the foundations for future generation collaboration environments (Sharma and Kiran Singh, 2005). The Infrastructure is basically classified into collection Infrastructure, Access Infrastructure, Computer Networks, Access Control and Digital Resource Organization. Everything has made to be complimented with each other in order to make the library Infrastructure efficient. Collections and services are the essential roles of the library. The information resources are stored in digital as various formats predominantly in electronic or digital medium such as digital books, scanned images, graphics, textual numeric data, films, audio and clips etc. The access should be made easier to retrieve the information with the help of the technology (like browser). A computer Network can be a point to point network (connection oriented), a multicast Network, or broad cast network. The

topology of the network, switching the network and the use of bridges, routers, gateways provides an effective computer network infrastructure. The library should develop an information resources collection and development policy consistent with the objectives of its Institution or community. These information resources should satisfy through content, currency format organization and quality. The digital library should provide access to the most current reference

Source available in order to assure the accuracy of information and this is based on resource organization such as standards and protocols (Anil Kumar and Dhiman Yashoda, 2004). Staff management Library staff members should possess a high skill set and have an updated knowledge on technical advancement in library science. They should understand the requirements of the users and satisfy their expectations. The librarian has also the responsibility to resolve the problems faced by the staff members due to their technical in expertise and ensure that they are user-friendly. They should provide portable qualifications against nationally recognized competency standards. In a competency based assessment system, it is recognized that learning can come from a variety of sources, both on the job and off the job, formal and informal. System management this specifies the way in which the systems in the library are interconnected each other and also to the outside world. A computer Network can be a point to point network (connection oriented), a multicast Network, or broad cast network. In constructing a library the various Sections are connected the need to know the topology by which the various nodes interconnect that are to be mentioned in designing a network are, Topology of Networks Switching in the Networks, Bridges, Routers and Gateways Using the Open system interconnect model, a Computer Network system could be designed for the required specification. Library services the ultimate role of the library is to provide service to the users. With the advancement in information technology, there have been a lot of changes in the concept of traditional library work as well as service. The recent trend and change in the information related field especially in Collection, storing, processing and dissemination of information have resulted in to the evolution of digital libraries. Now most of the reference books like encyclopedias, dictionaries, directories, handbooks, etc. are published in electronic form. Similarly about 50% of the existing secondary resources like abstracting and indexing services are available in electronic form. At present most of the libraries have been highlighted mainly on providing access to diverse digital information resources.

Technology Systems and Library Technology

With the advent of the information age and the radical change in library materials, media and means of access to information, the nature of certain types of building systems have changed accordingly. The most dramatic of these changes was the evolution of building communications and its associated equipment into the broad category of technology systems. Technology systemsin a building now encompass any digital device, digital media, routing devices, operating systems, digital networks and servers, audio-visual systems, cabling systems and digital wireless devices, that

are used to provide access to sources of digital information, modify that information, or even create information. The technology infrastructure is the name usually given to the equipment, the control and operating subsystems, the network connections, and the cabling of the total technology system as it resides in the building. The building's technology infrastructure is connected to utility services outside the building, such as telephone or cable service; this incoming service is referred to as the technology utility.

The technology infrastructure in a building continues to evolve in complexity and in its features and characteristics, and a new type of design professional has emerged with the type of expertise required to analyze, plan and design the technology system and its infrastructure. The technology consultant must not only be an expert in state-of-the-art technology systems, but must also be capable of anticipating the directions of development of new technologies as well as understand the physical interaction of components of the system with users and with the building.

Library Management and Services

(1) User Education

(2)Digital Library Services

(3) Personalized services
(4) Web-based reference and information services
(5) Search Engine Services
(6) Digital Reference Services
(7) Co-operative Digital Library Services
(8) Customer Service

Development of Library and information Science

Library and information science grew right from the first publication. Since then, there is a tremendous increase in library literature in various forms. The growth of library and information science is at a good pace. Developed countries are contributing a large chunk of literature through various types of publications. Developing countries like India have also made laudable contributions to library and information science. The chronological study indicates that library and information science literature has been expanding its subject boundaries. Most noticeably is its extensive coverage of IT-related services. The maturity of the scientific aspect of the library science discipline has helped in increasing the literary output in the field of library and information science. Library and information science has been growing gradually as new facets are added to the subject progressively due to inter-disciplinary approach and information tsunami. The field of library and information science is no longer confined to four walls of classification and cataloguing but has been broadened to embrace new concepts like automation, information retrieval, digitization, wikis, metadata, blogging, podcasts, open access, and other web related technologies (Arvind Malhorta and Ann Majchrzak, 2005). The present study aims to trace the

growth and development of library science so that the trend followed in Library Science can be visualized.

THE CURRENT TRENDS

Library is a vast storehouse of information. Emergence of Internet and Communication Technology (ICT) libraries has been acquiring different approaches of the same and mode of service is changed. Therefore, different types of library:

Hybrid library

The hybrid library is a term used to describe libraries containing a mix of traditional print library resources and the growing number of electronic resources. Hybrid libraries are mixes of printed books and magazines, as well as electronic materials such as downloadable audio books, electronic journals, e-books, etc. Hybrid libraries are the new norm in most public and academic liberties

Automated library

A library where access points and housekeeping operations are computerized is called an automated library. The graphic records are still print-on-paper publication

Digital library

A library in which a significant proportion of the resources are available in machine-readable format (as opposed to print or microform), accessible by means of computers.

Market area measurement

There are few ways to measure geographic markets that illustrate the dynamism and versatility of GIS. A market area is the geographic area from which a library draws most of its users. Maps based upon Indian geographic and political boundaries are provided to illustrate these concepts. Assigning each library branch a certain number of census tracts or block groups. Block groups are smaller divisions within a census tract. Determine a branch market through overlay of postal code boundaries. These codes are based upon user address data. Determine branch markets by assigning equal portions of the population to the nearest existing facility. This is a modeling technique, location allocation which simply assigns each member of the population to the nearest facility. Determine a branch market by assigning ascertain mile radii to be served. This is a standard and more general approach used to compare key features. determining the actual market area by encoding user address data. This is by far the most accurate.

CONCLUSION

Information technologies are already a firm part of daily life. Rather than trying to assess how technologies will change our lives, we should accept these technologies as another set of tools and proceed to make the best use of them for the library and all of its users. We must, however, seize the initiative to ensure that we control, and are not controlled by, the technologies of the future. The primary objective of libraries is to organize and provide access to information, and it remains the same although the format and methods have changed drastically. Under the present scenario of declining budgets and higher subscription costs of journals in India, it is becoming very difficult to meet the demands of library users. The only solution to the problem is the pooling and sharing of resources print as well as electronic by way of consortia. New technology has provided great opportunities for delivery of services within consortia. More and more libraries must unite, which of course requires a change in the attitudes, practices, and policies to get the maximum benefit. Researches have to be carried out with aid of technological advancement to compete the fast growing environment. The library movement in India is rapidly increasing and the traditional libraries are now on their way to digitization in a phased manner. In a developing country like India where resources are limited, funds are inadequate; the library professionals have to take careful and judicious decisions in selecting library materials.

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