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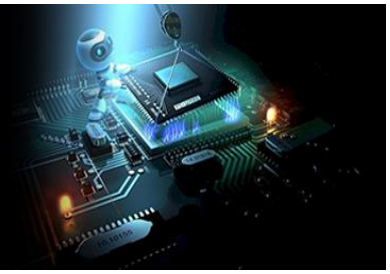

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Information technology effect on academic libraries

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Abstract
The use of information and communication technology (ICT) has compelled libraries to alter how they operate and handle information. Thanks to technological improvements, libraries have seen automation, digital libraries, open-source management, institutional repositories, and more. Digital resource acquisition, including e-books, e-journals, and online databases, has been made easier by ICT. The range of librarians' collections can now be increased by purchasing and accessing digital content from publishers and vendors. All the technologies that are anticipated to be utilized in library operations, activities, and other services for the gathering, processing, storing, retrieving, and distribution of recorded information should be included in the librarian's preferred IT list. The swift advancement of digital technologies has unleashed... The development of technology has made our lives easier, more productive, and more connected. Between cell phones, virtual reality, and artificial intelligence, technology has made numerous positive advancements that have changed how we interact with one another and the environment. Upgrading indeed makes it simpler for you to report any bugs you may encounter in the library. The first action you must take before receiving assistance or support is to upgrade if you discover a bug and have not done so.

Keywords: Library Automation, OPAC, Networking, Digital Library, ICT-based Services, and Information Technology

Introduction
Libraries are expected to use a variety of technologies, more rapidly and in greater quantities than previously, to supply information now that information and communication technology has been introduced. The benefit of using IT for information retrieval is that a large range of library materials may be accessed quickly and locally. It has also affected alerting services. Electronic material distribution has had a significant impact on information service operations, offering more flexibility, allowing for service modification, and opening up possibilities for completely new service kinds in the widespread transfer of information. The roles and activities of information professionals in libraries have undergone significant modifications over the last thirty years due to the swift advancements in information technologies. Today's libraries primarily use commercial software packages to carry out their operations. Many libraries have their online catalogues accessible via a web-based search engine and links to resources that they have either produced internally or obtained from other sources. To meet the information needs of their academic community, the majority of libraries have subscriptions to electronic resources and are linked to the campus network. Numerous libraries have started small-scale digitization initiatives to add to their holdings. To use, create, and manage the IT-based services and products that today's libraries use, librarians and information workers must acquire the necessary skills. The products, services, and applications of emerging information technology in libraries are discussed in this article. It explains online library services [1].

Technology use in academic libraries
Among the most important social institutions are libraries. A library that houses global knowledge is essential to any community. Libraries and the services they provide have been greatly changed by information and communication technology (ICT). Libraries used to provide their patrons with manual information resources and services but, these days, they are becoming more computerized, mostly in the form of online, or digital, libraries.

The Top 9 Trends in Information and Library Services Right Now

1. Management of Electronic Resources
2. Internet of Things
3. Cloud computing
4. RFID implementation
5. Visualisation of Data and Big Data
6. Computerised Intelligence
7. Library Services via Mobile Devices
8. Federated and Intelligent Library Search
9. Academic Integrity and Plagiarism [2]

What is library automation?

"Automation in libraries saves member data and monitors the books that are checked out and returned by the users". Automation of libraries is the process of using computers to monitor all the books that are checked out, returned, and added to. Library management systems are often known as library automation. It's an easy-to-use system. It was developed to guarantee that books in libraries are managed properly. All information, including book numbers, author names, rack data, book titles, and much more, can be stored in library automation. The issue and return process is simplified by it. It offers a search feature to assist students in finding any book in the library) [3].

Online OPAC Access

A sophisticated computerized system called the Online Public Access Catalogue (OPAC) has completely changed how library users interact with and access resources. OPACs are effective entry points to enormous databases of books, journals, DVDs, and other important resources. Because of their intuitive user interfaces and sophisticated search features, OPACs are now considered essential resources for both librarians and customers. These online catalogues give users the ability to look up specific things or browse through a wider range of topics while offering comprehensive bibliographic records and all the pertinent details about each resource. OPACs also frequently include several functions, like the ability to place holds, renew loans, and access personal library accounts. OPACs are evolving along with technology, adopting web-based and mobile applications that offer quick access to library collections anywhere and at any time [4].

Institutional Repositories

An institutional repository is a community-based service that an organization provides to its members for the administration and sharing of digital content produced by the institution and its members. In essence, it is an organizational commitment to the management of these digital resources, encompassing organization, dissemination, and, when necessary, long-term preservation (Lynch, 2003)[5]
An IR is a digital repository of an organization's intellectual production, according to Shearer (2006). They are a component of a wider worldwide network of repositories and gather and make available a variety of research materials [6].

Library Networking

The management and access of information in libraries has been completely transformed by networking technology, which has made formerly static library activities dynamic and networked spaces. These systems, which are frequently built on the Internet and computer networks, have greatly improved the effectiveness, accessibility, and range of library services. Libraries may easily connect their resources, services, and collections using networking technologies, which makes it possible for users to easily browse through enormous volumes of information. By incorporating digital catalogues, online databases, interlibrary loans, and collaborative platforms, libraries can expand their physical reach and provide users with previously unheard-of possibilities for learning, research, and collaboration [7].

Library Management

A branch of institutional management called library management concentrates on particular problems that librarians and library management specialists encounter. In addition to standard managerial duties, intellectual freedom, and fundraising obligations are included in library management. There are many similarities between the problems encountered in managing non-profit organizations and libraries [8].
Overseeing all library operations, budget management, planning and negotiating material acquisitions, handling Inter Library Loan [ILL] requests, maintaining stacks, supervising fee collecting, event organizing, fundraising, and human resources are among the fundamental duties of library administration [9].

Digital Library

A digital library is an online database of digital objects, which can include text, still images, audio, video, digital documents, and other digital media formats; it can also be an internet-accessible library. It is also referred to as an online library, internet library, digital repository, library without walls, or digital collection. Both created digital content, such as word processor files or social network postings, and digitized content, such as prints or photos, can be considered objects. Digital libraries offer ways to arrange, search, and retrieve the content that is part of the collection in addition to storing it. Digital libraries can be maintained by people or organizations, and they can vary greatly in size and scope [10].
Computer networks can be used to access digital content remotely or locally store it. Interoperability and sustainability allow these information retrieval systems to share information with one another [11].

Library Collaboration and Resource Sharing

"It will mean utilizing the information sources of one library for generating services by another library", claims Chatterjee, "rather than just mutual sharing of information sources available in different libraries" [12].
According to Sujatha (1999), resource sharing is simply the sharing of library resources among participating libraries based on the cooperative principle. This covers how resources like paperwork, labor, buildings, services, and equipment are used" [13].

Management Information System

Books and magazines must be received by the library's management information system, which must also code or number them, store and handle them, and create an index of the publications. Books and periodicals are the two primary document types that the library management manages.

When a new document is received, the librarian enters all of its details in the document register and adds it to the list of papers the library has available for patrons to search. The librarian enters the book name, book number, and author name in three fields on a card if the repeat is a new book. If it's a magazine, the librarian enters the name, number, and volume of the magazine in this area. Both the book number and the magazine number are unique. The library exclusively provides services to the institute's employees. Every employee should be assigned to a department inside the organization and given a unique number; they should never take other employees' numbers into account. The following details are recorded in the register of borrowing readers by the librarian each time a reader checks out a document: reader number, reader name, document number, document name, borrowing day, and return deadline. Upon receiving a returned document from a borrower, the librarian locates both the document and the borrower's number in the register and removes it [14].

ICT-Oriented User Assistance

The way people interact with and access information in libraries has been completely transformed by information and communication technology (ICT), which has also had a significant impact on the overall library experience. ICT has enhanced and diversified the user experience in several ways, from how users interact with library services to how they look for information.

- Improved Information Access.
- Remote Resource Access.
- Tailored Services.
- Cooperation and Information Exchange.
- Lifelong Learning and E-Learning.
- Digital Literacy and Proficiency.
- Mobile Apps and Their Usability.

ICT has had a profoundly transforming effect on library patrons, providing them with more personalized services, more access to information, and chances for ongoing learning and cooperation. Libraries are essential for closing the digital gap and guaranteeing that people from all backgrounds may fully engage in the digital era as long as they continue to adopt and incorporate new ICT solutions. Libraries may continue to provide their patrons with engaging and dynamic experiences that will inspire a lifetime love of learning and exploration by embracing the promise of ICT and remaining sensitive to user demands [15].

Conclusion

Academic libraries have transformed thanks to information and communication technology (ICT), which has made them into vibrant hubs of learning, creativity, and cooperation. Libraries may now provide a wider range of e-learning opportunities, digitize collections, expedite information retrieval, and increase access to information by embracing ICT. Academic libraries continue to be at the vanguard of research, teaching, and information distribution as technology develops, guaranteeing a better and more accessible future for higher education. The information landscape has undergone a radical transformation in the modern era thanks to computers and related technologies. Academic libraries have also seen this fundamental shift. These days, academic libraries would struggle to operate without computers and other information technologies. Libraries and information specialists have evolved and adapted to the advancements in information and communication technology in the modern world. Librarians will need to reorient themselves, exercise creativity, and embrace new technologies to provide services and resources that make the most of their ability to structure and organize information.

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