

Effects of the Newest Technologies on Library professionals and College Libraries

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Abstract

Students have long seen libraries as limitless information sources; for ages, this meant volumes in rows after rows. However, libraries are changing in look as content transitions to digital platforms and Internet access becomes more of a fundamental human right than a privilege. This essay evaluates how digital technology has affected the development of academic library services. It starts with a succinct summary of the history of academic libraries and then moves on to a discussion of the opportunities and challenges facing academic libraries today. As technology develops at an astounding rate, library professionals must play a quick and dynamic role to stay current and learn new abilities to keep up with the development of technology. Due to the rapid expansion and broad use of web resources, library professionals need to acquaint themselves with the skill set in using the techniques and tools to meet the requirements of modern-day libraries. It has been attempted to gauge how ICT has affected librarians. Explains the various types of competencies that librarians acquire to deal with modern technologies. It also sheds light on the difficult position that librarians occupy in the era of online learning.

Keywords: Digital Era, Effects of ICT, Management of library collections, Environment of libraries, and Effects of ICT on LIS professionals.

1. Introduction

In academic libraries, the technological revolution has resulted in significant changes and a demanding environment. The use of technology in libraries has altered the responsibilities and tasks of librarians. Traditional libraries were formerly actual structures that people could visit and find printed books in. Without the use of computers, librarians were previously in charge of creating collections, processing materials, and offering services. Technology is used in academic libraries today. They offer digital content that is both born digital and digitized in addition to printed content (Analog to digital conversion). The bulk of tasks had to be computerized as a result of the digital age's entry into libraries. The manner that traditional librarians used to work has altered as a result of technology. Today, technology is used by librarians to acquire, catalog, preserve, disseminate, offer reference services, and other things. The existence of conventional libraries won't end as a result of this. Traditional libraries as physical structures will support digital libraries for a very long time. As a result, physical libraries and digital libraries exist side by side. This indicates that the role of

librarians in libraries is significant and will remain so. Between their traditional job and their digital position, librarians must strike a compromise.

Technology is essential to academic libraries in the twenty-first century. Users' information demands change and they have higher expectations of librarians because of the quick and continual modernization of technologies. To keep up with the rapid developments in technology, librarians must constantly upgrade their technological knowledge. Academic libraries must change to keep up with technological advancements. Librarians must accept their new roles and duties and are capable of adjusting to these changes by becoming knowledgeable about the most recent digital technologies. They need to be educated and have the necessary technical abilities if they are to adapt to a constantly changing environment. Academic librarians need to be capable of managing, organizing, and serving students. Today's librarians have to use both printed and digital materials. Once you've learned and acquired some digital skills, librarians are prepared to offer their services and help library customers achieve their objectives. Additionally, in addition to technical expertise, librarians should possess additional talents such as administrative aptitude, teaching ability, consulting abilities, and so forth. Academic librarians in the twenty-first century play a variety of responsibilities as they mix traditional and technical expertise. We have the idea that librarians should offer the greatest services and delight customers because we have experience working as academic librarians. Librarians must receive training in the newest technical advancements to offer users the greatest digital library services.

2. THE ROLE OF INFORMATION TECHNOLOGISTS IN THE DIGITAL ERA:

With enhanced digitalization and computer use, the flow of information has gained high speeds. Moreover, the accessibility and replication of information have been steadfast in the modern days. Digital libraries (DLs) have made significant technological and practical advancements on a global scale. Libraries are gradually transitioning to what could be dubbed virtual or digital libraries owing to the growth in ICT. The principles involved in the delivery of library resources and services have been considerably affected. The function of librarians and information specialists in the digital age will be demonstrated in the remaining paragraphs of this article. Technologists are:

3. DIGITAL ERA:

"The term "information era," often known as the "computer or "digital age," was the early days of the 20th century. History was marked by major changes in old themes that have been introduced as a consequence of the industrial revolution. The information era may be viewed as having begun with the development of transistor technology, which revolutionized modern technology and became the core of digital electronics.

4. NEEDS OF DIGITAL LIBRARY:

- A range of digital items serve as representations of information.
- Geographically dispersed users and collections of digital information.
- Vast and interesting selections.

5. LIBRARIANS SKILLS:

The following are some of the initial skills a librarian will need to do their duties in a digital library:

- It Skills: Hardware, Software, Operating, Networking, Communication, Technology,

Programming;

- Update: Must be current on new and latest world events;
- Leadership: Must be an effective leader.
- Gathering: To gain knowledge of extensive gathering and evaluation
- Managerial: You need to be aware of the library's management systems, among other things.

LIBRARIAN PURPOSE:

1. To make knowledge of any kind accessible intellectually.
2. To assess the information sources at hand.
3. Structure and organize the information.
4. To guarantee information preservation.

STRESSES AND PROBLEMS:

- Lack of funding for the library;
- technical difficulties;
- a lack of expertise;
- a collection of electronic materials;
- copyright concerns
- A fuzzy sense of perspective
- Staff members' lack of cooperation;
- Virtual crimes and security

6. ICT's Effect on Society:

A mechanism for individuals to transmit information from anywhere in the world in a digital format has been made possible, thanks to ICT breakthroughs that have amalgamated the information, communications, entertainment, and mass media sectors. Society is remarkably affected by these changes. The merger of technologies has had a significant impact on the thought process of individuals. The style of life has also been markedly transformed by modern-day technologies. Business, education, knowledge management, communication, scientific research, and daily activities like utilizing electronic - mail and smartphones at work and home have all been influenced by these advancements.

7. How ICT is Changing Academic Libraries' Situation?

Academic libraries now differ in nature as a result of ICT. The phrase "academic library" is used to describe several different types of libraries, including digital, virtual, and hybrid. A "digital library" is defined as a "Managed collection of information with associated services where the content is stored in digital format and accessible across a network." "Remote access to the content and services of libraries and other information resources, combining an on-site collection of current, heavily used print and electronic materials with an electronic network that provides access to and delivers from the external worldwide library and commercial information and knowledge sources" is the definition of a virtual library. A library that offers both electronic and paper-based materials is called a hybrid library. It is evident from the definitions that the majority of academic libraries that exist today fit into the hybrid category. Accessing and retrieving information is now both simple and complex thanks to the internet. Information retrieval systems aim to be as simple as possible while yet meeting end users' needs. However, the user is simultaneously faced with so many options

and information sources that the procedure becomes complicated.

- ICT enabled online access, file sharing, and the generation of information in a digital format.
- The use of ICT enabled networking and resource sharing.

The transition from print media to digital content has had a significant influence on libraries, information centres, and other organizations that handle information. This tendency is sometimes due to the combining of telecommunications, entertainment, information, and other key sectors. Computers have been ingrained at all levels in society, thanks to their capacity to complete repetitive operations in big volumes and without errors at rates that are significantly faster than those of people. Information can now be accessed at any time and from any location because of current and forthcoming innovations in computers, such as networking, telecommunications, and resource sharing.

ICT advancements and applications have completely altered the library landscape. Traditional libraries are giving way to hybrid libraries. In the world of knowledge, we observe the creation of libraries with various nomenclatures. These libraries are virtual collections that are widely dispersed, automated, electronic, or digital. The idea of Library 2.0 has emerged in the web environment. For tasks ranging from material procurement to information dissemination, all of these libraries employ various information technology tools.

8. The effect of ICT on managing library collections:

Electronic resources have increased the complexity and difficulty of collection management in this era of information explosion. Budgetary restrictions, a wide variety of formats, and constantly shifting user needs exist. Collection management entails participation in activities including need analysis, contract negotiation, and resource evaluation:

- **Electronic Resources:** ICT has drastically altered college and university libraries' holdings. The day when the actual collection of an academic library determined its stature is long gone. In the current networked technology era, access to readily available electronic resources has taken precedence over ownership of tangible objects.
- **E-Journals:** An electronic journal (or e-journal) is a replica of a paper-based journal that is sent to the user electronically. The printed journal has continued to be the primary method of communication for academics and researchers since its introduction in 1665; nevertheless, the cost of journal subscriptions has significantly increased in recent years. The typical boost for each journal subscription between 1986 and 1996 was 147%. The introduction of the internet drastically changed publication and made it feasible to publish at a low cost. Access was also made widely available thanks to the Internet.
- **E-Books:** In essence, Printed books and reference materials that have been preserved digitally and made accessible online are known as e-books. E-books are less expensive from a library's perspective regarding the distribution of books, binding, late notices, and fine administration. Online accessibility, keyword search functionality, etc. are additional benefits.

9. The Effect of ICT on Academic Libraries:

Academic libraries are founded, acquired, and supported by the university of which they are a part. They're frequently called university libraries. College and polytechnic libraries are likewise crucial components of the institutions that academic libraries support. They create their collections and services to fit the institutions' curricula. Academic libraries

have historically gathered, handled, shared, and maintained information resources across a variety of media, with a focus on paper-based resources like books and journals. The improvement and transformation of information collecting, processing, distribution, and storage have resulted from information and communication technology's emergence in libraries. Since information can be found on paper and in electronic form, libraries can transform a part of their older holdings into machine-readable formats. Networking, development, and availability of distant electronic databases have also been made possible by information and communication technologies, by providing libraries and library customers with access to a vast network, libraries are progressively transitioning from organizations focused on books to ones focused on information. ICT gave us the chance to set up electronic networks and make it simpler than before to provide distant computerized information services and products are accessible. Utilizing the tools offered by the Internet, libraries are incorporating them into their regular operations. Libraries, once seen merely as repositories of information, now have a fresh perspective in the era of contemporary information and communication technologies (ICT). With the use of ICT, tasks that were once laboriously and painfully performed manually in libraries are now completed quickly and more effectively.

3. Impact on Library Collection:

In addition to print resources, the library collection also contains audio and video cassettes, CDs, DVDs, electronic journals, electronic books, and electronic databases. Electronic media are replacing traditional paper as a storage medium. For library automation, there are numerous programs for managing libraries of both national and international origin options available in India, including commercial options like LibSys, Ventura, Library Manager, E-Granthalaya, and SOUL, etc. and open-source options like Koha, NewGenLib, etc. The consortiums UGCINFONET, DELNET, INDEST, etc. are active in India. Global communication and information search are made possible by internet technology.

3. Effect on Library Staff:

ICT has remarkably modified the responsibilities, roles, and duties of library staff members. The continuous dynamic environment requires the librarian to be alert, inquisitive, and ready to face the challenges imposed. This trait of a librarian will make him acceptable to the management of the library.

4. The effect on library users:

Academic librarians should be aware of the immense potential of the electronic and printed resources that is made available to students in libraries. Electronic resources are preferred above print resources by patrons of the newest libraries. They want all library transactions should be completed online and all materials should be printed and fully text searchable. It should be quick and straightforward to use the library service. How these innovations affect the user community includes an increase in technological literacy, a rise in the demand for better, quicker information access, and an aggravation of the gap between those with access to information and those without it.

Users today are accustomed to using technology and anticipate having access to it when they need it since they have been exposed to a variety of uses of it. Users who are Internet savvy demand such facilities. However, financial constraints will prevent the accessibility to such technologies. As a result, there are now two distinct types of users, and

libraries must serve both the wealthy and the poor. To guarantee equal access to information for all users, services for both groups should ideally be provided in a balanced manner. Utilizing potent and suitable technologies will enable this to be accomplished.

5. The effect of ICT on librarians or LIS professionals:

Computers and IT have altered the usage of information and services of libraries completely. ICT has aided library staff members who work in information science and libraries to provide value-added services and remote access to information resources. ICT which transforms our traditional library into a modern library allows for quicker access to stored material. Recent ICT advances have had an impact on information processing and several parts of libraries. As a result of ICT breakthroughs and their widespread use, digital information sources and media are gradually substituting analog media to become the major means of storing and retrieving information. Information and communication technology also make it feasible to adhere to the true laws of library science, such as "Every reader his/her book/information," "Save the reader's time," and "Library is a growing organism." Users with a range of needs are catered for by the advanced technology in communications, which offers high transmission speeds, easy access, and a multitude of information sources. It also removes barriers caused by geography and time, ensuring that the appropriate information is delivered at the appropriate time to the appropriate reader. It also responds to the library's need for the collection of information further it acts as an excellent resource for libraries.

Modern technology has brought about complicated difficulties for LIS professionals, who need to modify their responsibilities to accommodate shifting needs. By implementing the most recent ICT, LIS professionals can manage the changes in an efficient method and increase performance. To offer top-notch library services, they must increase their technical expertise and awareness of emerging information and communication technology.

6. The Librarian's Changing Role in the ICT World:

The duties and responsibilities of the librarian are continuously getting upgraded to accommodate ICT-enabled and information resources along with other changes. User expectations in the current dynamic world are also changing with the times. In addition to offering traditional library information services, librarians quickly providing both online and offline information services is required to patron requirements. To thrive and provide for its patrons, the library must keep up with their expectations. To transform data into useful information, librarians must become information knowledge navigators. The role of the librarian must change and extend to meet the numerous new issues that arise in the rapidly changing ICT world.

The roles of a librarian in the present-day world are multi-dimensional. He functions as a leader, a two-way communicator, an identifier, an information retriever, a website designer, an information analyst, a researcher, a knowledge manager, and finally as an information scientist.

15. Conclusions:

The study discussed the technological and associated challenges faced worldwide by everyone as well as by library and library professionals. Due to the digital revolution and IT environment, the role of libraries and library professionals has changed drastically. They are

now not only the caretaker of a physical collection but also the information facilitator or information disseminator of learning resources. Information specialists should be knowledgeable about recent developments in ICT. To meet the manifold information need of the users, librarians have to be visionary so that they can make available reliable and up-to-date information as quickly as possible. It is a challenge for librarians to walk on a path whose starting point was clay tablets, halted at microchips, and reached Artificial Intelligence (AI), hence, day by day the challenge for librarians is increasing for the organization of knowledge and its proper dissemination. To ensure their long-term existence and viability, library professionals must face this challenge in the digital or Google age and work to transition from being knowledge custodians to knowledge managers or information facilitators. The 21st century will be the age of a paperless society and a 21st-century librarian needs to possess the knowledge of Hypertext Mark-up Language, auto-indexing system, providing CAS through advanced technology, networking, and multimedia technology with a special ability to the digitization of data and digitally preservation of the same.

A library is a crucial part of any academic establishment since it gives students access to top-notch information sources and services while also promoting national academic research. As a result, a library is essential to any educational institution's performance and has an impact on the entire educational system. Over the past few decades, there has been an overwhelming enhancement in the usage of ICT and its impact on the operations and services of the library has been phenomenal. Information and communication technologies are now present in every area of the library. ICTs are more effectively used in the library, which leads to improved resource sharing and better user services. ICT is expected to be used by libraries to deliver information more swiftly. In the context of using ICT, the fourth law of library and information science—"Save the time of readers/staff"—is extremely pertinent. The AICTE, NAAC, NBA, and UGC also set the standards for using ICT in university libraries, institutes, or colleges, because of the rising impact of ICT on libraries.

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