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## **Role of Digital Library in the Modern Society**

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### **Abstract**

*World development in the economic, scientific, technical, political and social spheres is a product of human development which is fuelled by education, and training, knowledge and literacy and information transfer. It is inconceivable to think of human development without literacy. A number of factors ranging from post independent government's policy on education, democratization of education, provision of public library services, support from nongovernmental organizations and the need to break free from the vicious circle of intergenerational poverty. There is immense potential in human capital development but this can only be realized through promoting and sustaining high literacy rates to enable everyone irrespective of race, creed, gender or other factors to participate fully in the conventional economic activities of the country.*

*Information and Communication Technology has revolutionized the concept of libraries. Each and every library is slowly getting digitized. A 'digital library' comprises digital collections, services and infrastructure to support lifelong learning, research, scholarly communication as well as preservation and conservation of our recorded knowledge. It is also a process of democratization of information. This article will discuss the factors that will necessitate the traditional libraries to get digitized, as well as the definition, need, advantages and disadvantages of digital libraries, the requirement for building a digital library etc. The emphasis is also put to describe the role of librarian in the new environment!*

**Key Words:** Intellectual access, electronic library, hybrid library, automated library.

### **Introduction**

We are in the age of a networked society where IT in addition to its use in all spheres of human activity has been used extensively to record, store, and disseminate the information in the digital form. IT has almost converted the world into a global village. The revolution in the IT sector is influencing the information industry also. Libraries are also changing to meet the demand put on them. The new generation whose demand for information is

never met is always demanding that traditional libraries should be developed as a well equipped and interconnected as digital libraries. If we consider that the information is for use and for all then why not libraries for all? Why not libraries become universal' open for all those who seek for information. By considering this view a number of large organizations in USA and Europe have already more or less switched over to digital mode. They are making digital images of periodicals which are not available in electronic form and there after no new procurement are being made on print media if a digital version is available.

The term Digital Library has a variety of potential meanings, ranging from a digitized collection of material that one might find in a traditional library through to the collection of all digital information along with the services that make that information useful to all possible users. As there are many definitions of a “digital library,” terms such as “electronic library” and “virtual library” are often used synonymously. A digital library is nothing but a large database for the people who are working on hypertext environment. It is an environment, which supports the full life cycle of creation, storage, preservation, dissemination and use of data, information and knowledge.

According to Arms a digital library is a managed collection of information with associated services where the information is stored in digital format and accessible over a network. The digital library federation in the USA defines the digital library as: Digital libraries are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities. A digital library is an organized collection of digitized material or it's holding in the digital form, which can be accessible by a computer on the network by using TCP/IP or other protocol.

**The Digital Library is:**

1. Organized collection of multimedia and other types of resources.
2. Resources are available in computer process able form.
3. The function of acquisition, storage, preservation, retrieval is carried out through the use of digital technology.
4. Access to the entire collection is globally available directly or indirectly across a network.
5. Support users in dealing with information objects
6. Helps in the organization and presentation of the above objects via electronic/digital means etc.

### **Requirement for digital libraries**

The Internet and World Wide Web provide the impetus and technological environment for the development and operation of a digital library. The Internet provides the TCP/IP and or its associated protocol for accessing the information and web provide tools and technique for publishing the information over Internet. In the digital environment it is reasonable to say that a central back up or archive should be created at the national level, which will store information out put of the region as well as information from out side the country. Some of the requirement for digital libraries is:

1. **Audio visual:** Color T.V., V.C.R., D.V.D., Sound box, Telephone etc.
2. **Computer:** Server, P.C. with multimedia, U.P.S. Etc
3. **Network:** LAN, MAN, WAN, Internet etc.
4. **Printer:** Laser printer, Dot matrix, Barcode printer, Digital graphic printer etc
5. **Scanner:** H.P. Scan jet, flatbed, Sheet feeder, Drum scanner, Slide scanner, Microfilming scanner, Digital camera, Barcode scanner etc
6. **Storage devices:** Optical storage device, CD-ROM, Jukebox etc.
7. **Software:** Any suitable software, which is interconnected and suitable for LAN and WAN connection.PC Pandi

### **Resources of a digital library**

The resources of a digital library are those, which the computer can store, organized, transmit and display without any intervening conversion process. It includes both print and electronic or digital material. The digital material may be of multimedia types or any other i.e. only digital audio, video, full text information, photograph, drawing, digitized sound, e-book, v-book, electronic tax, map, image, 3D representation etc. The collection may also include structured /unstructured text, scanned images, graphic audios, video recording etc

### **Online resources:**

1. Local database of traditional books in machine-readable form.
2. E-book, v-book, electronic tax, map, image, sound, video, and multimedia etc.
3. E-journal
4. LAN, MAN, WAN for web browsing, e- mail etc.
5. Well trained manpower for online help

### **Off line resources:**

1. C.D-ROM, Jukebox etc.
2. Audio visual aid etc.

### A shift from traditional library to virtual library

The development is already taking place. The traditional closed access libraries are shifting towards open access library. The open access libraries are shifting towards automated library, the automated one towards the electronics, the electronics to digital and finally end in Digital library and its different aspect/badan barman virtual library. Is it really true? The truth is that nobody knows what will be the future of libraries. In the following Para an attempt has been made to categorized the different types of libraries based on the technology used. It's the best time to mention that there is no strict line of demarcation between the latter four types of libraries.

1. **Traditional library:** The collection of the traditional libraries is mostly print media, manuscripts etc and are not well organized. The documents are deteriorating at a rapid rate, the collection information is not easy to locate and so does not easily reach to user, Again the traditional libraries are confined itself within a physical boundary.
2. **Automated library:** A library with machine-readable catalog, computerized acquisition, circulation and OPAC are called as automated library. The holding of this type of libraries are same as that of traditional libraries.
3. **Electronics library:** When automated libraries goes for LAN (Local Area Networking) and CD-ROM networking and started procuring E- journal and other similar kind of publication then it is known as electronic library. The resources of the electronic libraries are in both print and electronic form. The electronic Medias are used for storage retrieval and delivery of information.
4. **Digital library:** It is a later stage of electronic library. In digital library high speed optical fiber are used for LAN and the access is over WAN and provide a wide range of Internet based services i.e. audio and video conferencing and like other. The majority of the holding of a digital library is in the computer readable form and also acts as a point of access to other on line sources.
5. **Hybrid library:** The libraries, which are working both in electronic or digital and print environment, are known as hybrid library. Actually it is a transitional state between print and digital environment. It is estimated that in near future libraries will be of hybrid nature, some of the very strong point in favor of this view are centuries old reading habit of paper, convenience of handling and reading a paper document then the digitized one (in case of digitized some equipment are must needed to read the document), incompatible standard of electronic product, different display standard of digital product and its associated problem etc.

### Factors of change to digital libraries

Information explosion The limited buying power of libraries, complex nature of recent document, storage problem etc are some of the common factor which are influencing to change to digital mode, some other factors are-

1. Searching problem in traditional libraries
2. Low cost of technology: When we consider the storage capacity of digital document and its maintained then it can be easily realize that the cost of technologies is much more less than that of traditional libraries.
3. Environmental factor: the use of digital libraries is the cleanest technologies to fulfill the slogan "Burn a CD-ROM save a tree"
4. New generation needs

### **Advantages of the Digital Library**

A digital library is not confined to a particular location or so called building it is virtually distributed all over the world. The user can get his/ her information on his own computer screen by using the Internet. Actually it is a network of multimedia system, which provides fingertip access. The spoken words or the graphical display of a digital library is again having a different impact from the words that are printed. In the new environment owing a document will not be problem for the library because the user will pay for its uses.

1. **Disadvantages of the Digital Library No physical boundary:** The user of a digital library need not to go to the library physically, people from all over the world could gain access to the same information, as long as an Internet connection is available.
2. **Round the clock availability:** Digital libraries can be accessed at any time, 24 hours a day and 365 days of the year
3. **Multiple accesses:** The same resources can be used at the same time by a number of users.
4. **Structured approach:** Digital library provides access to much richer content in a more structured manner i.e. we can easily move from the catalog to the particular book then to a particular chapter and so on.
5. **Information retrieval:** The user is able to use any search term bellowing to the word or phrase of the entire collection. Digital library will provide very user friendly interfaces, giving click able access to its resources.
6. **Preservation and conservation:** An exact copy of the original can be made any number of times without any degradation in quality.
7. **Space:** Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain them. When the library had no space for extension digitization is the only solution.
8. **Networking:** A particular digital library can provide the link to any other resources of other digital library very easily thus a seamlessly integrated resource sharing can be achieved.
9. **Cost** - The cost of maintaining a digital library is much lower than that of a traditional library. A traditional library must spend large sums of money paying for staff, book maintains, rent, and additional books. Digital libraries do away with these fees.

The computer viruses, lack of standardization for digitized information, quick degrading properties of digitized material, different display standard of digital product and its associated problem, health hazard nature of the radiation from monitor etc. makes digital libraries at times handicap.

1. **Copyright:** - Digitization violates the copy right law as the thought content of one author can be freely transfer by other without his acknowledgement. So One difficulty to overcome for digital libraries is the way to distribute information. How does a digital library distribute information at will while protecting the copyright of the author?
2. **Speed of access:** - As more and more computer are connected to the Internet its speed of access reasonably decreasing. If new technology will not evolve to solve the problem then in near future Internet will be full of error messages.
3. **Initial cost is high:** - The infrastructure cost of digital library i.e. the cost of hardware, software; leasing communication circuit is generally very high.
4. **Band width:** - Digital library will need high band for transfer of multimedia resources but the band width is decreasing day by day due to its over utilization.
5. **Efficiency:** - With the much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult.
6. **Environment:** - Digital libraries cannot reproduce the environment of a traditional library. Many people also find reading printed material to be easier than reading material on a computer screen.
7. **Preservation:** - Due to technological developments, a digital library can rapidly become out-of-date and its data may become inaccessible.

### Role of librarian in digital environment

Though the digital environment is built as a system, which can be used by its ultimate end user directly from their desktop pc, the role of librarian cannot be overlooked. In digital environment also the librarian and information scientist will be needed for packaging and repackaging of information, for electronic publishing, for reference purpose, to advise the user about the strategy to identify relevant electronic sources etc. thus the librarian will be more or less a hypertext engineer. In the new environment it will be very difficult for the librarian to decide what should be organized? How to give citation? How to organize the collection? Etc because the new environment will be really challenging one for the librarian to decide who are author who are publisher and who are user? . In the new environment any one who has access to the network of digital libraries can be a publisher by merely posting messages to an online discussion group or by other means. A virtual environment is really open for all. In some cases, librarians have the opportunity to digitize unique material in their libraries' collections, which can then be made accessible to users of the World Wide Web at large.

### Conclusion

Digital libraries are not going to replace the physical existence of document completely but no doubt to meet the present demand, to satisfy the non local user digitization must be introduced so that at least libraries becomes of hybrid nature. The initial cost of digitization is high but experiment shows that once digitization is introduced then the cost to manage this collection will be cheaper than that of any traditional library. Day by day the cost of digitization is decreasing, the online publication is increasing, the needs of user are shifting towards a different environment so it's needless to say that after one or two years my library or your library will go to be digitized so it's the pick time to all informational and library professional that they geared themselves to take the challenge.

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