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ACADEMIC LIBRARIES IN TRANSITION: EXPLORING EMERGING TRENDS

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Abstract:

Libraries have undergone a transitional change in the 21st century. From a traditional storehouse of books and a silent reading spaces of reading materials it has evolved to modern libraries as vibrant knowledge hubs that cater to diverse learning needs and technological advancements. Libraries are also expanding their outreach by leveraging social media and digital platforms to engage its users. These evolving practices highlight the field's responsiveness to changing user expectations and technological progress. This paper explores the recent technological advancements and their practical applications within Library and Information Science (LIS). This study is based on a qualitative analysis of relevant literature and websites. By systematically examining academic journals, databases, conference proceedings, and credible online sources, the study identifies recent trends and innovations that are reshaping the roles and functions of modern libraries. The thematic analysis reveals a dynamic and evolving landscape in LIS, characterized by continuous adaptation to societal shifts and technological advancements. This article aims to provide valuable insights for LIS practitioners and scholars, serving as a foundation for future studies and highlighting the ongoing transformation within the discipline.

Keywords: *Evolving Academic Libraries; Recent Trends & Technologies; Digital transformation*

"As libraries embrace digital technology, they become more than just places for books; they are centres for creativity, collaboration, and life-long learning."

-Rebecca Jones

Introduction:

In the contemporary era, the rapid progress in Information and Communication Technology (ICT) has significantly transformed the way information is created, accessed, and disseminated. The rapid growth of digital media has led to an exponential increase in the availability of both current and past information. Along with recent developments and real-time news, traditional and rare archival materials, such as historical books, government regulations, decrees, and newspapers, are widely accessible, due to now being digitized and preserved in digital formats.

Today, information, knowledge, and entertainment are available across various platforms including the internet, mobile devices, and cloud-based services, often accessible from the comfort of one's home. Ironically, despite this information abundance, individuals often find themselves with limited time to meaningfully engage with the vast resources available to them.

Amidst these technological shifts, libraries remain pivotal social institutions. Historically recognized for their role in the preservation and dissemination of knowledge, libraries have continually adapted to meet the ever changing needs of their users. The impact of

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ICT has fundamentally reshaped library services, transitioning from traditional, manual systems to technologically enhanced operations. Academic libraries, in particular, are now embracing digitalization through the development of online repositories, e-libraries, and digital libraries. These initiatives aim not only to improve access to information but also to modernize the management of library collections and user services.

This paper explores the recent trends in academic libraries, with a focus on the applications of emerging technology, digital transformation, changing user expectations, and the evolving roles of librarians in the digital age. The following highlights the recent trends in the field:

Shift from Print to Digital:

One of the most profound changes in libraries has been the shift from print to digital formats. Modern libraries provide a diverse range of digital resources namely e-books, e-journals, databases, institutional repositories, and open educational resources (OERs). These resources supports the growing demand for remote and flexible learning by enabling access to information 24 x 7 ie anytime, anywhere. These electronic resources requires systematic management system namely E-Resource Management.

Electronic Resource Management:

With the growth of digital resources, Electronic Resource Management (ERM) has become crucial for effectively managing a variety of electronic materials. ERM pertains to the systematic processes and practices, libraries and information institutions employ to acquire, organize, access, and maintain electronic resources and digital formats which are accessible electronically. E-Resource Management Software is employed by libraries to locate the collection efficiently. The key components of ERM include acquisition, access management, metadata, cataloging, usage statistics and reporting.

Examples of Electronic Resource Management (ERM) practices in libraries: University of Texas at Austin Libraries, Library of Congress, University of California Libraries, Florida Virtual School Library, University of Cambridge Library, New York Public Library, University of Michigan Library, North Carolina State University Libraries. Examples of Electronic Resource Management (ERM) practices in the Indian context: Indian Institute of Technology (IIT) Libraries, National Digital Library of India (NDLI), Jawaharlal Nehru University (JNU) Library, University of Delhi Libraries, Tata Institute of Social Sciences (TISS) Library, Mahatma Gandhi University Library in Kerala, CSIR-National Institute of Oceanography (NIO), National Institute of Fashion Technology (NIFT), Central Library of the Indian Institute of Science (IISc). These libraries employs ERM system to manage a diverse range of electronic resources, ensuring proper licensing management necessary to make it accessible to students, researchers, and the general public. Providing regular training sessions to students and faculty enables efficient use these resources.

RFID Technology:

Radio Frequency Identification (RFID) has revolutionised library management by streamlining various process related to inventory control, enhanced the security system and user service in the library. It uses electromagnetic fields to automatically select and track tags attached to library items. The RFID based library management system is the trendy technology used to strengthen library security system. This technology enhances operational efficiency by facilitating various processes enhancing autonomy for routine tasks, data management and of being vigilant. RFID technology lets staff timely access the required materials onto the shelves and provide them into the hands of their patrons, improving the speed and accuracy of the circulation section. As a result, staff

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can spend more time on enriching interactions with their patrons, thoughtfully spare time to develop and enhance library initiatives and programs and not be stuck behind the desk. For the users, RFID accelerates the borrowing and return procedures. While challenges exist, careful planning, budgeting, and training can lead to successful implementation. As libraries continue to transform to technological advancements, RFID will play an important role in influencing the future of library services.

Cloud Computing:

Libraries across the globe are embracing cloud computing to make library services more efficient and cost-effective. This system enhancing digital libraries or repositories, ensures optimal use of library resources, infrastructure, human resources. Library automation and prompt data search is also a part of this technology. Furthermore, cloud computing enables third-party services to manage servers, perform upgrades, and handle data backups in digital libraries.

Internet of Things:

The **Internet of Things (IoT)** signifies a network of physical objects, often called "smart devices", that are integrated with sensors, software, and other mechanisms to connect and exchange data with other devices and systems over the internet. The best integrated library software and LMS software have started using the Internet of Things (IoT) to transfer data automatically. Libraries use IoT to control inventory, prevent theft, and identify users. It also helps in improving the quality and speed of circulation desk activities. Moreover, IoT facilitates reservation of books, fire detection and prevention in the library, and streamline digital library services.

Big Data and Data Visualization:

Big Data and Data Visualization comprises of representing vast amounts of data using visual formats such as illustrations and infographics. These visual tools make complex data easier for the human mind to comprehend, facilitating the identification of trends, patterns, correlations, and outliers within large datasets. This analysis is particularly valuable in enabling better decision-making approach.

With reference to digital libraries, Big Data and Data Visualization play a crucial role in improving accessibility and global reach. By leveraging these technologies, digital libraries can manage and present large-scale data more effectively, making it easier for users to navigate and discover relevant information. These tools allow readers to access a high volume data quickly, providing them with intuitive ways to explore diverse collections, analyze scholarly trends, and enhance research efforts. Ultimately, Big Data and Data Visualization contribute to a more user-friendly and efficient digital library experience, where information is readily accessible and easily understood.

Examples of western libraries that use Big Data and Data Visualization technologies to enhance access, research, and user experience in western countries are as follows:

The Digital Public Library of America, The British Library, The Library of Congress (LC Labs), New York Public Library (NYPL). Indian libraries using Big Data and Data Visualisation technologies are National Digital Library of India (NDLI), DELNET (Developing Library Network), INFLIBNET (Information and Library Network Centre): INFLIBNET is an inter-university centre under the University Grants Commission (UGC) of India, offering services like Shodhganga (for theses and dissertations) and e-ShodhSindhu (for academic resources). Indian Institute of Management (IIM) Bangalore offers a Data Centre and Analytics Lab (DCAL) where researchers and students can work on Big Data projects in various fields, including library sciences. Although not a traditional library, IIM Bangalore's DCAL uses Big Data and Data

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Visualization for academic research, providing insights through visual tools like dashboards and graphs that is applied in managing digital libraries, especially in research data management. Archives of Indian Government Websites (National Informatics Centre - NIC): Managed by NIC, this digital archive contains snapshots of Indian government websites over time, allowing users to view historical data and information. NIC uses Big Data and Data Visualization to archive and present large-scale government data, allowing users to visually explore the evolution of government websites and access records through interactive tools.

Artificial Intelligence:

Artificial intelligence (AI) uses the power of a robotics system that tries to do human tasks efficiently. The AI tools are increasingly being integrated into library systems to enhance services, improve user experiences, and optimize operations. AI tools are evolving library operations and functions, improving service delivery, enhancing user experiences, and making resources more accessible efficiently and effectively. The most common application of AI in a library is the chatbots that resolve users directional and frequently asked questions. They notify the user about their book submission due date, direct a user to the relevant library segment, and automatically schedule appointments. Similarly other features of applications of AI in libraries which includes Personalized Recommendations, Natural Language Processing (NLP), Automated Cataloging and Metadata Creation, Data Analysis and Visualization, Digital Preservation and Archiving, Plagiarism Detection, Sentiment Analysis, Predictive Analytics, Enhanced Accessibility are utilised for various functions to be carried out for efficient and effective user services.

Mobile-Based Library Services:

A library's core mission is to promote literacy, disseminate useful information, and encourage lifelong learning through diverse reading materials and resources. Mobile-based library services extend this mission by reaching users who may not otherwise have the opportunity to visit the physical library. With the widespread use of smartphones and tablets, libraries are increasingly leveraging mobile technology to enhance user engagement and accessibility. These services provide convenient, on-the-go access to collections, services, and information. Libraries now utilize mobile platforms such as WhatsApp, Telegram, and SMS to offer quicker and more personalized services. Many have integrated Learning Management Systems (LMS), like Moodle - to manage and deliver educational content effectively. The OPAC mobile application, developed by various LMS providers, is a prime example of mobile-based services that aim to transform conventional libraries into digital spaces. Dedicated mobile apps allow users to browse library catalogs; check out or renew books; Manage personal accounts; receive real-time notifications about due dates or new arrivals. Libraries also offer virtual reference services via mobile platforms, where users can chat with librarians, ask questions, and receive real-time assistance. Integration with social media platforms further enhances outreach, keeping users informed and engaged. Examples of Mobile apps are MyLibrary by Knumbus, Libby & Sora by OverDrive and more.

Academic Integrity and Plagiarism:

In academic libraries, academic integrity signifies a strong commitment to ethical practices in the use, creation, and dissemination of information. Libraries uphold this principle by fostering honest, responsible, and transparent research behavior among their users. The concepts of academic integrity and plagiarism are particularly important in the context of supporting quality research, learning, and the ethical dissemination of knowledge. Developing sound research practices and an understanding of

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information ethics is therefore essential in today's academic environment.

Any discussion on current trends in library services would be incomplete without addressing the critical issue of plagiarism. Plagiarism refers to the act of using another person's ideas, words, theories, data, illustrations, or graphics without appropriate acknowledgment, thereby presenting them as one's own. It is considered a serious violation of academic integrity and undermines the credibility of both the individual and the institution. For students and researchers alike, plagiarism compromises intellectual honesty and the overall quality of academic work. In response to this challenge, libraries play a pivotal role in promoting academic integrity and preventing plagiarism. They do so through user education, access to citation and referencing tools, and the provision of resources on ethical research practices. Moreover, libraries often facilitate training sessions on citation styles, referencing software, and academic writing.

Technology has further empowered libraries in this regard. The development and integration of plagiarism detection softwares, such as Turnitin, Urkund, iThenticate or DrillBit, enable institutions to monitor the originality of submitted work. These tools assess content similarity, helping to ensure that scholarly documents meet acceptable standards of originality. In educational settings, such technologies assist in guiding students, researchers, and faculty towards maintaining ethical standards in their academic pursuits. By advocating academic integrity and addressing plagiarism proactively, libraries contribute significantly to the cultivation of a responsible, informed, and ethical academic community. Key trends such as the integration of artificial intelligence and advanced search tools enhance the discovery of scholarly resources, making research more efficient and accessible. The focus on information literacy empowers students to critically evaluate sources and develop essential research skills, fostering a culture of academic integrity.

Libraries as Learning Spaces:

Contemporary libraries are increasingly adopting the concept of the "learning spaces", a collaborative centre where learners can access information, engage in group work, use multimedia tools, and seek academic support. The embedding of technology-rich environments, makerspaces, and digital labs enhances experiential and interdisciplinary learning. Moreover, the shift toward collaborative spaces and hybrid learning environments reflects the growing importance of community and engagement in academic settings. By providing versatile spaces that accommodate group work and individual study, academic libraries are becoming vital hubs for collaboration and innovation.

Librarians as Knowledge Facilitators:

As academic libraries continue to adapt and innovate, they are not only enhancing the access to information but also empowering individuals to navigate the complexities of the digital age with confidence. This transformative journey positions libraries as essential partners in education, research, and community engagement, ensuring their relevance in an ever-changing world. A key aspect of this evolution is the library's commitment to inclusivity and diversity. By developing collections that represent a broad spectrum of voices and perspectives, libraries enrich academic discourse and foster a sense of belonging among students from diverse backgrounds. Additionally, academic libraries are taking a proactive stance on promoting academic integrity by addressing issues such as plagiarism and ethical research practices through targeted instruction and resources.

The role of the librarian has evolved dramatically from being a gatekeeper of information to a dynamic facilitator of knowledge and learning. Today's librarians are actively engaged in infrastructure

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development, ICT applications, information literacy instruction, research support, digital literacy, and academic publishing assistance. They play a crucial role in helping users not only locate information but also critically evaluate, synthesize, and apply it ethically and effectively.

Conclusion:

As the world continues to evolve, so too do libraries, remaining steadfast in their mission to empower individuals and communities through equitable access to knowledge. Recent trends in academic libraries highlight how institutions are effectively adopting innovative practices to manage electronic resources, enhance user access, and enrich the overall library experience in an increasingly digital environment.

These developments align with the evolving needs of students, faculty, and the broader academic community. Academic libraries are no longer seen merely as repositories of information, but as dynamic facilitators of learning, research, and digital literacy. By embracing digital technologies and user-centric services, they are redefining their roles and strengthening their position as indispensable partners in the academic journey.

Both Western and Indian libraries have made notable strides by integrating advanced technologies and transitioning into knowledge resource centres. However, while university libraries often lead in adopting such trends, college libraries frequently implement changes reactively, often in response to accreditation requirements or immediate user demand. To bridge this gap, college libraries must adopt a proactive approach by implementing innovative tools and services ahead of demand. With the right infrastructure, ongoing training, and upskilling initiatives, users will gradually embrace these advancements. The COVID-19 pandemic in India offered a compelling example: despite economic constraints, many users adopted smartphones to continue accessing educational resources, showcasing a strong willingness to adapt when supported by accessible technology.

Ultimately, academic libraries are well-positioned to shape informed, digitally literate societies. By continuing to evolve and respond to the shifting educational landscape, they ensure their continued relevance, responsiveness, and long-term impact in the future of higher education.

References:

1. *Asim, M., Arif, M., & Rafiq, M. (2022). Applications of Internet of Things in university libraries of Pakistan: An empirical investigation. The Journal of Academic Librarianship, 48(6), 102613. Retrieved from https://doi.org/10.1016/j.acalib.2022.102613*
2. *Chandwani, Anita (2023): Latest Trends in Library and Information Science.- International Research Journal of Humanities and Interdisciplinary Studies Vol.4(3), 147-154. Retrieved from https://irjhis.com/paper/IRJHIS2303018.pdf*
3. *Ganesamoorthy, M & Selvakamal,, P: Emerging Technologies and Trends in Library: A Study.- In: E-Conference Proceedings on Connecting the Nations for Knowledge and Cultural Heritage held at Puducherry in February 2024. Retrieved from https://www.researchgate.net/publication/378183766_EMERGING_TECHNOLOGIES_AND_TRENDS_IN_LIBRARY_A_STUDY*
4. *Kumbhar, Rajendra (2014): Academic Library's Responses to the Emerging Trends in Higher Education.- DESIDOC Journal of Library & Information Technology Vol. 34, (6,): 477-485. Retrieved from https://www.researchgate.net/publication/268505220_Academic_Library's_Responses_to_the_Emerging_Trends_in_Higher_Education.*
5. *Nepali, S., & Tamang, R. (2022). A Review on Emerging Trends and Technologies in Library.*

ISSN–2277- 8721

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OPEN ACCESS Original Research Article

American Journal of Information Science and Technology, 6(1), 8. https://doi.org/10.11648/j.ajist.20220601.12

6. *Racheal, A. F. (2020). Global trends and emerging technologies in libraries and information science. Library Philosophy and Practice, e-journal,(January), 1–14. Retrieved from https://digitalcommons.unl.edu/libphilprac/3835/*
7. *Rafik, Sheik Maideen Abdul (2019): A Study on Emerging Technology trends in Academic Libraries: An Overview. In: E-Conference Proceedings on "Reshaping Librarianship: Innovations and Transformations" held at Bharathiar University, Coimbatore, TN. Retrieved from https://www.researchgate.net/publication/336318395_A_Study_on_Emerging_Technology_trends_in_Academic_Libraries_An_Overview*
8. *Sandhu, G. (2018). The Role of Academic Libraries in the Digital Transformation of the Universities. 2018 5th International Symposium on Emerging Trends and Technologies in Libraries and Information Services (ETTLIS), 292–296. Retrieved from https://doi.org/10.1109/ETTLIS.2018.8485258*
9. *Shashikumar, A., Manu, T., Chaudhary, P., Asjola, V., & Muduli, P. K. (2019). Emerging Technology Trends for Libraries and Library Professionals. 2ND International Conference On Librarianship Development through Internet of Things & Customer Service (LDITCS-2019), February. Retrieved from https://www.researchgate.net/publication/348871131_Emerging_Technology_Trends_for_Libraries_and_Library_Professionals*
10. *Singh K K, Asif M (2019): Emerging trends and technologies for digital transformation of libraries. IP Indian J Libr Sci Inf Technol 2019;4(2):41-43. Retrieved from https://doi.org/10.18231/j.ijlsit.2019.011*

Website:

1.https://slimkm.com/news-articles/emerging-trends-technologies-in-library-information-services/

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