INFORMATION TECHNOLOGY AND LIBRARY

Abstract

In the past, books were placed on the shelves only to fill the available space in libraries rather than being used by people. Except for books, information resources were prohibited in their use. That outdated practice has completely altered with time, and libraries are now seen as information resource hubs with a wealth of print and digital resources. Users were unable to locate an appropriate source of information that was compatible with their specific information demands due to the enormous expansion of information. To bridge the gap between learning tools and its users' requirements in this digital age is a huge issue for libraries and their librarians. This chapter will explain the bond of information technologies and libraries. Moreover, this chapter highlights the use of digitalization during pandemic.

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I. INTRODUCTION

Information Technology and Libraries disseminates original content about all facets of information technology in all kinds of libraries. However, in today's era which is an age of information and digitalization, libraries have undergone a profound transformation. The way we access and consume information has been revolutionized by the integration of information technology (IT) with conventional library services, which has also aided in bridging the digital divide. Moreover, Information technology can be defined as the management techniques, scientific, technological, and engineering disciplines used in handling and processing information, as well as their applications, computers and how they interact with people and other machines, as well as the related social, economic, and cultural issues. Simultaneously, with these technological breakthroughs, libraries have developed, becoming vibrant centers of information and creativity.

1. **Technologies and Libraries:** It is challenging to assess the whole impact of the changes brought about by technological advancements, particularly with regard to information technology, but it is evident that libraries are undergoing a fundamental transition. Divergent schools of thought have emerged as a result of the rapid development of information technologies in libraries and information management. One school of thought emphasize the short-term view, the opposing school of thought is in line with the long-term viewpoint.

   According to the short-term perspective, information technology has helped libraries work more smoothly, quickly, and effectively. The use of information technology, according to the short-term perspective, also removes tedious and repetitive work. Although the long-term perspective shares all of the short-term perspective's underlying assumptions, it has a different outlook because it takes into account the human aspect.

   A task that required five people to complete manually has been reduced to one person in the automated technique.

   - **Component of IT in Libraries**

     ➢ **Software Technologies:** This relates to the creation of computer programs that might facilitate library operations. Software such as Microsoft packages, tinlib, Alice for Windows, and others are used in library operations.

     ➢ **Media Usage and Development:** Handling information resources that are available in digital formats, such as CDs, projectors, microfiches, etc., is what this has to do with.

     ➢ **Artificial Intelligence:** This requires creating technology that can mimic human abilities including teaching, learning, and reasoning.

     ➢ **Workstation:** They are specialized computers that aid in the distribution of massive amounts of data from a server, which serves as the network's central hub, to other computers.

➢ **Emails and Hypertext:** Electronic mails, or e-mails, are messages sent via the Internet. They are typically employed for selective information transmission and current awareness. On the other side, hypertext is linkages that provide access to additional sources of information.

- **Use of Information Technologies in Libraries:** Information technologies perform varieties of functions. These include the following-

  ➢ **Cataloguing and Classification:** The development of information technology has accelerated the process of knowledge organization. The development of Union catalogues had been facilitated by the emergence of computers.

  ➢ **Indexing and Abstracting Services:** Computer programs are being utilized to carry out this activity in place of the human approach for highlighting significant keywords in a manuscript. Simply import the paper into the software, and the crucial keywords will be highlighted.

  ➢ **Database Management:** Software for managing databases is used to handle user information. Databases are now developed to record user information instead of the manual system that was previously used.

  ➢ **Current Awareness Services:** This service focuses on spreading knowledge of library resources and offerings. It comprises alerting library users to new materials that have just become available. This method is now more advanced because to the development of information technology because library customers are no longer need to physically be present in order to learn about the resources that are available there. However, library personnel can now send emails to them. They are forced to use the library from the comfort of their own homes as a result.

- **Benefits of Information Technologies in Library Services:** Without mince words, information technology has contributed greatly to the expansion of libraries. Some of the benefits are listed below-

  ➢ Networking among libraries and cooperation
  ➢ Lessening of the staff's workload
  ➢ Users get 24/7 access to library services.
  ➢ Providing library customers with efficient and effective service
  ➢ Unlimited access to data from many sources
  ➢ The availability of information in many formats.

2. **Relationship between Information Technology and Libraries**

- **The Digital Transformation of Libraries:** Libraries have undergone a dramatic digital revolution, shifting from being centers of information and digital resources to traditional storage of physical books. Due to the digitalization of priceless archival material brought about by the integration of IT, rare books and historical papers are now available to a global audience. Additionally, libraries now provide their patrons

with e-books, online journals, and multimedia resources, broadening the range of information at their disposal.

- **Online Learning and Research:** Libraries have changed from being only storage facilities for knowledge to becoming active hubs for learning and research. In order to meet the varied learning needs of its patrons, libraries can now provide online courses, webinars, and tutorials. Large digital databases, scholarly publications, and scholarly articles are all accessible to researchers, enabling them to stay up to date with the latest scientific discoveries.

- **E- Books and E-journal:** Electronic books and journals are products of information technology (e-books and e-journals). These digital forms offer a practical and sustainable replacement for conventional print media. Nowadays, large E-books and journals are easily available in libraries.

- **Online Library Services:** Libraries today provide a wide range of online services, such as digital resource can access anytime and anywhere, online reservations, online material renewal, and virtual reference assistance.

3. **Applications of Information Technology in Library:** The library is the main information center where IT is being developed for the benefit of all humankind. The fast-evolving information technologies have flooded nearly all fields of application, including libraries, and the librarian's preferred IT should include all those technologies that are anticipated to be used in library operations, activities, and other library services for the collection, processing, storage, retrieval, and dissemination of recorded information. In case of libraries, these services are useful in the following circumstances.

- **Library Management:** These quick IT advancements will undoubtedly speed up the following library administration tasks: classification, cataloguing, indexing, database construction, and database indexing.

- **Library Networking:** Library Networking is a collection of for any common pattern or design for information exchange and communication with a view to increasing efficiency, libraries and information centers are connected.

- **Audio-Video Technology:** Audio-Video technology includes photography microfilms, microfiches, audio and tapes, printing, optical disk etc.

4. **Impact of information Technology on Library:** Followings are the effect of information technologies on library management-

- **Electronic Resources:** Information Technologies has significantly changed academic and college libraries' holdings. Now the emphasis has switched in the modern networked technological era from ownership of physical goods to access to electronic resources that are available everywhere.

- **E-books:** E-books are simply printed books and reference materials that have been digitally preserved and made available online. E-books save money for libraries in

terms of shelving, binding, circulation, overdue notices, and fine administration. Online accessibility, the ability to search using keywords, etc. are additional benefits. Indeed, E-books has great impact on digitalization of libraries which makes the work easy for users.

- **E -journals:** The term "e-journal" refers to a version of the classic print or paper-based journal that is delivered electronically to the user in one way or another. Since its debut in 1665, the printed journal has remained the principal method for academics and researchers to communicate, but over the past few decades, the cost of journal subscriptions has significantly increased. The average increase per journal subscription between 1986 and 1996 was 147%. The introduction of the internet drastically changed publishing and made it feasible to publish for less money. Access was also made widely available thanks to the Internet.

5. **Impact on Digitalization on Library Users:** Academic library staff has a good understanding of the tremendous value of printed and electronic resources available to students at academic libraries. Users do not necessarily the insight. New generation library users have a preference for electronic resources rather than print resources. They want All resources should be available in full text and printable, library services should be fast and easily accessible,24*7 hours availability of library services and all library transaction should be online.

6. **Impact of Information Technologies on Librarians:** The impact of IT on library services and information use has changed. Information technologies has helped library and information science personnel in libraries to offer value-added services and give more distant access to the information resources that are available. Faster access to stored material is made possible by information and communication technology, which also transform our classic library into a modern library. The information profession and different aspects of libraries are being impacted by recent digitalization. Digital information sources and digital media are replacing and replacing and becoming the primary form of information storage and retrieval as a result of advancements in and the widespread usage of information technologies.

7. **Changing role of the Librarians in the Digitalization World:** The role of the librarian is adapting to new information & communication technology, information resources, and users' demands in the current dynamic, tumultuous world. In addition to offering traditional library information services, librarians must quickly deliver online and offline information services in accordance with customer requirements. To thrive and provide for their patrons, the library must keep up with their expectations. In order to transform data into information that is useful, librarians must become information knowledge navigators. The role of the librarian must change and extend in order to meet the numerous new issues that arise in the era of information technologies.

8. **Challenges Faced by Information Technology in Library Management:** As technology develops further, libraries must overcome a number of obstacles to adapt to and incorporate digitalization into their daily operations. Some of the common challenges include-

- **Digital Transformation:** Libraries must undergo a digital transition in order to stay up with the rapidly evolving information ecosystem. This entails putting in place digital lending platforms, digitizing their collection, and providing online services. The procedure necessitates a large investment in both staff training and technology.

- **Funding Constraints:** Funding IT projects in libraries might be difficult to come by because they can be expensive. Libraries sometimes have small budgets; therefore, they must rank their IT projects according to their significance and impact.

- **Privacy and Security Concern:** Libraries handle sensitive user data, such as personal information and borrowing history, which raises privacy and security concerns. It is essential to guarantee the security and privacy of sensitive data. Compliance with data protection laws and the implementation of strong cybersecurity measures become essential jobs.

- **E-Books and Licensing:** Libraries frequently encounter difficulties procuring e-books as a result of the publishers' tight licensing requirements. Libraries may find it challenging to provide a wide selection of e-books to their users since certain publishers may restrict the number of copies available or charge high charges.

- **Training and Support:** Libraries need qualified people to administer and maintain their IT systems and services. To provide users with high-quality service, librarians and staff must be properly trained in the use of computer technologies and in how to fix them.

II. ROLE OF IT IN LIBRARY MANAGEMENT DURING COVID -19

IT was crucial in assisting libraries during the COVID-19 pandemic in adjusting to the new obstacles and continuing to offer vital services to its patrons. Here are a few ways IT assisted in managing libraries during the pandemic: -

1. **Virtual services and Resources:** IT allowed libraries to offer a wide range of virtual services and resources while keeping physical libraries open or functioning with restricted access. This offered remote access to databases, e-books, e-journals, and other digital resources that customers could access from their homes.

2. **Online Catalogue and Search Tool:** In addition to keeping physical libraries open or operating with limited access, IT enabled libraries to provide a wide range of virtual services and resources. Customers could access databases, e-books, e-journals, and other digital resources remotely from the comfort of their homes thanks to this.

3. **Remote Work and Communication:** IT made it easier for library employees to switch to remote work by ensuring that they could still efficiently cooperate and communicate via a variety of online platforms and communication tools.

4. **Digital Learning and Events:** Libraries were able to engage with their communities and continue encouraging education and learning despite physical limitations thanks to IT support in the form of virtual events, webinars, and online seminars.

- **Cybersecurity and Services:** IT was essential in putting strong cybersecurity measures in place to safeguard sensitive user data and the confidentiality of online library transactions due to the rising reliance on digital services.

III. SERVICES THAT CAN PROVIDED BY ACADEMIC LIBRARIES DURING COVID-19

Online library services are the most secure option to offer library services to patrons throughout the epidemic. In order to connect with their library users, academic libraries can use online library services. Academic libraries are undoubtedly designed to give their customers access to material via the internet on their laptops and Android phones. Social media sites including WhatsApp, Facebook, Instagram, Twitter, Snapchat, SMS, and email (Synchronous and Asynchronous sluggish infrastructure) can be used to share online content with library patrons. Academic libraries have a responsibility to provide information literacy services by uploading free online resources like Author STREAM and JING as well as e-books, e-journals, reference books, and newspapers. which are user-friendly and freely accessible on the internet, and academic librarians can provide brief tutorials for their users explaining how to use a certain resource or how to get information from e-books and e-journals during the Covid-19 pandemic. The OPAC, library tours, etc., are just a few examples of the resources and services that library customers can access and learn about by using these connections. Users of the library will have free access to a variety of tutorials offered on the library websites by using the information literacy software. The main objective of an academic library is to make sure that both staff members and students can get the information they need. This service aids patrons in understanding how to use the library's information resources efficiently. Moreover, During the Covid-19 epidemic, academic libraries can additionally offer services like document delivery, selective information distribution, and interlibrary loan.

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