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## IT Skills for LIS Professionals in the Modern Context

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**Laxmi Yallappa Kamble**

Research Scholar

Department of Library and Information Science

Rani Channamma University

Belagavi

[Email-laxmikamble166@gmail.com](mailto:Email-laxmikamble166@gmail.com)

### Abstract

*The paper investigates the requisite IT skills and competencies for LIS personnel in the changing setting of the Information Society. The key challenges for library staff handling information in an ICT setting include managing and understanding technological integration, interpreting issues, and delivering service to end users.*

### Keywords

IT skills, Skills and competencies, Information Technology, Managerial Skills, Communication Skills, LIS professionals.

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## 1. Introduction

A librarian manages the management of information organization, preservation, and retrieval. The librarian is typically a qualified and educated professional who can handle information in various settings and formats. Users can traverse the internet and effectively analyze material with the assistance of a librarian. Users can get assistance from librarians to locate and use the necessary information for personal and professional purposes. A librarian should be familiar with a wide range of information sources and keep up with the latest technological advancements, media, and publishing. (Khan & Bhatti, 2012). The modern world has a great deal of brand-new problems. These difficulties are brought on by ICT use, which appears in a variety of forms or conceits, including digital repositories, open access, user-centric services, web-based library services, the use of social networking, library cooperation (including consortia), and legal concerns. The academic community puts a lot of effort into modifying the present forms and keeping up with the newer forms to make their jobs of teaching and learning easier. Not wanting to fall behind, librarianship works to develop new competencies and abilities while also investigating how these might be used to advance library and information services (Thomas et al., 2015). We live in an information society where the growth of telecommunication networks and information technology is accompanied by an increase in knowledge and a swiftly expanding flow of information. New skills are necessary to properly find, analyze, and utilize information in this new information environment.

## 2. Literature Review

Rahoo (et al., n.d.) identified the level of information technology knowledge possessed by information professionals working in public university libraries in Sindh province. His research revealed that librarians lacked ICT capabilities due to significant obstacles such as lack of resources, lack of time, and unfavorable system conditions. According to study findings, authority collaboration or interest is responsible for the failure to implement technological advances in library development. Other research found that such librarians' information and communication abilities were inadequate. (Kolle, 2014) covered a variety of soft skills and competencies for librarians. The primary objective of information centers must be accomplished, hence library staff must possess various soft skills and

competencies, including those in technology, interpersonal communication, listening, and presenting. Shastri & Chudasma's (2022) study's purpose is to understand the level of ICT knowledge, competency, technology use, issues, and services provided by library professionals in Gujarat, India, during the lockdown. The study found that COVID-19 significantly boosted the use of library websites and electronic publications, but it also highlighted the problems associated with using e-resources, such as a lack of ICT skills, poor internet connectivity, and insufficient IT infrastructure. Users must be properly educated about electronic resources. The study presented suggestions on how to improve library and information services, with a concentration on ICT, to better serve the library community. Missingham, (2006) examines the skills that modern library employees must have. LIS personnel require a wide set of abilities, which should be fostered by both schools and employers. By publicizing issues in the larger society, the next generation of LIS professionals may find the field appealing. Because the current workforce will need to be replaced within the next ten years, we must consider displaying our abilities to attract new participants.

Lobo, (n.d.) demonstrates how the COVID-19 outbreak contributed to IT expertise and digital literacy development. The COVID-19 pandemic era, according to the research, improved library staff members' technology and digital skills, as well as their usage of social networking platforms for educational purposes. According to the poll results, 75% of librarians said that attending webinars on various topics helped them become more proficient with technology. Fakkirappa Kattimani & R. Naik, (2013) analyses various library professionals' grasp of librarianship and information, communication, and technology (ICT) skills at engineering college libraries connected with Visvesvaraya Technological University (VTU), Belagavi. There is a substantial competence gap between different designations in computer operation, Internet-related skills, web design/editing, search engines, radio frequency identification (RFID), library automation software modules, multiple operating systems, and IR digitization. According to one study, higher-ups have a negative attitude towards learning ICT skills, while librarians have the best web design skills of any occupation.

### 3. Required skills for Library Professionals

Due to differences in library systems, services, and infrastructure, and to meet the evolving needs and expectations of 21<sup>st</sup>-century individuals, societies, communities, and institutions, it is more important than ever to provide library science education and to acquire the necessary knowledge, techniques, and skills. (Nkanu et al., n.d.). necessary abilities to thrive in the electronic environment of the 21<sup>st</sup> century, library and information science (LIS) workers will need diverse skills, including technical, managerial, information technology (IT), and communication competencies.

- **Information Technology skills:** Technical abilities are required to operate computers, use telecommunications media, construct online databases, design websites, obtain information on the internet, and work in other industries related to information technology. Library staff must be aware of how to handle IT and its use in the setting of libraries.
- **Managerial skills:** As the manager of a library and information center, librarians must have certain essential administrative skills to be able to manage the many departments, such as finance, human resources, and so on. They should be expected to have some of these managerial skills, such as motivating others, making choices, and planning. Managing one's time effectively is a major managerial skill required for a successful librarian. (Mazumdar, n.d.)
- **Communication Skills:** As librarians interact with people regularly, communication skills are essential. The ability of a librarian to communicate with others will affect how well they execute their duties. Communication, listening, presenting, and technology skills are necessary.

### 4. Information Technology Skills for Library Professionals

Technical skills are those required to operate computers, use telecommunications media, create online databases, design websites, find information on the internet, and other information technology-related fields. Borderless libraries are characterized by the increased use of information technology, which necessitates that library workers be knowledgeable about how to handle IT and its use

in the library environment in the proper context. Getting the right book to the right person at the right time necessitates additional competencies, which is a key focus of the LIS profession. IT-related skills are now required to better meet the needs of users. The library's resources are now accessible digitally rather than as printed books. In the digital age, having IT skills is essential for collecting, processing, managing, and disseminating information. The most difficult IT-related skill is searching and getting related details from the Internet. (Rajendra) significant IT skills are as follows;

**Online searching and information retrieval:** An online information retrieval system is a tool that librarians can utilize to provide people with information from numerous machine-readable internet databases. An online retrieval system combines a computer with additional hardware, including networking terminals, communication layers and connections, modems, disc drivers, and other software programs. LIS practitioners should be familiar with the various online information retrieval techniques.

**Computer operating systems:** An operating system (OS) is a piece of software that supervises all other application programs in a computer after being loaded by a boot program. Working with operating systems requires knowledge of computer operating systems. Because there are numerous computer operating systems accessible, LIS practitioners must be knowledgeable with at least two or three of the most popular ones to best satisfy user demands.

**Institutional repository software:** Institutional repositories are collections of internal publications; they save all published works in digital format for future use by both professors and students. To create our institutional repository, we employ a variety of software programs, including Eprints, Dspace, and Greenstone. The growth of technology is transforming the role of LIS professionals. The librarian is also required to receive training in the administration of institutional repository software.

**Integrated library systems:** An integrated library system (ILS), commonly referred to as a library management system (LMS), is an enterprise resource planning (ERP) tool used by libraries to keep track of the materials they hold, the orders they've placed, the bills they've paid, and the people who have borrowed. An ILS typically consists of two graphical user interfaces, a relational database, and software to communicate with the database (one for patrons, one

for staff). Most ILSes divide software functions into independent programs referred to as modules, each of which is integrated with a single interface. For instance, OPAC, circulation, serial control, cataloging, classification, and acquisition.

**Repair and maintenance of computer hardware:**

Computer hardware maintenance involves the upkeep of a computer's tangible components, such as the keyboard, hard drive, and internal CD or DVD drives. Cleaning the computer, keeping the fans free of dust, and reformatting the hard drives are all parts of a routine maintenance program for computer hardware. The LIS experts should be able to perform computer hardware maintenance as needed. To repair and maintain the library computers, they must become experts in both hardware and software.

**Creation and upkeep of databases:** Databases will help to find reliable information from trusted sources. A database may be dedicated to a single subject or cover several subjects. Some publishers also provide databases that allow you to search all their published content from one website. In the library, database management plays a crucial role (Singh, n.d.). Professional librarians are familiar with database creation and management.

**Connecting (Networking) the information:** To connect with people, networking is a crucial ability that combines professionalism, relationship management, and interpersonal communication. The ability to give users the information they need lies with librarians.

**Designing and maintaining websites:** The actual space appears on the library's website. Libraries significantly support and extend information services through their websites. The library's website is the finest source for getting access to all the online materials. Websites need to be more attractive and educational. It should be incredibly captivating for both website visitors and library patrons. Library websites' arrangement, content, and web content must be constantly evaluated, which calls for examination. To meet user needs, a library website must be well-designed and well-organized.

**Coding/programming languages:** Computers might be the tool that all librarians utilize the most frequently. By learning to program, one can take control of the machine or feel less dependent on it. Libraries could become more independent from outside providers by programming their librarians.

## 5. Library professional Skills according to the National Knowledge Commission

The following competencies are necessary to fulfill the evolving function of libraries, according to the National Knowledge Commission of India:

- i. Library and information handling skills.
- ii. Service orientation.
- iii. ICT knowledge skills.
- iv. Communication and training skills.
- v. Marketing and presentation skills.
- vi. Understanding of cultural diversity.
- vii. Knowledge mapping skills (Halder, 2012)

## 6. Benefits of skill development for librarians

- i. Improved quality of work
- ii. better quality of user service
- iii. development of a flexible workforce
- iv. improved knowledge and skills
- v. saving time through more effective use of systems
- vi. continuous professional development
- vii. Enrich skill sets
- viii. Improve performance
- ix. Provide better information services

## 7. Recommendations for strengthening the employment prospects for LIS graduates

Based on the literature analysis, the following recommendations are made to increase the odds that LIS graduates will find employment.

- The relevant bodies shall take steps to plan, coordinate, monitor, and update skill development activities for LIS professionals efficiently in compliance with the national skill development policy. The lack of consistency in work tasks, titles, academic requirements, and salary range is one of the major issues contributing to practitioners' discontent with the LIS employment market. Because the LIS employment market is volatile, developing a national standard and standardized service structure is critical.
- The current LIS curriculum must be revised and updated in light of the current and future needs of the LIS labor market.
- LIS graduates and practitioners must maintain their adaptability in the face of today's complex information environment. Professionals may be resistant to change because they're fearful of the unknown. This

negative perspective must be changed by the acquisition of new generation LIS skills, along with people, processes, and technology.

- To promote library services, the next generation of LIS practitioners is expected to have experience in marketing and public relations. These subjects should be covered in college curricula to ensure library users can access a variety of services. Today's LIS personnel all require subject-matter expertise, IT competency, user service skills, general skills, and personality attributes.

## 8. Conclusion

Professional library and information science degrees are no longer sufficient for today's librarians. Librarians with administrative, technical, and user-oriented service delivery skills and soft skills are in high demand. Soft skills are necessary in everyday employment, just like in any industry, to do normal tasks more efficiently (Kolle, 2014). Due to the quick change in diversity, library professionals are finding it difficult to adapt to the new realities and acquire new abilities. The most effective strategies to manage change involve introducing new working practices and fostering cooperation across organizational levels. All library professionals must be driven to stay current with trends and willing to accept changes that will have immediate implications on libraries and library professionals' jobs.

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