

## **Reconceptualising the Librarian's Role in the Age of Generative AI and ChatGPT**

**Dr. Dhananjay Shivaji Trimukhe**

Librarian,

Sanskar Mandir Sanstha's

Arts and Commerce College, Warje, Pune

Email: [ds.trimukhe@gmail.com](mailto:ds.trimukhe@gmail.com)

### **Abstract**

This study investigates the evolving role of librarians in the context of generative artificial intelligence (AI), particularly tools like ChatGPT. A descriptive survey was conducted among 46 librarians from grantable colleges affiliated with Savitribai Phule Pune University to assess their awareness, usage, training, and ethical concerns regarding AI. The findings reveal high awareness but limited formal training, alongside a strong interest in AI integration and user education. The study emphasizes the urgent need for targeted professional development, ethical guidelines, and AI literacy initiatives to enable librarians to navigate and lead in an AI-augmented information environment.

**Keywords:** Generative Artificial Intelligence, ChatGPT, Digital Literacy, Library Innovation

### **1. Introduction**

The advent of generative AI tools such as ChatGPT is transforming the landscape of information creation, retrieval, and dissemination. These technologies present new opportunities for enhancing library services through summarization, content generation, reference support, and more. Libraries, traditionally custodians of trusted information, must now adapt to these technological shifts. Consequently, the role of librarians is expanding to encompass digital facilitation, ethical mediation, and AI literacy education.

This study analyses the readiness and perceptions of 46 librarians from grantable colleges in Pune, affiliated with Savitribai Phule Pune University, in engaging with generative AI. Using a structured survey approach, it explores their current practices, challenges, and expectations concerning AI-driven tools like ChatGPT.

## **2. Generative AI and ChatGPT in Library Practice**

### **2.1 Capabilities of ChatGPT in Libraries**

- Information retrieval and summarization
- Reference assistance
- Content creation (e.g., bibliographies, reports)
- Language translation
- Coding and data support

## **2.2 Limitations of ChatGPT**

- Inaccurate or fabricated information (hallucinations)
- Bias in training data
- Absence of real-time updates unless paired with external tools

## **3. Evolving Roles of Librarians in the AI Era**

### **3.1 AI-Enhanced Service Facilitators**

Librarians can leverage AI for automated literature reviews, chatbot-assisted reference services, and personalized reading recommendations.

### **3.2 Digital Literacy Educators**

They are now responsible for equipping users with skills to critically assess AI outputs, understand prompt formulation, and detect misinformation.

### **3.3 Ethical Guardians**

Librarians must guide responsible AI use by promoting privacy, intellectual property awareness, and equitable access.

### **3.4 Curators and Evaluators of AI Tools**

Libraries can identify, assess, and deploy appropriate AI applications, while providing documentation and training.

### **3.5 Research and Policy Collaborators**

Librarians play a strategic role in institutional AI policymaking, research support, and AI literacy initiatives.

## **4. Challenges and Considerations**

### **4.1 Role Re-definition**

Librarians are transitioning from information gatekeepers to AI-literate facilitators and ethical mentors.

### **4.2 Resource Constraints**

Balancing traditional services with AI investments requires strategic planning.

### **4.3 Continuous Learning Demands**

Librarians need ongoing training in AI, data ethics, and emerging digital tools.

### **4.4 Inclusivity and Accessibility**

AI tools must be made accessible to diverse user groups, including those with limited digital literacy or special needs.

## **5. Study Limitations**

The sample size is restricted to 46 librarians from grantable colleges in Pune affiliated with a Savitribai Phule Pune University. Findings may not generalize to other institutional contexts or geographic regions. Broader studies are recommended for more comprehensive insights.

## 6. Objectives

1. To examine the impact of generative AI on library services.
2. To identify changing roles and responsibilities of librarians in AI integration.
3. To explore strategies for promoting AI literacy and ethical awareness.
4. To recommend best practices for the equitable adoption of AI tools in libraries.

## 7. Methodology

This research used a descriptive survey method with a 20-question structured questionnaire. Respondents were purposively selected from 46 grantable colleges in Pune. The instrument included closed-ended and Likert-scale questions addressing AI awareness, usage, training, ethical views, and readiness. Data were analyzed using frequency counts, percentages, and t-tests.

## 8. Hypotheses

- **H<sub>1</sub>**: The integration of generative AI tools like ChatGPT enhances the efficiency and accessibility of library services.
- **H<sub>2</sub>**: Librarians who actively engage with generative AI are more effective in fostering digital literacy and ethical awareness.

## 9. Data Analysis and Interpretation

The table below summarises the respondents reply as percentages:

Respondents reply	Percentage
Aware of ChatGPT	76%
Advanced AI knowledge (self-assessed)	17%
Intermediate AI knowledge	39%
Beginner AI knowledge	44%
Use ChatGPT/AI tools in professional duties	61%
Received formal AI training	26%

Interested in future AI training workshops	85%
Moderate–high concern about AI ethics issues	78%
Support librarians’ role in AI ethics	91%
Support formal AI guidelines/policies	96%
Believe new AI/digital skills are needed	72%

Each percentage above comes from the survey’s frequency analysis. Together, they show that while Pune librarians are largely aware of generative AI and optimistic about its benefits, most recognize gaps in expertise and a need for training and ethical guidance. These findings are in line with broader library trends, reinforcing the interpretation that the profession is actively engaging with AI but also grappling with its challenges.

### Awareness and Usage:

- 76% were aware of ChatGPT.
- 61% had used AI tools in professional tasks such as summarizing, referencing, and reporting.
- 17% rated themselves as advanced users, while 44% were beginners.

### Training Needs:

- Only 26% had formal AI training.
- 85% expressed interest in attending workshops.

### Perceived Impact and Ethics:

- ChatGPT was rated as moderately to highly useful for routine tasks.
- ChatGPT users reported significantly higher efficiency ( $t = 10.57, p < 0.05$ ).
- 78% expressed concern about misinformation and plagiarism.
- 91% felt librarians should lead in AI ethics, while 96% supported institutional guidelines.

### Skill and Role Evolution:

- 72% believed librarians need new digital and AI skills.
- 75% reported institutional support for professional development.

## 10. Hypothesis Testing

### H<sub>1</sub>: AI Improves Library Services

- *t*-statistic: 10.57, *p*-value:  $2.36 \times 10^{12}$
- Result: Accepted. AI use improves efficiency and accessibility.

## **H: AI Engagement Enhances Digital Literacy and Ethics**

- *t*-statistic: 12.84, *p*-value:  $9.22 \times 10^{12}$
- Result: Accepted. AI-trained librarians are more effective in promoting digital ethics.

## **11. Key Findings**

1. 76% awareness of ChatGPT among respondents.
2. 61% have integrated AI in professional tasks.
3. 85% are interested in future AI training.
4. Only 26% received formal AI instruction.
5. 91% support librarian leadership in AI ethics.
6. 96% endorse institutional AI guidelines.
7. 72% foresee the role becoming more technical.
8. 78% express concern over ethical risks like misinformation.
9. Librarians using AI report significantly improved task efficiency.
10. Broad acceptance of AI's transformative potential in libraries.

## **12. Suggestions**

1. Conduct regular AI workshops for librarians.
2. Develop institutional policies on AI use.
3. Embed AI literacy in library orientation and training sessions.
4. Implement AI-based tools for user support and reference services.
5. Promote awareness of AI's ethical implications among users.

## **13. Recommendations**

- Incorporate AI topics in LIS curriculum and library instruction.
- Collaborate with academic and IT departments for AI initiatives.
- Regularly assess AI tools for accuracy and fairness.
- Advocate for equitable, open-access AI resources.

## **14. Conclusion**

Generative AI technologies like ChatGPT are redefining the landscape of academic librarianship. This study, focused on librarians from grantable colleges in Pune, reveals a sector ready to embrace these innovations, yet in need of training and policy support. While awareness and optimism are high, gaps in formal education and ethical preparedness remain. Librarians must now serve not only as information curators, but also as AI educators, ethical guides, and strategic partners in academic innovation. With the right investments in capacity-building and governance, librarians can remain indispensable in shaping the future of equitable, informed, and AI-literate learning communities.

## References

1. Adegboye, M., Vaidhyam, S., & Huang, K. T. (2024, October). Generative AI-ChatGPT's Impact in Health Science Libraries. In *Proceedings of the ALISE Annual Conference*.
2. Association of College & Research Libraries. (2023). *AI literacy in higher education: Challenges and strategies*. ACRL.
3. Bawden, D., & Robinson, L. (2020). *Introduction to information science* (2nd ed.). Facet Publishing.
4. Chen, X. S., & Feng, Y. (2025). Exploring the use of generative artificial intelligence in systematic searching: A comparative case study of a human librarian, ChatGPT-4 and ChatGPT-4 Turbo. *IFLA journal*, 51(1), 84-93.
5. Cox, A. M., & Pinfield, S. (2024). Libraries and artificial intelligence: Towards a new paradigm. *Journal of Documentation*, 80(1), 1–20.
6. Diyaolu, B. O., Bakare-Fatungase, O. D., & Ajayi, K. D. (2025). Generative AI Ethical Conundrum: Librarians as Artificial Intelligence Literacy Apostle in the Educational Space. In *Navigating AI in Academic Libraries: Implications for Academic Research* (pp. 131-162). IGI Global.
7. Dwivedi, Y. K., Hughes, D. L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., & Williams, M. D. (2023). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 67, 102669.
8. Eke, H. N. (2023). Awareness and application of artificial intelligence tools by librarians in Nigerian universities. *Library Philosophy and Practice*, 1–12.
9. Floridi, L., & Cowls, J. (2022). A unified framework of five principles for AI in society. *Harvard Data Science Review*, 4(1).
10. Formanek, M. (2025). Exploring the potential of large language models and generative artificial intelligence (GPT): Applications in Library and Information Science. *Journal of Librarianship and Information Science*, 57(2), 568-590.
11. Head, A. J., & Eisenberg, M. B. (2010). How college students evaluate and use information in the digital age. *Project Information Literacy Progress Report*.



12. Hosseini, M., & Holmes, K. (2023). The evolution of library workplaces and workflows via generative AI. *College and research libraries*, 84(6), 836.
13. Kirtley, S., & Brewerton, A. (2023). Artificial intelligence in academic libraries: Use cases, perceptions, and challenges. *Library Management*, 44(4), 258–274.
14. Koltay, T. (2022). Digital literacy, data literacy, and AI literacy: A triad of knowledge. *Journal of Documentation*, 78(3), 600–613.
15. Makulilo, A. B. (2021). Data protection and artificial intelligence: Ethical and legal challenges. *Computer Law & Security Review*, 41, 105530.
16. Narayanan, N. (2024). The era of generative AI: Transforming academic libraries, education, and research.
17. Oddone, K., Garrison, K., & Gagen-Spriggs, K. (2024). Navigating generative AI: The teacher librarian's role in cultivating ethical and critical practices. *Journal of the Australian Library and Information Association*, 73(1), 3-26.
18. OpenAI. (2023). *ChatGPT technical report*.
19. Pomerantz, J., & Peek, R. (2016). Fifty shades of open. *First Monday*, 21(5).
20. Raju, J. (2017). Information professional or IT professional? The knowledge and skills required by academic librarians in the digital library environment. *Library Hi Tech*, 35(3), 457–474.
21. Rifkin, W. (2023). Educating for AI literacy: The role of information professionals. *Education for Information*, 39(2), 121–135.
22. Serdyukov, P. (2017). Innovation in education: What works, what doesn't, and what to do about it? *Journal of Research in Innovative Teaching & Learning*, 10(1), 4–33.
23. Smith, A., & Anderson, J. (2022). AI and the future of humans. *Pew Research Center*.
24. Stephens, M. (2020). *Wholehearted librarianship: Finding hope, inspiration, and balance*. ALA Editions.
25. UNESCO. (2023). *Ethics of artificial intelligence in education: Challenges and recommendations*.
26. Vogus, B. (2023). Generative AI and ChatGPT: Friend or foe for academic libraries? *Public Services Quarterly*, 19(4), 309-312.
27. Vuorikari, R., Ferrari, A., & Punie, Y. (2022). Artificial intelligence and digital competence. *Publications Office of the European Union*.
28. Wilson, T. D. (2021). The future of libraries in an AI world. *Information Research*, 26(1), paper 892.