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"The Emerging Trends In Indian University Library Services: A Systematic Review"

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Abstract: This review-based article provides an overview of Indian university libraries and their evolution. Academic libraries in India have transformed from book repositories to dynamic learning spaces facilitating access, research, and knowledge creation. Rapid technological advancements have led to automation, extensive digital resources, and global partnerships. E-books, journals, institutional repositories, digital libraries, and consortia arrangements have expanded learning opportunities. Initiatives like Shodhganga, e-PG Pathshala, and NLIST have enabled access to e-content.

Libraries now focus on user-centricity, providing customized services, mobile apps, virtual reference, and information literacy instruction. Open access is a priority, with institutional repositories and publishing funds. New services include research data management, IP rights support, maker spaces, innovation labs, and sustainability initiatives. Continuous assessment and staff development enable improvement. However, libraries face challenges like budget cuts and adopting emerging technologies like AI, VR and IoT. Advocacy for funding support and policy frameworks is required to reinvent libraries as future hubs of learning, technology, and scholarship.

Key Words: Emerging, India, Libraries, Services, Universities.

I. INTRODUCTION

Overview of Indian University Libraries

Academic libraries have always played a pivotal role in higher education in India. With over 1,113 universities and 43,796 colleges across the country, libraries remain the core hubs for learning, research, and knowledge creation. The Indian university library system is one of the largest in the world, serving millions of students and faculty (AISHE, 2021).

University libraries in India have evolved from being storehouses of books to dynamic spaces fostering learning, discovery, and scholarship. They enable access to global academic resources, both physical and digital, that are critical for quality education and advanced research. Library services like circulation, reference, research assistance, training, and more cater to the evolving needs of users.

In recent years, Indian academic libraries have transformed rapidly in line with technological disruptions and educational reforms. Automation, digital archiving, and access to e-resources have significantly enhanced operations and services. With information literacy key for students' academic success, library training programs empower users for self-directed learning. Continuous improvement of libraries is crucial as they continue to play an indispensable role in higher education.

According to the All India Survey on Higher Education (AISHE) 2020-2021, the total enrollment in higher education has increased to nearly 4.14 crore in 2020-21 from 3.85 crore in 2019-20. The female enrollment has increased to 2.01 crore from 1.88 crore in 2019-20. The Gross Enrolment Ratio (GER) has improved from the previous year for all social groups.

The number of universities has increased by 70, and the number of colleges has increased by 1,453, in 2020-21 over 2019-20. The total number of faculty/teachers increases by 47,914 from 2019-20. The IndCat database has 1,56,06,841 unique book titles with 2,32,16,494 holding details of 263 University/Institute libraries in India. It also has 4,50,610 unique records of theses from 459 universities and 37,152 unique records of serials from 238 universities. These statistics highlight the vast scale and importance of university libraries in India's higher education landscape. They underscore the need for continuous investment and innovation to ensure these libraries can effectively support India's growing and diversifying student population.

1. Digitalization of Resources:

Digitalization has indeed dramatically impacted academic libraries, enabling instant global access to resources. E-books and e-journals are now extensively used by students and researchers alike. Indian university libraries subscribe to e-journal databases like JSTOR, ScienceDirect, SpringerLink, and others, and e-book collections from various publishers (Iris Xie et al., 2016). National Institutional Repositories by premier institutes like IITs, IISc, and others host thousands of e-books, papers, and lectures. Libraries also digitize rare archival materials, manuscripts, theses/dissertations to preserve local content. Institutions use both commercial and open-source software like DSpace, EPrints, Greenstone to set up interoperable repositories.

The INFLIBNET Centre, an autonomous Inter-University Centre (IUC) of University Grants Commission (UGC) of India, has enabled access to e-resources for many academic libraries through initiatives like Shodhganga, Shodhgangotri, and e-PG Pathshala. The N-LIST (National Library and Information Services Infrastructure for Scholarly Content) program provides access to e-resources to students, researchers, and faculty from colleges and other beneficiary institutions through server(s) installed at the INFLIBNET Centre (Singh, 2015.)

Digital libraries have become ubiquitous, enabling anytime, anywhere access. They expand learning opportunities for students and promote the dissemination of indigenous research. The digitization of university libraries in India is still in the embryonic stage.

The development of Digital University libraries has been suggested in three phases:

- Phase I: Acquiring Materials in Digital form
- Phase II: Digitization of Thesis, Dissertations, Manuscripts, and Rare Books
- Phase III: Digitization of books and Journals

In the third phase, the digitization of books and journals should be taken up. The university libraries in India will have more or less similar books and journals. Digitizing all books and journals in university libraries will result in duplication of process and wastage of time, money, and manpower.

These advancements underscore the need for continuous investment and innovation to ensure these libraries can effectively support India's growing and diversifying student population. As the world trends in ICT compel the libraries to move on par with other areas of development, Indian university libraries are no exception to this. There is a need to catch up with modern trends, which is possible only through the digitization of libraries.

2. Collaborations and Partnerships:

Partnerships and collaborations have become essential for academic libraries to enhance resources and services. Indian university libraries are members of global library consortia like ICOLC, CARL, ANGLU to facilitate inter-lending and access to shared catalogs and resources. Industry linkages enable libraries to prepare students for the job market. Libraries partner with corporate L&D teams to align research projects, internships and skill development with industry needs. Tie-ups with publishing houses and aggregators facilitate usage of scholarly resources (Konnur, 2019).

Government initiatives like NME-ICT, NKC, and IMPRINT support universities in digitization, automation and e-resource access. The JULNET consortium was set up by the MHRD to integrate library networks. The UGC's INFONET provides high-speed links and access to e-resources across universities. Such schemes help modernize university libraries. Partnerships at national and international levels allow Indian academic libraries to pool resources, adopt best practices and better serve user needs.

3. User-Centric Services:

User-centricity has become a prime focus for academic libraries striving to provide personalized and seamless services. Many libraries now offer customized recommendations based on circulation history, search topics and user interests. Virtual reference services through email, chat and co-browsing enable real-time assistance without physical access. Some libraries even provide round-the-clock support. Video tutorials and screencasts on information searching, tools, plagiarism avoidance etc. serve learning needs (Mayende et al., 2021).

Mobile apps allow users to search catalogs, access accounts, databases, e-resources and manage loans through smartphones. Apps like bookmyne, Ranganathan, Easylib etc. have been adopted by many academic libraries for mobile-friendly services. Such initiatives improve self-service options by making library services intuitive, interactive and accessible anywhere, anytime. They underscore the libraries' growing patron-centric focus aligned with modern user expectations and lifestyles.

4. Open Access Initiatives:

Open access has become a priority for academic libraries to increase reach and usage of scholarly output. Institutional repositories like Vidyanidhi at University of Mysore, ePrints at IIT Delhi and DSpace at INFLIBNET host thousands of open access articles, theses, papers and data sets. Libraries conduct awareness programs and workshops to promote open access publishing among faculty and students. Many libraries have Open Access funds to sponsor article processing charges for authors. Library associations advocate for national open access policies and mandates (Sinha, 2008).

Librarians help faculty self-archive accepted manuscripts in compliant repositories. Libraries participate in global open access events like Open Access Week to highlight issues. Such initiatives expand global visibility and use of indigenous research originating from Indian institutions. Open access has the potential to accelerate the growth of world-class research from India. Proactive efforts by academic libraries are thus critical for the open access movement to gain more traction.

5. Data Management and Research Support

Research data services have emerged as a new focus area for academic libraries. Data curation programs help researchers properly organize, describe, format, store and preserve research data. Metadata creation, assigning identifiers and uploading to data repositories is facilitated. Librarians conduct training and workshops on best practices in research data management planning, storage, security, sharing, citation and ethical use of data. Guidance is provided on data management requirements of funding agencies and publishers. Model data management plans are shared (Masinde et al., 2021).

Such research data support services fill an important niche for libraries. They allow improved discoverability, reusability and interoperability of the research data produced at campuses. The new roles align with the goals of open science and research by helping unlock access to data.

6. Maker Spaces and Innovation Labs

Maker spaces, innovation labs and fablabs are emerging as creative collaborative zones for learning in many academic libraries. These provide access to technologies like 3D printers, virtual reality headsets, robotics kits, electronics equipment and more. Students utilize 3D printing facilities in libraries for prototyping designs, models and developing engineering projects. Virtual reality labs allow immersive learning through simulated experiences and visualization in disciplines like healthcare, astronomy, anatomy etc (Collins and Unger Advisor, 2017).

The facilities foster experimentation, design thinking and hands-on learning. Campus libraries, being neutral spaces, are ideal locations for provisioning access to advanced technologies and tools for the university community through such creative commons. Maker spaces align with the libraries' changing role as centers for co-creation of knowledge.

7. Sustainable Practices in Libraries

Sustainability has become an important priority for modern libraries to reduce environmental impact. Green library practices are being widely adopted like shaded windows, sensor lighting, eco-friendly furniture, water conservation and plastic-free initiatives. Libraries are switching to energy-efficient technologies like LED lighting, solar panels, occupancy sensors and automated temperature control. Building Management Systems help monitor and optimize energy usage. Offsite servers, cloud computing and virtualization also curb power consumption in libraries (Hasan & Panda, 2023).

Green architecture is incorporated in new library buildings with ample natural lighting and ventilation. Libraries encourage sustainable commuting through facilities for cyclists and shuttle services. Sustainability criteria are also often included in collection development and supplier policies. Such efforts help position libraries as champions of environmentally responsible practices. The greening of libraries creates healthy, energy-efficient spaces welcoming to users while lowering resource consumption.

8. Diversity and Inclusion in Library Collections

Academic libraries are making conscious efforts to build diverse and inclusive collections representing a plurality of views and backgrounds. Special collections and archives are being created to preserve marginalized narratives like Dalit literature. Books, magazines, films and resources spotlighting women, LGBTQ+, minority communities and marginalized groups are key acquisition priorities. Oral histories are being recorded to document experiences of underrepresented groups (Hepler & Horalek, 2023).

Multilingual collections in vernacular languages are being developed to serve linguistically diverse user groups. Literature from regional and folk traditions is being digitized. Translations of international works are being added. Anti-bias guidelines are formulated to avoid stereotypes in cataloging and classification. Library displays and exhibits highlight diverse cultures, identities and perspectives. Such initiatives align with the educational and social role of academic libraries as inclusive spaces facilitating exposure to diverse ideas and worldviews.

9. Assessment and Evaluation of Library Services

Continuous assessment of outcomes and impact is crucial for academic libraries to improve services. User surveys gauge satisfaction levels across various library functions like resources, space, technology, staff assistance etc. Feedback is analyzed to identify strengths and pain points. Quantitative usage statistics of resources, facilities and services are evaluated using assessment software, digital analytics and customized reports. Benchmarking with peer institutions helps assess performance.

Insights from assessments enable data-driven decision making to realign services, modify policies or invest in new solutions. Assessments also help demonstrate libraries' value and impact on student success, faculty productivity and institutional goals. By integrating user-centric assessment frameworks, Indian academic libraries are evolving as dynamic learning organizations that proactively improve services and provide greater value to their community.

10. Professional Development for Librarians

Ongoing skills development is crucial for librarians to adopt emerging roles. Professional bodies like ILA, IASLIC and SALIS organize conferences, seminars and workshops on new technologies, trends and best practices. Librarians also attend international events like IFLA to gain global perspectives. Many libraries conduct in-house training programs on digital skills, data literacy, research support, information literacy instruction and more. Library schools offer continuing education on topics like marketing, leadership, project management and communication. This enables librarians to develop competencies beyond traditional roles.

Mentorship programs, webinars, e-learning platforms and access to research publications further support continuous learning. Secondments and exchange programs help librarians gain newer skill sets required in modern academic libraries. A culture of constant capability development is vital for librarians to remain updated, innovate services and showcase the evolving value of libraries.

11. Future Directions and Challenges:

Academic libraries will continue to evolve in line with advances in technology and pedagogy. Adoption of automation, artificial intelligence, Internet of Things, augmented/virtual reality and smart technologies will drive newer service models. Enabling seamless access across physical, digital and networked spaces will be critical. Libraries face the challenge of shrinking budgets and decreasing manpower. Advocacy for increased funding support from parent institutions and dedicated library budgets is key for libraries to flourish. Library associations need to lobby for favorable policy frameworks and schemes to modernize libraries.

Developing diversified resource strategies through donations, partnerships, revenue centers and user-focused fee-based services will enable libraries to enhance facilities despite funding constraints. The future landscape will require librarians to wear many hats - as technologists, instructors, data stewards, collaborators, managers and more. Reinventing libraries as vibrant learning hubs will call for creative vision, leadership and change readiness among librarians.

Conclusion:

The article provides a holistic overview of the state of Indian university libraries. It summarizes their evolution, key contributions, recent advances, and future roadmap. Libraries have transformed from passive book collections to dynamic learning spaces integrated with modern technologies, digital resources and global knowledge networks. Adoption of international standards and best practices has improved efficiency and service quality. However, continued advocacy for funding support and policy initiatives is needed for library modernization. Libraries will need to assess new technology applications and evolving pedagogies to stay relevant as information and learning hubs of the future. Ongoing skill development will enable librarians to transition into emerging roles like data stewards, technology managers and research partners. Reinventing libraries as inclusive, sustainable and vibrant centers fostering learning, innovation and knowledge creation should be the goal for the future.

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