

Libraries in the Artificial Intelligence Age and its Future

Dr. Paresh Ilasariya¹, Ms. Manjula Ilasariya²

¹Librarian, ²Assistant Librarian

^{1,2}P P Savani University, Surat

Abstract: In this paper, some recommendations have been made to maintain the values of the library and to provide services to the library responsibly while using IT (Artificial Intelligence). When we use IT to get any information, IT collects, organizes and makes available the information available online. This includes students, teachers, libraries and educational institutions etc. There are all kinds of risks in the use of such information such as dissemination of wrong information, confidentiality of information is not maintained, in such a situation, the responsibility of librarians and libraries increases a lot and some recommendations have been made in this paper to avoid such a situation.

Key word: AI is transforming academic research and academic workflow; libraries must respond by blending AI tools with management and critical instruction.

Keywords: libraries, artificial intelligence, information literacy, digital inclusion, library services

1. Introduction:

AI applications, from recommendation engines to large language models (LLMs), are making inroads into library operations and patron-facing services. These technologies can improve search, automate repetitive tasks, and enable personalized user experiences. However, they also raise concerns about accuracy, privacy, bias, and widening the digital divide. Libraries must therefore balance innovation with core professional values such as universal access, intellectual freedom, confidentiality, and information literacy.

2. Literature review:

TechRadar (2025). Recent analyses indicate that AI is rapidly being integrated into research workflows (literature reviews, data synthesis, drafting support), accelerating some aspects of scholarship while raising authorship and integrity questions. This broader redefinition of research practices creates downstream impacts for academic libraries supporting faculty and students.

Library Journal (2025). As generative AI increases the volume of plausible but incorrect content, public libraries are emerging as critical institutions for teaching critical consumption of information and for providing safe, neutral access. Librarians are being called on to teach patrons how to evaluate AI outputs and identify misinformation.

Association of Research Libraries. Professional bodies (e.g., Association of Research Libraries) are producing guidance on AI adoption emphasizing stewardship, ethics, and policy development. Libraries are advised to take proactive governance approaches rather than reactive adoption.



College and Research libraries. Studies show variability in AI literacy among library staff and underscore the need for targeted professional development so staff can evaluate tools, explain limitations to patrons, and integrate AI responsibly into services.

3. Opportunities for libraries:

Artificial Intelligence offers libraries transformative opportunities to modernize operations and expand services. Its key benefits include:

- Automating routine cataloguing.
- Providing 24/7 reference support through AI chatbots

4. Using predictive analytics to optimize collection management, etc.

Additionally, libraries can lead AI literacy initiatives, teach customers ethical AI use, and prompt engineering.

Enhanced patron services and research support: Libraries can deploy conversational AI and virtual assistants to help users find relevant resources and get answers 24/7.

Operational efficiency: AI algorithms can extract metadata, automate cataloguing, manage inventories, and generate summaries, freeing up library staff to focus on higher-level, strategic, and community-driven efforts.

AI literacy and education: With the rapid development of technology, libraries have increased their global reach and can organize workshops using AI, create curriculum materials, and provide guidance on ethical AI use, data privacy, and reducing algorithmic bias.

Accessibility enhancements: AI-powered software and language translation services can greatly improve the accessibility of library materials and digital interfaces for people with disabilities.

5. Risks and Challenges:

- Misinformation and hallucinations: Generative models sometimes produce confident but false outputs problematic if used for reference.
- Privacy & surveillance risks: AI-driven personalization may require data collection that conflicts with library privacy norms.
- Digital divide: Patrons with low digital literacy or limited access could be disadvantaged by AI-driven self-service.
- Staff displacement concerns: Automation can be framed as “cost-cutting” rather than as an augmentation of librarian work leading to morale and employment concerns.
- Phase 1 Environmental scan & policy analysis: Document current AI tools, vendor contracts, privacy practices, and governance frameworks across a purposive sample of institutions.
- Phase 2 Survey (large-N): Measure staff and patron AI literacy, attitudes to AI, perceived benefits/risks, and usage patterns. Use validated scales where available (adapted for AI literacy).
- Phase 3 Case studies (5–7 libraries): In-depth ethnographic and workflow studies where specific AI tools are deployed (e.g., chatbot, automated cataloguing). Collect system logs, conduct interviews with staff and patrons, and perform pre/post service quality measurements.

- Phase 4 Experimental evaluation: For patron-facing tools (e.g., recommendation engine), run A/B tests to measure engagement, satisfaction, and information accuracy. Include fairness audits for different user groups.

6. Practical Recommendations for libraries:

1. Adopt an AI policy. Create an AI governance working group to assess use cases, privacy, and procurement.
2. Invest in AI literacy for staff and supporters. Offer workshops on evaluating AI output, safe prompt use, and basic prompt-engineering skills.
3. Prioritize human-in-the-loop deployment. Use AI to augment rather than replace human expertise; ensure clear escalation paths for uncertain or high-stakes questions.
4. Require vendor transparency and auditability. In procurement, ask vendors for information about training data, bias reduction, and options for running models on-premises or with strong data controls.
5. Pilot, scale, iterate. Run small pilots with clear success metrics (accuracy, customer satisfaction, equity outcomes) before a broader rollout.
6. Frame AI as a literacy challenge and social service. Outreach should prioritize inclusion (sessions for seniors, low-literacy customers) to avoid widening the digital divide.

7. AI Tools Useful for Librarians

The following AI tools can significantly improve librarians' efficiency in reference services, research support, cataloguing, collection development, information literacy, and administrative tasks.

AI TOOL	PURPOSE	LIBRARY APPLICATIONS
CHATGPT (OPENAI)	AI assistant integrated with Microsoft 365	Draft emails, prepare reports, summarize articles, create library guides, answer reference queries, generate training materials
MICROSOFT COPILOT	AI assistant integrated with Microsoft 365	Create meeting minutes, analyse Excel data, prepare presentations, draft official documents
GOOGLE GEMINI	AI-powered search and content generation	Literature searching, content creation, multilingual translation, research assistance
MENDELEY	Research management	Store references, collaborate with researchers, annotate PDFs
CANVA MAGIC WRITE	AI content creation	Design posters, newsletters, social media posts, and presentations
GRAMMARLY	AI writing assistant	Improve grammar, clarity, tone, and professional writing
GAMMA AI	AI presentation generator	Create presentations for library orientation and workshops
TURNITIN	Similarity and AI writing detection	Plagiarism checking, academic integrity support
ZOTERO AI PLUGINS	Reference management	Organize citations, summarize PDFs, manage bibliographies
ELICIT	AI literature review assistant	Search research papers, summarize findings, compare studies, identify research gap

SCITE			Citation analysis	Verify whether research has been supported or contradicted by later studies
ADOBE	ACROBAT	AI	PDF analysis	Summarize reports, extract key information, answer questions from PDFs
ASSISTANT				

8. Discussion:

Libraries trust capital neutrality, privacy, and long-term stewardship is an asset in the AI era. By proactively building governance, pedagogy, and evaluative capacity, libraries can both benefit from AI (better discovery, operational gains) and protect vulnerable patrons. The biggest long-term risk is not the technology itself but the absence of policy, training, and public-facing explanation that keeps AI aligned with library values.

9. Conclusion:

AI offers compelling tools to enhance library services but also introduces novel ethical, privacy, and equity challenges. The way forward requires intentional governance, staff training, careful procurement, and rigorous evaluation. Libraries that position themselves as educators and stewards will remain indispensable community anchors in the AI age.

References:

[1] Cawley, Christian. AI is redefining university research: here's how. *TechRadar* (2025). <https://www.techradar.com/ai-platforms-assistants/ai-is-redefining-university-research-heres-how>. Accessed Sep. 29, 2025

[2] Enis, Matt. AI Influencers: Libraries Guiding AI Use. *Library Journal*. Sep. 2025. <https://www.libraryjournal.com/story/ai-influencers-libraries-guiding-ai-use>. Accessed Sep. 28, 2025

[3] Association of Research Libraries. *AI Guidelines and Scenarios*. (ARL web resource). <https://www.arl.org/artificial-intelligence/>. Accessed Sep. 29, 2025

[4] Leo S. Lo. Evaluating AI Literacy in Academic Libraries: A Survey Study with a Focus on U.S. Employees. *College & Research Libraries*. Vol 85, issue 5, 2024. <https://doi.org/10.5860/crl.85.5.635>.

[5] Steiger, Karen. *Artificial Intelligence in Higher Education and Academic Libraries: A Literature Review*. Endnotes, American Library Association. vol. 12, issue 1 (2024). ISSN:2159-0591