Review Article

Computer Skills Required by Library Professionals in the Digital Age

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A B S T R A C T

Libraries have evolved dramatically as a result of the growing emphasis on information technology. Developments in the way libraries gather materials, organise their resources, and deliver services are among the developments. With these changes in the library environment, it is critical for library and information science workers to be conversant with a variety of abilities. Librarians with excellent technology abilities are in higher demand in the digital era. This presentation emphasises the significance of library personnel learning new skills in order to succeed in this technologically driven workplace.

Keywords: Influence, ICT, LIS, ITS Skills, LIS Professional, Software, Hardware.

Introduction

The education system is currently evolving towards encouraging creative, self-learning, and informal ways, with a heavy emphasis on values, virtues, and quality. Technologies have spawned a new service environment, pushing the envelope with measured risks and opportunities. Traditional libraries are being replaced by digital libraries, and newly formed libraries are largely digital. Information and Communication Technologies (ICT) play an important part in the Library and Information Science (LIS) environment. They bring about significant modifications in the LIS system and services. Professionals working in these libraries must continue to improve by obtaining vital skills and new capabilities in order to remain relevant in this continuously changing environment.[1]

Library Professionals Working in Digital Libraries

The rapid advancement of information technology and communication networks has fundamentally altered how information is organised and maintained. Libraries are currently facing new problems, greater competition, varying needs, and varying user expectations for information services. To function effectively in a modern digital library context, library professionals must be knowledgeable in both the theory and practice of library and information science. It is critical for them to keep current on technology advances, particularly as they pertain to library operations.

Librarians can browse numerous websites, and e-journals, and discuss ideas with fellow professionals via emails, audio/ video conferences, and other means in a digital online environment. They must also be conscientious users of freshly created gear and software required for a web-based library.

Library Professionals in Electronic Library Environment

Librarians are learning and need to improve their IT abilities in order to manage library software. Libraries are changing dramatically in the twenty-first century, owing to three

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major factors:

- **New Work Organisation:** As a result of variables such as user computing, work teams, downsizing, and re-engineering, the way work is organised in libraries is changing.

- **Transition from Paper to Electronic Media:** There is a shift away from using paper for storing, retrieving, and distributing information and towards utilising electronic media. This covers the incorporation of many forms of media, including text, pictures, and sound, into multimedia resources.

- **Increased Accountability:** Libraries are increasingly placing a greater emphasis on accountability. This includes emphasising great customer service, monitoring performance, benchmarking against standards, and pursuing continual improvement.[2]

The current IT-driven world necessitates experts with new work needs, distinct tasks, and the necessary abilities. This allows them to respond to new changes by developing new goods and services. They must, in particular, be well-equipped with IT technologies to handle jobs more effectively, including:

- **Library Operations Jobs:** Professionals should be competent to use IT technologies for a variety of duties linked to library operations.

- **Creating Information Handling Ways:** They must devise new and improved ways for efficiently dealing with information.[3]

- **Accessing Information from Other Libraries:** Knowing how to use IT technologies is essential for gaining access to information resources from other libraries.

- **Optimising Available Resources:** Professionals should understand how to make the greatest use of the resources available to them.[4]

Professional Skills and Abilities

Professionals play critical roles in a variety of sectors in the new digital era:

Using Technology to Search, Organise, and Exchange Information: They utilise technology to search, organise, and exchange information. Professionals provide outstanding advice and help for library and information services.

Expert Understanding of Information: They have an extensive understanding of information resources, including the capacity to critically examine and filter them.

Specialised Information Product Development: These professionals create particular information products for usage within or outside of organisations.

Evaluating Information Use Outcomes: They evaluate how information is used and undertake research to solve information management challenges.[5] Professionals recognise information requirements and produce and market excellent information services and solutions to suit those needs.

Continuous Improvement: They constantly improve information services to respond to changing requirements and remain relevant in an ever-changing digital world.

Soft Skills for LIS Professionals

Soft skills are essential for LIS specialists and considerably contribute to an organisation's success. Librarians not only handle information but also function as promoters and producers, participating in community social events. In addition to their library tasks, they should have the following soft skills:[6]

Customer Service Skill: It is the ability to successfully assist and service library patrons.

Leadership Abilities: It includes the capacity to guide and motivate people.

Writing Ability: It is the ability to communicate thoughts clearly via written communication. Understanding and applying abstract ideas and concepts is a conceptual skill.

Teaching Abilities: It is the capacity to successfully teach information.

Public Relations: Building and sustaining strong relationships with the community is one of the most important aspects of public relations.

Communication Skills: It is the ability to effectively express information and thoughts to others.[7]

Essential IT Skills Required by LIS Professionals

IT abilities are essential for LIS practitioners. Librarians should be adept in the following areas:

- Creating websites
- Using word processing
- Working with spreadsheets
- Conducting video conferences
- Understanding computer security
- Managing e-mails
- Using scanners
- Creating electronic presentations

Understanding Fundamental Computer Operations

- Managing networks and their architecture
- Understanding file and folder structures for optimal

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file management

- Setting up and utilising printers in both standalone and networked situations
- Understanding computer networks and how they work

Internet Proficiency

- Librarians and information managers require critical internet abilities such as:
- Effective searching techniques and tools
- Understanding URLs and their forms
- Using several browsers such as Internet Explorer, Mozilla Firefox, Open Netscape, and others
- Understanding the internet's architecture, features, and services
- Knowledge of search engines such as Yahoo, Google, AltaVista, Lycos, and others[8]

Other Expertise Needed by Librarians

Librarians should be familiar with the following:

- Networks
- Software
- Hardware

Networks

Librarians must have a basic grasp of the following:

- Network gear such as hubs, switches, network interface cards, and data cables, as well as network configuration
- IP addresses and how they function
- Wireless networks and their capabilities
- Fundamentals of proxy servers
- Domain Name System (internal and external)
- Inter-Service Digital Network (ISDN)
- Network Address Translation (NAT)
- Virtual Private Network (VPN)

Software

LIS workers and librarians should be aware of the following:

- File Transfer Protocol (FTP)
- Microsoft Office and alternative applications
- Functions of a firewall
- Anti-virus protection software
- Web design software
- Telnet for remote access
- Multimedia authoring software

Hardware

Librarians and information managers must be familiar with the following computer hardware components:

- CPU and its components
- Projectors and printers
- Scanners for barcodes
- Flash drives and pen drives

Challenges Faced by Library Personnel

LIS personnel face the following challenges:

- Managing social networks in an information world
- Understanding the impact of mobile technologies and virtual worlds
- Getting used to virtual libraries
- Understanding the most recent advancements in search technology and their implications for the profession
- Adapting to changing user requirements
- Addressing the impact of changes in media and social networks on user expectations
- Managing substantial changes in learning and new information behaviours in the digital era
- Managing political and economic constraints on library services, as well as contemplating alternative solutions
- Using a variety of tools to organise and label information

Conclusion

Librarians are vital protectors of digital knowledge in the current day, enabling democratic access for all. Their responsibilities include analysing, obtaining, organising, and disseminating information in various media. This includes not just books and magazines, but also internet services, internal documentation, and database resources. IT proficiency is essential for librarians, and a favourable attitude towards its implementation helps bridge the gap between present and ideal conditions. To efficiently traverse the digital world and contribute to preserving fair access to information, all professionals in the area should have IT skills, as they play a critical role in developing an educated and empowered society.

Conflict of Interest: None

References

1. Narasappa KC, Kumar PD. ICT Skills for LIS professional in the digital environment. Int J Res Lib Sci. 2016 Dec;2(2):55-8.

2. Gopal K. Impact of information technology services in libraries. Authors Press; 2003.

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3. Loganathan G, Sekar K, Kasirao V. Technological skills for LIS professional in the digital era. Int J Lib Inform Sci. 2015 Sep;4(3):65-9.

4. Rafi M, Ming ZJ, Ahmad K. Technology integration for students' information and digital literacy education in academic libraries. Inform Discov Deliv. 2019 Nov 21;47(4):203-17.

5. Baker D, Evans W. Digital information strategies: from applications and content to libraries and people. Chandos Publishing; 2015 Dec 10.

6. Mackenzie A, Martin L, editors. Mastering digital librarianship: strategy, networking and discovery in academic libraries. Facet Publishing; 2013 Nov 15.

7. Varnum KJ, editor. New top technologies every librarian needs to know: a LITA guide. American Library Association; 2019 Feb 27.

8. Sarma GK. Planning for implementation of open-source digital library software in Library and Information Centres (LICs). In: Librarianship in changing environment. 2021.