



Enhancing the Skills in the Changing LIS Landscape: A Look at the Digital and Associated Skills of the Professionals

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ABSTRACT

Skill is the capability of a human being that something can do well. Skill sets are the range of a human being's skills. In every profession, every individual should have the skills to accomplish their roles and responsibilities. Earlier, library professionals or librarians were called custodians of the materials in a particular library. But in the present scenario, the library profession has developed in various fields like academics, business, research, software, information and marketing. Hence, library professionals have become cybrarians and librarians who provide outstanding services to users at the right time. Currently, for Library and Information Science professionals, it is essential to enrich their knowledge, skill sets, self-motivation, situation handling, problem-solving, service-oriented mindset and rapid response to the users to meet their needs and requirements. For that professional achievement, library professionals must continuously develop their skills like Computer skills, Networking skills, Information retrieval skills, managerial skills, communication skills, preservation skills, etc., up to their career end. In that context, this paper aims to know the skill development practices and their fallouts for LIS professionals in the digital age from an Indian perspective.

Keywords: Skill Development, LIS Professionals, Digital Age, Network, Internet, Protocol

1. Introduction

1.1. Skill

Labelling the skills of the professionals is central to designing and evaluating modern information systems. Although the use of professional skills in the lifecycle of information systems is well understood and workflows have been established over the years, the current regulatory skill enhancement considers the potential risks associated with automated skill infusion, particularly about protecting the rights of the professionals whose skills are being processed by these systems.

Skill is the ability to carry out a task or achieve a goal with proficiency, knowledge, and efficiency. Skill acquisition is a continuous learning, practising, feedback, and improving process. Skilled people are proud of their work and go above and beyond what is required. They have great problem-solving skills and can quickly adapt to different situations. For professionals, having a specific set of skills is important because it helps them to compete in the job market more effectively and provide more value to their employer or client. However, professionals must also have technical and interpersonal skills, such as communication, leadership, teamwork, and adaptability, to be well-rounded professionals who always deliver exceptional results.

1.2. Skill Sets

What is a skill set? A skill set is an individual's unique combination of skills, knowledge and experience that allows them to perform tasks associated with their profession. In today's rapidly changing world, having a diverse, well-rounded set of skills is essential for any professional who wants to be successful in their field. A strong set of skills can include technical knowledge, communication, organizational skills, leadership qualities, problem-solving skills or a combination. A strong set of skills sets a top-performing professional apart from others and allows them to make a positive contribution to the organization's growth and success. Investing time and effort in developing your skill set can increase your job satisfaction and open up more significant career opportunities.

2. Need for Skill Development for the Library Profession

In today's world, where technology is advancing at an alarming rate, skill development in the library profession has become more critical than ever. Libraries have become more than places to store books and other media; they have become dynamic centres for learning and exchanging information. As a result, professionals in this field must have various skills, including proficiency in software, data analysis, digital media generation, social media management, and many more. Not only do they need these technical skills, but they also need to have strong communication, critical thinking, and excellent customer service skills.

In the knowledge society, UNESCO (1972) recognizes the importance of skill development and lifelong learning for all field professionals. In a changing world, self-motivation, self-learning, and the practice of reading, watching, and learning are all recognisable things. Therefore, at this stage, many factors influence the development of knowledge and professional activity of library professionals in the context of the changes that have occurred.

2.1. Factors Impacting for Skill Development

2.1.1. Changes in ICT

The changing landscape of user focus, adaptability and personalisation calls for a deeper dive into context and its influence on skills development. Context represents a new paradigm shift, shifting the focus to the user-in-context representation, recognising the multi-layered nature of context as it relates to user needs, changes in the environment, and technological developments reflected in the skills development of LIS practitioners. ICT changes directly affect the improvement of skills to perform the technology implementation.

2.1.2. Social Networking

Social media platforms such as WhatsApp, LinkedIn, YouTube, Twitter, Facebook, etc., have also become key information transformers. Similarly, web technological tools such as Web 2.0, Wikipedia, blogs, podcasts and RSS feeds enable library users to maintain a relationship with knowledge-providing sources through libraries, information centres, and research centres.

2.1.3. Technology

In the 21st century, technology has revolutionized the way libraries are used. By adopting the technology, they have become more of a knowledge/learning resource centre. The main activities, such as acquiring, cataloguing, classifying, circulating, controlling serials, OPAC, storing information, disseminating to the users, and creating a customized, user-friendly interface, have been developed with the help of collaborative tools. ICT and LIS professionals must adopt the ISO-2709 format with retro-converted collections to prepare OPAC or Web OPAC for users. Information and Communication Technologies (ICT) has created sub-sequences to simplify the work in various segments such as Digital Collection Management, Acquisition, Cataloguing, Copyright Issues, IPR Management, Plagiarism, Data Security, Validation, Library Collection Development, Shrinking Financial Resources, Continuous Improvement, Quality Services to Users, Performance Measurement and Accountability, Outsourcing, etc. have all contributed to the intensive transformation of the 21st century. (Raina 2000)

3. Related Study

Learning about new technologies through various activities such as workshops, conferences, training meetings, seminars, and so on can improve skills. It is also recommended that computer literacy be improved if one wants to improve one's skills. Most of the hands-on sessions and practices have helped them improve their work skills. (Vyas Kumar Bajpai and Margam Madhusudhan (2021). Library management is limiting the budget for carrying out the skills development programmes. Hence, alternative options can be suggested.

Ashwini A. Vaishnav (2019) proposes capacity building for LIS professionals in the digital environment, which plays an important role in the contemporary ICT society. Capacity building provides knowledge, wisdom, skills and methodological implementation in LIS programmes in libraries and information science. It helps in developing the necessary forecasting for planning the LIS education curriculums. In conclusion, some related studies suggest that librarians and information science professionals need to be invited and updated to the ever-evolving phenomena.

Information, knowledge, and data are the fundamental requirements for every human being to carry out their day-to-day activities. (K.N.Kandpal, S.S.Rawat et.al (2018),) In this fast-paced era, especially in the library and information science field, professionals are expected to play a vital role in providing services to their users efficiently and effectively. We rely heavily on digital resources and the networking infrastructure to access global information. To acquire knowledge from a wide range of sources, library professionals must constantly improve their professional skills in the race of knowledge acquisition. In this context, ICT helps LIS professionals develop among themselves to serve the user community uniquely.

Only skill development can pave the way to handle voluminous data and information base and ensure knowledge delivery in the present information environment.(Smitha C, Elayadom1 and et.al (2018). The dramatic changes in Information and Communication Technologies (ICT) are opening up many possibilities for library professionals and libraries. In this process, university library managers can acquire appropriate knowledge repositories to recognise their users as citizens nationwide. Library professionals must take on new responsibilities, concepts, abilities, and tasks in this knowledge and asset management process.

LIS Experts of the Indian Library System can be considered the broad-based model by the web-based competency framework to create a proportion using the same methodology. (. Uma Tyagia, ZuchamoYanthanb, Vinod Kumar and Anil Kumar Tyag (2018).It could help librarians with their professional development and improve university-level staff's information communication technology skills.

Technological advances have brought about tremendous changes in library services, particularly in networking and its function. (Onuoha, Uloma D & Unegbu, Vincent E et al. (2013) In particular, in innovative thinking, critical thinking, and problem-solving skills, the professionals are missing the mark in their work areas. To overcome these professional obstacles, the curriculums in library schools need to be updated during the courses. Strong training and development of knowledge building capacity is crucial for librarians in this age of technology.

4. Library Professionals-Required Skill Sets

Library professionals are expected to possess a broad range of skill sets that enable them to provide excellent service and support to library users. These skills include expertise in various forms of information technology, such as software for cataloguing and managing electronic resources, as well as proficiency in research and reference services. Library staff must also possess strong communication skills, both written and verbal, to effectively interact with patrons from diverse backgrounds.

Moreover, working collaboratively with colleagues is essential, particularly in light of emerging trends such as open-access publishing and digital preservation. Finally, library professionals must remain up-to-date with evolving technology and best practices by engaging in continuing education opportunities such as webinars, conferences, or skill-based courses. Keeping abreast of these key competencies will allow library personnel to continue providing their communities with vital information resources while adapting to the rapidly changing digital environment.

4.1. Computer Literacy

In today's information age, computer skills are more important than ever. Librarians must be able to use search engines and databases, catalogues, spreadsheets, presentations, social media tools, content management systems, and more. They must also be able to troubleshoot hardware and software issues and analyse data. Librarians with good computer skills can improve the services they provide to their patrons by allowing them to access valuable resources and support digital technologies. Investing in computer training is essential for keeping libraries relevant institutions with important contributions to society.

4.2. Network Skills

In today's digital world, library professionals need strong network skills. Network skills include maintaining and troubleshooting library systems and equipment, collaborating with colleagues from different departments, and connecting patrons to relevant online resources. Networking skills include proficiency in various computer languages and applications. It would help if you understood data privacy, cybersecurity, and copyright laws well. You should also be able to evaluate emerging technologies and how they could affect your library services. Librarians need to be familiar with LAN (Local Area Network), WAN (Wide Area Network), MAN (Manual Access Network), and data communication inside a network system. Protocols play an essential role in ensuring reliable and secure data transmission. Several types of protocols are implemented in network systems. HTTP is used to communicate with websites, FTP is used to share files across the internet, and IP is used to route and address data on the Internet. On the other hand, Simple Mail Transfer Protocol (SMTP) facilitates the transmission of emails between two computers, while Simple Network Management Protocol (SNMP) centrally manages the devices on your network. Knowing the differences between the two protocols can help your IT department keep your network secure and resolve connectivity problems more efficiently.

4.3. Information Retrieval Skills

Librarians have a wide array of information retrieval abilities that are essential for meeting the needs of their patrons. These abilities range from basic search techniques to sophisticated citation techniques and are developed through extensive academic training and hands-on experience in different types of libraries. Librarians must have a thorough knowledge of library classification systems, metadata schemas, and database indexing. They must also be able to evaluate the reliability and relevancy of information sources while adhering to ethical standards. With the ever-changing technology and information formats, it is important for library professionals to stay up-to-date with the latest trends to guide patrons looking for information. Having strong information retrieval skills is essential for library professionals who work to ensure everyone has access to knowledge in their communities.

4.4. Managerial Skills

Managing skills are the organizational skills needed to lead, manage, and lead people, resources and processes to meet predetermined objectives. Managers must be able to foster collaboration among people from different backgrounds while also articulating a clear vision for the organization. In today's rapidly evolving corporate landscape, where businesses once

thought of as stable can easily become exposed to new risks or opportunities that require quick reactions from leaders, managers must have an innovative mindset while also balancing ambition with caution when exploring new opportunities that are in the company's best interest. More than ever, employers are looking for leaders with a potent combination of analytical skills and human relations knowledge to produce high-quality outcomes in the workplace and keep stakeholders happy.

4.5. Communication Skills

Librarians interact with a wide variety of patrons and peers. They must communicate clearly and effectively to assist patrons in accessing library resources, responding to reference inquiries, and providing technical support. They may also participate in projects, advocacy work, or outreach efforts. This means they need strong interpersonal skills, such as listening skills, diplomacy, empathy, and more. Librarians must also be able to adapt to the ever-evolving technology and user landscape. They must be able to use digital communication tools, such as email and social media, as well as virtual meeting software, to communicate with their peers and colleagues. Developing these communication skills allows library professionals to create a positive learning environment that encourages and engages all patrons.

4.6. Preservation Skills

Preserve valuable archives, manuscripts, rare books and other historical material for future generations. Preservation skills include various methods and approaches designed to ensure these objects' long-term preservation and protection from physical deterioration, environmental degradation, and technological wear and tear. Preservation activities typically include Document cleaning Acid, free enclosures, Digital imaging, Restoration work, Disaster response planning, Temperature and humidity monitoring, Existing collections, Risks or vulnerabilities to existing collections, and Implementing customized preservation plans. Preservation practices are essential for preserving the integrity of a cultural heritage collection over time while also making it available to scholars, researchers, or individuals who wish to learn about history through primary sources.

4.7. Additional Skills

We expect a few additional associative skills to be required, which are listed below.

- **User Services-** The ability of the professionals to render effective user-oriented services
- **User Education and Orientation-** Able to deliver user education whenever required to them
- **Promotional activities of library services-** Use of information sources in a library is like marketing of the services where the LIS professionals should be able to promote the services
- **Project management skills-** Able to undertake wherever necessary the task of carrying out the projects
- **Time management skills-** Time is the essence of success in a multimodel information environment
- **Digital right management skills-** In the digital world it is more significant
- **Knowledge handling skills-** Knowledge about the information content of the sources and deciding the right user for the content
- **Evaluation and assessment skills-** Able to judge the user level and their right informaton
- **Lifelong learning/Continuing education commitment-** To self-educate ever till the end of the service.

5. Skill Development

Skill development is an integral part of professional growth and success. An individual's willingness to continuously learn and improve their skills is essential for staying competitive in today's fast-paced job market. The ability to acquire new skills not only enhances performance but also promotes confidence and empowers individuals to rise to the challenges of their profession. Successful skill development requires commitment, effort, and a strategic approach that involves identifying existing strengths and areas for improvement, setting concrete goals with measurable outcomes, seeking out opportunities for learning through training programs or mentorship, putting newfound knowledge into practice, and reflecting on successes and areas for further growth. In today's constantly evolving business landscape, investing in skill development is a worthwhile investment that yields invaluable professional and personal returns.

6. Skill Development in an Electronic Environment

Electronic environments are becoming increasingly commonplace as we progress into the technology era. This digital shift has majorly impacted our personal as well as professional lives. The skill set requirements of most workplaces are transitioning to technology-based expertise. The ability to obtain proficiency in electronic environments is now essential for employees, managers, and business owners. With the continuously growing number of devices we use daily, the demand for knowledge and proficiency in electronic environments is crucial.

In today's ever-changing world, it's essential for people to update and develop their skills as much as possible. It takes time, effort, and a long learning process to develop electronic environment skills. There are many online courses and webinars available for free or at a nominal cost. The industry standards of electronic-based skills sets are constantly changing, so it's important to keep updating your knowledge and expertise. The electronic environment is essential for making decisions and solving problems. Working with different technological tools helps you succeed in the workplace. Whether it's operating software or hardware devices, or troubleshooting them, it gives the employer confidence in the employee's ability to manage and solve problems. By developing skills in electronic environments, you can gain a competitive advantage, become an expert in your field, and increase your professional growth.

In conclusion, recognizing the value of e-skills and taking steps to build them can open up many opportunities for personal and organizational growth. Technology is at the core of every aspect of our professional life, and learning how to effectively navigate the digital landscape is a valuable skill. Learning how to manage electronic tools, staying productive, and staying up-to-date with industry standards will make you stand out as an efficient and competent employee.

7. Libraries and Digital Age

Libraries

The digital age has brought about a shift in the way people access and consumes information. As more digital content is produced, it is increasingly important for libraries to adapt and offer access to it. One way libraries have done this is by investing in digital resources such as e-books, digital journals, and online databases. These resources allow library patrons to access information from anywhere with an internet connection, making it more convenient than ever to conduct research and access educational materials.

However, the library's role in the digital age goes beyond providing access to digital content. Libraries also serve as community centres and educational resources. They offer a space for people to come together and share ideas, attend events, and participate in academic programs. Additionally, libraries provide many services beyond book lending, such as access to technology, job coaching, and literacy programs. In an age where information is abundant but not always reliable, the importance of the library as a trusted source of information and a centre for lifelong learning cannot be overstated.

Digital Age

The digital era has changed our way of living, working and communicating. Smartphones, laptops and tablets have connected us to a huge network of information instantly. Social media platforms like Facebook and Twitter allow us to stay in touch with our loved ones, share pictures, and participate in online conversations. (Figure 1) The digital age also has changed the way we conduct business. Businesses can now sell their products and services anywhere in the world with the click of a mouse. Online marketplaces like Amazon have enabled businesses of all types to sell their products to customers all over the world. In the education sector, students can now access online educational resources, communicate with their professors and classmates, and enroll in online courses at leading universities worldwide. Technology has enabled teachers to customize learning experiences and give students more interactive and engaging educational experiences. While there are some drawbacks to the digital age, such as data privacy and social media addiction, it has transformed our world and changed how we interact.

8. Skilled professionals in India By 2026

According to a report delivered by TeamLease, a group store network organization, India will require 30 million carefully talented experts by 2026, and 50 per cent of the current labour force should re-expertise themselves in emerging innovations.

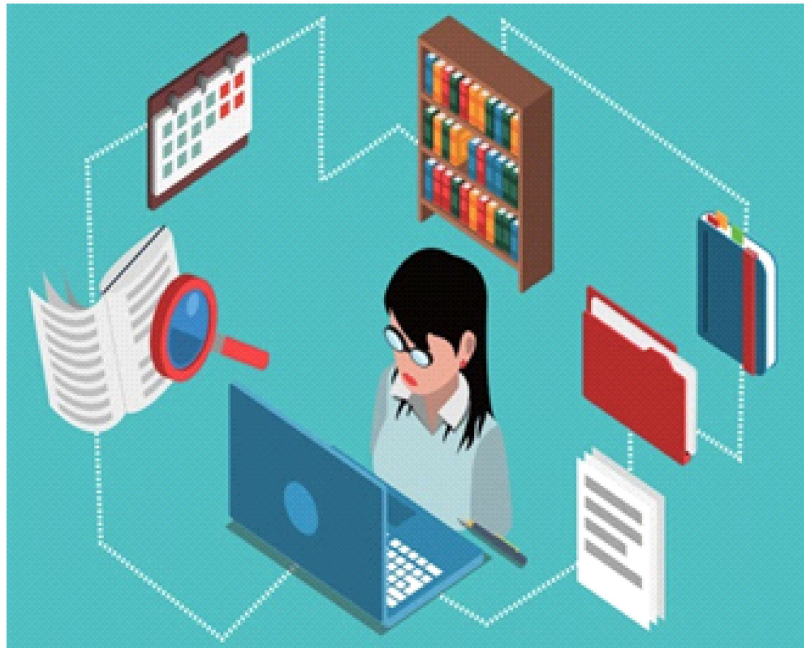


Figure 1. Tools and Resources

Associations are used to prepare and improve exercises as business-as-usual development and advancement exercises. Associations didn't depend on these exercises to manage cutthroat difficulties or to further develop a return on initial capital investment; however, today, the situation has changed, and normal skilling and upskilling are needed to keep organizations going.

The eventual fate of work will be based on ceaseless mechanical advancement and computerized change. A new report by NASSCOM predicts that the interest and supply hole will increment 3.5x by 2026, and just 35% of the STEM alumni of 2020 to 2021 are employable; the leftover 65% would require upskilling to find a new line of work. The Ability Crunch is an emergency that costs countries and organizations trillions of dollars.

Purposes behind worker upskilling

20% -	Apprehension about employment cutback
23.8 per cent -	Better open doors or pay overhaul
8.7 per cent -	Shift to new industry
19.3 per cent -	Shift to another job
15.9 per cent -	Work on specialized abilities
12.3 per cent -	work on delicate abilities

Today, India has about 500 million people of working age. Despite this, the country continues to face an emergency of expertise, as stated by Rituparna Chakraborty, Prime supporter and Chief Head of TeamLease Administrations. According to industry data, only 49% of the country's youth are employable. Even among those who remain in their current position, it is estimated that 40% of the necessary skills will need to be changed. Therefore, it is essential for organizations to re-adjust the expertise system.

9. LIS Professionals Role Play- Present Indian view

The nations like India have a vast library of knowledge because of the heavy ancient historical approach, heredity, culture and civilization. India has an extensive education system that produces influential citizens. In that prospective, libraries and library professionals play a key role in enhancing knowledge in the user communities. In the modern scenario, library professionals must go for the global level upgrades and run with the comprehensive world.

For that level of change management in the library science field, Indian library professionals must develop their roles and skills as follows:

Roles of Library Professionals

The LIS professionals are expected to assume many roles, as indicated below.

- Information/Knowledge Manager
- Information adviser/Instructor
- System Architect
- Information Facilitator
- Cloud Librarian/library professional
- Website designer
- Blogger
- Database and Asset Manager
- Policy maker and reviewer
- Subject specialist
- Cybrarian/Hybrarian
- Banking analyst

Advanced Skills

Learning auxiliary skills is essential to facilitate the services to be rendered.

- Mapping and bibliographic tools
- Scientometric tools
- Assessing tools
- Scholarly research output expertise
- Search Engine/Meta and Semantic search engine/scholarly search engine expertise
- Research Information Management
- Language correction software and Review sources
- Barcode, RFID, QR Codes, AI, Machine learning, Blockchain technology, Augmented reality
- Robotic service practices,
- Citation tools, Plagiarism tools, LMS, Data visual tools,
- Emerging and innovative library and learning resources, services, products and trends, and
- Rankings and Accreditations

10. Skills Development Programmes for Engineering College Librarians

To stay up-to-date with the ever-evolving technology and research techniques, the skills development programmes offered by engineering college libraries are essential. These programmes enable librarians to develop new skills, improve existing skills, and apply those skills to serve their communities better. Participants in these programmes are trained to use the latest software and tools to visualize, analyze, and manage data. They are also taught advanced search techniques to efficiently search for highly specialized information. The focus of the training is on technical proficiency and soft skills, such as communication skills, collaboration skills, project management skills, and leadership skills. By participating in these skills development programmes, librarians in engineering colleges can stay ahead of the competition and effectively meet the changing demands of their users while providing high-quality services that promote academic excellence by providing access to cutting-edge bibliography resources.

11. Conclusion

LIS professionals need to develop their skills to meet the ever-changing needs and requirements of their patrons, as well as the ever-changing technology landscape. They need to stay on top of the newest technologies, information sources, and software to be able to provide the best possible services to their clients. By staying updated with the latest trends and technologies, one can improve your skills and become more productive and efficient. The importance of the library as a centre for excellence and learning will only increase, and it is up to us and the team to rise to the challenge.

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