

A BRIEF ANALYSIS ABOUT E-LIBRARY IN EDUCATIONAL

INSTITUTIONS

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ABSTRACT

An e-library or Digital library is a physical site and/ or website that provide around the clock online access to digitized audio, video, and written material. It provides free copies of books, journals, etc. available to the users. Normally these materials are classics which have no copyright digital formats (as opposed to print, microform, or other media) and accessible by computers. Digital libraries are a natural progression from electronic document sharing. The main benefit of a digital library is the ability to provide around the clock, remote access to high-demand or restricted materials for multiple concurrent users. Setting up a digital library can either be done by using 'off-the-shelf digital library products, document management products or library management products capable of digital library management or in-house system development by using open archives software. These Digital Objects could be classified as text, visuals, video, audio, etc.. Digital Library stores these objects as standardized and customized electronic media formats instead of print, micro form, or other media. Most importantly, a digital library should provide means for organizing, storing, and retrieving the contents. e-Library stores the contents at a central location for providing access on multiple devices.

KEYWORDS-DIGITAL LIBRARY, TEXTS, VISUALS, VIDEO, AUDIO, RDF, ENCYCLOPEDIA, GOVERNMENT GAZETTE, JSON-LD. LRML

INTRODUCTION

An e-library or Digital library is a physical site and/ or website that provide around the clock online access to digitized audio, video, and written material. It provides free copies of books, journals, etc. available to the users. Normally these materials are classics which have no copyright 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. Digital Libraries are an increasingly popular research area that encompasses more than traditional information retrieval or database methods and techniques.

Definitions.

An e-library is electronic information, library organizers usage of the catalog, tag and search books, and journals. It maintains a database as the collection of e-materials and provides services in digital form.

Many libraries traditionally have been repositories of local information and heritage documents such as manuscripts, rare books, maps, photographs, and paintings, etc. In university libraries, documents generated in house such as dissertation and theses, research reports, etc. represent the intellectual strength of the institution.

Libraries are developing digital repositories of such resourced and providing access to the internet or intranet access to these. Large public and academic libraries also provide up to date local information via the internet.

Digital libraries are a natural progression from electronic document sharing. The main benefit of a digital library is the ability to provide around the clock, remote access to high-demand or restricted materials for multiple concurrent users. Setting up a digital library can either be done by using 'off-the-shelf digital library products, document management products or library management products capable of digital library management or in-house system development by using open archives software.

A simple definition of the digital library is 'a library consisting of digital materials and services'. Digital materials are items that are stored, processed and transferred via digital (binary) devices and networks. Digital library services are information services that are delivered digitally over computer networks.

Advantages of E-Library

1. E-library is the easiest to use the available online research tool.
2. Standards searching help the educators to integrate the technology into the curriculum, by increasing the technology literacy.

3. Students can use the search by topic feature to retrieve a manageable amount of quality content, quickly and easily.
4. Public libraries need to offer an easy-to-use research solution to patrons.
5. Point-and-click functionality ensures all the users finding the information they need.
6. The reference desk gives integrated access to a dictionary, encyclopedia, almanacs, and much more.
7. Visually impaired people are no longer disabled in searching and surfing information on the digital library.

There are a number of reasons for building digital libraries such as. information explosion, dwindling budgets of the library, space problem, high information demand, available technologies, etc. The other major points, which compel us for the digitisation of present-day libraries, are,

1. Documents and other materials housed in the collection of traditional libraries are deteriorating at a rapid rate.
2. Libraries with a unique collection of manuscripts and archives should be digitized so that these rare materials should be available for extensive access throughout.
3. Digital Library Technology is to manage a lot of digital content such as thousands of images, audio clips, etc.
4. The vast amount of information being created and stored each day makes it more difficult to find specific information later. There are electronic tools, which enable this to be done quickly and easily by text search and also by the actual searching on the closer texture and even in shapes in images.
5. Digital libraries enable greater access to the content. They are capable of managing the content from multiple locations and provide a way to enrich the teaching and learning environment from the distance.
6. The information available on the web is not uniformly distributed and only a small portion of which exists in print.

An *e-Library or Digital Library* (both terms often used interchangeably) is a collection of digital objects. These Digital Objects could be classified as **text, visuals, video, audio**, etc.. Digital Library stores these objects as standardized and customized electronic media formats instead of print, micro form, or other media. Most importantly, a digital library should provide means for organizing, storing, and retrieving the contents. e-Library stores the contents at a central location for providing access on multiple devices.

A comparison of traditional physical libraries with digital library:

1. A physical library consists of Physical Books, Magazines, Newspapers, Monographs, reports, etc. Whereas, digital library consists of digital content viz e-books, e-magazine, e-newspapers, e-reports, video, audio, rich media, animations, etc.
2. A physical library has Limited Space and thus is difficult to expand. Whereas, a digital library has limited (limited till scalability of underlying IT infrastructure) but large space and thus makes it easier to expand.
3. A physical library will provide access to objects via Issue and borrow system certainly limited to number of available quantities. Whereas, a digital library will provide access to objects any number of times by any number of users.
4. A physical is created on a physical space. Whereas, a digital library is created on virtual space viz. data centers, cloud, servers.
5. A physical library follows rack-based search and indexing. Whereas, a digital library provides Web Interface based search and indexing.
6. The major demerit of physical library is material degradation, mutilation and loss over time. Whereas, a digital library provides digital preservation and longtime archival of the contents.

Components of Digital Library / e-Library:

An e-Library typically consists of the following components:

1. e-Content
2. Meta-Data
3. Repository
4. E-Library software
5. Underlying IT infrastructure

e-content:

The content of a digital library could be broadly classified in two categories. First, that is created in a digital format, also known as born-digital. It is a collection of texts, images, etc. that can be stored, retrieved and read over electronic devices. These devices for example can be **computers, mobile, digital readers**, etc. The second form of content in the form of information that has been converted from a physical medium, e.g. **paper, Journals, books**, etc. by digitizing.

The e-content also contains invisible properties known as Metadata, also described as data that describes other data. It is often known as data about data or information about information. Meta is a prefix that in most information technology usages means “an underlying definition or description.” Metadata summarizes basic information about data, which can make finding and working with particular instances of data easier. For example, an image may include metadata that describes how large the picture is, the color depth, the image resolution, when the image was created, and other data. A text document’s metadata may contain information about how long the document is, who the author is, when the document was written, and a short summary of the document.

Meta-Data

Metadata is an important aspect of e-Library. It is the structured information that describes, explains or otherwise makes it easier to retrieve, use, or manage an information resource.

For educational purposes, an e-Library can adapt a set of metadata relevant to learning objects from schema.org or Learning Resources Metadata Initiative (LRMI).

Schema.org is a collaborative, community activity with a mission to create, maintain, and promote schema for structured data on the Internet, on web pages, in email messages, and beyond. One can use schema.org vocabulary with many different encodings, including **Resource Description Framework in Attributes (RDFa)**, Micro-data and **JavaScript Object Notation for Linked Data (JSON-LD)**. These vocabularies cover entities, relationships between entities and actions. One can easily extend these through a well-documented extension model.

Learning Resource Metadata Initiative (LRMI) is a later version and a super-set incorporating all relevant portions of schema.org. Since, schema.org didn’t have a way of naming the educational parameters that could help narrow down the search; LRMI added them such as Educational Use, Interactivity Type, Typical age range, etc.

Central Repository:

A digital library may create a reservoir of e-contents at a central repository. This repository is basically a storage space attached to the repository servers. Typically, in a Data Centre. The central repository should have access mechanisms along with data backup policies. The repository is ever growing by creating new e-content and adding the content to the repository.

e-Library / Digital Library portal:

The e-Library portal acts as the front-end. It is also the predominant mode of access to knowledge and learning. A user can access the huge reservoir of e-contents stored at a central repository through the portal.

IT Infrastructure for establishment of Digital Library:

We will require an underlying IT infrastructure for hosting of web application, repository, e-Library Studios and e-Library sections.

One can host the web application on hosting layers viz. web, application and database servers in a secured environment of a Data Centre. Also, you can create the repository in the data center itself with features of scalability as the repository is ever growing as informed above. The repository will grow with addition of new e-contents. Users can create new e-contents in e-Library studios with facility of creating digital contents.

A typical e-Library studio consists of audio-video recording and scanning equipment with features of editing and mixing. Organizations may create e-Library sections at schools, colleges, community centers and of course in physical libraries for accessing of e-contents. A typical e-Library section would consist of desktops (for personal access), TVs (for broadcasting content to a larger audience) and required network infrastructure for connectivity to the central repository.

e-Library Software:

The e-Library software should provide web-based access to the e-content stored at a Central repository. It should have option to view, upload and manage the e-contents.

It should be an open to view for all i.e. anybody who wish to view contents through this portal can view the available contents, whereas, for uploading new contents one needs to be an authenticated user. Each user who wants to upload contents to e-Library portal has to register himself as a content provider and duly approved by the Administrator. The portal will assign a username and password to the user upon successful registration.

The user will use these credentials for accessing the portal for uploading contents on the portal with relevant information in the form of metadata and license. After successfully passing through a number of validation steps and duly approved by an authorized person (could be a subject matter expert) the uploaded content should be available under an appropriate category.

Impact of e-resources in modern Library and Information Centers.

The rapid growth of information and communication technologies have given rise to the evolution of several new jargons like paperless society, electronic resources, portal 7 gateway, and global digital library. In the day context, all types of libraries viz: academic, public and special are not only providing printed resources to their

library users rather they provide printed, electronic as well as other Internet resources like e-books and databases for fulfilling the day to day academic and research requirements of the library users.

The challenge, the present society faces in the 21st century is keeping pace with the rapid developments in the information and communication technology, one needs to continuously upgrade their knowledge and skills. It is understood that we live in an information-rich society where the amount of information and knowledge in the present world is increasing at a tremendous pace. Information literacy is the ability to evaluate information across the range information needed, locate, synthesize and use the information effectively, using technology, communication networks, and electronic resources. Information literacy includes the full range of experience, and the user needs to enable the use of information literacy.

People who are not fond of reading will agree with the fact that a library is the most peaceful place on the earth. The library is like a corpora of knowledge. One could find books in a library in almost all topics, like history, geography, or even science e-fiction. Libraries are considered as the shrine where all the relics of the ancient saints, full of true virtue, and that without delusion or imposture, are preserved. A library is like the thole world encompassed in one room. Without a library, an institution will not be complete. It is very essential to the education and any problem, any query unanswered one can find it in one of the books stored in the library. Libraries are an integral part of the education system and one is incomplete without the other. A well-stocked library is an asset to any institution.

A library is a place where not only books but also magazines, journals, and newspapers are well-stocked for the benefit of the readers. Besides this one can also get the entire charts, **Encyclopedia, government gazette**, etc. A reader can either read in the library or borrow the book/journal of his choice and take it home. A library is a popular place in the academic curriculum. With the growing popularity of the internet, the retrieval of information becomes faster. In view of the above facts, it is apparent that a library is a very important place in society.

Libraries are the repositories of knowledge form of an integral part of education. The primary objective of the library is to organize and provide access to information. This objective will never change but the format and methods that are used will change dramatically, providing new opportunities and challenges. Libraries have witnessed a great metamorphosis in recent years. The print medium is increasingly giving way to the electronic form of materials. The library is an extremely important entity in an ever-changing society and it must be responsive to the needs of society. Information Technology (IT) has changed the complexion of today's libraries. Libraries have evolved to become an information provider rather than mere document providers. The shift from the traditional libraries to the digital is not merely a technological evolution but requires a change in the paradigm by which the users access and interact with information. This move from traditional to electronic libraries also alters the fundamental role of the library.

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