Evolving Role of Hybrid and Digital Libraries in Contemporary Information Management

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Abstract*: With the use of a digital library, users may easily retrieve data from a digital collection by mixing text, numbers, pictures, music, and video files with other digital content. Libraries and the services they provide have undergone significant transformation due to advancements in networking, e-products, computer processing and storage, communication technologies, and internet use. The present study focuses on a working library that provides everyone with access to read and borrow books, documents, newspapers, and multimedia items. Information and communications technology has had a significant influence on libraries. It has altered the idea of a traditional library, which mostly uses print and paper materials. Libraries are changing into digital libraries in order to keep up with the massive information explosion and the increasing demand for information. The virtual library is a brand-new kind of library. This is the outcome of both the rapid advancement of technology and the digitization of library materials. Most of us often find library lingo to be bewildering. We attempt to provide a competent explanation of the language used in these libraries in this work. These libraries will increase educational effectiveness in the next centuries.*

Keywords: Hybrid library, Digital library, Virtual library.

I. INTRODUCTION

Electronic information from any age is available in our digital environment. Libraries used to be reserved for monarchs and other noteworthy persons. It was a library and information hub in the future, but information and communications technology changed the concept of a traditional library. Knowledge became a textbook, and data was valued more and used for dissemination rather than preservation. Due to rapid advances in information and communication technology, consumer demand has transitioned from conventional libraries to digital, electronic, and virtual libraries. ICT allows fast information collecting, storage, processing, and distribution, among other benefits. Data saturation makes it difficult to provide the appropriate information to the right individual. Information technologies let us provide the correct information to the right person at the right time. Modern people use infotech devices like PCs, laptops, and iPads to access and use electronic data that is only available from electronic sources at any time and from any location. Digital libraries are controlled collections of electronic and digital data and associated services gathered, preserved, and processed using electronic devices and network access. In contrast, a hybrid library offers print, non-print, and internet services. Though often used interchangeably, "digital library," "virtual library," "hybrid library," and "electronic library" should have different meanings. Current libraries include hybrid, electronic, and virtual libraries, which vary substantially from conventional libraries.

II. HYBRID LIBRARY

Hybrid libraries include both traditional print resources like books, journals, and papers as well as non-traditional or electronically created resources like e-books, electricpapers, and audio books. Chris Rusbridge first used the term "hybrid library" in a 1998 piece for D-Lib Publications. Most commercial and academic libraries are experimenting with hybrid libraries since they can simply supply electronically or online operations and develop collections using their current services and collections. With the advent of "information technology" in the 1990s, libraries were able to get electronic resources that were more generally accepted for academic and public use as well as more freely accessible.

For these digital goods, content on CDs, DVDs, or specialized offline online databases was readily accessible. Electronic information today encompasses papers and online services that are accessible, such e-journals, e-docs, and so on, since it is so readily available. Workers in hybrid libraries must have the necessary training to operate electronic equipment, such as scanners, CPUs, and other devices of a similar kind, as well as search through the enormous quantity of digital content that is accessible.

III. DIGITAL LIBRARY

Digital libraries provide fully automated services and digital versions of all resources. These libraries contain a wide range of subject matter, such as work on data and how to digitize, preserve, find, link, envision, use, disseminate, and manage data. According to N. Tomal and M. B. Yilar (2019), the definition of a digital library is "a collection of digital computer, storage, and communication equipment, as well as information and software." A digital library's content is mostly divided into two categories:

Born digital: This details is digitally generated and kept.

Digitalized: Data is stored in physical forms, which are then transformed to virtual or electronics ones using suitable gear and technology.

Architecture of Digital Library System

Architecture of digital library system mainly consists of 4 things user interface, search system, handle system and repository.

User Interface

Both the prototypes and the pilots have two client interactions: one for the users of the library, and another for the librarians and systems administrators who manage the collections. Each user interface has two components. A standard web browser is used for the real user interactions. It might be Netscape Browser or Microsoft Internet Explorer. The browser connects the website to client services by serving as a bridge between it and the rest of the computer. The client facilities provide the user with the ability to select what they want to browse and gather; they interpret information as electronic objects; they try to negotiate terms and conditions; they manage connections between electronic objects; they commit the nation of communication to memory; and they switch between the processes used by different system sections and framework components.

Repository

Digital items and other kinds of information are handled and stored in repositories. Numerous repositories, such as Web servers, outdated databases, and current repositories, may be found in a vast digital library. The repository access protocol (RAP) is the name of the interface that connects to this repository. RAP has many features, such as support for a wide range of electronic object dispersion, an accessible design with clearly defined interfaces, and an explicit description of the right and permission required before a client may acquire a digital object, according to K. S. Chung, H. W. Byun, S. Kim, and H. C. Yu (2018).

Handle System

Handles are identities that may be used to manage content in any database or repository and track down Internet assets over time, such as electronic products. When the handle system is used in conjunction with the repository, it receives a handling for a digital item as input and outputs the name of the archive that contains the object.

Search System

The electronic library system is based on the assumption that information may be obtained before it is pulled from a repository by searching a large number of indexes and catalogues. Such indexes might be independently supported and maintained by various strategies.

Virtual Library

Another kind of digital library gives electronic information: virtual libraries. This stresses Library material shortages. A library that gives local connection to dispersed electronic material has been called thus for a decade by librarians. "Remote access to library and other information components and services, merging an on-site gathering of existing and strongly utilised components in both write and digital form with a digital network that offers entry to and delivery from external world - wide library and commercial details and knowledge sources" Gap (1993). Virtual libraries are a worldwide emblem of information access due to their rapid and wide access to current content. Virtual Libraries have transformed librarians' concentration from selecting, categorizing, and organizing books and periodicals.

Virtual libraries prioritize accessibility above technical operations. Virtual Libraries have encouraged libraries, researchers, publishers, and document delivery companies in developed and developing nations to cooperate on scholarly communication. Online Libraries employ ICT to access digital books, documents, and periodicals to improve education, information acquisition, and quality of life. Virtual Libraries provide curricula, learning materials, books, journals, periodicals, newspapers, and library and information source services remotely. Virtual libraries use a network to access and distribute electronic material. A excellent public sector educational tool is inexpensive and meets student, teacher, researcher, and academic requirements. Free software programs and low Internet fees should promote public domain collection building.

Function of Virtual Library

- It enables worldwide access to up-to-date information in a timely and efficient way.
- It has revolutionized the old library method of exclusively cataloging book items.
- Non-book materials (NBM) cataloging encompasses not just databases but also websites.
- The focus is on access rather than collecting.
- It saves time
- It creates a digital gap since only wealthy nations with the finances to automate and meet the infrastructure needs for Virtual Library services can afford to sustain them.

Electronic Library

Electronic libraries store collections electronically and make them accessible on any media. Electronic data may be stored on a local or remote server accessible through computer networks. An electronic library includes these items and services. Electronic information includes all digital and analog items that need electricity. An electronic library saves customers time and helps them locate information and books online and offline. Corporation for National Research papers first used "electronic library" in 1988.

Advantages of Digital, Virtual, Electronic and Hybrid Library

Consumers may access information instantaneously online from anywhere in the globe, eliminating library trips. Simply input the library's URL for all services and information. Users save time by getting all information with one click.

Availability Libraries operate 24/7. Digital gadgets don't know day, night, weeks, or months.Web content is available 24/7. No information is accessible online 24/7.

Different users may share resources. Information may be accessed several times without difficulty. It saves customers time and money, improving services and meeting demands. Multiple users access the same resource at once or later. Traditional libraries provide one-time access.

Modern content The contents are well-organized, making it easy to go from catalogues to books, novels to chapters, etc. A library's structured learning archives help us quickly study and identify relevant material. We search the subject as needed from catalogue to book, index to chapters.

Use any term linked to a word or phrase in the collection to search or get information. Users will like the one-click library access and user-friendly UI. Search boxes allow word, phrase, symbol, and number searches. Explore our subject using search. Users saved energy, got information quickly, and used it easily.• Traditional libraries have storage

and space issues due to their print-based holdings, whereas digital libraries can store more information in less space. The digital library requires less space to function and supply services since one hard drive may house thousands of eBooks, periodicals, journals, and other items. Space-constrained libraries must digitize their collections.

Libraries now have high-speed internet connections, called networking. Sharing links facilitates resource sharing. The library's online materials are accessible without visiting. Users may access many libraries' databases with one click since libraries share connections, saving time and helping users discover relevant information.

Why Traditional libraries cost far more than virtual ones. Traditional libraries spend more on employees, upkeep, and salaries. Electronic, virtual libraries may improve this since they only cost once until technology progresses and fewer people are required.

Disadvantages of Digital, Virtual and Hybrid Library

Copyright
Since digitization makes it easy for others to transmit an author's information or resources without that author's knowledge, it breaches copyright rules. The primary issue is how libraries may distribute information while safeguarding the intellectual property of authors. In the digital age, it has become more difficult to defend an author's or publisher's intellectual property rights, even if copyright laws provide harsh penalties.

Website Speed
As more machines join, the server gets more stressed and the website becomes slower. If fresh approaches to solving the problem don't emerge soon, the Web will be flooded with failure alerts. With the large-sized documents, films, and music that make up digital information, which need higher bandwidth rates, it is challenging to provide the same speed of access because of ageing equipment.

Initial Cost
These days, modern libraries are expensive up front due to the programs, materials, equipment, and other things that are needed. Libraries are unable to buy them since they are not for-profit companies; instead, they must rely on any group that donates money to maintain and operate the libraries.

Bandwidth
High transfer rates are required for the delivery of multimedia content in libraries, since everyday use and internet saturation are using an increasing amount of bandwidth. Due to limited bandwidth, digital content takes longer to upload and download, which causes users to spend more time finding and obtaining the information they want.

Efficiency
Finding the correct information has become more challenging due to the proliferation of information caused by the information explosion. There are doubts about the information's accuracy.

Atmosphere
It is impossible to recreate the ambience of old libraries in contemporary libraries. Reading information shown on a computer screen is not always as pleasant for many individuals as reading written stuff. Many individuals prefer reading content in print due to technical reasons. Additionally, bad behaviors are a big issue.

Preservation
As technology advances, libraries become less relevant and their materials may no longer be available. A multitude of new formats will emerge in the future, making it challenging to preserve library materials in a way that is widely recognized.

IV. DISCUSSION

Libraries hold resources, publications, and other materials for use. Data is updated constantly to meet user needs. tangible, virtual, or both libraries supply tangible or digital contents. A library may have books, DVDs, CDs, cassette tapes, music, and bibliographic databases. Administrations, universities, organizations, and people may manage libraries of varied sizes. Librarians search, select, disseminate, and organize material, assess knowledge needs, navigate, and analyze massive amounts of data from numerous sources. Libraries often provide private study areas, communal research and collaboration rooms, and Internet and computer access. Different types of library patrons use different services. Specialist and general library expectations vary. Libraries and community centers may provide

lifelong education. Advanced libraries provide several services. books available online, even from home, boosting their offerings. Since distant users may access library information, data maintenance is easy in the electronic age. Digital libraries—also called electronic libraries, internet libraries, digital repositories, and digital collections—store text, still photos, music, video, digital documents, and more. Scanned print, photos, or actual digital information like word processing files or new media postings may be objects. Digitized libraries store, organize, search, and retrieve data. People and organizations may run digital libraries of varying sizes. Information may be stored locally or retrieved remotely through computer networks. Interoperability and sustainability facilitate data sharing amongst information retrieval systems.

V. CONCLUSION

In modern libraries, hybrid, electronic, digital, and virtual libraries are all interchangeable. Modern libraries will always have print items, but digitalization is necessary to fulfill user demand and stay up to date with technological improvements. As a result, libraries will be able to adopt a hybrid identity and interact with users in novel ways. Despite the high initial cost of digitization, research indicates that, once in place, the cost of maintaining and managing this library's contents will be lower than that of a traditional library. The cost of digitizing is going down every day since technology is becoming obsolete every day, online publications are expanding, and consumers' expectations are moving away from print sources.

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