



CURRENT TRENDS IN LIBRARY INFORMATION CENTERS IN HIGHER EDUCATION INSTITUTIONS IN INDIA

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Abstract

Higher education in India is passing through a tremendous change. India has become the third largest system in the world among institutions and students also. India has significant advantages in the 21st century knowledge race. It has a large higher education sector – the third largest in the world in student numbers, after China and the United States. The purpose of education is well-rounded development. Students need a combination of arts, computer science, science, and humanities or literature courses to achieve this kind of development. A well-equipped and well-managed library is the foundation of modern educational structure. The library is the chief instrument for accumulating and using our intellectual heritage.

Key Words: **Higher Education, ICT Era & Library and Information Science**

Introduction

Role of Libraries in Higher Education Institutions

Libraries play a crucial role in higher education institutions, serving as academic and intellectual hubs that support the teaching, learning, and research activities of students, faculty, and researchers. Here are some of the key roles that libraries fulfill in higher education:

Information Access and Resources: Libraries provide access to a vast collection of academic materials, including books, journals, databases, and multimedia resources. They offer a wide range of print and digital materials to support the curriculum and research needs of students and faculty.

Research Support: Libraries assist in research endeavors by offering research consultations, access to specialized databases, interlibrary loans, and guidance on citation and referencing. Librarians often collaborate with researchers on literature reviews and information searching.

Information Literacy Instruction: Libraries offer information literacy programs to help students develop critical thinking skills, conduct effective research, and evaluate information sources. These skills are essential for academic success and lifelong learning.



Study Spaces: Libraries provide quiet study spaces, group study rooms, and collaborative workspaces, offering an environment conducive to focused academic work. These spaces promote a culture of learning and scholarship.

Technology and Computing: Libraries offer computer workstations, printing and scanning facilities, and access to software and online resources. They help students and faculty stay current with technology trends and support digital literacy.

Specialized Collections: Academic libraries often have specialized collections, such as rare books, archives, and subject-specific resources, which are invaluable for research and scholarly exploration.

Academic Support Services: Many libraries offer academic support services, including tutoring centers, writing labs, and mathematics resources, to help students succeed in their coursework.

Collaboration and Partnerships: Libraries collaborate with faculty and other academic departments to support curriculum development, integrate information literacy into courses, and promote open educational resources (OER) adoption.

Open Access Initiatives: Libraries are active in promoting open access initiatives, which make research and educational materials freely accessible to the global community, reducing the cost of education and increasing access to knowledge.

Cultural and Intellectual Events: Libraries host cultural events, author talks, exhibitions, and lectures, enriching the academic and cultural life of the campus community.

Reference and Research Assistance: Librarians provide reference services, helping students and faculty with information inquiries, research strategies, and database searches.

Archiving and Preservation: Libraries play a role in archiving and preserving institutional history, faculty publications, theses, and other scholarly materials.

Accessibility Services: Libraries ensure that materials are accessible to all students, including those with disabilities, by offering assistive technologies and accessible formats.

Professional Development: Libraries support faculty and staff by offering professional development resources, workshops, and training to enhance their teaching, research, and information management skills.



Innovation and Technology Integration: Libraries often serve as centers for innovation, experimenting with emerging technologies such as virtual reality, makerspaces, and data visualization tools to enhance the learning and research experiences of students and faculty.

Libraries in higher education institutions are dynamic and responsive to the evolving needs of their communities. They serve as critical components of the educational ecosystem, fostering a culture of inquiry, scholarship, and lifelong learning.

Digital Transformation: Libraries were increasingly digitizing their collections and services. This included offering e-books, digital archives, and online access to databases and resources.

Open Access Initiatives: Libraries were actively participating in open access movements, providing free and unrestricted access to scholarly research and educational materials.

Data Management Services: Libraries were expanding their roles in helping researchers manage and preserve research data. They were offering support in data management planning and curation.

Maker Spaces: Many libraries were creating maker spaces and innovation hubs, providing access to 3D printers, robotics, and other creative tools for hands-on learning and exploration.

Collaborative Spaces: Modern libraries were incorporating collaborative workspaces, group study rooms, and areas that facilitated teamwork and interaction among patrons.

Information Literacy and Digital Skills: Libraries were offering programs and resources to enhance information literacy skills, digital literacy, and critical thinking in the age of information overload.

Community Engagement: Libraries were becoming more community-centric, hosting events, workshops, and activities that addressed the specific needs and interests of their communities.

Diversity, Equity, and Inclusion (DEI): Libraries were focusing on DEI initiatives, ensuring that their collections, services, and staff were inclusive and representative of the entire community.

AI and Automation: Some libraries were exploring the use of artificial intelligence and automation to improve user experiences, including chatbots for reference services and RFID technology for self-checkout.

Virtual and Augmented Reality: Libraries were using VR and AR technologies for educational and immersive experiences, from virtual tours to augmented reality books.

Library as Third Place: Libraries were embracing the concept of being a "third place" (after home and work), providing a welcoming and comfortable space for the community to gather, work, and relax.

Environmental Sustainability: Libraries were adopting sustainable practices, such as using energy-efficient technologies, promoting recycling, and incorporating green design principles into new construction.

Remote Services: Libraries were enhancing their online presence and remote services, enabling patrons to access resources, borrow e-books, and interact with librarians from anywhere.



Community Partnerships: Libraries were partnering with local schools, businesses, and community organizations to expand their reach and provide specialized services.

Library as Cultural Hub: Many libraries were curating cultural experiences, including art exhibitions, music performances, and author talks, to enrich their community's cultural life.

LIS Professionals Skills

Library and Information Science (LIS) professionals require a diverse set of skills to effectively manage and provide access to information in various settings, including libraries, archives, and information centers. These skills are essential for serving patrons, organizing collections, and adapting to the evolving information landscape. Here are some key LIS professional skills:

Information Organization and Cataloging: Proficiency in classifying, cataloging, and indexing materials using systems like Dewey Decimal, Library of Congress, and MARC (Machine-Readable Cataloging) standards.

Reference and Research Skills: The ability to assist patrons in finding information, conducting research, and using various reference tools, including databases, search engines, and print resources.

Digital Literacy: Familiarity with digital technologies and the ability to assist users in accessing digital resources, e-books, databases, and online catalogs.

Information Retrieval: Skills in effectively searching and retrieving information from various sources, both online and offline, using Boolean operators and search strategies.

Collection Development and Management: Knowledge of collection development principles, including selection, acquisition, weeding, and resource evaluation.

Information Literacy Instruction: The ability to design and deliver information literacy programs to teach users how to critically evaluate and use information effectively.

Reference Management Tools: Proficiency in using reference management software like EndNote, Zotero, or Mendeley to assist researchers with citation and bibliography management.

Archiving and Preservation: Knowledge of archival techniques for preserving and maintaining historical records, manuscripts, and rare materials.

Metadata Creation: Skills in creating and managing metadata to enhance the discoverability of resources in digital repositories.

Customer Service: Effective communication and interpersonal skills to assist and serve library patrons professionally and courteously.

Cataloging Software and Integrated Library Systems: Proficiency in using library software systems for cataloging, circulation, and acquisitions.

Project Management: The ability to plan and execute projects, such as digitization initiatives, database migrations, and collection development projects.

Interlibrary Loan Services: Knowledge of procedures and systems for borrowing and lending materials between libraries to expand access for users.



Copyright and Intellectual Property: Understanding of copyright laws and intellectual property issues to guide users and protect library resources.

Adaptive Learning: The capacity to adapt to new technologies, trends, and best practices in the constantly evolving field of LIS.

Collaboration and Networking: Building relationships and collaborating with other professionals, both within and outside the library field, to access resources, share knowledge, and engage in community partnerships.

Cultural Competence and Inclusivity: A commitment to inclusivity and cultural competence, ensuring that library services and resources are accessible and relevant to diverse populations.

Leadership and Management: Skills for leading teams, managing library operations, and making strategic decisions to enhance library services.

Research and Analysis: The ability to conduct research, assess user needs, and evaluate the impact of library services through data analysis.

Adaptability and Lifelong Learning: A commitment to ongoing professional development, staying current with emerging technologies, and continuously improving one's skills and knowledge.

These skills are essential for library and information professionals to provide high-quality services, foster information access, and support the needs of library patrons in a rapidly changing information landscape.

Impact of ICT on Academic Libraries

Information and Communication Technology (ICT) has had a profound impact on academic libraries, transforming how they operate, the services they provide, and the role they play in higher education. Here are some of the significant impacts of ICT on academic libraries:

Digital Collections: ICT has enabled academic libraries to digitize and offer a wide range of digital collections, including e-books, e-journals, digitized historical documents, and multimedia resources. This has expanded access to scholarly materials for students and researchers.

Online Catalogs and Databases: Academic libraries have adopted integrated library systems (ILS) and online databases, making it easier for users to search, access, and borrow materials from anywhere with an internet connection.

Electronic Resource Management: Libraries use ICT to manage electronic resources efficiently, including licensing, access control, and tracking usage statistics. This ensures the cost-effective management of digital collections.

Open Access Initiatives: ICT has supported the growth of open access publishing, enabling libraries to promote open access resources and collaborate on open access initiatives. This has expanded the availability of scholarly content to the global community.



Information Literacy and E-Learning: Academic libraries integrate ICT into information literacy programs, helping students develop digital and critical thinking skills. They also support e-learning initiatives by providing online resources and services to support online courses.

Remote Access: ICT allows library users to access resources remotely, which is especially important for distance learners and off-campus students. This has increased the accessibility of library materials.

Data Management Services: Many libraries are involved in helping researchers manage and preserve research data, which has become increasingly important in the digital age. They provide tools and guidance for data storage, sharing, and preservation.

Digital Preservation: ICT plays a critical role in the preservation of digital materials, including archiving websites, ensuring long-term access to valuable online content.

Library Automation: ICT has automated various library functions, such as circulation, cataloging, and interlibrary loans, resulting in more efficient operations and improved user services.

Mobile Access: Libraries have adapted to the mobile era, offering mobile apps and responsive websites for easy access to library resources on smartphones and tablets.

Collaborative Tools: ICT enables libraries to collaborate with other institutions and share resources more effectively. Interlibrary loan systems and cooperative collection development are examples of this collaboration.

Social Media and Online Communities: Libraries use social media and online platforms to engage with users, promote resources, and foster online communities around shared academic interests.

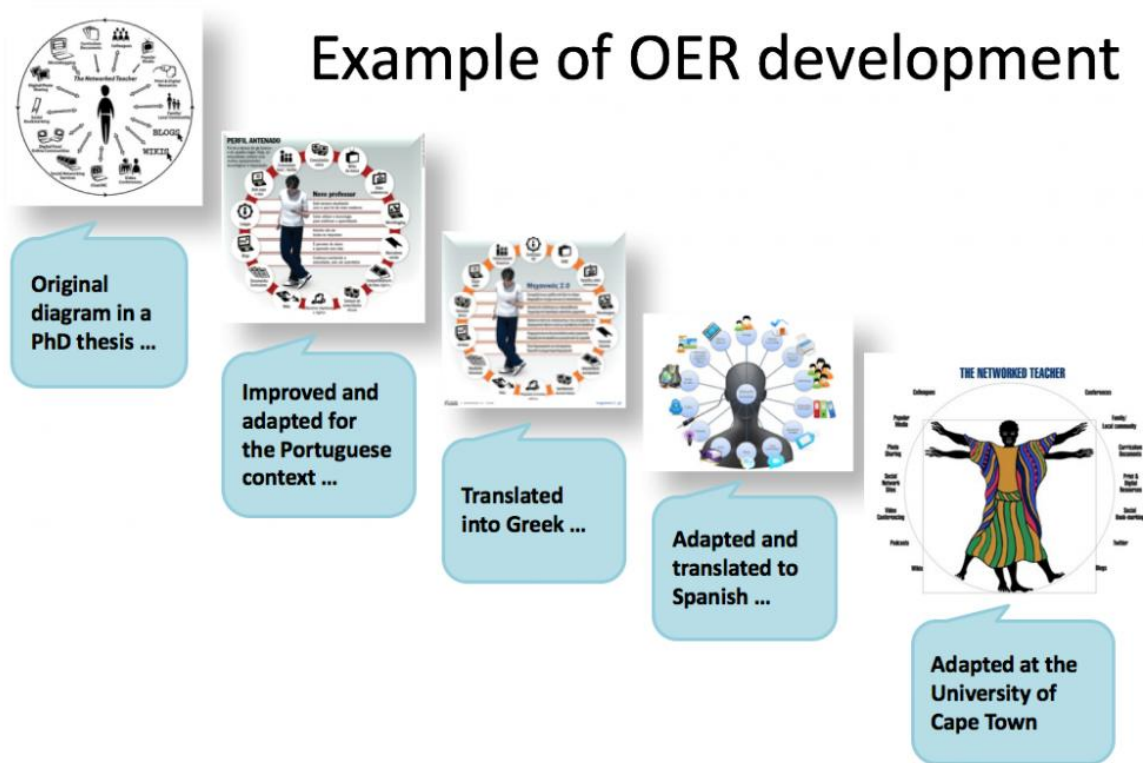
Innovation Spaces: Libraries are creating innovation spaces and makerspaces equipped with ICT tools, such as 3D printers and virtual reality equipment, to support creative and technological exploration.

Analytics and Assessment: Libraries use ICT for data analytics and assessment to measure the use and impact of library services and resources, enabling data-informed decision-making.

Cybersecurity and Data Privacy: As stewards of sensitive information, libraries must invest in cybersecurity measures and data privacy practices to protect user data and library resources.

Overall, ICT has made academic libraries more accessible, efficient, and adaptable. It has empowered libraries to be at the forefront of information management and access, supporting the academic and research missions of their institutions.

OERS in Higher Education



The movement originated in the late 1990s with the first major initiative coming from the Massachusetts Institute of Technology (MIT). In 2002, MIT released 50 freely available courses through the OpenCourseWare initiative. One year later, MIT officially opened OpenCourseWare with 500 classes.²

In 2007, the Open Society Institute and the Shuttleworth Foundation gathered parties interested in the open educational resource movement in Cape Town to offer a venue to collaborate on formalizing this movement. From this gathering, the Cape Town Open Education Declaration was drafted.

This document discusses the need for educators to openly share their resources and make them freely available for others to use.³ The open educational resources movement continues to gain attention with an announcement from MIT who recently unveiled their MITx program, which will begin to grant certificates for students who complete a defined number of open courses through the institution.⁴ The Internet resources listed here comprise a sampling of content focused primarily at the college and university level. Many institutions offer open educational resources online through their own Web sites, and, for the most part, we have chosen not to review these institution-specific resources, except where they have made significant broader contributions.



Full-package courses

- **Connexions.** Launched in 1999 by Rice University, Connexions offers users the ability not only to create content but to repurpose others' content to include in a course. Currently Connexions includes more than 17,000 learning objects in a range of disciplines. The benefit of Connexions is the ability of an instructor to pull from a range of learning objects and organize the material to create his or her own course. Connexions offers textbooks, journal articles, learning objects, and assignments. Once organized, the material can be viewed as either a PDF or EPUBS document for distribution to students. *Access:* <http://cnx.org/>.
- **MIT OpenCourseWare.** A pioneering initiative in the open educational resources movement, MIT OpenCourseWare currently offers approximately 2,000 courses in a range of disciplines. These full courses can include lecture notes, online textbook material, assignments and exams with answers, and multimedia. The course content is downloadable, with the exception of the video materials, through iTunes. Like any open educational resource, these materials are freely available for educators to re-use with attribution. *Access:* <http://ocw.mit.edu/index.htm>.
- **MITx.** Building on the success of MIT OpenCourseWare, the Massachusetts Institute of Technology joined the Massively Open Online Course (MOOC) movement with the announcement of MITx. This initiative will make courses available to students attending MIT, and is open to anyone interested in taking a course. These courses will include recorded lectures, course material, and assessments, which can be organized in a student portfolio. After completing a determined sequence of courses, a student will be awarded a certificate indicating completion. The MOOC movement represents a recent progression of the open educational resources movement by now offering recognition of students' completed work. *Access:* <http://mitx.mit.edu/>.
- **Open Course Library (Washington State Board for Community and Technical Colleges).** In November 2011, the Washington State Board for Community and Technical Colleges released the first half of its Open Course Library, which aims to eventually offer all of the content for the highest-enrollment courses in the state system. The 42 courses that are currently available are designed to be used primarily by faculty, who can then integrate any or all elements of the syllabus, lessons, discussion topics, readings, and assignments they feel are appropriate. Some courses offer links to free outside readings and textbooks, others recommend textbooks that cost no more than \$30. Open Course Library offers downloadable files in Common Cartridge and ANGEL, which are compatible with other course management systems. *Access:* <https://sites.google.com/a/sbctc.edu/opencourselibrary/>.
- **Saylor Foundation.** Founded by a corporate CEO, the Saylor Foundation offers complete, freely accessible packages for college-level courses in business, science, math, engineering, the humanities, and the social sciences. Courses are designed to be easily used by students who are working entirely on their own, outside of any formal educational system. Each course is made up of a syllabus, links to free online readings, multimedia resources and tutorials, assignments, and exams. Quantitative assessment is available for those who have set up an account. A student enrolled in a course must take a graded final exam, and scores and

grades are recorded in the student's account. Qualitative assessment is trickier. For example, assessment of the final essay assignment for English Composition 1 is completed by the student reading his or her essay aloud to a friend and revising it based on feedback. Together, these courses comprise curricula, which include core, prerequisite, elective, and subfield courses. *Access:* <http://www.saylor.org/>.

Video

- **Academic Earth.** This independent nonprofit collects videos from the lecture-halls of universities around the country. Watch a semester's worth of video lectures from a given university course, or find a curated collection of lectures from the archive on a particular theme. No other course materials are offered. While the Web site lists 30 partner institutions, several only provide informational videos or links to their online degree programs. But overall, hundreds of instructors' lectures are provided. *Access:* <http://academicearth.org/>.
- **Khan Academy.** A widely popular example of open educational resources, the Khan Academy began in 2004 as a way for the founder, Salman Khan, to begin creating short tutorials to teach his cousin and others mathematics. The tutorials were eventually posted to YouTube, and their success of these resulted in the creation of the Khan Academy. Currently the Khan Academy offers open educational resources primarily in mathematics and science but has expanded to include other subject areas. These 3,000 plus online videos are self paced and allow students to focus on the specific lessons they need help with. *Access:* <http://www.khanacademy.org/>.

Repositories

- **Applied Math & Science Educational Repository.** Although *math* and *science* are in the title, this repository of online educational content offers resources in a variety of other disciplines, too, including vocational education and health. *Access:* <http://amser.org/>.
- **Merlot.** This massive resource was begun by a consortium of state higher education systems. Today it offers access to learning objects, full course curricula, open access journals, assessment tools, open textbooks, discipline-specific pedagogical resources, and more. Material is peer reviewed, and reviewer and user comments are accessible to all. Academic discipline is represented by communities, each with their own editorial board of faculty from disparate institutions. Browsing through users' "personal collections" can provide insight into how others use the materials. *Access:* <http://www.merlot.org/>.
- **OER Commons.** Compiling contributions of individuals, universities, cultural institutions, and online initiatives, OER Commons allows educators to access open online content based on a useful, faceted search function. Outside links are displayed within an OER Commons frame, which makes navigation easier or more cumbersome, depending on your preferences. Registered users can save and comment on items. *Access:* <http://www.oercommons.org/>.
- **National Repository of Online Courses (NROC).** NROC offers a short list of advanced placement, college preparatory, and foundational college-level courses in math, science, and American history and government. A project of the Monterey Institute for Technology and Education, NROC offers full courses, lessons, and learning objects developed by membership institutions that follow lengthy pedagogical guidelines, and who

are then able to share courses, use others', and integrate content into their own course management systems. *Access:* <http://www.montereyinstitute.org/nroc/nrocdemos.html>.

- **iTunesU.** Apple made a splash at the beginning of 2012 with the announcement of its iTunesU app. Although content is available through the regular iTunes site, the iTunesU app allows users to organize course lectures, notes, books, and other supporting materials for an entire course or combination of courses. Participating educational and cultural institutions number in the thousands and make varying degrees of content freely available—from one-off video or audio lectures to full blown courses complete with syllabi, lecture notes, iBook textbooks, quizzes, and more. Some content is simply an upload of a static film taken from the back of a traditional university lecture hall. Other content is created specifically for use in iTunesU. For instance, Open University has created a multitude of self-paced courses, including Moons: An Introduction, which suggests a self-directed pace of completing the course in a week. Many participating institutions provide more or different content on their own open-course Web sites from what they offer in iTunesU. *Access:* <http://www.apple.com/education/itunes-u>.

Textbooks

- **Flatworld Knowledge.** This for-profit publisher offers open access textbooks, primarily in business, but in other subjects, as well. The company's profit is made from selling supplemental materials and alternative book formats to students. *Access:* <http://www.flatworldknowledge.com/>.
- **Global Textbook Project.** An international initiative, Global Textbook Project seeks to provide access to free, quality textbooks to students in developing nations. The project is led by a team of university faculty members, whose global staff is creating a growing collection of open textbooks. *Access:* <http://globaltext.terry.uga.edu/>.
- **National Academies Press.** Most books published by the National Academies Press can be downloaded for free in PDF format. Just find the book you want, bypass the print price, and click the "Download Free PDF" button. This site requires that you provide a name and e-mail address. *Access:* <http://www.nap.edu/>.
- **Smarthistory.** This award-winning, multimedia, online art history textbook is now owned and operated by the Kahn Academy. *Access:* <http://smarthistory.khanacademy.org/>.
- **WikiBooks.** Offering more than 2,000 titles, WikiBooks offers access to open textbooks written collaboratively (much like Wikipedia entries). Peer reviewers are any users who wish to contribute. *Access:* http://en.wikibooks.org/wiki/Main_Page.
- **Open Courseware Consortium.** With a more global perspective, Open Courseware Consortium seeks to make an impact on accessibility to education on an international scale. Rather than a simple repository of courseware, the Open Courseware Consortium offers its members the tools and resources to develop their own content. Click on "Community" to find the consortium's toolkit for those seeking to make a case for open educational resources at their own institutions and communities, as well as help with assessment, pedagogy, and more. Click "Courses" to search external content from the consortium's 19 sustaining members. *Access:* <http://www.ocwconsortium.org/>.



- **Open*Education.** Openesource.com devotes a section of its site to news and insight from the world of open education resources. Contributors include librarians, college faculty members, and other open-source and open-access enthusiasts. Updates appear every few days. Openesource.com is a publication of Red Hat, a for-profit, open source technology developer. *Access:* <http://opensource.com/education>.
- **Open Educational Resources Blog.** Written by Cable Green, director of global learning at Creative Commons, Open Educational Resources covers the international world of open educational resources. The blog offers the latest news on conferences, Webinars, and collaborative activities in the United States and around the world. *Access:* <http://blog.oer.sbctc.edu/>.

References

1. Deshmukh, A. L. and Bapat, S. J. (Ed.); R.R. B. Board Exam; Pune M/S, Sarad Sahitya, 1996, p. 104.
2. Ordinance No. -8, 'Doctor of Philosophy' Amended vide Co-ordination Committee dated 12.08.1993 Item No. A2 (31) and (32) Devi Ahilya Vishwavidyalaya Indor.
3. Pillai V.N.R.: Zakir Husain Memorial Lecture, 2005. Delhi, University of Delhi, Zakir Husain College, 4th Feb. 2005.
4. Singh, Chandra B.P. and Prasad, C.S. (2016). Higher Education in India: At a Glance, University News, Vol.54 No.(26).
5. UGC Annual Reports 2014-15.
6. Mittal, R. L. Library Administration Theory and Practice. Delhi: Metropolitan, 1993, pp.14. 7. Matoli, Rajeshwari (2016). Role of Academic Libraries In India in Higher Education System: An Overview, LISPA Journal, 2016 Vol.2