

APPLICATION OF INFORMATION COMMUNICATION TECHNOLOGY IN COLLEGE LIBRARIES

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Abstract:

Library function as an essential integral component in higher education. College libraries in India is facing a lot problem. Library environment is currently undergoing a rapid and dynamic revolution leading to new generation of libraries with the application of ICT. Application of technological advancement presented a new model for library as well as put the challenge for the librarians to perform well. This paper attempts to present the actual application of ICT in college libraries, what the ICT skills for library professionals, application of ICT in libraries and its impact.

Keywords: *Information Communication Technology, Library, College, Application.*

Introduction:

Information technology and its management will be crucial in this rapidly changing environment. It is already known that one of the most important resources for a nation's socioeconomic development is information. Information is currently computers, telecommunications, biotechnology, and other fields have become the most sought-after resources due to their ability to store, generate, alter, and communicate information.

It can be noticed that the new technology affects every aspect of managing information. The growth of digital computers has created new opportunities for information management and is likely to have a significant impact on how we think about information in general. The processing, storing, and sharing of information using computers is most likely mentioned to as information technology.

Computers have already permeated the information science and library fields in India, where several university and research institution libraries have installed computer systems to automate certain tasks. Ordering and acquiring books, cataloging, controlling serials, circulating, creating and publishing etc. are some of these tasks. The computer system's use can be expanded to include the storing and retrieval of other documentation lists, such as bibliographic indexes. The computer system's use can be expanded to include SDI Services and the archiving and retrieval of bibliographic data.

In 1955, and for the following ten years, up to sixteen computers were set up in various regions of India. In 1964, the ISI in Calcutta, India, worked with Jadavpur University in Calcutta to construct the country's first domestic computer. This marked the beginning of India's computer system introduction phase, and the country has not looked back in the area of computerization since.

College Libraries:

Higher education is based on the further education college library's integration with the local community. Only if the library is established and viewed as a hub and vital resource for the campus community, and if librarians regard themselves as educators, can this high level of integration be possible. The personnel and service are integrated into the organization, not added to it. Their duties don't end when they enter the library. The library's goals ought to align with those of the institution, meaning that they should focus on equipping students for life as well as for further study and work. This means that there is a focus on life skills in addition to the conventional role of academic support, with consequences for the provision of a very wide range of materials and user education.

In the less formal environment of a college for higher education, the library serves as a real centre of community life. It's possible that the library is the only place where students of all academic levels congregate, and librarians are the only staff members who engage with students of all backgrounds and have the opportunity to establish connections with the majority of college staff. Close working relationships with colleagues are especially important in a college when the trend towards smaller facilities makes it difficult to hire subject librarians with the specialised knowledge that is required.

It's a highly difficult, but exciting, field to work in further education. It never stays motionless and offers a lot of variation. Integrating his library with the institution and, equally essential, integrating himself with his colleagues are skills that the college librarian must possess. He needs to be extremely proactive in making sure that everyone in the community has access to education. The function is quite broad, ranging from organising shelves to serving on college decision-making panels.

Information Communication Technology (ICT):

Though it is a more specific term that emphasises the role of unified communications and the integration of telecommunications, computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, information and communications technology (ICT) is frequently used as an extended synonym for information technology (IT). This allows users to access, store, transmit, and manipulate information. The convergence of computer networks with phone, video, and audio-visual networks via a single cable or connection system is also referred to as ICT. Although academic scholars have been using the term "ICT" since the 1980s, it gained popularity after Dennis Stevenson used it in a report to the UK government in 1997 and in the updated National Curriculum for England, Wales, and Northern Ireland in 2000. The more general term "computing" has taken the place of "ICT" in the UK National Curriculum as of September 2013.

Information and communication technologies, or ICTs for short, are those that enable telecommunication-based information access. Though it mostly concentrates on communication technologies, it is comparable to information technology (IT).

This covers mobile phones, wireless networks, the Internet, and other channels of communication.

ICT has given society a wide range of new communication possibilities during the last few decades. Social networking platforms, such as Facebook, facilitate regular communication and interaction among individuals worldwide. With the use of contemporary ICT, individuals may now speak with one other anywhere in the world as if they were next door, creating a "global village." ICT is therefore frequently examined in light of the social implications of contemporary communication technologies.

ICT Skills for Library Professionals:

New and advanced technology must be implemented in libraries, which calls for qualified workers with a diversity of ICT abilities. The degree to which staff members are proficient in using ICT to handle a variety of library duties and fully utilise their capacity for doing so is a crucial component of the successful adoption of ICT in libraries. It is imperative that library management have qualified personnel with in-depth familiarity of ICT application in libraries in order to fully utilise this potential. However, in reality, the majority of library professionals lack sufficient ICT proficiency. The professionals working in libraries need to continuously improve their knowledge, abilities, and interest in several ICT-related topics. The capacity or proficiency in execution or performance that is necessary for an individual to organise and carry out an action intended to accomplish a certain task or reach a goal is known as a talent. A skilled individual can successfully do any task. Giving those who need information access has always been the main objective of the library and information professions. Over time, the efforts to achieve this goal have changed and evolved. Information explosion, computers for information retrieval and dissemination, and advancements in information storage, presentation, and archiving have all influenced information activities. On the other hand, computer specialists who assist LIS professionals are collaborators in this endeavour. LIS workers must be well-trained and have the necessary knowledge and technical abilities in order to successfully integrate ICT tools and services in libraries. The term "technical skills" refers to the abilities needed to manage ICT-based tasks and procedures used for library services, such as computer operation, software knowledge, media knowledge for telecommunication, building online databases and content management systems, and Internet-based information retrieval techniques. A digital library is simply a library that uses advanced ICT-based tools and procedures. Therefore, LIS professionals need to be educated about the relevant skills in order to manage ICT and its application in the contemporary digital environment.

In order to implement these ICT technologies in their libraries, LIS professionals need to have a basic understanding of ICTs, networking, database management, web development, multiple media management, metadata skills, and familiarity with standards. In order to handle new ICT technologies, library professionals should regularly update themselves by attending workshops, conferences, symposiums, and conferences, among other events. They are learning how to manage content, generate connecting data, and retrieve, share, and preserve digital information. Because technology is developing so quickly, it is imperative that working librarians receive ongoing in-service training. This will help them stay up to date on industry advancements and acquire new skills related to using contemporary technology.

Effect of ICT on Library Staff Attitude

The achievement of library services in an automated setting is greatly dependent on the attitudes of the library personnel. Staff members' positive attitudes and actions when using ICT are seen as essential components of a successful adoption. The majority of library employees have an open-minded, rational, and enthusiastic attitude towards automating the library. They also exhibit genuine desire in education more and being involved in training and orientation. "A deeper understanding of the complexities of people's perceptions and attitudes is mandatory to deal with new technology and maintain balance between human considerations & technology and maintain balance between human consideration and the technology of library automation," states Luquire (1983). According to Klerk and Euster (1989), technical support employees who are used to the specific details and requirements provided by a computer are adjusting to it with ease. Prince and Burton (1998) discovered that while more recently qualified staff was a more enthusiastic adopter of innovation, senior academic staff was generally neutral when it came to technology.

Information and Communication Technology for Libraries:

The volume of information available did not increase as it does now, and libraries were able to manually arrange the contents. However, there has been an enormous output of information after the Second World War, which is commonly referred to as the "information explosion." Informational products in print and non-print media, such as reports, books, journals, films, discs, and tapes, are being generated and consumed in ever-increasing amounts. In 1984, Xerox Corporation stated in a promotional brochure that "over the last twelve years, recorded knowledge has doubled." In the next decade, it will double once more. It is necessary to process, store, and retrieve this enormous amount of data as needed. Processing the problem manually is not feasible due to its immense complexity and scale. Professionals working in libraries and information are more and more forced to handle information with the assistance of automated and semi-automated devices. There are two effects of the breakthrough advancements in information technology. First off, the objectives of the information profession have fundamentally shifted from "more information" to "accurate, up-to-date, and timely information" as an increasing amount of information is easily accessible in machine-readable form. Second, given the growing prevalence of computer-based information provision, librarians and other information professionals need to stay up to date on the most recent advancements in technology.

Library Automation

The employment of machines to perform tasks or activities in libraries is referred to as automation. One of the most crucial tools for automating libraries is a computer; it enhances the activities of libraries in terms of operational automation. Combining computer technology with multimedia and telecommunications has opened up new avenues for information processing and transfer. Automation of libraries is crucial to boost library usage, reduce the need for staff, handle massive amounts of data or information more easily, and provide more and extremely fast information access. Libraries may now provide more efficient services because of this new technological application.

Changing Role of LIS Professionals in ICT Environment:

The development of ICT and its usage in libraries and information centres has altered the needs of users, the atmosphere of libraries, the nature of collections, and the roles played by LIS professionals. User-centred librarianship has replaced the previous notion of book-centered librarianship. ICTs have opened up new career opportunities for LIS specialists.

As creators, communicators, leaders, mentors, and lifelong learners, LIS professionals keep a close eye on technological developments to deliver instantaneous worldwide information to end users via ICTs. The role of libraries and library professionals is greatly impacted by the sources, formats, and information flow available in the Web environment. Globally, there has been a growing introduction of collecting tools, techniques, and approaches in the field of library services. It compels them to alter the way they operate in order to meet their users' information needs.

Librarians in these new jobs need to have distinct personalities in addition to unique knowledge and abilities. The ability to bring together many communication channels, seamlessly integrate them into a digital environment, and enable quick, friendly, and interactive telecommunications to access the stored information via computer systems is the main focus. The nature of collections, the information environment, and the drastic shift in user expectations and demands have all presented issues for library and information science workers as a result of the globalisation of ICTs. A LIS professional's competency in a digital setting is in:

- a) accelerating information dissemination,
- b) accelerating information access,

- c) filtration of user-selected content,
- d) standardising keyword and classification methods for user information sources, and
- e) expert vocabulary development.

LIS specialists must assess organisational conditions and determine the degree to which team members and higher-ups are ready and willing to embrace change before making any adjustments to libraries. LIS professionals need to be curious, flexible, adaptive, self-assured, and able to engage with users outside of the library while taking on new responsibilities within the digital library. They also need to have a can-do attitude, a team-oriented mindset, and the capacity to think internationally. Adapting to the shifting collections, services, and users calls for creativity.

LIS specialists working in libraries will take on the role of accessibility and integration agents, directing patrons to a variety of digital resources made accessible by way of licence agreements or other arrangements. Library and material Science (LIS) specialists have been trying to retool library services so that users may discover, organise, and interact with material in a way that is infinitely customisable. The transition from "isolated information silos" to "interlinked computing platforms" is represented by these new service kinds. According to Smith (2006), there are nine crucial components that must be present for any LIS practitioner to successfully and sustainably implement change. They are: make sure you're prepared for change; make plans for it; take the lead in managing it; provide support for it; deal with resistance to change; communicate well; follow through, assess, learn, and take care of the human element. According to Ashcroft (2004), the necessity to organise documents and information in a hybrid environment necessitates a combination of traditional and modern librarian qualifications. He classified fundamental skills into six categories:

1. Expert
2. Promotion and marketing
3. Assessment
4. Collaboration, negotiation, and communication
5. Repression
6. Individually transferable abilities

Professionals in libraries and information science experiment and look for innovative methods to use emerging technologies in their libraries. Technology has presented a problem as well as a chance to redesign library structure.

Graphic user interfaces, file storage, and networking were made possible by technological advancements. This difficulty has made it possible to give the possibilities of making up for cut funds some serious thought. LIS specialists must change with the times to accommodate users who are connecting new information, technology, and customers. A librarian who "connects users with their information needs, whatever the format and whatever the technology" is considered to be at the core of the library liaison role.

ICT Application in Libraries:

Information technology refers to a range of technological applications used in information exchange. The phrase "information technology" refers to a broad category of technologies that offer methods and tools for gathering, storing, transmitting, retrieving, and processing information. The word "information technology" refers to all of the different technologies used in the processing and transmission of information, according to Webster's New Encyclopaedia.

a) **Computer Technology:** Possibly the most practical modern instrument ever created is the computer. A computer can store any kind of data that people have ever recorded, retrieve it at any moment, and perform calculations millions of times quicker than the human brain. With a set of exact instructions, a computer can therefore perform all the tasks in the library that require the use of numerous devices.

b) **Communication Technology:** It is employed in conveying information from the source to the recipient. Any kind of communication system, including verbal, telephone, etc., is used to convey the information. These days, a portion of people use the phone, fax, television, e-mail, and Internet as means of communication. These are some of the essential elements of library services.

c) **Multimedia Technology:** The most popular application of multimedia technology is the simultaneous preparation of presentations using text, images, audio, and video. Larger libraries may also use multimedia programs, however access to them is restricted to certain student types.

d) **Networking Technology:** The fusion of communication and computing technologies has given rise to networking.

This is a system that allows two computers to communicate with one another. These days, there are a plethora of active networks worldwide. Some of the significant networks in India are NICNET, INDONET, PUNNET, CALIBNET, DELNET, and INFLIBNET.

e) **Barcode Technology:** A barcode is a self-contained message that contains information encoded in a sequence of black bars with varying widths and white spaces between them. They are useful for the duties of stack verification and document circulation in libraries.

Impact of ICT on Libraries:

For librarians, information technology encompasses a broader range of technologies, such as database building and usage, technical communication technologies, and repro-micrographic technologies. The following list of library sections' functioning has been impacted by information technology:

- a) **Library Management:** Under this, information technology has an impact on the tasks of classification, cataloguing, indexing, database construction, CAS, and SDI.
- b) **Library Automation:** This includes arranging databases, automating the library, and performing other information technology-related housekeeping tasks.
- c) **Library Networking:** Information technology has an impact on resource sharing and information distribution, which fall under this category.
- d) **Technical Communication:** Information technology has an impact on resource sharing and information distribution, which fall under this category.

Functions of Library affected by ICT Application:

The computer can process the following library function activities quickly. Here is a quick rundown of these:

- A. Acquisition
 - i. Duplicate Checking
 - ii. Order list preparation.
 - iii. Placing orders to reserve a supplier or suppliers
 - iv. Tracking orders and taking appropriate action
 - v. Confirmation using order files and invoices

- vi. Preserving financial stability, budgetary management, etc.
- B. Cataloguing
 - i. Software entry
 - ii. Duplicate checking through software
 - iii. accession lists
- C. Circulation
 - i. Registration of Patrons
 - ii. Check in and Checkout of documents
 - iii. Updating the records file
 - iv. reminders
 - v. Information retrieval etc.
- D. Serial Control
 - i. Ordering of serials
 - ii. Updating the record file
 - iii. List of holdings
 - iv. Reminders
 - v. Information retrieval
- E. Documentation and Information Retrieval
 - i. Indexing
 - ii. Abstracting
 - iii. Bibliographic Work
 - iv. Union Catalogue
 - v. Searching of queries of users

To improve competence, efficacy, and lower costs per unit, among other benefits, the computer system can be used to control additional library functions in adding to those already mentioned. ICT makes information resources easily accessible, and technology's capabilities have been the main force behind the development of the knowledge society.

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