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Digital Literacy: A Survival Skill for Librarian in the Information Age

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ABSTRACT

In the information age, librarians are crucial. Due to rapid digital technology evolution, librarians must learn digital literacy to access and manage the abundance of digital materials. The value of digital literacy for librarian survival in the information age. Librarians must be adept in digital tools, information retrieval, and critical content curation in the digital age. Digital literacy promotes library services, information diffusion, and librarians' technology adaptability. Librarians must learn digital literacy to be effective information guardians. Libraries and librarians are evolving rapidly in the information era. Digital technologies have changed information availability, consumption, and analysis. Digital literacy is essential for librarians in this changing climate. Digital literacy includes technology, information, critical thinking, and communication. Librarians use digital literacy to assist research, curate collections, engage with communities, and manage the ever-changing information landscape. It promotes continuing education and professional development to stay up with technology and information needs. Digital literacy allows librarians to serve as information guides and knowledge facilitators in

the digital age.

Introduction

In this day and age of information and communication technology, there is an infinite number of options for personal development, professional advancement, and educational advancement. Various technical advancements, including the World Wide Web (also known as the Internet), computer storage, and advancements in telecommunication and networking, have made it feasible for educational institutions, such as schools, libraries, and further education institutions, to amass a substantial amount of material for adult learners. The aim of adult learners to make critical use of information learning is, nevertheless, accompanied by these fascinating advancements. The reality is that students who are enrolled in university education do not correlate with the accomplishment and literacy rates that have been published. This is despite the fact that current legislation such as the No Child Left Behind Law and other accountability policies imply a favourable association between testing and achievement. Adult learning is the stage at which learners in post-secondary learning environments are not equipped to analyses, evaluate, or think critically about material. This is the case now that adult learning has reached its current stage [1].

1.1 Information Age:

The transition from the Modern Age (roughly 18th-20th centuries) to the Information Age is marked by a shift in the primary source of wealth and power from physical resources to information and knowledge.

This shift arose due to several factors:

- Technological advancements: The invention of the printing press, telegraph, telephone, radio, and later, computers and the internet, facilitated the rapid creation, transmission, and access to information.
- Knowledge-based economy: The rise of service industries and scientific research made information and skilled workers increasingly valuable.
- Globalization: Increased interconnectedness through trade and communication further amplified the importance of information exchange.

➢ **Role of Information Age:**

Information plays a crucial role in the Information Age in several ways:

- Decision-making: Access to accurate and timely information is essential for informed decisions in various fields, from business to politics to personal life.
- Innovation and knowledge creation: The rapid sharing of information fuels innovation and scientific progress, leading to new technologies and solutions.
- Empowerment and democratization: Information access empowers individuals and communities, fostering greater participation in decision-making and challenging existing power structures.

1.2 Digital Literacy

In digital surroundings, digital literacy involves sophisticated cognitive, physical, sociological, and emotional skills. In this context, tasks include "reading" instructions from user interface graphics, using digital reproduction to create new, meaningful materials from existing ones, building knowledge from nonlinear, hypertextual navigation, evaluating information quality and validity, and understanding cyberspace "rules" maturely and realistically. This new idea of digital literacy can be used to evaluate students' digital work and help scholars and developers construct better user-oriented settings. This article provides an improved conceptual framework for digital literacy that incorporates photo-visual, reproduction, branching, information, and socioemotional literacy.

Social settings and events made face-to-face learning ongoing. Technology constantly modifies and multi-structures this learning process. Effective digital literacy is evident during this procedure. Digitization began with digitization, multimedia, interaction, and every whereness. Digital technologies and integration systems of the 1970s established the digital world. Computers and communication devices introduced digital voice, image, data, packing, and coding of all messages. After the release of permanent control centers, networked fact transfer has become liberal. Digitalization also prepared globalization systems with universal languages and communication networks . Satellite and TV technology in the 1990s forced society to digitalize. It also created their social structures. Digital terms no longer define each fact. These formations include digital literacy.

Digital literacy requires knowledge of, the Internet, web, and digital literacy. Each stage is crucial and should be used simultaneously for digitalization. Digital literacy is also a systemic requirement. Developing technologies and mass structures require digital literacy.

Digital literacy requires reading and text comprehension. Structures in learning forms, instructional settings, and reading sources vary naturally. Another issue is source material formation. One of the first

digital literacy studies described digital literacy as the capacity to use technology, information, and multi-format using cognitive and emotional computers. Digital literacy is a new information and communications media activity. It succeeds 'computer' (based, assisted, mediated), 'online', 'networked', 'web-based', and 'ubiquitous.

Digital literacy is affected by public policy, the global information and communication economy, and the advent of the Internet in professional and personal life. The eight main characteristics of development literacy:

1. The Internet has become the primary technology for literacy and learning worldwide.
2. Increased literacies are needed to fully utilize the promise of the Internet and related technologies.
3. New literacy is deictic.
4. New literacies are multidimensional and multimodal.
5. Critical literacy is essential for new literacies.
6. New literacies necessitate new strategic knowledge.
7. Social behavior is important to New Literacies.
8. Teachers play a larger role in emerging literacy classes, despite altering roles.

For social structure. Specifically, the digital divide exists for rich and poor nations, ethnicities, genders, and locations. For digital literacy, knowledge must be identified, defined, evaluated, organized, and used.

Technology has made digital literacy a "survival skill" that lets consumers naturally do difficult digital activities. The following six literacy abilities are included in a comprehensive conceptual model of digital literacy that claims to include all cognitive obstacles experienced by users of modern digital environments: Visual, reproductive, branching, information, socio-emotional, and real-time thinking literacy [6]. Digital literacy defines these skills. Literacy practices entail cultural knowledge, artifacts, and world representations due to the complexity of communicative instruments and their relationships.

- **Components of digital literacy**

Digital literacy integrates several literacies and skills, rather than a single literacy to rule them all. Although it is feasible to identify and demonstrate the components of digital literacy, it is not wise to restrict set a limit on linear stages. It is not true that one digital literacy method works for everyone or every lifetime. Digital literacy requires, not proves, as individual circumstances and the digital information environment require updating of understanding and ability.

1. **Underpinnings:**

- Literacy itself
- Computer/ICT literacy

These "underpinnings" reflect traditional abilities, including computer literacy, that make up literacy and social functioning. It's unclear if these should be considered part of digital literacy (maybe as "smart working" or "basic skills") or assumed before digital literacy is added.

2. **background knowledge**

- the world of information
- nature of information resources

These were assumed of educated people when reading books, newspapers, magazines, academic journals, professional reports, and print-on-paper libraries. The well-defined "publication chain"—from author to archive, via editors, publishers, retailers, librarians, and others—remained rational into the computer age. It has little meant and no apparent replacement. However, knowing new types of information and where they fit within digital information is vital to digital literacy.

3. **central competencies**

- reading and understanding digital and non-digital formats
- creating and communicating digital information
- evaluation of information
- knowledge assembly
- information literacy
- media literacy

Digital literacy claims are suspect without these abilities and competences. They are a wide collection, and assessing their prevalence worldwide would be depressing.

4. **attitudes and perspectives**

- Independent learning
- Social/moral literacy

These beliefs may have popularized the link between digital literacy and literacy two centuries ago. Skill and ability alone are not enough; they must be founded in a moral framework, firmly associated with

being educated, or "lettered," per our forebears. They are the hardest to teach or instill, yet they most resemble “infomare”—the transformative, structuring power.

1.3. Digital literacy as the acquisition of ‘information age’ skills

Digital literacy can be seen as a collection of skills or behaviours used to use digital information systems, frequently in inquiry. The "Information Age" was brought on by widespread use of computers, digital devices, and information services in affluent Western societies, features these talents [8]. These digital ‘translations’ of information literacy abilities anchored in print-based bibliographic education are widely supported in librarians and information scientists. Digital literates know when and how to use digital resources to bridge knowledge gaps and examine digital content for currency, relevancy, and reliability. From a digital information literacy standpoint, inquiry and investigation to address correctness, currency, reliability, validity, and comprehensiveness. Online information creation and sharing via user-generated forums and social networks are recent additions.

The skills perspective examines user behaviours in the digital environment, therefore digital literacy can be tested via standardized exams or heuristics. Students and users are assessed on their capacity to find, assess, and apply information, usually for academic purposes but also for daily information requirements. Assessing the learner against institutional system and search engine expert models is the goal.

The skills viewpoint emphasizes measurement: if digital literacy is measurable, institutions may assess how instructional programmes affect skill levels. Current concerns with accountability and programming outcomes relate to impact. However, this strength is conceptually weak. Young people's digital tool use is typically nonexpert, classifying them as "lacking" digital literacy that can only be overcome with formal teaching from librarians or other skilled educators. Information literacy and bibliographic information systems underpin these digital skills; therefore, we detect older skill markers. Some digital literacy tests assess a user's grasp of Boolean logic, specifically how to utilize ‘and’, ‘or’, and ‘not’ to refine database search results. This skill may distinguish advanced searchers from novices, but Google makes it rare. Skills education, especially when based on behaviours rather than concepts, may not accommodate for digital technology's quick changes.

The skills perspective explains low digital literacy among youth by citing a lack of motivation: young people lack the drive to acquire expert information skills or sometimes believe they possess digital literacy when in fact they do not [9]. Self-taught digital literacy leads to ‘good enough’ solutions for most

digital issues. Informal environments can overcome motivational issues by providing diverse incentives to practise and achieve mastery, or by re-contextualizing skills in relation to the learner's interests.

2. Literature Review

Attahir, Isa Sidi. (2019) examined digital literacy, whether Nigerian researchers have it, and Nigeria's digital literacy initiatives. A detailed of relevant literature and the work and personal experiences were used to outline the study's goal. In order to build a training plan, this study will assess Nigerian librarians' digital literacy. In addition, Nigerian received DL training. Based on the literature, librarians still have low digital literacy, so more digital literacy programmes should be added to institutions' curricula and librarian training programmes.

Shabahat Husain and Mohammad Nazim (2015) studied the Indian academic libraries primarily use traditional ICT-based technologies to administer library activities and services, especially information organization and retrieval. Academic libraries rarely use social networking, blogs, wikis, RSS feeds, web discovery tools, and social bookmarking. Lack of ICT-trained staff, insufficient ICT skills among library users, unawareness of ICT's potential benefits, and inadequate ICT infrastructure were determined to be key impediments to ICT uses in academic libraries

Amogu, Uma Kalu et.al (2015) described Librarians must adapt to the Digital Age's developments in information handling to do their jobs well. The article discusses the information literacy abilities librarians need in the “Digital Age”. The report also discussed civilization's ages before the Digital Age, information literacy, librarians' need for it, and information literacy methods. It lists librarians' information literacy skills: information necessity, comprehension of information availability, and information location, result evaluation, result exploitation, ethics and responsibility of information use, sharing or communicating information, and managing findings. Librarians must learn information literacy skills to stay crucial to information supply in the Digital Age, the report says.

Meyers, Eric M et.al (2013) studied media and technology are changing how people communicate, study, work, and govern. The conditions of this emerging sociotechnical reality individuals to know both how to utilize devices and how to use them properly. To be ‘digitally literate’ includes cognitive authority, safety and privacy, creative, ethical, and responsible usage and reuse of digital media, and more. Lack of digital literacy limits one's potential as a student, employee, or citizen. Learning digital literacy in libraries, museums, social clubs, affinity places online, and the home is informal, not school-

based. This article recognizes and connects approaches to develop a modern digital literacy understanding.

Verma, Manoj Kumar (2015) proposed ICT and digitization of library resources have created new paradigms in library and information science in the last two decades, changing the definition of library from document preservation to knowledge management. Globalisation, privatisation, and liberalisation of every aspect of human life and the rise of ICT in information generation, communication, and access have created an unprecedented explosion of information and its availability in different forms, presenting new challenges for library professionals. Modern librarians must shift from document custodians to information providers to address these issues. Library management has changed from storehouse to access provider. The current digital world has changed not just library and information services but also library professionals' roles and expectations to meet user information needs.

Li, Shuqing, et al (2019) examined the role of user service in building digital libraries in the big data era and finds that not only do modern digital library data resources have big data characteristics, but also do library services need big data methods to reform and innovate, including resource transferring, resource utilization, social identity, and thinking innovation. We emphasize user services and big data resources that digital libraries can use, including user behaviour data, digital literary resources, and scholarly big data. Digital libraries in the age of big data face challenges and opportunities in data, technology, services, and users. More effective digital library service improvements can be made using big data resources and user needs. In the age of big data, consumers' personalized needs drive the growth of digital libraries from resource-sharing to user-oriented services.

Guess, Andrew M. (2023) studied digital literacy as a possible cause of disinformation and other internet disorders. Unfortunately, definitions and measures of it are still disputed. We equip political scientists with a digital literacy framework and test survey items for online information retrieval. Digital literacy varies widely in the population, is connected with age, and may obfuscate trends. It uses online convenience samples that pick computer and internet users, which obscures this. The effects of measurement and sample selection on effect heterogeneity in online political behaviour are discussed. It should make theoretically informed arguments about how they choose sample and quantify digital literacy, as there is no universal method for selecting a non-probability sample or operationalizing the term.

Table 1: Comparison of Reviews

Author and Years	Focus	Findings
Attahir, Isa Sidi (2019)	Examined digital literacy among Nigerian researchers and initiatives in Nigeria. Assessed digital literacy of Nigerian librarians.	Librarians in Nigeria have low digital literacy. The study suggests the need for more digital literacy programs in institutions' curricula and librarian training programs.
Shabahat Husain and Mohammad Nazim (2015)	Studied the use of ICT-based technologies in Indian academic libraries. Identified impediments to ICT use in academic libraries.	Indian academic libraries primarily use traditional ICT-based technologies. Key impediments include lack of ICT-trained staff, insufficient ICT skills among library users, unawareness of ICT benefits, and inadequate ICT infrastructure.
Amogu, Uma Kalu et.al (2015)	Described librarians' need to adapt to the Digital Age and discussed information literacy skills required.	Librarians must acquire information literacy skills, including information necessity, comprehension, location, result evaluation, exploitation, ethics, responsibility, sharing, and managing findings, to remain crucial to information supply in the Digital Age.
Meyers, Eric M et.al (2013)	Explored how media and technology are changing communication, study, work, and governance. Recognized approaches to develop digital literacy.	Lack of digital literacy limits potential as a student, employee, or citizen. Learning digital literacy is informal and occurs in libraries, museums, online clubs, and at home. Digital literacy includes cognitive authority,

		safety and privacy, creative, ethical, and responsible usage and reuse of digital media. The article connects approaches to develop a modern digital literacy understanding.
Verma, Manoj Kumar (2015)	Proposed shifts in library and information science paradigms due to ICT and digitization. Emphasized the changing role of librarians.	ICT and digitization have changed library roles from document preservation to knowledge management. Librarians must shift from document custodians to information providers. Challenges include the unprecedented explosion of information and its availability. Modern librarians play a role in providing access to information in a globalized and digital world.
Li, Shuqing, et al (2019)	Examined the role of user service in building digital libraries in the big data era. Emphasized the use of big data methods in library services.	Digital libraries in the big data era face challenges and opportunities. User services can benefit from big data resources, including user behavior data, digital literary resources, and scholarly big data. The growth of digital libraries is driven by personalized user needs, transforming from resource-sharing to user-oriented services.
Guess, Andrew M. (2023)	Studied digital literacy as a	Digital literacy is linked to

	cause of disinformation and internet disorders. Developed a digital literacy framework and tested survey items.	disinformation and varies widely across the population, connected with age. Measurement methods and sample selection impact the understanding of online political behavior. The study emphasizes the need for theoretically informed arguments when selecting samples and quantifying digital literacy, as there is no universal method for selecting a non-probability sample or operationalizing the term.

3. Information Literacy Skills Needed by Librarians

Information gathering Literacy could solve information utilization, which is essential for librarians' success. Librarians can utilize several information sources to study, ask informed questions, and improve critical thinking for self-directed learning with IL skills. Librarians must employ thinking skills to become expert users of information sources in different sites' ad forms to maximize problem-based learning, increasing their accountability for their own learning. Information literate librarians should know information characteristics, sources, access tools, search strategies, critical thinking, ethical and legal difficulties with information use and knowledge exchange.

Skills required by librarians to be information literate as identified by CILIP (2012) include:

- **Skills on Need for Information:** Knowing why and what information is essential, and any constraints (e.g., time, currency, access) and available in numerous formats in many geographical and virtual locations.
- **Skills on Availability and Identification:** Librarians should know Availability, access, benefits, and when to use resources. Understanding paper, electronic/digital, human, and other resources and when to employ them is necessary. Individual resource type needs and differences. Journal articles can be printed, published online, or stored in full-text databases.

- **Skills on How to Locate Information:** Effective resource searching and information identification. For optimal resource use, strategies must be adapted to the resource. Search results may be too many, therefore users must reply and know when to stop. An information-literate librarian knows that browsing, scanning, and monitoring information sources are useful in addition to deliberate searching. Searches, back-of-book indexes, journal abstracting and indexing, email discussion lists, bulletin boards, hypertext, URLS, bookmarking, Boolean logic, and more are examples.
- **Skills on Information Evaluation:** This is another information literacy skill for librarians. Librarians should be able to assess your method to verify it did not yield misleading or incomplete results. The resources are trustworthy, not merely if they answer it. E.g., Applying author, editor, series, publisher expertise to problem relevance, user-friendliness, currency/timeliness, consistency, etc.
- **Skills on Exploitation of Information Resources:** Data analysis is needed to create accurate, presentable results or gain new knowledge to analyses, compare, integrate, annotate, and apply the data. Realize you may need more information. Use spreadsheets, databases, statistics, and reference management software.
- **Skills on Ethics and Responsibility of Use:** This skill entails knowing why knowledge should be used ethically, responsibly, and culturally. Maintain confidentiality and credit others. Reporting accurately requires understanding bias. Provide balanced (unbiased) reports as applicable. Firm, institution, or professional group may have ethical, data protection, intellectual property, and practice standards.
- **Sharing and Communicating Findings:** This IL skill entails communicating information in a format appropriate for the audience and situation. Beyond analysis, this competence synthesizes, organizes, and creates relevant information. For example, understanding the pros and cons of different communications channels (web page, presentation, written report), participating effectively in collaborative writing and publication, including using collaborative software (e.g., student group report, internal knowledge base, collaborative blog, Wikipedia), and understanding appropriate writing styles.
- **Managing of Findings:** This talent requires knowing best practices for data storage and management. It also requires critically assessing the process, results, and sources to learn from knowledge discovery and use. Examples include folders for computer data, email and attachment organization, document tracking, security, backups, and content management [20].

Table 2: Library in Information Age

Changes in the Role of Library in Information Age	
From	**To**
Information resource in one medium	Information resource in multi media
Library has its own collection	Library without wall
Procurement of information sources by individual library	Procurement of information resources through consortia
Service in good time	Service just in time
In-sourcing of all activities	Out sourcing of all activities
Local reach of resources	Global reach of resources through networks
User's want print resources	Users want print, non-print, online resources
Users goes to library	Library come to users
Local users	Users from any place

4. CONCLUSION

Librarians safeguard and share information in the Information Age. Digital technologies have changed information availability, consumption, and analysis, making librarians need digital literacy. Tech skills, information retrieval, critical thinking, and communication are all part of digital literacy. To be current and effective, librarians must navigate digital terrain. Digital literacy helps librarians adapt to new technology and curate, manage, and share knowledge in a fast-changing world. The library has grown from walls and paper resources to a global institution thanks to digital networks and technologies. Basic computer skills to socio-emotional awareness demonstrate the intricacy and multifaceted nature of digital literacy. Digital literacy abilities are acquired over time, as technology and information needs change. Modern librarians are information guides and knowledge facilitators with digital literacy. They help with research, curate varied collections, engage communities, and manage the changing information world. Digital literacy encourages continued education and professional development, keeping librarians current on technology and information trends. Librarians must learn digital literacy to survive as libraries become digital hubs. Learning to understand the digital world improves library services and positions librarians as major players in information diffusion and technology adaption. Finally, librarians need digital literacy to thrive and contribute in the Information Age. It equips individuals to use digital tools, engage with varied information forms, and be essential guides in a world of plentiful, dynamic, and ever-changing knowledge.

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