Importance of Digital Library in Education

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ABSTRACT

During the past recent years, there has been tremendous development reaming the concept of digital libraries, the biggest online platform of knowledge that can be stored and retrieved through online networks. Digital libraries are considered as the most complex form of data systems that associate with the digital document preservation, distributed database management, hypertext, filtering, information retrieval, and selective dissemination of information. This has really overcome geographical barrier offering a wide range of academic, research, and cultural resources with multimedia effects which can be accessed around the world over the distributed networks. The study also highlighted the information on the digital library projects undertaken in countries.

This article provides information to the audience on the subject matter in terms of what has been already discovered and explored on the importance of Digital Library and what all can be further explored. The literature pertaining to the studies relating to how digital libraries emerged discussed in this article. The idea is to brief the readers about the concept of library resources shifted into digital libraries with the help of technology and its growth sourced from already existing literature. The contemporary trends reflecting the current state of the library and how it has progressed over time also discussed here.

KEYWORDS: Digital Libraries, Electronic resources, Digital resources.

INTRODUCTION

Concept of digital libraries has existed from the 20th Century. It is yet to follow many years of the 21st Century in building these digital libraries as strong and complete collections of records that have been visualized regarding them from a long time in the past (Okerson ,2009). The affluence within the knowledge has transformed the access systems for every stake holder in retrieval of main learning and significant information. The evolutions of digital libraries have happened significantly in the past few years. They are not only the digital corresponding entity of traditional (physical) libraries but they have become involved in networking systems. They have now the potential of managing communication as well as collaboration between diverse, universally spread user groups and communities (Tramboo et al. 2012).

The services of digital libraries are very much the same as that of traditional libraries. The only fundamental distinction is the digital format followed by digital libraries for maintaining the collection. As we advance for the

further details in terms of distinction then due to digital format, these services are technologically oriented, requiring less space for storage with easy accessibility to users. The resources of digital libraries are accessible from any location across the world with core needs of electricity and network availability for the Internet. Computers have become the mode of delivering digital services to its consumers in comparison to conventional physical libraries in which human intervention is mandatory for normal operations (Shem, 2015).

The different research is performed in recognizing the user perception for using digital libraries and that have also highlighted few challenges for broad reception of digital libraries. The various key audiences of digital records are the university level scholars, teachers, and research scholars that leads to development of academic libraries having digital documents (Matusiak, 2012). Academic libraries pursue a theoretical task of providing access to diverse education-based materials and further services. It also provides instruction on finding, using, assessing, and selecting material for its every user successfully. The present organizations of higher education are developing the student's learning experiences by eliminating the physical hurdles and offering lessons and academic programs in an online way. The online learning environment gives a distinctive stage in delivering and accessing the academic information compiled for educational teaching to everyone, all time, and any location. Due to the advancement of the Internet and the emerging capability for online communiqués, institutes of higher education are witnessing an increasing thrust in the progress from traditional in person education to online and distance education (Sasso, 2016).

The designing of innovative models and architectures are transforming this combination of information along with user requirements for giving improved well-versed decisions and enriching the customer experience. The vast volume of information within the communicating networks fetches vital challenges for assuring security basics within a disseminated setting. Blockchain, originally launched as a Bitcoin Cryptocurrency by Satoshi Nakamoto, has advanced beyond that. It facilitates a reliable platform for exchanging services and transactions through a disseminated network. Therefore, it is transforming the digital financial system of present era by giving fresh aspects to security and effectiveness of systems (Srivastava et al. 2018). Blockchain has emergent as a better way out for diverse concerns faced by the academic society and could be utilized for a variety of tasks (Kolvenbach et al., 2018). Hoy (2017) proposed that block chain can be utilized as a further digital rights management tool. The block chain project of San Jose State University discovers the technology for developing an improved metadata system for the libraries, securing digital first sale rights, and hosting digital peer-to-peer distribution. The block chain technology permits digital data to be disseminated instead of copying.

The present generation of users who are in need of data for studying and seeking knowledge always demand that traditional libraries need to be created and well-equipped with interconnectivity as digital libraries. Accessibility to services provided by academic libraries in distance education within traditional educational background are insufficient and not favorable to address the information requirements of distance learners. This study is pursued to add value to the body of educational research within the background of distance learning environments by explicitly focusing on the way academic libraries and librarians are providing distance learning library services to the students and teachers. The findings of the study might help to inform academic librarians and institution administrators of latest practices and movements with guidance for future improvements linked with supporting distance learning users. This study could give valuable contribution to distance learning library services implementation initiatives as well.

This chapter provides an overview about digital libraries by reviewing the previous studies and providing the knowledge about the digital library, its resources and its evolution with current progress. This chapter provides the conceptual view and real sense of digital library along with different definitions given by various research scholars. It also highlights the significance of digital libraries for distance learning along with challenges related to this kind of learning. Lastly it specifies the characteristics, benefits, the core objectives and the generation of digital libraries.

REVIEW OF LITERATURE

Owusu-Ansah et al. (2019) explains that digital libraries have the potential to provide tremendous opportunities for developing nations for participating in worldwide affairs and enhance the living standard of people. It performs the role of a learning platform, learning space and a vital teaching resource as well. Based on this perspective, digital libraries are significant in distance education and distance learning.

Indiramma & Sugunavathi (2019) mentioned that the society is advancing ahead to a phase where digital information can be replaced with a huge amount of information which is available on the basis of printed and published resources. Therefore, the projects of the library need to be linked with the past as well as the present and consequently will help in shaping the future through procurement, preservation and presentation of the records related to human culture. At times, these resources are required to be designed with integration with emerging technologies. The future library needs to be digital and must possess the elements which comprise: including all the recorded knowledge online, distribution and maintenance of these records online at a global level, and the records needs to be accessible to every person at any place and time using the internet in any language. The concept of digital library is necessary and vital latest efforts of digitization of libraries are focused at creating individual libraries which are capable of replacing the existing physical libraries that are overloaded due to financial as well as space limitations. Nonetheless, the policy designed for modern digital libraries should be able to reach every home where accessibility of the data is feasible in electronic libraries and electronic museums across the world through the web.

Xie & Matusiak (2016) affirmed that it was the advancements in digital computing and the popularity of computing networks that led to the development and creation of digital libraries with remotely accessing the scholarly information resources. It has led to access to a broad array of resources ranging from books to three dimensional artefacts. This transition from conventional set-up to digitized version has fetched tremendous benefits.

Rane (2015) explains that digitization of the documents consumes a great amount of time, efforts and funds. There are various reasons and factors that are required to be considered prior to shifting to the digitization.

1. It is required to be considered that the documents which are being digitized are worth digitizing or not. The documents which include lots of information are valuable enough for funds being invested for digitization. The documents which are already obsolete and bulky should not be digitized. Moreover, those documents which are bulky but are worthy as they are ancient and unique should be digitized as they are susceptible to damage. People can use them without handling the original format

2. The audience needs to be identified while digitizing the documents. If the library has very few users or even if the potential users are in huge numbers but do not have access to computers for accessing digital libraries then they can be served through printed copies instead of a digital set-up.

3. The documents which are selected should form a collection. It is significant that the documents are verified and should have some factors in common so that it can be displayed as a collection in digital format.

4. The convenience and ease of digitizing the documents should also be considered. This is a significant aspect that needs to be accounted for. It might be possible that some of the printed materials are not modified into electronic format with ease. Therefore, verification of the physical features of the documents is required, to determine if it is easy to digitize them.

Bandi et al. (2015) mentioned that although libraries as well as librarians across the globe are progressing to a digital set-up, there are few limitations within the methods as well as their maintenance. The issues related to digitization are:

1. Data Size : Much of the media stored that has been applauded by the people across the globe can be not as valuable once they are unreadable. Hence, the material or records that are converted to digital format and storage is done in those formats generally tend to be outdated with time and maintaining these formats are highly difficult in comparison to printed media due to data sizes.

2. Documents Type - In this present era where information is being exploded everywhere and creating a crowd, librarians are confused regarding the kind of records that need to be in digital form and those documents that should not be in digital form. It is due to the reason that those documents which are in great demand presently, might become obsolete even tomorrow as the rapid advancements within the subject is happening along with the printing and publishing sector.

3. Multilingual Text Support - It is expected that the digital library system will provide support to multilingual information within the diverse functions of the library. This is required to assist the activities such as acquisition, storage, organization, and access to the digital collection. Maintaining such records and documents digitally also possesses a challenge.

4. Technology Obsolescence - The technological advancements that are facilitating the digitization have undergone radical variations constantly. The computer-system hardware, software, storage media and the data formats are constantly undergoing huge revolution. The digitized resources have become unreadable when the supporting devices in the backend comes obsolete with time and this leads to loss in the digital information.

5. Copyrights - The problems related to copyright increases crucial matters for the librarians to handle while undergoing digitization. The researchers normally incorporate graphical objects, facts from the books and journals with no advanced consent from the authorized person. Within digital libraries, the consumers constantly ask for those issues of journals as well as rarely available historical archives that are not as per copyright with the library. This concern leads to huge discontentment regarding digitization within consumers.

OBJECTIVE

The purpose of the present study is to explain the role played by a digital library in the life of student's education. The study will explain the concept of digital library, generations, background, definitions, need, objectives and functions of digital library.

BACKGROUND: EVOLUTION AND PROGRESS

The conceptual thought of a digital library was stated in 1737 by Wells. Wells (1737) encouraged the proposal of 'world brain'. It was observed by him that presently gathering and sharing of the knowledge within the globe is very

futile. With the same idea of digital library, Bush (1945) insisted the researchers to think of a futuristic set-up within which has the individual compilation of his entire collection of books, records and communication and that is automatic for consulting with beyond speed and flexibility. Licklider (1960) also visualized that human intelligence and computing systems could be strongly tied together with support through the network of 'thinking centers' which would integrate the role of current day libraries along with expected progress in information storage and recovery. Borges (1964) also mentioned in his book "The Library of Babel" regarding a splendid infinite library that possesses a record of entire feasible collections. Hence, Licklider, Bush and Borges advocated a system which was mostly on the similar concept of a digital library.

The research and advancement activities commenced over digital libraries in the early 1990s due to the rise of the Internet and exceptional possibilities created by the Internet for discovering and delivering human knowledge. The Mercury Electronic Library at Carnegie Mellon University was founded as the first digital library of an American university (Mercury, 1992). The program that initiated to make such systems live which can refer to significant digital libraries were Digital Library Initiative (DLI) in the US. Moreover, different national programs initiated were eLIB in UK and EU funded projects comprising a devoted Network of Excellence, DELOS for shaping the European setting (Griffin et al., 2005). Various major projects were undertaken under the Digital Library Initiative (DLI). Although, none of these set-ups exist now, the solutions provided with technology development led more complex digital libraries. Google was developed as the successor of such initiatives. In Europe, the set-up existed due to DELOS which turned up as DELOS working group in the 1990s and created DELOS thematic network under Fifth Framework program (200-2003). Then it developed to DELOS Network of Excellence (2004-2007) and the major accomplishment was DELOS DL Reference model. The merits of DELOS led to the final creation of European DL research community. Digital library has significantly evolved as a system since its early emergence. Now they have shaped up as compound networked set-ups that can assist in communicating and collaborating between diverse global communities which are distributed and also handle a variety of digital objects such as pictures, videos, multimedia and programs (Candela et al., 2012). The nonexistence of digital libraries has showcased a limitation for distance education in Ghana because of the shortage of strategic help, reliable policies and explicit funding for the designing of digital libraries (Peters et al., 2015). Currently, digital libraries are gaining interest from across the globe. Diverse research studies on digital libraries has highlighted such as Library of the inscription Cultural Heritage Africa, which gives information regarding collections inscription about the cultural heritage (Audunson & Shuva, 2016). The Ministry of Communications and Information Technology has also established the Digital Libraries in India. The different projects were initiated under diverse categories in institutions such as Delhi University, CDAC centers, State Central Library & Government Press along with many others (Sudhahar, 2016).

For ensuring their readers for satisfaction and loyalty, Chinese university libraries are receiving suggestions based on the objective as well as subjective measures to enhance the excellence of digital library services (Ilahi et al., 2019).

CONCEPT AND MEANING OF DIGITAL LIBRARY

Digitization is basically the procedure of changing the written and printed documents to electronic format. The information can be in the form of text, image, audio or a mixture of such multimedia. The result of this digitization

progression is that electronic record which could be hosted over the Internet as well as Intranet. This electronic record might be in a Portable Document Format (PDF) or a Tagged Image File Format (TIFF). PDF format is generally utilized for storing content on the Web, when the size of the file is comparatively undersized and is effortlessly available for download and transfer. PDF also has an exceptional printable or display format which is similar on every platform and is readable through Acrobat Reader. TIF Format is majorly utilized for the storage of records of archival value (Islam, 2011).

Digital age has fetched remarkable transformation in the methods to store the information and its accessibility. This transformation has brought variation in the conceptual set-up of the library, the compilation and the related services. Novel words such as digital libraries, libraries without walls, virtual libraries emerged to define the libraries of the present era. A digital library is observed as the electronic adaptation of a library that has the storage digitally with provision of direct communication. This library blends the technology along with the data sources for facilitating remote access with elimination of physical obstructions among resources. Digital libraries sustain conservation in addition to information recovery and deliverance for further comfort (Kanjilal, 2017).

The digital library does not mean a solo entity. This library needs the linkage of resources from multiple collections with the technology. The connections among digital libraries and resources are crystal clear to their consumers. Digital library compilations do not stand restricted to document replacements such as bibliographic records but they also contain real digital entities such as pictures, transcripts and many more. The difference between a digital library and the traditional one can be sensed in various ways. A digital library emphasizes on accessing digitized substances irrespective of the location, with digitization removing the requirement to possess or pile up a physical thing. Digital set-up facilitates labeling down to personal words or glyphs, browsing as per the hyperlinks, keyword, or any definite factor of association. Digital library uses broadcast technology and eliminates the need of physical proximity and makes visiting the library electronically for access (Bamgbade et al., 2015).

The Digital library has been observed to portray a strong part in encouraging the usage of information. Digital libraries provide a way out to the major challenge that exists in traditional libraries which is storage. There is a requirement of digital information in each domain; hence efforts are being made to have a higher number of digital libraries (Kaur, 2018).

DEFINITION OF DIGITAL LIBRARY

The foremost published usage of the word "digital library" happened to be in 1988 in a report to the Corporation for National Research Initiatives. This word was primarily made famous by the NSF/DARPA/NASA Digital Libraries Initiative in 1994. Bush (1945) created a vision based on experience ("Digital library"). As per the definition of digital libraries by The Digital Library Federation: 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 available for use by a defined community or set of communities (Shiri 2003).

As per Calhoun (2013), Digital libraries can be explained as:
● The domain of research and practice with users belonging to diverse areas and works, mainly the computer, information and library sciences; publishing; the cultural heritage sector; and education.

● Those systems as well as services, which are frequently accessible in open, that (a) helps with the progression of knowledge and culture; (b) include organized compilations of digital content (objects or links to objects, annotations and metadata) aimed to facilitate the requirements of specific communities; (c) frequently utilize an architecture that primarily emerged within the computer and information science/library area and that normally represents a repository, mechanisms supporting search and other services, resource identifiers, and user interfaces (human and machine).

Other definitions of digital libraries:

Fox and others (1995, 24) provides a description: the term 'digital library' reminds a diverse sense in every person who reads.

Lesk, Fox and McGill 1993, 12, 19-24 explains: The futuristic library imagined will be on the basis of the electronic data ... include text as well as graphics and be broadly accessible by means of electronic networks. It is expected to be distributed.

Borgman 1993, 122 explains A service, an architecture , an array of informational sources, databases of content, figures, graphics, sound, video, and much more.; an array of tools and abilities with users as well as providers.

Lynch and Garcia-Molina 1995 explains: Systems that provide a population of users with logical right to use to a big, structured repository of data and knowledge, enhanced by the abilities of digital technology extending printed and digital resources, giving a rational outlook of an extremely huge collection of data combining resources in digitized forms featured through permanence with conventional library roles and mission and along with various digitized s records emerging as a solo digital library set-up.

Zhao and Ramsden 1995 explains: A big compilation of the complete data of highly used resources comprising books, research papers, learning resources, and multimedia learning materials, that is straight-away accessible to students and staff through personal computers.

Lesk 1997 defines structured compilations of digitized resources. The configurations and data compilations are merged which is always done by libraries, through the digitized demonstration of data, which is made feasible by computer systems.

Lyman 1996 defines: The description of the digital library would need a comprehension of the function and character of public institutions in a postindustrial society.

Waters 1998: Firms that are institutions, which offers the resources, comprising the expert staff, to choose, configure, present intellectual access to, infer, dispense, protect the reliability of, and make certain the perseverance over time of collections of digital works so that they are willingly and cost-effectively accessible for utilization by a definite society or set of societies.

Shortened version of Borgman 2000, 42: 1. Digital libraries can be considered as a range of electronic materials and related technical competencies for creation, search, and usage of information. 2 Digital libraries are developed, compiled and arranged , by a group of users, and their working abilities assist the data requirements and uses of the group of users .

Bishop, Van Houseand Buttenfield 2003: Sociotechnical systems, networks of technology, information, documents, people, and practices.

Candela et al. 2007 defined as: the central device for intellectual functioning that has no rational, theoretical, physical, sequential, or individual boundaries or hurdles to data materials. Commonly acknowledged ideas that shifted from a data-focused set-up that just sustains the institute and offer accessibility to specific compilations of

informational sources, to an individual - focused set-up that provides unique, developing, and custom-made facilities for users. Ideas of the working of Digital Libraries have transferred from static storage and recovery of data to enabling communication, association, and further types dynamic interfaces and the competencies of Digital Libraries are developed from managing frequently centrally positioned text to synchronizing distributed multimedia record compilations, sensor information, mobile information, and pervasive computing functionalities.

NEED FOR DIGITAL LIBRARY

It is being observed that the libraries and the information hubs are transforming from buildings, which have the storage of lots of books and further printed materials to an electronic access to an increasing universal compilation of digital information. As the data and content initiated to be accessible electronically, libraries too commenced to transform in a way to give data to their supporters. Digital libraries open novel avenues for the learners. By means of digital library materials, these learners get the most relevant informational sources and that too within the second by pushing the button. The numbers of learners are rising in the world and the designing of distinct types of services is happening as per the needs of the regional as well as other users. The various reasons due to which the digital libraries are required for education are:

- For having expert accessibility to suitable information
- There is a constant need for accessing huge amounts of information to the learners irrespective of location and time
- For archiving those materials which are properly sorted, are authentic and systematically arranged for easy access and with proper specifications and rights to use
- For accessing latest and current information
- To have a credible information to refer
- For reliable information for further evaluation for research work
- For access to hypertext links for navigation to correct sources for easy access
- For connecting with extended experts of social network
- For promoting their research work produced and to exchange the knowledge
- To have the flexibility to store data for anytime access
- To save time of visiting library and searching the relevant materials

GENERATION OF DIGITAL LIBRARY

Prior to 1990, there used to be computers and libraries leading the ways in terms of utilizing technology in the form of typewriters as well as microfilm. Since the 1960s, computers and related technology was widely utilized within libraries, however normal computers namely IBM 360 series were still far behind in terms of helping the requirements of libraries. The Mercury Electronic Library located at Carnegie Mellon University has been set-up as the foremost digital library within American university (Mercury, 1992). The architecture of Mercury was distinctive of distributed computing prior to the advent of web-based systems. In the initial phase of the 1990s, digital libraries had become an identified area of computer science research. As per Griffin (1998) , in 1994, the National Science Foundation (NSF), DARPA, and NASA united jointly for the foremost digital libraries project.

The National Science Foundation's approval too recognized the naming for the domain as the plural "digital libraries", substituting previous terms as in "electronic library" and "virtual library". The initial web version

appeared to possess numerous errors for digital libraries applications. However, it possess few important characteristics such as an easy version of HTML, access to URLs for locating data, and MIME kinds to indicate formats excluding its basic protocol, HTTP, which happens to be inadequate. HTTPS later appeared as the most secured format of communication. Plug-ins gave a convenient method to adjoin the latest kinds of information. Netscape initiated JavaScript and Java applets were developed by Sun for downloading code to a browser. In the last phase of the 1990s, digital libraries were not an innovation anymore with all the developments. The DSpace software for supervising institutional repositories had been an outstanding case of a library set-up of that era. Seadle & Arms (2012) explained that in the last 30 years, digital libraries have undergone from an inquisitiveness to ordinary. It was learned that the era of the 1990s was the significant and decisive decade. Prior to 1990 computing within libraries was focused on metadata. Around the initial years of 1990, computing arrived at a stage where it has become cost-effectively feasible to build up huge collected works online and accessing them on the networks.

Alguliyev & Ismayilova (2017) highlighted that due to quick advancement of latest information and communication technologies along with deeper dispersion of computer fields within the library studies and information sciences, the system of configuration of current generation of e-libraries is enthusiastically increasing. The potential of web-based technologies have been intensifying and cooperative intelligence is mounting. Therefore, the procedure of enhancing the excellence of service conveyed to e-library consumers have been constantly under advancement. The beginning of Web-based technologies such as Web 1.0, Web 2.0, and Web 3.0 within e-libraries generates further opportunities for librarians as well as consumers. The evolution has enhanced the interfaces being given to the consumers. The e-library consumers are those people that have diverse psychosomatic states, knowledge and expertise. Hence, it is aimed that every consumer should be facilitated with a suitable, helpful and interactive interface. The user interfaces have now greatly improved due to web technology in a significant way with increased user convenience. The further evolutions of the digital libraries has lead to various advancements

- Blogs and Wiki-technologies is that mechanism which provides consumers the platform to share their thoughts and learnings. Wiki-technologies and blogs have been helpful in arranging the efforts within e-libraries, such as, execution of combined work, developing courses or teaching corps along with involvement of an entire set of interested groups such as lecturers, students, and dynamic teaching platforms.
- RSS (Really Simple Syndication) is that which assures users to get content and data regarding the latest happenings with no access to individual sites.
- Multimedia files is that which uses web-technology as the platform for distributing and making available the different multimedia files that offer lots of methods to exhibit multimedia resources.
- Social networks along with the e-library information system have been providing better, consistent and superior quality working standards combined related to information resources as well as the human resources. Through usage of the social network infrastructure, these libraries have been creating essential constituents as e-library funds, user groups, profiles and much more through consumer interference.
- Providing a complete search engine by means of the bookmarks and tagging.

FUNCTIONS OF DIGITAL LIBRARY

As mentioned by Patra & Nahak (2014), the major functions of digital libraries are:

- Providing accessibility to huge quantities of content to its users independent of location and as per convenience
- Providing accessibility to main information resources

- Supporting the multimedia information besides the text
- Providing access to network over Intranet as well as Internet
- Providing user-friendly interface
- Providing hypertext links for better navigation to sources
- Provision of Client-server design
- Highly developed search and consequent recovery
- Amalgamation with further digital libraries

Brangier et al. (2009) stated the core functions of digital libraries as:

- To store resources for giving an competent right to use relevant data
- To authorize the data provided for improving the reliability of the digital library
- To substantiate knowledge for updating the learning
- To evaluate the data for helping the consumer to understand the records
- To insist an individuality for expressing a high-quality, optimistic and significant image
- To connect by helping the users to bond with dedicated social networks
- To provide animation functionality for increasing user interest through creation of digital experiences

The other functions mentioned are:

- To offer responsive interfaces to its users
- To reward with further network functionalities
- To assist the conventional library functions
- To improve the advanced searching, accessing and recovery of data
- To make the library operations better
- To facilitate users to perform those searches which are not manually possible
- To protect the user information
- To protect exclusive compilation by means of digitization

OBJECTIVES OF DIGITAL LIBRARY

Trivedi (2010) specified the objectives of the digital library as:

- Accelerate the methodical creation of methods to gather, stock, and systematize content in the digital format
- Encourage competent deliverance of data in an economic way to every user
- Promote supportive endeavors in study resources, computing, and communication networks
- Reinforce communication along with alliance amid educational organizations
- Initiate leadership function within the creation and distribution of knowledge

Deshpande (2018) explains the purpose of digital libraries as:

- The digitization of libraries is aimed at making libraries for keeping rapidity with the current advancements
- The digital libraries are aimed at providing accuracy, flexible options and trustworthiness within the library as well as the information center.
- The digital libraries have the objective to reduce the continuous workload and to save time for bringing accuracy and pace to keep the resources protected.
- Digital library is there to enhance the competence in technological processing of library resources and transform the effectiveness of library management and supervision.

Pavani (2007) describes the purpose or objectives of digital library as:

● The handling of the records of all forms in a united manner irrespective of the form of data, providing it is possible to store them within digital documents.

● The information is allocated diverse kinds of access as per the types of users, which are permitted to them.

● The sharing of information is to be provided so that authors are able to make data accessible to further faculties to combine within their courseware. This is to be done with no duplication and just by 'pointing' to the contents through an appropriate set of metadata constituents.

● The information, which is handled by digital libraries to be made interactive and on the basis of multimedia.

● To provide customization as per the users that might need special features of the information and the system. This can be the case with users having special needs.

● To provide re-usage of the materials by developing things in the finest form so that there is a flexibility to combine and support multiple syllabus.

● To provide cross-institution cooperation, as these libraries are normally associated with the Internet, that facilitates the information to be utilized from diverse establishments in an appropriate way.

FEATURES OF THE DIGITAL LIBRARY

Vasupongayya et al. (2011) explains the features of digital library as:

● A collection of digital computation, storage space and communications machines collectively through the information and software required to replicate, follow and expand the services offered by traditional libraries

● It comprises a browser interface along with a virtual room and society

● It needs a smaller amount space and the information could be made accessible by means of communication networks to everyone at every location, at the same time as making simple searches with pace

● It is not a solo unit and is usually connected with multiple resources of various further groups

Sun & Yuan (2012) defined the features of digital library as:

● A library which supply a definite group of people or set of groups of people

● A corporation of numerous units

● Library which includes education and right to use

● Library which offers quick and proficient access through numerous accessible approaches

● A library having a compilation that is huge and continues more over time, structured and handled, enclose lots of formats and include objects that might be else not obtainable.

Rathee & Kaushik (2010) has explained the diverse features of digital library as:

● The digital library compilations comprises set and lasting records. The current libraries possess further dynamic collections as the digital settings further enables the fast management of transient information.

● The digital libraries are developed on the basis of digitally oriented technologies. The fundamental supposition that these libraries include just digital resources might not be true. It is possible that digital as well as non-digital data resources material have the feasibility to coexist.

● The digital libraries have been utilized by people working single-handedly. There is a focused work outlook concentrating on a set of information analysts, completing the work along with the documents and technologies which are supported.

● It eliminates the substantial boundaries of transferring the data internal and external to countries. It is observed that the supporting communications as well as collaboration is very significant, similar to data seeking activities.

TYPES OF DIGITAL LIBRARY

Kumar Mishra (2016) explained that the digital library is classified on the basis of the digital collection it possesses, the related technology used for the library, and the specific work or services it provides to its users. There are majorly three types of digital libraries that exist namely: Stand-alone Digital Library, Federated Digital Library, and Harvested Digital Library. Standalone is a regular library that has self-contained resources and is localized on a local area network with single or diverse collections. Federated library has various autonomous libraries having heterogeneous repositories and forming a virtual library with transparent user interface. Harvested Digital Library is one that harvests digital entities into metadata and is not a complete digital library but has regular digital library features.

Deshpande (2018) defined that digital libraries can be categorized on the basis of the standards and format. The different kinds as per standards of digital libraries are 1) Bibliographic 2) Record structure 3) Encoding 4) Communication 5) Protocol 6) Formats. Bibliographic refers to the descriptions of data sourced as per standards followed. Record structures explain the data record physically and logically. Encoding refers to the procedure of data transformation from one type of format to another type. Communication is the level at which exchange of messages or data is happening over the connection established. The protocols are rules which are configured for controlling the data exchange among two things set-up for connection. Brangier et al. (2009) concluded that digital libraries offer majorly three functions and can be classified according to the archived knowledge as per the formats, credible information and updated actualized knowledge.

Kanjilal (2017) described that digital libraries could be classified in groups in distinct ways. The digital libraries are categorized as per their origin such as the digital libraries which were created within the USA as the outcome of DLI 1 and DLI 2 (the Digital Library Initiatives) or eLib (Electronic Libraries) programme initiated in the UK. The other types of digital libraries are:

● Early digital libraries such as ELINOR, Gutenberg

● Digital libraries of institutional publications such as ACM, IEL

● Digital library developments at national libraries such as the British Library, Library of Congress (THOMAS), Digital Library of Canada

● Digital libraries at universities such as Berkeley Digital Library, Sun SITE Bodleian Library, Digital Library Projects, California Digital Library, DIGILIB, iGEMS and SETIS

● Digital libraries of special materials such as Alexandria, Informedia, Grainger Engineering Library

● Digital libraries as research projects such as GDL, NCSTRL, NDLTD

● Digital libraries as hybrid library projects such as HeadLine.

BENEFITS OF THE DIGITAL LIBRARY

The benefits of digital library as per Chore & Salwe (2010) are as:

- Preservation of the precious records, exceptional and extraordinary compilations of libraries, archives and museums.

- Guarded informational sources

- Provision of downloading as well as printing

- Provision of fast accessibility to the assets of libraries which are universally located by means of automated enhanced catalogues

- Helping in locating physical as well as digitized accounts of scholarly articles and books by means of solo interface

- Optimization of search, possibility of concurrent investigations on the Internet, preparation of commercial databases, and library collected works

- Instant pursue by the users

- Provision of cross references for further records

- Reducing the chain of author to the final user

- Saving of preparation or saving price, space and funds

- Management of digital technology in providing access to numerous, concurrent users from a solo origin which is not at all feasible with resources and documents saved in any other formats

- Full text search

Warr & Hangsing (2009) highlighted few of the main benefits of digital libraries as :

- Removing physical peripheries: The consumer of the digital library is not required to visit the library in a physical form and people or groups of people can get access to the similar data, provided that the Internet connection is readily available

- Accessibility at all time: Users can get data accessibility irrespective of the time and round the clock

- Many accesses at a time: The same data or sources are accessible to multiple users at the parallel time leaving no scope of shortage of knowledge

- An organized approach: Digital libraries has the benefit of providing accessibility to a more affluent information and that too in a much better organized format which means that one can conveniently shift from the record to the specific book then to a specific chapter and so on.

- Recovery of Information: People accessing digital libraries are capable of using any search term (word, phrase, title, name, subject) for searching the complete collection. Digital libraries can offer extremely useful user-friendly interfaces, through clickable accessibility to its content.

- Protection and maintenance of:

- Space- As the conventional libraries were restricted from storing information, the advantage of digital libraries is storing a great amount of information, just because digital data needs extremely less physical storage space to hold them.

- Networking- A specific digital library has the provision of associating with to every other resource of further digital libraries in a convenient way; therefore a faultlessly incorporated resource sharing is feasible due to digital library

Cost- Theoretically, the price of preserving a digital library is less in comparison a conventional library.

CHALLENGES FOR DIGITAL LIBRARY

Harilal (2018) highlighted that the problems faced by the digital library are:

- Shortage of funds
- Incapability to take in frequent costs
- Shortage of skilled staff or staff of suitable expertise
- Shortage of technical knowledge
- Shortage of developmental policies
- Insufficient infrastructure
- Lacking management help
- Lacking professional identification
- Non interest among library staff for commencing digital initiatives
- Lacking team efforts
- Lacking sufficient training of staff
- Legal concerns such as IPR Issue
- Network issues
- Vulnerability of media
- Technical obsolescence
- Issues of security such as hacking, virus impact, HD format
- Protection concerns

CONCLUSION

The primary function of any academic library is to provide quality information service in order to satisfy their users with the right information at the right time. The achievement of digital library is really helpful in order to fulfill the requirement of users. Digital library offers many option to the library users to do the task as quickly as possible. Use of the digital library enables the library to save space of the library and save time of the users. Although there are some challenges that users are facing while using the digital library. To meet these challenges librarians should play an important role. The library should possess to have well trained library staff who can guide the users and can teach them how to use the digital resources. Most important thing librarian should do efforts to create more awareness among users about digital resources.

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