DIGITAL LITERACY AND CRITICAL AI USE IN LIBRARIES: NAVIGATING THE HUMAN AND ETHICAL DIMENSIONS IN THE AI ERA

Dr. Aparna S. Choudhary
Librarian
Smt. Binzani Mahila Mahavidhyalaya, Nagapur

Crossref DOI - https://doi.org/10.5281/zenodo.23362138

Abstract :

Artificial Intelligence (AI) is becoming an important part of the modern information environment. Libraries are also experiencing changes as AI-based tools are increasingly used for information searching, reference services, content organisation, and research support. Students and researchers use generative AI tools to find information, generate ideas, summarise documents, and understand difficult topics. These tools can provide useful support, but they also raise concerns related to accuracy, bias, privacy, copyright, misinformation, and academic integrity.

In this changing environment, digital literacy needs to go beyond the basic ability to use computers and digital resources. Users need to understand how AI-generated information is produced, how its accuracy can be evaluated, and when information should be verified through reliable and authoritative sources. Critical AI use is therefore becoming an important part of modern information literacy. Librarians can guide users in understanding both the benefits and limitations of AI and encourage them to use these tools responsibly.

This paper discusses digital literacy and the responsible use of AI in libraries. It focuses on the changing information environment, the use of AI in library services, the critical evaluation of AI-generated information, ethical concerns, and the changing role of librarians. The paper highlights that AI can be a useful tool for learning and research when it is used with human judgement, critical thinking, and ethical responsibility.

Keywords : Digital Literacy; Artificial Intelligence; Critical AI Use; Information Literacy; Ethical Use of AI

Introduction :

Libraries have traditionally played an important role in helping users find, evaluate, and use information. Librarians guide students and researchers towards books, journals, reference sources, databases, and other reliable information resources. The growth of digital technology has significantly changed the information environment. Users can now access information through online databases, digital libraries, search engines, social media

platforms, and a variety of digital tools.

Another major change has come with the development of Artificial Intelligence. AI-based tools can generate responses, summarise information, translate text, provide explanations, and assist users in various educational and research activities. Generative AI has made these possibilities more visible because users can interact with such systems using natural language and receive responses almost instantly. For students and researchers, this can make some information-related activities faster and more convenient.

However, convenience does not always mean reliability. AI-generated responses may contain misinformation, incomplete information, inaccurate statements, or references that cannot be verified. The quality of an AI response may also depend on the data, models, and systems used to generate it. Therefore, users should not assume that every AI-generated response is correct simply because it is presented clearly and confidently.

This situation requires us to rethink the meaning of digital literacy. In the past, digital literacy was mainly associated with the ability to use computers, access digital information, and search for resources online. Today, users also need to understand how AI-based systems work at a basic level, how to evaluate their outputs, and how to verify the information received through AI tools.

Libraries have an important role to play in this changing environment. Information literacy has always been an important part of library services. Librarians teach users how to identify their information needs, find appropriate sources, evaluate information, and use it ethically. The emergence of AI does not remove these responsibilities. Instead, it adds a new dimension to them. Librarians can now extend information literacy programmes by introducing AI literacy and helping users critically evaluate AI-generated information.

Digital Literacy in the AI Age :

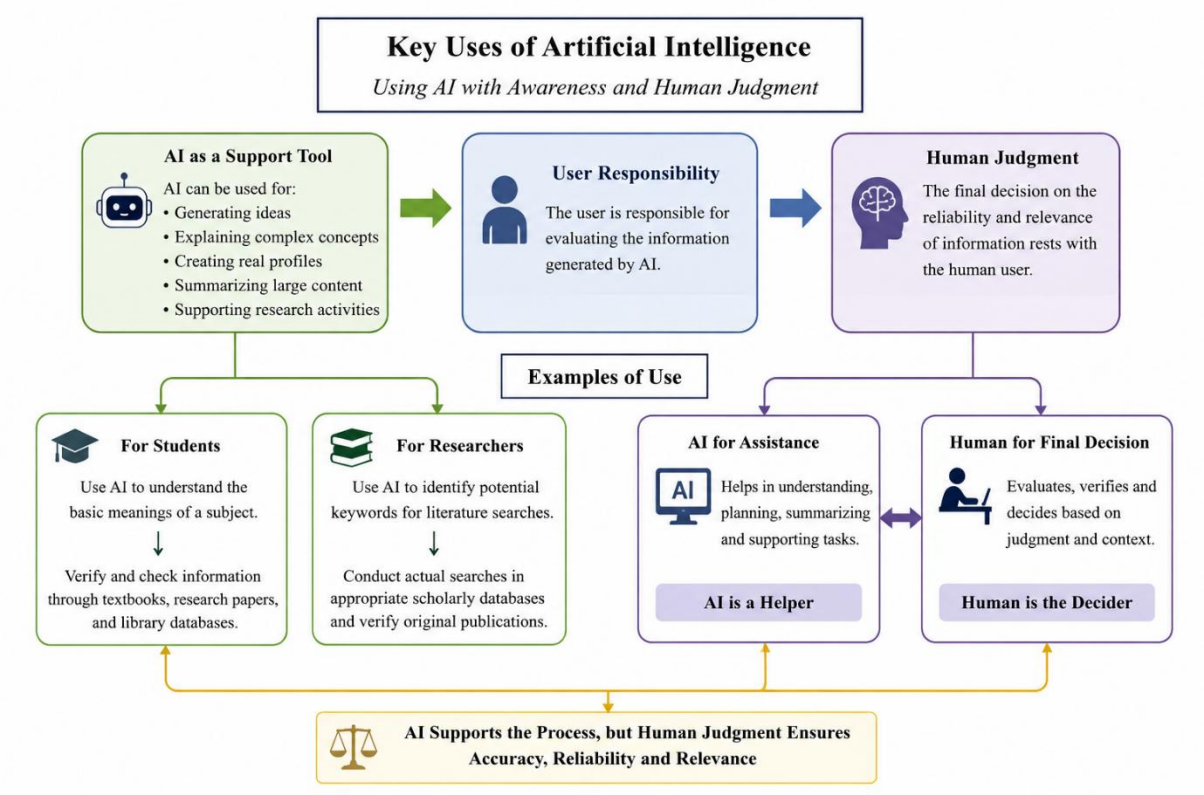
Digital literacy is traditionally associated with the ability to access, find, understand, evaluate, and use information through digital technologies. In the present environment, however, its meaning has become broader. A digitally literate user should not only know how to obtain information but should also be able to judge whether that information is reliable, relevant, and appropriate for a particular purpose.

The increasing use of Artificial Intelligence has made this ability even more important. When a student receives a response from an AI tool, the student should consider where the information came from, whether it is supported by reliable sources, and whether it can be verified independently. The same principle applies to researchers who use AI for literature searching, summarising information, or developing ideas for their research.

Therefore, digital literacy in the AI era involves a combination of technical skills, information evaluation, critical thinking, and responsible use. Users need to understand that information generated by AI should not be accepted automatically. Important information should be checked against reliable and authoritative sources before it is used for academic or

research purposes.

Key Uses of Artificial Intelligence

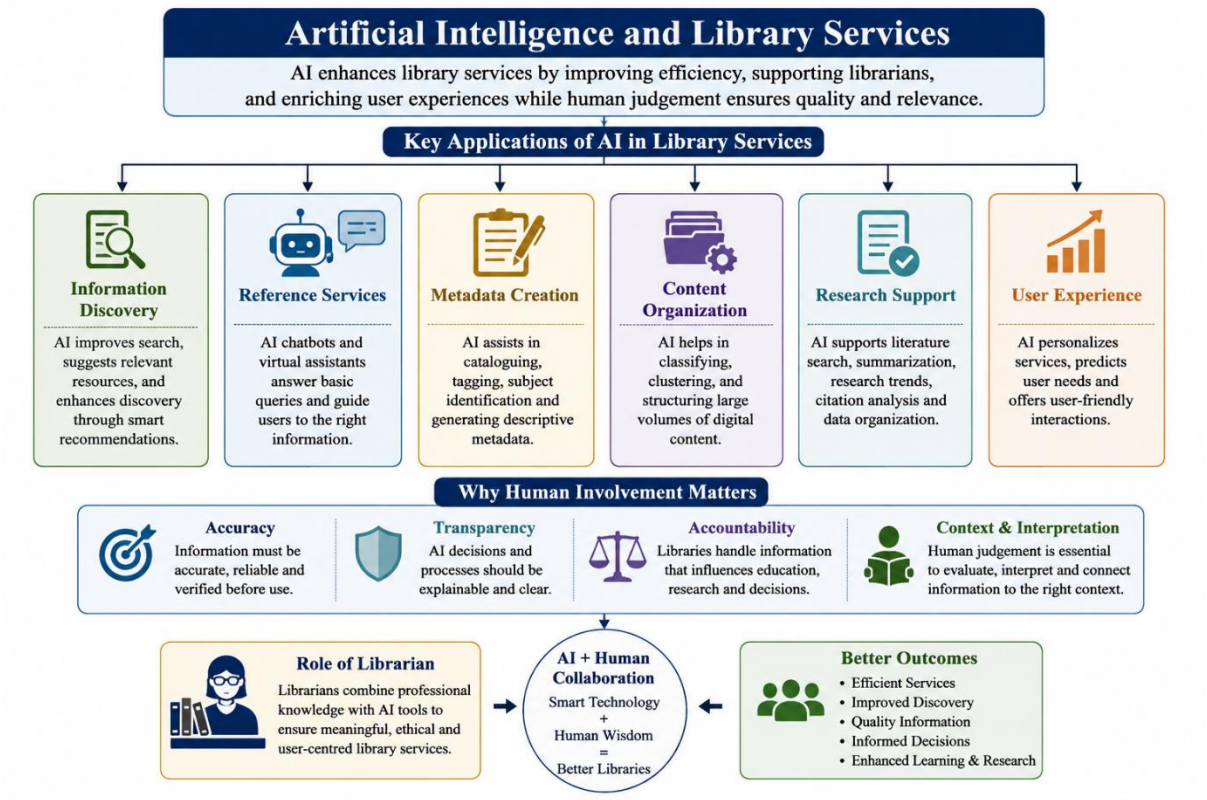


The use of AI does not mean that AI tools should be avoided. When used appropriately, AI can support learning and research in several ways. It can help users generate ideas, explain complex concepts in simple language, summarise large amounts of information, translate text, prepare initial outlines, and support specific research activities. However, the responsibility for evaluating the information generated by AI remains with the user.

For example, a student may use an AI tool to understand the basic meaning of a difficult topic. The student can then consult textbooks, research papers, library databases, and other reliable sources to confirm the information. Similarly, a researcher may use AI to identify possible keywords for a literature search, but the actual search should be conducted through appropriate scholarly databases and the original publications should be consulted and verified.

This creates an important distinction between using AI as a support tool and depending on AI for the final answer. AI can assist users during the learning and research process, but the final judgement about the accuracy, relevance, and reliability of information should remain with the human user.

Artificial Intelligence and Library Services :



Artificial Intelligence has potential applications in several areas of library services. It can support information discovery, reference services, metadata creation, content organisation, and research support. AI-based systems can help users discover information more quickly and can provide new ways of interacting with library collections.

AI can also help librarians perform repetitive tasks and manage large amounts of information more efficiently. However, the introduction of AI in libraries should not be considered only from the perspective of efficiency. Libraries manage information that directly influences education, learning, research, and academic decision-making. Therefore, accuracy, transparency, accountability, and responsible use are equally important.

Human involvement remains essential when information needs to be evaluated, interpreted, or connected to a particular educational or research context. The professional knowledge and judgement of librarians can help ensure that AI technologies are used in meaningful and responsible ways.

Ethical Dimensions of AI Use :

The increasing use of AI raises several important ethical questions. The accuracy of AI-generated information is one of the major concerns. AI systems can sometimes produce information that appears reliable but is actually incorrect or unsupported. Users should therefore verify important information through authoritative and original sources.

Bias is another concern. AI systems may reflect biases present in the data or systems used to develop them. This can influence how individuals, communities, subjects, or events

are represented. Critical evaluation is therefore particularly important when AI-generated information is used for academic or research purposes.

Privacy is also an important concern in the library environment. Users may enter personal, educational, research-related, or confidential information into AI tools without fully understanding how that information may be processed or stored. Libraries can help users understand the importance of protecting personal and confidential information when using digital and AI-based tools.

Copyright and academic integrity are further concerns. Students may use AI-generated text in assignments or research work without fully understanding the principles of responsible use and academic honesty. AI can support learning and writing, but it should not replace a student's own thinking, analysis, interpretation, and academic contribution.

Role of Librarian :

The development of Artificial Intelligence is changing rather than diminishing the role of librarians. Librarians have traditionally helped users find, evaluate, and use information. In the AI era, this responsibility can be extended to helping users understand AI-generated information and use AI tools critically.

Librarians can guide students and researchers in comparing AI-generated responses with information available in books, journals, scholarly databases, and original research publications. They can teach users how to check references, identify reliable information, recognise inaccurate content, and understand the limitations of AI-generated responses.

Library orientation programmes, information literacy sessions, workshops, and research support services can provide useful opportunities to introduce AI literacy. In this way, AI literacy can become a natural extension of existing information literacy programmes.

The librarian therefore becomes an important link between technology and human judgement. The role is not simply to teach users how to operate an AI tool, but also to help them understand when it is appropriate to use the tool, how to question its output, how to evaluate the information provided, and when the information should be verified through original and authoritative sources.

AI literacy as an extension of information literacy :

Information literacy and AI literacy are closely connected. Traditional information literacy encourages users to identify their information needs, locate relevant sources, evaluate information, and use it responsibly. AI adds another layer to this process.

When a user receives information through an AI tool, additional questions need to be considered. The user should ask how the answer was produced, whether the information is supported by reliable sources, whether the original source can be identified, and whether the information can be independently verified. This makes critical thinking an essential part of AI literacy.

AI literacy should therefore not be viewed as a completely separate skill. It can be developed as an extension of digital and information literacy. Libraries already have considerable experience in teaching users how to evaluate information, and this provides a strong foundation for developing responsible AI literacy programmes.

Challenges for Libraries :

Libraries face several challenges in responding to the rapid development of AI. AI technologies are evolving quickly, and librarians need to continuously update their knowledge and skills. Different AI tools have different capabilities, limitations, and terms of use, making it difficult to establish a single approach for their use in libraries.

Issues related to privacy, copyright, academic integrity, data security, and institutional policies also need careful consideration. In addition, users have different levels of digital and information literacy. Some students may be comfortable using AI tools but may not have sufficient skills to evaluate the information generated by them.

These challenges suggest that AI literacy should be treated as a continuous learning process rather than as a one-time training programme. Libraries need to provide regular awareness programmes, workshops, and guidance so that students and researchers can develop the skills required to use AI responsibly.

Conclusion :

Artificial Intelligence is changing the way people search for, understand, evaluate, and use information. Libraries therefore need to respond to this change by expanding the scope of digital and information literacy. Knowing how to use an AI tool is not enough. Users also need to understand its limitations, question its outputs, verify important information, and use the technology responsibly.

The role of librarians remains important in this changing environment. Librarians can help students and researchers develop the ability to use AI critically while maintaining academic integrity, privacy, responsible information practices, and ethical standards.

The future of library services should therefore not be based on a choice between Artificial Intelligence and human capabilities. Instead, libraries should work towards a balanced approach in which AI provides technological support while human judgement, critical thinking, information evaluation, and ethical responsibility remain at the centre of learning and research.

References :

- Miao, F., & Holmes, W. (2023). - Pioneer of productive artificial intelligence in education and research. UNESCO UNESCO - Guidance for Generative AI in Education and Research
- International Federation of Library Societies and Institutions (IFLA). (2025). IFLA's Report on Libraries and Artificial Intelligence.

IFLA Report on IFLA Libraries and Artificial Intelligence

- Association of College and Research Libraries (ACRL). (2025). AI Skills for Educational Library Staff. American Library Association. ACRL – AI Skills for Academic Library Staff
- American Library Association (ALA). (2026). Guidance for the Use of Artificial Intelligence in Libraries. American Library Association. ALA - Guidance for the Use of Artificial Intelligence in the Library
- International Federation of Library Societies and Institutions (IFLA). (2025). Understanding Capacity , Supporting Users: IFLA's Report on Copyright and Artificial Intelligence. IFLA - Copyright and Artificial Intelligence
- American Library Association (ALA). (2022). Key Competencies of the Librarian.American Library Association. ALA - Library Skills