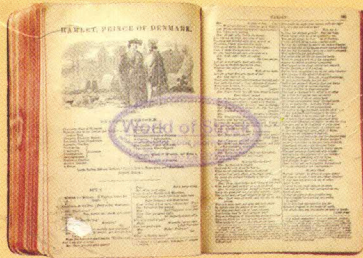




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*Library & Information Services in
Changing Era*

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Changing Role of Librarians in Digital Era and need of Professional skills, Efficiency & Competency

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The emergence of a vast storehouse of information on the Internet poses a different kind of conundrum Librarians, the traditional gatekeepers of knowledge are in danger of being bypassed, their skills are ignored, their advice unsought. Search engines send user straight to the information they require – or so users may think – without any need for an intermediary to classify, catalogue, cross-reference, advice on sources.

The location and provision of information services has dramatically changed over the last ten years. There is no need to leave the home or office to locate and access information now readily available on-line via digital gateways furnished by a wide variety of information providers (e.g. libraries, electronic, publisher, businesses, organizations, individuals). Information is electronically accessible from a wide variety of globally distributed information repositories.

Information is no longer simply text and pictures. It is electronically in a wide variety of formats, many of which are large, complex (i.e. video & audio) and often integrated (i.e. multimedia).

Traditional Library:

Libraries are where the access points such as, library catalogues as well as library collections are print based and their management is by and large manual. In traditional library uses manual charging and discharging methods for circulations.

Automated Library:

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

New electronic services

New electronic service in this sense could mean:

1. Online ordering and delivery from local and remote resources
2. Portals (of one library or groups of libraries, subject portals)

3. Regional or national catalogue databases
4. Personalized services ("my library", profile and alerting services)
5. Online reference
6. Collections digitized by the library
7. Electronic publishing services
8. Online self-paced training facilities
9. Internet access via the library's workstations or network

Though electric media and activities are prevalent among new library services, there are also a number of new non-electronic services. In the last years, group work and problem-based learning have become more important for students. Offering group working areas or study landscapes for problem-based learning might be new services that attract users. Their impact on user behavior would also be of interest.

Electronic Library – Digital Library:

The access point as well as the graphic records are in electronic/digital form when these electronic/digital libraries are connected via various networks, particularly the INTERNET, this is called virtual library.

Digital library is not only digitization of physical resources, but also thoughtful organisation of electronic collection for better access. Such organisation provides coherence to a massive amount of shared knowledge base. The methods of access provide convenient information retrieval for a wide range of global user. Essentially a digital library deals with organisation and access of a large information repository. In all probability, digital libraries are likely to augment traditional libraries, such as an on-line card catalogue augments, rather than strictly replacing, a book collection. The reason for this could be that the digital medium tends to be better for searching and the physical medium better for reading. Lets us know about digital library and the skills required to build up digital collection

Definition:

According to Wikipedia a **digital library** is a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and accessible by computers. The digital content may be stored locally, or accessed remotely via computer networks. A digital

library is a type of information retrieval system. The first use of the term *digital library* in print may have been in a 1988 report to the Corporation for National Research Initiatives. The term *digital libraries* was first popularized by the NSF/DARPA/NASA Digital Libraries Initiative in 1994. The older names **electronic library** or **virtual library** are also occasionally used, though *electronic library* nowadays more often refers to portals, often provided by government agencies, as in the case of the Florida Electronic Library. The *DELOS Digital Library Reference Model* defines a digital library as:

An organization, which might be virtual, that comprehensively collects, manages and preserves for the long term rich digital content, and offers to its user communities specialized functionality on that content, of measurable quality and according to codified policies.

According to Wiederhold "A digital library is popularly viewed as an electronic version of a library where storage is in digital form, allowing direct communication to obtain material and copying it from a master version.

"Digital Library is a combined technology and information resources to allow remote access, breaking down the physical barrier between resources".

Winensky viewed that 'the digital library will be a collection of distributed information services, producers will make it available, and consumers will find it through the automated agents.'

Digital Library is a "Collection of digital object (text, video, audio) along with method for access and retrieval, [as far as users are concerned] and also for selection, organisation, and maintenance (from the point of view of librarian). Ian Whitten.

"The digital library is not merely equivalent to a digitized collection with information management tools. It is also a series of activities that brings together collections, services and people in support of the full life cycle of creation, dissemination, use and presentation of data, information and knowledge.

Advantage of Digital Library:

Digital library has certain characteristics, which make them different from traditional library. It has expansive and accurate system of searching with large volumes of text, image and audio-video resources. Digital libraries do not need physical space to build collection and it can be accessed from anywhere, any time. Different people can access same

source at the same time. The advantages of digital libraries are mentioned herein below:

- Preserve the valuable documents, rare and special collections of libraries, archives and museums.
- Provide faster access to the holding of libraries world wide through automated catalogues.
- Help to locate both physical and digitized versions of scholarly articles and books through single interface.
- Search optimization, simultaneous searches of the Internet make possible, preparing commercial databases and library collections.
- Offering online learning environment.
- Making short the chain from author to user.
- Save preparation/ conservation cost, space and money.
- Digital technology affords multiple, simultaneous user from a single original which are not possible for materials stored in any other forms.

Disadvantage of Digital Library:

New technology has brought many advantages but simultaneously it also has certain disadvantage

- Costly affair
- Technology obsolescence (Hardware & Software)
- Storage media relate
- Dominance of data creators and publishers
- Trained manpower
- User education and training
- Security against hacking & sabotage

Types of Resources

The resources provided by the digital libraries can be classified into in-house resources and external resources. In-house resources are those resources that are stored in the web server locally and made accessible through the network. E-books, course notes, and application notes etc. are examples of the in-house resources.

The external resources are those materials that are not stored in the web server. An external resource includes online journals, online

databases, online e-books etc. External resources are provided by different publishers - ASME, ACM, IEEE, Oxford University Press Journal (OUP) and many more are there. The publisher provides access to their full text materials by two methods:

- (i) Username and password
- (ii) Internet Protocol (IP) address based Access Control Method

Impact of new services on the library

Introducing new services, enlarging or transforming traditional services will have consequences on the structure and organization of the library as well as on its traditional services. The library must invest resources – funds, room, and staff time – into the new service and must therefore reconsider its resource allocation. Additional staff times will probably in the beginning be necessary for user training and reference service, but also for staff training. There will often be shifts in resource allocation to electronic media or IT equipment. As new processes and activities will probably be needed for a new service, workflows will change. In the long run, with the new tasks for staff new departments will evolve and the organizational structure will change. Hope fully, the quality of the library's performance will improve. A traditional service replaced by an electronic one might gain in:

- quickness of delivery (e.g. direct access to electronic journals)
- accuracy (better ways of keeping track, e.g. of an online order)
- higher market penetration by attracting more users and new user groups
- ease of access to the service
- relevance for users (e.g. relevance of research results)

Though new services probably cannot be offered with fewer costs than the traditional ones – only with other cost factors -, higher use data can reduce cost-per-use and thus improve the efficiency of the services. New services may involve changes in traditional services like lending, in-house use, or users' copying in the library. Libraries have experienced a decrease in circulation, copying, and physical visits to the library when offering a large electronic collection, remote access to catalogues and databases, web based ordering and ILL. On the other side, experience has also shown that in spite of a substantial electronic collection and a

broad range of electronic services physical visits can remain stable or even increase, if libraries offer comfortable surroundings for in-house work and adequate IT equipment and if they consider the need for group learning by special group working areas.

Changing Role of Library Professional in Digital Age:

The ready availability of information on the Internet, and its widespread use, really presents Librarians with an opportunity, not a threat. Technology Savvy users realise they need help, which Librarians can provide. Librarians now face difficulties and complicity challenges due to new trends in information access.

In the present technological/Internet era the professionals have to change themselves as the information profession is being changed. Now information specialists have to work as e-information resources in which various professional groups are expected to map a strategy that leads to produce, manage, maintain and service the information. Information professional has to work as:

Librarian- In addition to being library manager, they also act as collection development, technical processors and so on, taking care of information quality.

Information Manager- To meet information need of the user they should know how to manage and deliver appropriate information services.

Information adviser/instructor- Ensure that user/staff know how to access relevant sources of information (literacy).

System & Networking- For delivery of information to their users in an appropriate manner develop and design appropriate systems.

Skills, knowledge, competencies required for LIS Professionals:

The basic goal of library and information profession has always been to provide access to information to those who need it. The activities realizing this goal have evolved and transformed over the years. This includes - Available technology, and need of an evolving information society. Information activities have been guided by the developments in the field of storages, presentation and archiving of knowledge, collection development and organization of knowledge, information explosion and computers in information retrieval. Librarian and information professional involved in information gathering, storage, retrieval and dissemination on one hand and on the other hand the computer specialist who supports the library and informational

professionals in this endeavor. For successful implementation of Digital Library, it is essential that LIS professionals are well trained and possess requisite knowledge and skills in this respect.

I) - Knowledge & Skills

Librarians need to know understand –

- Knowledge resources (books, journals, i.e. resources, Internet)
- Teleological facilities and resources (computer, online catalogues, websites, LANs file servers etc.)
- Financial resources (Budget) Human resources (Skills for manpower training)

II) - Competencies that required to possess in LIS professional:

- Acceptance of change.
- Knowledge of user interaction with knowledge resources.
- Provide quality service.
- Be adoptive, flexible and resistant.
- Be resourceful
- Posses excellent communication skills, constantly update personal knowledge base by keeping in touch with the latest development
- Create awareness among the users, make them accept the changes
- Be an information management strategist, etc.

III) - Technical Knowledge required:

- Operating systems - Windows, UNIX, LINUX.
- World processing, Graphics, Spread sheet & Presentations.
- Database Management Systems including the skills in Bibliographic Database Management Systems.
- General purpose programming, Networking
- Web page Development and Content Management
- Information Retrieval software for online, CD-ROM and Internet.
- Library software packages, acquaintances with Digital Library Tools.

IV) - Capacity to used free software/resource.

Librarian should have capacity to used free software (e.g.; NewGenLib, DSpace, etc). NewGenLib is open source library management software and DSpace is open source repository building software.

Conclusion:

The world of information is undergoing rapid change. It is an age at a great turning point in the history of civilization. The day has arrived when it is most important to learn to access, analyze apply and evaluate such information. As traditional custodians of information, librarians need to be aware of the implications of these changes and develop technological and managerial skills, which will enable them to make effective use of information and to meet their organizations changing information need.

Development of information technology is playing a crucial role in restructuring of the libraries. Shift from human dependent operations to machine dependency, mechanization (data processing) to knowledge processing, stand alone system to network computing, local LAN to wireless access protocol systems. Document centered information to user (Access) centered information; print media to electronic (Access) media, data capture methods, human to machine oriented. Library automating (in-house) to web-enabled services (WAN Access), Online information retrieval to CD-ROM Databases to Internet. These prolonged shift in application of innovative IT to library and information profession can be attributed to the changes emanated in the last 2 decades.

The role of librarian has changed in the digital library era. It is, therefore pertinent on the part of the librarian to acquire new skills required for developing and managing the digital libraries. The library and information professionals are required to acquire such knowledge and skills as the library is one of the highly IT influenced service profession. The empowerment of library and information professionals with IT skills is aimed at providing services that are expected of from the clientele in the new environment.

Digital age has brought a tremendous change in the way information is stored and accessed. This has brought about a change in the concept of librarian, their collection and services. Many new terms viz. Digital Librarian, Libraries without walls, virtual libraries, are emerging to describe the libraries of digital age.

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