Re-Engineering of Library Services by using Information and Communication Technology

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ABSTRACT

Re-engineering is the business term used for re-designing and reinventing the ways and means by analyzing and examining the business activities and systems to meet the required goals. In the context of Library and Information Science (LIS), this term is also being used for evaluating and redesigning of existing library services in cost effective manner. With the growing emphasis on quality improvements, librarians are also searching various methods and ways for cutting costs and improving services. Applications of ICT certainly has improved the ways in which libraries acquire, process, store and disseminate information. As a result, libraries have automated their house-keeping operations and started providing user services through various online modes like e-mail, FTP, Telnet etc. These modes of information sharing over network have improved the library services and their popularity among the users.

This paper discusses the need of re-engineering of library operations and up gradation of library's resources and services by applying ICT.

1. INTRODUCTION

The term re-engineering in the context of library services may be defined as re-designing, organizing and optimum utilizing the library's resources and services at minimum cost. The ICT has remarkable impact on library services and it has improved the activities of the libraries. The libraries must continue to change if they are to remain most capable and respected information clearing houses in the modern digital environment. Re-engineering library services requires proper planning, organizing, staffing, directing, coordinating, reporting and budgeting towards the goal to be achieved as an information centre. The quantity, quality and efficiency of traditional library services must be improved by using ICT in cost effective manner to achieve the right balance between knowledge conservation and advance information services. Libraries have always had the ability to respond to the challenges of technology for updating and improving their services up to and beyond the expectations of their clienteles. Modern

economic rationalism demands that libraries become more accountable for both the services they provide and the funds they expand. Such accountability requires libraries to investigate, analyse and where necessary, change the methods and processes they have traditionally undertaken to justify their very existence to funding bodies.[1]

The aims of a good library is to become a force for learning excellence. It should be the hub of activities of any organisation. The basic function of the library is to acquire, process, organize, store and disseminate information either in print, or digital form.

2. CHANGING ROLE OF LIBRARIANS

Librarians have a major role to play at a time when they are faced with budget crunches coupled with rising costs and inflation. Here again library managers must judiciously use the available funds at every level of library operation such as acquisitions, services, staffing and digitization. They have to explore new ways to accomplish their goals without diminishing the quality of services.[2]

The mission of the librarians is to work towards meeting the information needs of the people by providing high quality information systems, services, products, based on the recorded human knowledge of the world, through the utilization of current and emerging technology. Librarian should be an active knowledge worker in the international knowledge society and to participate in educational training and development programmes that leads to better utilization of information resources by the beneficiaries of library's services at large.[3]

The librarians of the present digital age have become the custodian of information instead of custodian of documents only and would be the medium to the access to information. His role is being change increasingly towards offering the guidance to the users in their queries in navigating through the web of documents that span the global library.[4] However, the digital age has changed the role of librarians from a traditional book keeper to a dynamic information manager, information navigator, cyber engineer, information disseminator and knowledge administrator.

3. ROLE OF INFORMATION AND COMMUNICATION TECNOLOGY

Information and Communication Technology (ICT) is the most useful technology of present era. It has far-reaching impact and has influenced almost every sphere of human activity. Obviously this technology has influenced the library and information activities which deal with ever increasing print and digital material and strive to serve pin pointedly right information to the right user at the right time. All over the world, there are uncountable libraries and information centres using this technology to solve their specific problems. The present age of digital technology provides us with information, which has mainly three aspects, the abundance of information, the currency of information, and the accessibility of information.

The abundance of information can be observed by using the internet, a storehouse of lot of information and data. Besides the information available on internet, there are also other sources of digital information like CD's, DVD's, audio files, video files etc. which need to be managed by the library. The phenomena of rapidly increasing amount of published information and the effects of this abundance of data is known as information explosion. As the amount of available data grows, the problem of managing the information becomes more difficult, which can lead to information overload. The digital age has, however, changed the focus of library

professionals from library collections to information sources available anywhere. Access to information from not only holdings, is now the key for libraries coping with the abundance of information.

The digital age has also had an enormous impact on the currency of information which means the period of time between the existence of information and its availability to the end user. The information and communication technology has provided the means of reducing physical processes through which information has to travel from originator to the user. With the help of word processing devices, the originator can prepare information more quickly for dissemination and use. The web technology has facilitated the originator to publish the information on the world wide web. For the librarians, processing and absorbing tasks of such type of excess amount of information being provided, is very difficult because some times we can not see the validity behind the information. Verifying the authenticity of such information is the important responsibility of the librarian of the present digital age.

From the librarians point of view, most important, is the accessibility of information. With the help of information retrieval tools and techniques the librarians are able to access the information more easily than traditional print resources. Through web searching, a librarian can search and retrieve information from anywhere in the world. The very format of digital information also enhanced its accessibility by making it easily transportable, either electronically or because such large amounts of data may be stored in small, lightweight packages.

4. REASONS FOR RE-ENGINEERING

Library is a service oriented organization focused on user satisfaction at utmost level. Libraries have always been reengineered according to the demand and needs of the users. There is a responsibility of the libraries to keep their users well informed and updated about latest developments in their interests preserving the values of the society. To create a learning environment in libraries that will enhance resources, facilities and services is the primary objective of the librarians. There are three basic reasons for reengineering library operations:

(i)   To allow and implement technology for updating the library facilities in cost effective manner ;

(ii)   To satisfy the changing needs of the users at utmost level ;

(iii)   To upgrade the infrastructure and skill of library staff in modern technological environment to achieve the goal of the parent organization.

5. LEVELS OF RE-ENGINEERING

Re-engineering of the libraries in the modern technological environment is needed to be done at following two levels :

(i)   Automation of traditional library operations and services.

(ii)   Continuous up gradation of automated library's infrastructure.

At first level automation of traditional library's services required attention on priority basis. There are several reasons for automating library activities. An automated record, prepared at the time of acquisition may be used repetitively for several purposes. Thus a considerable saving in efforts, time and resources involved in manual processing can be achieved.[5] The technology selected and implemented in the library should be appropriate, cost effective and as per real need of the library.

Software and Hardware selection: The first step towards this direction is the selection of software and hardware. There are various commercial, semi commercial and free library automation packages are available. Automation facilities available with the software should be justified with its cost. Similarly, hardware like computers, LASER / INKJET printers, ZIP drives, Bar code scanners and printers, photocopiers, fax machine etc should be procured as per requirements of the software and as per real need of the library.

Implementation : Properly trained and skilled manpower will be required to implement the technology. Initial implementation may done from out sourcing but continuing skill development planes should be initiated for the library staff.

The second level of continuous up gradation of automated library's infrastructure is equally important. Keeping in view the new technological developments, the available library technology must be upgraded at the regular intervals with the new technology of automation, online databases, CD-ROMs, Interactive Multimedia, Electronic Publishing, Electronic mails/ file transfers, Digitization and Networking. Enhanced library facilities adaptive technology rooms with computers equipped with specialized software for different type of users may be provided in the library's premises.

6. RESOURCE SHARING AND COLLABORATION

Resource sharing and collaboration is an important activity of modern libraries. This activity may also be reengineered. Librarians are moving towards resource sharing which includes both information services and sources. In an online environment it is possible to expedite selection, acquisition, processing, indexing and reference by means of library personnel grouped together in organized clusters. It is possible to reconstitute the entire organizational structure of libraries with the help of ICT which provides opportunities for delivery of services in unique ways where the role of the librarian will be that of an entrepreneur who will market information products with out waiting for users to come to the institutions. Today, there is a need for economies in procuring, storage and retrieval of information. End users want direct access to information which is possible with ICT. Sharing and collaboration are more dependent on people than technology. ICT has also greatly facilitated information sharing and collaborative working. Cost of sharing and distribution of information is low and negligible in digital environment. Keeping in view the demand of the time, library's acquisitions, operations, digitization and services should be redesigned in such a way that they should be more cooperative and cost effective.

7. CONCLUSION

The Information Communication Technology (ICT), a leading technology of present time, has already entered in each and every field of human activity. This technology has reengineered of all library's operations and services. The transformation of traditional libraries into sophisticated information centres is also the result of this development. The primary objective of any information centre is to make available the required information within a reasonable period of time. The information thus made available should be reliable and up to date and in a form and format that is convenient to use. The success of any information centre, therefore, lies also in identifying and enlisting the various sources of information and developing the requisite tools and systems for tapping those resources. It is hoped that reengineering of

the libraries will be continued and they will apply latest technology for collecting, storing, processing, retrieving and disseminating information for the benefit of the society and large community of their users.

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