LONG LIFE LEARNING OPPORTUNITY THROUGH DIGITAL LIBRARIES AS FACILITATORS OF E-LEARNING

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Abstract

"Libraries are community treasure chests, loaded with a wealth of information available to everyone equally" Former First Lady Laura Bush

With the changing needs of the users and the onset of digitization, the role of libraries has also undergone Himalayan changes.The traditional libraries have transformed into digital libraries with the changing modes of teaching, learning, and research. The emergence of digitization has forced library professionals to accustom themselves with the emerging information technology tools to manage and disseminate services to its users. Today learners are looking for a single interface where they could access umpteen resources at a go, to support learning. And hence the growing relevance of digital libraries.

When compared to traditional libraries the scope of digital libraries is vast which includes not only reading material in printed format but also comprises digital objects such as texts, audiovisual material, video material stored in electronic media format.

Their role as facilitators and disseminators of knowledge and information is tremendous in the present era and links students and tutors to plenty of online resources, library catalogs, e-resources, digital resources, and discussion forums. And therefore Digital is considered as a federation of library services aimed at creating a digital learning community.At present e-learning is considered the best alternative tool for imparting knowledge and skills. A supplement to classroom teaching. It enables a student who is situated in a remote area to access a wide range of information and interact with the teachers and his peers.This brings in added responsibilities to the librarians managing traditional libraries to upgrade themselves into digital librarians and re-evaluate the way they develop, manage and disseminate online resources.

In this backdrop, the paper tries to understand the concepts of digital library and E-learning. It presents the role of digital libraries as facilitators of e-learning. It quotes a few examples of ace Digital libraries of India. It discusses the various e-learning platforms provided by digital libraries to its learners.

Introduction

A traditional library was a mere collection of books, manuscripts, articles, newspapers, journals, and other sources in printed format and gave priority towards storing and preserving them for which the librarian was its custodian. Information was assembled in a compact place and users were needed to travel to the particular place to gain access to the resources. They have been criticized as primitive, obsolete, and archaic. With the changing needs of the users and the onset of digitization, the role of libraries has also undergone Himalayan changes. The traditional libraries have transformed into digital libraries with the changing modes of teaching, learning, and research.

The emergence of digitization has forced library professionals to accustom themselves with the emerging information technology tools to manage and disseminate services to its users.

Today learners are looking for a single interface where they could access umpteen resources at a go, to support learning. And hence the growing relevance of digital libraries.

Digital libraries differ from traditional ones in several ways, such as providing access to a large number of resources at their fingertips, wherever may they be located, eliminating the need to own or store a study material in physical terms, help to catalog down to individual glyphs or words and benefit browsing based on a single word or hyperlinks. When compared to traditional libraries the scope of digital libraries is vast which includes not only reading material in printed format but also comprises digital objects such as texts, audiovisual material, video material stored in electronic media format. Their role as facilitators and disseminators of knowledge and information is tremendous in the present era and links students and tutors to plenty of online resources, library catalogs, e-resources, digital resources, and discussion forums. And therefore Digital Libraries have made E-learning handy and interesting.

Against this backdrop, the paper tries to understand the concepts of digital library and E-learning. It presents the role of digital libraries as facilitators of e-learning. It quotes a few examples of ace Digital libraries of India. It discusses the various e-learning platforms provided by digital libraries to its learners.

Objectives

1. To understand the concepts of digital library and E-learning.

2. It presents the role of digital libraries as facilitators of e-learning.

3. It quotes a few examples of ace Digital libraries of India and online services disseminated by them and

4. It discusses the various e-learning platforms provided by digital libraries to its learners.

Methodology

The paper has been prepared based entirely on the resources and articles collected from various secondary sources and concerned library websites.

Digital Library: the concept

Synonymized as virtual libraries, Hybrid libraries, and electronic libraries, the first use of the term dates back to probably 1988 in a report to the Corporation for National Research Initiatives. The idea of the first computerized library that would supplement, add functionality, and even replace traditional libraries was invented by HG Wells and others who caught the imagination of millions with speculative writings about world brains and similar fanciful devices. (Sharifabadi 2006)

The credit of the early actual application of computers for information retrieval was simulated by Benner Bush, a scientist who made a mention of memex a mechanical device based on microfilm technology that anticipated the ideas of both hypertext and personal information retrieval systems. (Bush 1945)
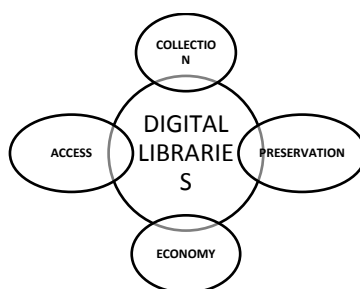
And for the first time computers pitch in two libraries during early 1950 with IBM and punched card applications to library technical service operations. The development of (machine-readable cataloging) MARC, a standard for digitizing and communicating library catalog information came into practice.

The term was popularized by the NSF/DARPA/NASA Digital Libraries Initiative 1994. Most popular are the European Library and the Library of Congress of America who is developing
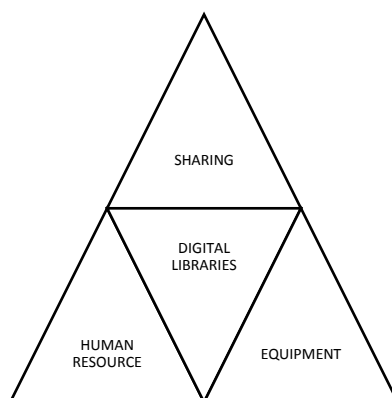
in a web-based environment. School, College, and Public Libraries are also able to develop their websites featuring digital repositories.

A digital or electronic library is an organized collection of digital objects including text, audio, images, and videos along with associated services, where the information is stored in digital formats and accessible over a network. (Rachna 2017)

Digital Libraries Federation(DLF) 1998 defined "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".Though having multiple meanings, it is meant broadly to suggest that there are a set of attributes identified with the concept of digital libraries.

They have the potential to offer unprecedented resources to support e-learning. They motivate the independent self-learning process. They function as digital schools that offer formal content on a variety of subjects and facilitate general browsing for creative discovery and self-guided informal learning. This needs library professionals to keep their information technology skills updated. Library professionals are required to familiarize themselves with the operations of Digital Library Softwares like DSpace, Greenstone, Fedora, E Print to quote a few. They need to devise a mechanism to identify the resources required for the users and provide access to them. Therefore a digital library is the amalgamation of three components,

E-Learning: the concept

There are several terminologies associated, also referred to as online learning, distributed learning, networked learning, telelearning, virtual learning, Web-based learning, etc. E-Learning is an abbreviation of the term electronic learning.

E-learning implies that a learner is at a distance from his tutor and that he uses some form of technology to access his learning materials and to interact with his tutor and other fellow learners. It is a term used to describe the teaching and learning process delivered

electronically, communication technology such as online learning, webinars, computer-based learning, educational materials on videos. (Wang 2004)

It makes use of applications like interactive learning packages, web-based learning environments, communication applications like email, discussion rooms, chat, video conferencing, etc. It is a software application integrating different tools for management, communication, evaluation, monitoring to provide technical support for the teachers and learners to make optimum use of the e-Learning resources in their teaching-learning process. Allen (2000) refers to it as a blended learning approach where the learner goes through a mixture of face-to-face and online activities(Allen 2002)

At present e-learning is considered the best alternative tool for imparting knowledge and skills. A supplement to classroom teaching. It enables a student who is situated in a remote area to access a wide range of information and interact with the teachers and his peers. Thus it is a combination of both modes of teaching traditional and technological.

Learners today can access a universe of digital information through the internet. This brings in added responsibilities to the librarians managing traditional libraries to upgrade themselves into digital librarians and re-evaluate the way they develop, manage and disseminate online resources. E-learning is not just an educational website, a computer software but a culmination of a variety of aspects delivered electronically such as browsing for articles, watching a video for educational and entertainment purposes, making use of a digital camera for recording, viewing, and interacting personally or for presentation in conferences, conducting online classes, using software for editing pictures, texts, sounds or animations for presentations, recreation and education, making use of a whiteboard during an online lectures session are all considered as tools of e-learning.

Benefits of e-learning

Not forgetting to quote this difficult situation of the pandemic and its impact on every aspect of business and learning, the online platform has emerged as the conqueror in providing much-needed access to learning resources and tools to its users, organizations, teachers, and students. It has emerged as the best alternative for offline education and a boon to bridge the gap of knowledge in the education system. As learning knows no time zones, location, and boundaries, asynchronous e-learning has facilitated teachers and students to connect and interact. E-learning allows easy access to its learners irrespective of remoteness and time.

   i.   It helps its learners to keep themselves updated and seek knowledge from experts in their subject domain.

  ii.   Situated learning is facilitated (Sharifabadi 2006) which means learners are allowed to complete their courses while working or at their own convenient time and space.

 iii.   E-learning in the present context has facilitated young minds to learn plenty of things only through watching online videos and study material, though they were not able to attend formal schooling.

  iv.   It is economical in its use as the user need not travel in person to the library for gaining access to the material he wishes to read.

   v.   Research has been made more easier and economical as much-needed secondary data is handy with the researchers online. And this imposes an added responsibility on the university libraries to provide open access to update research material for both the faculty and students.

The obvious answer for providing e-learning resources to students is introducing digitization by the institutional libraries to support the e-learning environment and design its functioning in such a way to meet the needs of the present-day learners both individually and collaboratively in the digital format.

Digital libraries as facilitators of e-learning

Digital libraries in the present era play a significant role in facilitating the e-learning process. Easy access to numerous digital content and search engines economically has helped digital libraries to spread their wings. They have transformed from traditional providers to digital content disseminators by designing their web portals and assisting learners in searching and retrieving information. It consolidates scattered online resources under one umbrella. Many Open Source Content Management Systems are available to provide library e-services under a single platform. Often referred to as group inter-linked workstations connected to high-speed networks facilitating users in several ways such as,

i. Access to unlimited e-resources such as e-journals, bibliographic and full-text databases, e-books, e prints mounted on the servers located at remote places, and allowing member libraries with the user's login and password on a yearly subscription basis to access information.

ii. Simultaneous access to the resources at one site at the same time without any hurdle connected over the internet through Dial-up, DSL, Lease Line, or VSAT connectivity.

iii. Provides access to content in varied formats such as animation, graphics, audio, and video.

iv. It helps in the preservation of documents over long years keeping their intrinsic value intact.

v. Information dissemination knows no barriers and digital libraries help to browse for resources across countries globally.

vi. It is available at the disposal of the learners round the clock, helps in the retrieval of information and access is cost-effective

The Space Applications Center's library has designed its portal using DRUPAL, a content management system that provides information about library activities, resources, and services under a single window. A Content Management System (CMS) is a software application used to create, customize and manage information and provide an e-learning platform for the learners. (Rachna 2017)

Sharifabadi (2006) lists out many intermediate goals digital libraries can support e-learning such as improving student performance, increasing the quantity, quality, and comprehensiveness of internet-based educational resources, making resources easily discoverable and retrievable for students, parents, and educators, and ensuring availability of these resources over time.

Digital libraries support e-learning through a variety of source materials such as curriculum and course materials, lectures, lesson plans, computer programs, modeling and simulation, tutoring, access to scientific and research-based resources in journals and on websites, raw data, statistical information. They also support authors and instructors by providing peer-reviewed journals, government reports, periodicals, newspaper clippings, and annotations. And for faculty and students, it helps to browse for resources of their concerned subject in the form of digital textbooks, multimedia classroom sessions, video lectures, live experiences as in the case of the Byju's and Vedantu apps, discussion forums, and interdisciplinary activities.

Traditional libraries organized the much-needed resources for their users in the print form in its arena but the scope of the digital library has broadened with not just providing reading material to its uses in print format but also organizing the online collection and databases, electronic books, electronic course reserves and tutorials to its users in digital format under one platform. The prominence of digital libraries as a facilitator of e-learning is aptly quoted as "complete information access leads to better education" (Sharifabadi 2006)

Sharifabadi(2004) examines the role of the university libraries and librarian in the digital age and concludes that "as technology continues to transform the classroom and campus environment, a librarian must be trained to deal with new problems and questions"

After having analyzed the role of digital libraries as facilitators of e-learning let us now have a look at the digital library initiatives in India.

The concept of digital libraries is in its nascent stages in India. In India traditional libraries are simultaneously developing their digital resources in the form of regional subscriptions, bibliographical and full-text databases in CD-ROM/DVD-ROM format, OPAC within the campus, provisions of online circulation services, email, content page services, abstracting services, are a few initiatives started in India. The Government of India with the help of the National Science Foundation of the United States of America has initiated the "Million Book Project" at the Carnegie Mellon University USA with India as a partner and the Indian Institute of Science (IISC) Bangalore as the focal point of this activity in India. The project is an international attempt to digitize millions of seminal books in the fields that happened to be in the public domain and have been copyrighted but have not been printed thus making them freely available on the website for everyone India has also launched the Digital Library of India portal in September 2002.

The National Science digital library is one example of a comprehensive collection of Science and Technology publications with over 1,80,000 bound volumes of Science and Technology books and periodicals, a rich collection of more than 5000 foreign journals, conference proceedings, and a large number of databases.

The National Library Kolkata also moving on the same steps of digitization of rare manuscripts, books, artifacts, and paintings in the digital form.

The Nalanda the digital library initiated in 1999 at NIT Calicut is one of the largest digital libraries in India which has a rich collection of ebooks in engineering and science, arts and humanities, electronic theses and dissertations, journal back volumes, conference proceeding databases, and handbooks application notes and datasheets.

The very popular Shodhganga project initiated by INFLIBNET, the VidyaNidhi project of the Library and Information Science Department of Mysore University which aims to create an online database of all doctoral theses and dissertations published by Indian universities. E resources from 23 World-class publishers are made available under the UGC Infonet Digital Library Consortium for full texts, abstracts, and table of contents access of journals, databases

The MHRD initiated the setting up of the Indian National Digital Library in engineering sciences and technology and provides funds for subscription to electronic resources for 37 institutions including IISC, IIT, IIMs, and NITs. There are several such initiatives taken by several institutes around the country to develop their institutional digital repositories and are in no way behind the western world in developing digital libraries.

The National Digital Library of India, developed by IIT Kharagpur with a slogan ONE LIBRARY ALL OF INDIA is one of the ambitious digital library portals providing varied

online databases under one umbrella offered in 10 Indian languages started in 2019. It offers every kind of digital material covering every subject domain right from primary to postgraduate level. One can sear over 67,102,159 resources on this site.

One more initiative worth mentioning here is the National Mission o Library launched in 2013 by the GOI at a cost of 1000crores to modernize and digitally connect 9000 libraries across the nation. Several digital learning platforms are available in India at present, to quote a few, NPTEL, SWAYAM, MOOCS, SWAYAM PRABHA, E Pathashala, E Shodhasinshu, DIKSHA, and Virtual Labs.

Conclusion

The momentum in the field of digitization of Libraries and networking is gaining momentum in India. As it has gained tremendous importance and applicability especially in the age of pandemic which has been serving as the basic medium of educational delivery as an alternative to a face-to-face teaching-learning methodology for every education institution be it Schooling or University, digitization has become inevitable for imparting online education. Digitization of education and e-learning is the new Mantra and Digital Libraries and its Librarians are the main components of this quality e-learning system. And a judicious collaboration of the Library and Faculty can promote a positive approach towards e-learning and facilitate learners to become information literates and cope with this new environment.

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