

Transforming School Library Services and Learning Practices through ChatGPT: An Empirical Study

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ABSTRACT

Artificial Intelligence (AI) is rapidly transforming educational practices, including the functioning of school libraries. This study examines the integration and impact of ChatGPT in Indian school libraries, focusing on awareness, usage patterns, and perceived benefits. A descriptive survey design was employed, and data were collected through a structured questionnaire administered to 156 school library professionals representing various educational boards. The findings reveal a high level of awareness and increasing adoption of ChatGPT, particularly in reading promotion, reference services, and academic support activities. Most respondents perceive ChatGPT as an effective tool that enhances service efficiency and supports student research skills. However, concerns related to plagiarism, ethical misuse, and accuracy of information remain significant. Notably, 93% of respondents emphasized the need for formal training to ensure responsible implementation. The study concludes that while ChatGPT demonstrates strong potential for enhancing school library services, its sustainable success depends on clear institutional guidelines and continuous professional development.

KEYWORDS: ChatGPT, Artificial Intelligence in Libraries, Library Services, Information Literacy, Learning Enhancement, School Libraries.

INTRODUCTION

Artificial Intelligence (AI) is bringing significant transformations to the field of education. School libraries are also adapting to this digital shift by integrating emerging technologies into their services. Tools such as ChatGPT are increasingly being used by students and teachers to gain quick access to information and academic assistance. These tools support learning by answering queries, explaining complex concepts, and assisting with homework, projects, and research tasks.

Modern school libraries are no longer limited to book circulation; they function as dynamic learning centres that promote inquiry, reading culture, and skill development. Librarians are exploring how AI applications can enhance reference services, streamline daily operations, and provide more efficient user support. AI has the potential to save

time, improve service delivery, and offer personalised academic guidance. Despite these benefits, important concerns remain. Issues related to plagiarism, ethical misuse, data accuracy, and reliability require careful attention. Effective implementation therefore depends on proper training, institutional policies, and digital literacy awareness. This study investigates how school libraries in India are adopting ChatGPT and examines its role in strengthening learning experiences and library service delivery.

LITERATURE REVIEW

Recent research highlights the growing adoption of Artificial Intelligence (AI) in library services. Ayinde, Ebiefung, and Oladokun (2024) examine AI implementation in academic libraries by reviewing 29 peer-reviewed studies published between 2020 and 2024. Their study maps AI applications across reference services, technical processing, administrative functions, and information literacy instruction. They identify funding limitations, infrastructure gaps, skill shortages, and ethical concerns as major barriers. The authors emphasize the importance of librarian retraining and structured policy development for sustainable AI integration.

Chowdhury (2023) explores the prospects and challenges of ChatGPT in library services. The study highlights improved accessibility, faster information retrieval, and personalized user support. However, it also addresses ethical issues, accuracy limitations, and technical constraints. As the study is primarily literature-based, it lacks empirical validation but still provides useful conceptual insights.

Kumar (2022) discusses the transformative potential of AI in academic libraries, focusing on applications such as automated cataloguing, predictive analytics, and intelligent search systems. While the paper critically examines both benefits and challenges, including cost and privacy concerns, it remains largely conceptual.

Dhepe (2025) provides a comprehensive review of 240 academic sources related to ChatGPT in library and information science. The study identifies applications in reference services, metadata generation, and knowledge management. Although the paper offers a systematic analysis, it calls for more empirical and longitudinal research. Similarly, Suradkar and Samad (2024) analyze AI-based smart libraries, highlighting improvements in user services and workflow automation. However, their work relies mainly on descriptive discussion without field-based evidence.

Overall, existing literature demonstrates increasing interest in AI integration within library environments. However, most studies focus on higher education institutions and are largely conceptual in nature. Empirical research specifically examining the adoption and impact of ChatGPT in Indian school libraries remains limited. Therefore, this study addresses an important research gap by providing field-based evidence from school library professionals in India.

OBJECTIVES OF THE STUDY

This study explores the integration of ChatGPT in library environments and its influence on service delivery and learning practices. The following objectives focus on evaluating performance outcomes, educational value, and implementation challenges associated with its use.

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1. To assess the effectiveness of ChatGPT in improving the efficiency and quality of library operations and services.
2. To investigate the contribution of ChatGPT to AI-enhanced information literacy and digital learning environments.
3. To identify the benefits, limitations, and implementation challenges of ChatGPT in library contexts.

METHODOLOGY

The present study adopted a descriptive survey design to examine the awareness, adoption, and impact of ChatGPT among school library professionals in India. The study aimed to understand how ChatGPT influences learning processes and library service delivery in school environments.

Data were collected through a structured questionnaire administered using Google Forms. The instrument included both closed-ended and a few open-ended questions to explore various dimensions of ChatGPT usage. These dimensions covered daily library practices, perceived benefits and challenges, promotional strategies adopted by librarians, and the role of ChatGPT in enhancing information services and modern library operations.

The questionnaire was developed in consultation with practicing librarians from different educational boards to ensure content validity and contextual relevance. The survey link was shared with approximately 450–500 school librarians across India through professional networks and digital communication platforms.

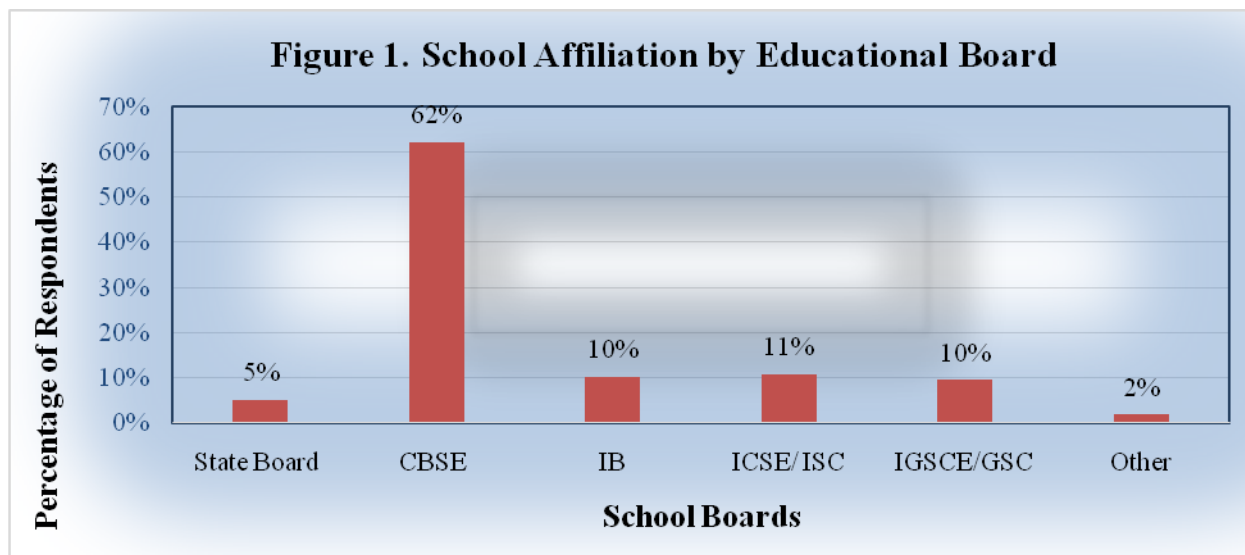
A total of 156 valid responses were received, representing an approximate response rate of 31–35%. All responses were included in the analysis. In addition to survey data, a few telephonic discussions were conducted to supplement the quantitative findings. Data were compiled and analyzed using descriptive statistical techniques, primarily percentage analysis, with the assistance of Microsoft Excel software application. Ethical considerations such as voluntary participation, anonymity, and confidentiality were strictly maintained throughout the study.

DATA ANALYSIS AND INTERPRETATION

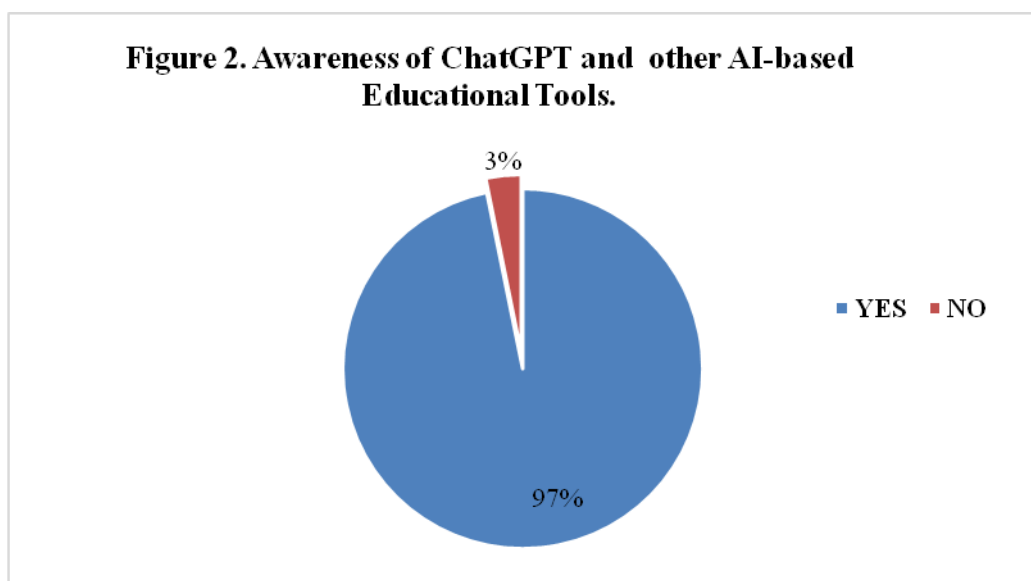
The present study explored the awareness, adoption, and impact of ChatGPT on learning processes and library services. Data were collected using a structured questionnaire administered through Google Forms. The instrument included both closed-ended and open-ended questions.

The questionnaire link was distributed to approximately 450–500 school librarians across India through professional networks, including WhatsApp groups, Facebook, email, and direct contact. A total of 156 valid responses were received from librarians representing various educational boards. This represents an approximate response rate of **31–35%**, which is considered acceptable for online survey-based research. All collected responses were included in the analysis.

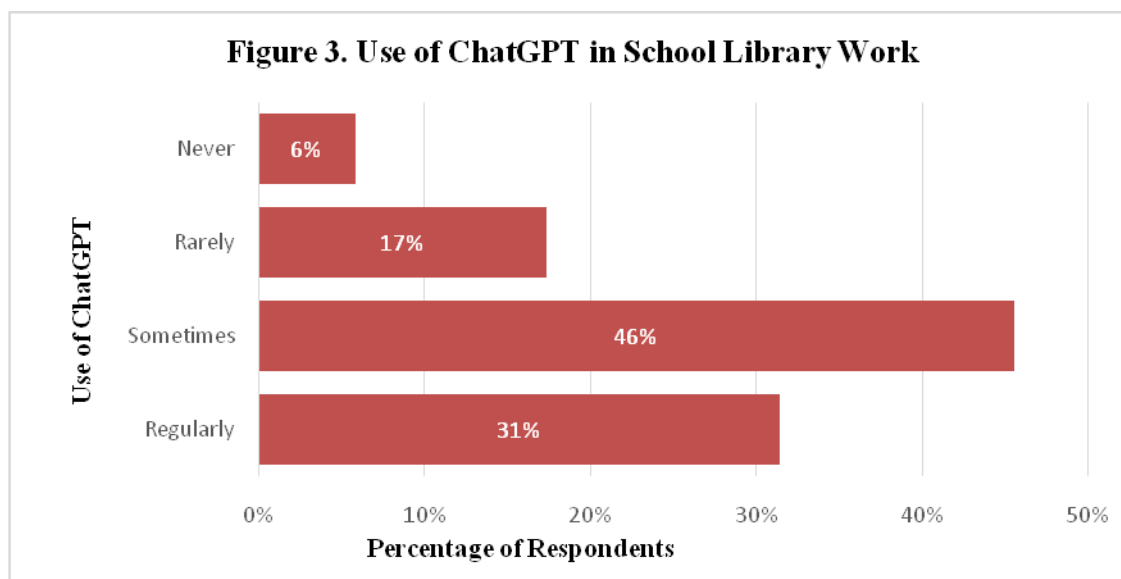
The data were compiled and analysed using descriptive statistical techniques, primarily percentage analysis, to examine patterns related to awareness, usage practices, perceived benefits, and associated challenges.



The data show that the majority of respondents (62%) are affiliated with the CBSE board, indicating strong representation from CBSE schools in the study. Schools under ICSE/ISC (11%), IB (10%), and IGCSE/GCSE (10%) also show notable participation, reflecting diversity across national and international curricula. Only 5% of respondents belong to State Boards, while 2% fall under the 'Other' category.



The pie chart illustrates that a majority of respondents (97%) are aware of ChatGPT or other AI-based educational tools, while only a small proportion (3%) reported no awareness. This indicates a high level of awareness of AI tools used in education among the respondents.



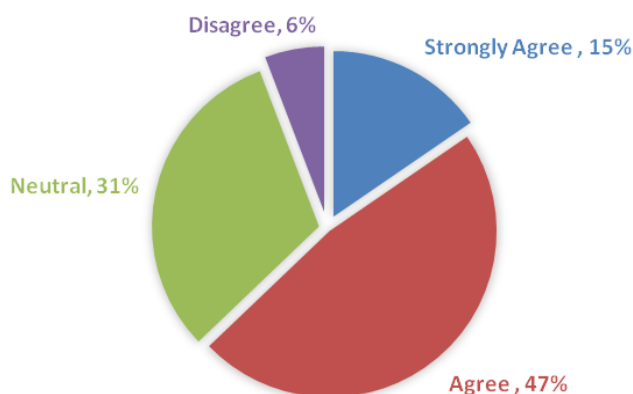
The figure shows that most respondents use ChatGPT in their school library work either sometimes (46%) or regularly (31%), indicating a considerable level of adoption in library-related activities. A smaller proportion of respondents reported that they rarely use (17%), while only a limited number indicated that they never use ChatGPT (6%).

Table: Use of ChatGPT in Library Services

Sr. No.	Application Areas	Percentage
1	Assisting students with homework/projects	42%
2	Answering reference queries	43%
3	Information literacy instruction	33%
4	Administrative and library management tasks	37%
5	Collection development	18%
6	Cataloguing and classification	22%
7	Reading promotion and library activities	64%
8	To support school teachers and students	46%

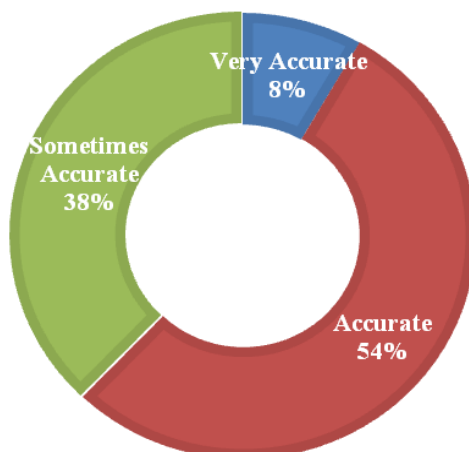
The data indicates that ChatGPT is perceived as most useful for reading promotion and library activities (64%), followed by supporting school teachers and students (46%) and answering reference queries (43%). It is also considered beneficial for assisting students with homework and projects (42%) and administrative tasks (37%). Comparatively fewer respondents identified collection development (18%) and cataloguing/classification (22%) as primary areas of usefulness.

Figure 4. ChatGPT Helps to Develop Better Learning and Research Skills



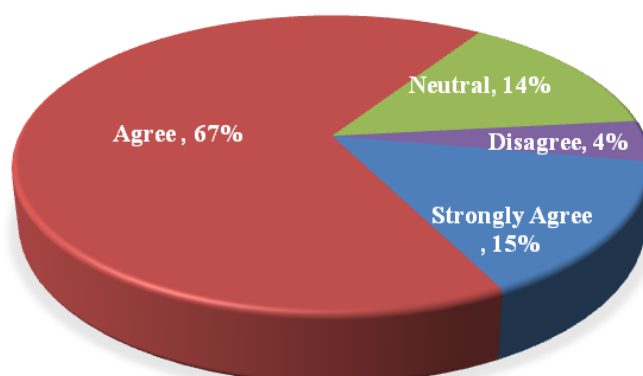
The above data demonstrates a predominantly positive perception, as 62% of respondents (combining "Agree" at 47% and "Strongly Agree" at 15%) confirm that ChatGPT helps develop better learning and research skills. This majority suggests that most students view AI as a constructive educational aid that facilitates academic growth. A significant 31% remains neutral, suggesting that a considerable group is still cautious or perhaps has limited experience with the tool. With only 6% expressed disagreement and no "Strongly Disagree" responses were recorded, indicating very little active resistance.

Figure 5. Accuracy Level of ChatGPT



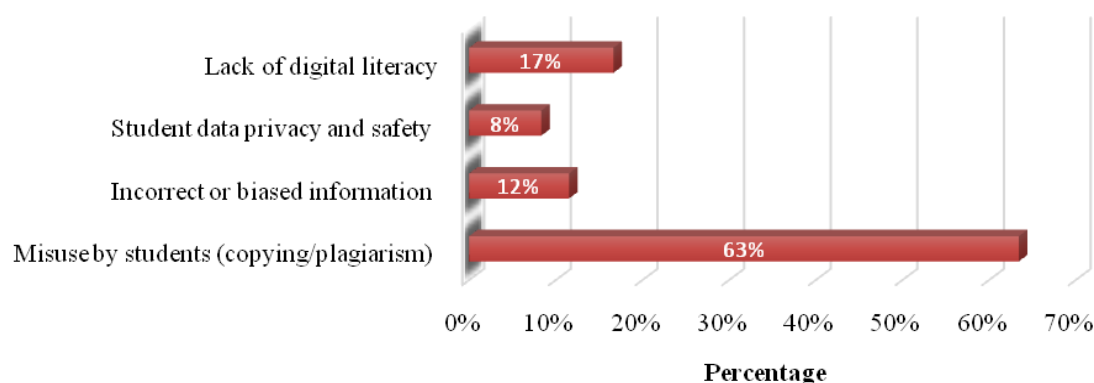
The above figure illustrates respondents' perceptions regarding the accuracy of ChatGPT's responses to school-level academic queries. The majority of respondents consider ChatGPT to be accurate, indicating strong confidence in its reliability. A substantial proportion perceive the responses as sometimes accurate, suggesting occasional limitations or the need for verification. A smaller segment rates the responses as very accurate, reflecting high satisfaction among a select group of users. Notably, no respondents regarded ChatGPT as inaccurate.

Figure 6. ChatGPT Support in Providing Faster Library Services.



The data presented in Figure 6 reveals an overwhelmingly positive consensus regarding ChatGPT's role in accelerating library services, with a combined 82% of respondents expressing agreement (67% "Agree" and 15% "Strongly Agree"). This high level of support suggests that the vast majority of users perceive AI as an effective tool for increasing efficiency within the library environment. In contrast, opposition is remarkably low, with only 4% of participants disagreeing, while a small neutral segment of 14% indicates that some respondents may still be undecided or requires further exposure to the technology.

Figure 7. Primary Concern Regarding the Use of ChatGPT



The figure presents the primary concerns regarding the use of ChatGPT among respondents. The majority (63%) identify misuse by students, particularly copying and plagiarism, as the most significant concern. Lack of digital literacy accounts for 17%, indicating that some users may struggle to use the technology effectively. Additionally, 12% are concerned about incorrect or biased information generated by ChatGPT. Concerns related to student data privacy and safety are comparatively lower at 8%.

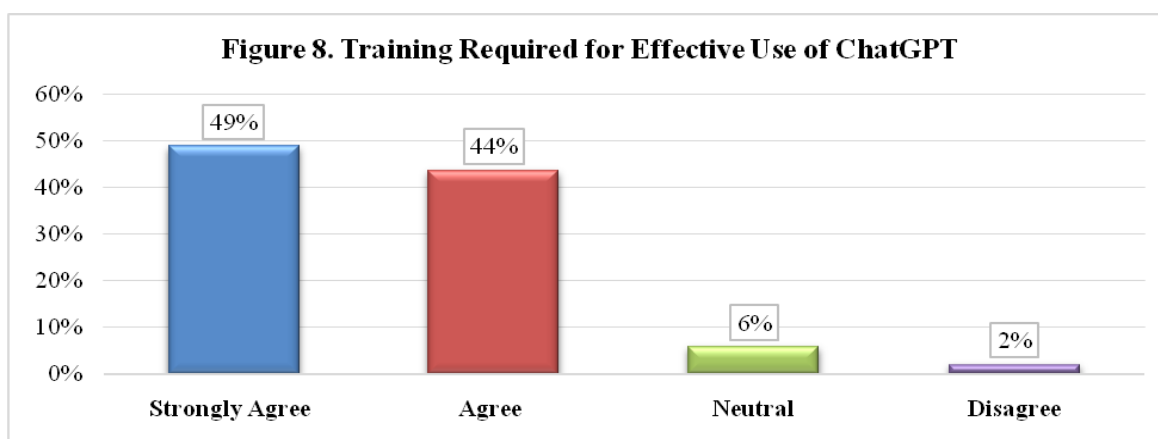
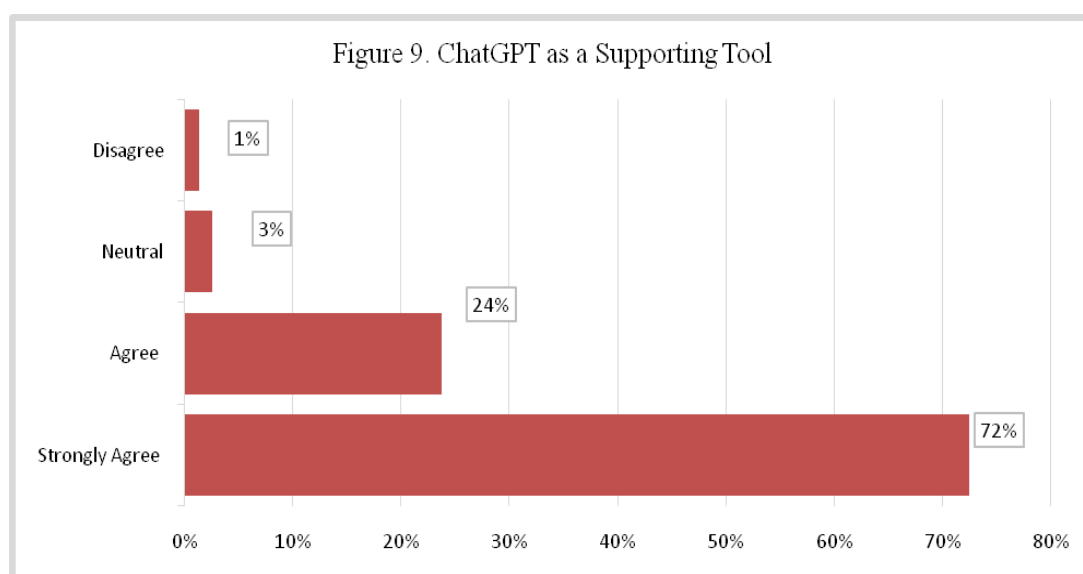


Figure 8 illustrates' opinions on whether training is required for the effective use of ChatGPT. A majority strongly agree (49%) that training is necessary, while 44% agree, indicating a combined positive response of 93%. Only 6% remain neutral, suggesting limited uncertainty about the need for training. A very small proportion (2%) disagree, showing minimal opposition to the idea. The data clearly highlights a strong consensus that proper training is essential for maximising the benefits of ChatGPT.



The above figure illustrates respondents' perceptions of ChatGPT as a supporting tool. A significant majority (72%) strongly agree that ChatGPT serves as an effective supporting tool, while 24% agree, resulting in an overwhelming 96% positive response. Only 3% remain neutral, indicating minimal uncertainty. A very small proportion (1%) disagree, reflecting negligible negative perception. The data clearly demonstrates strong acceptance of ChatGPT as a valuable support system.

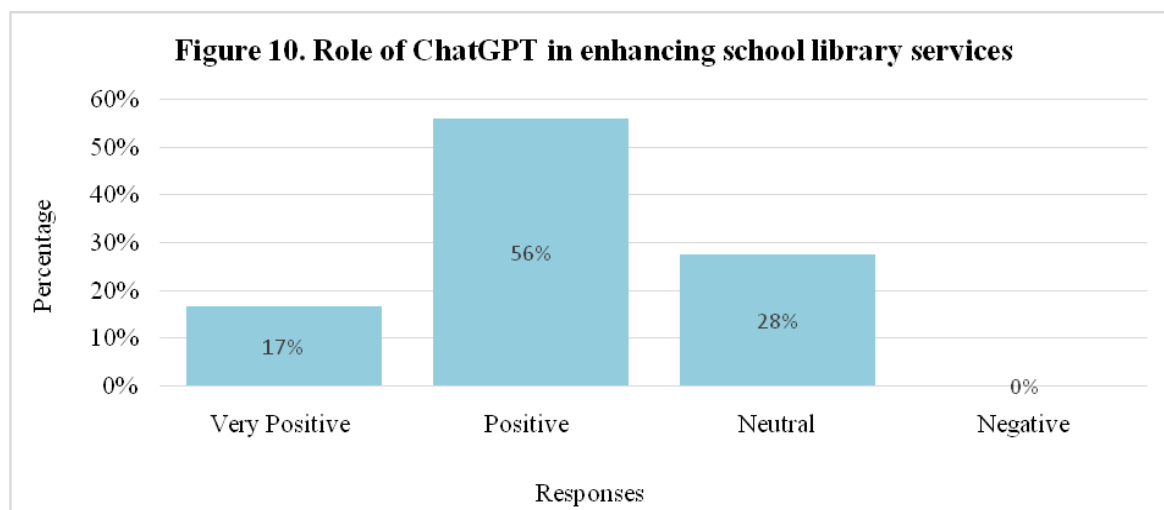


Figure 10 depicts respondents' perceptions of the role of ChatGPT in enhancing school library services. A majority (56%) express a positive opinion, while 17% consider its role to be very positive, resulting in a combined favourable response of 73%. About 28% of respondents remain neutral, indicating moderate uncertainty or balanced views. This trend suggests generally favourable perception of ChatGPT's potential to support and enhance library services within the school environment.

DISCUSSION AND FINDINGS

The analysis of the collected data provides significant insights into the awareness, adoption, and impact of ChatGPT in Indian school libraries. The responses demonstrate growing familiarity with AI tools and increasing integration into routine library practices. At the same time, the findings identify important challenges that require structured and responsible intervention. The key findings and their interpretation are summarized below:

- **High Awareness and Adoption:** An overwhelming majority (97%) of respondents reported being aware of ChatGPT. Most use it either occasionally (46%) or regularly (31%), indicating its gradual integration into school library operations.
- **Board Representation:** The majority of respondents are affiliated with CBSE schools (62%), followed by ICSE/ISC, IB, and IGCSE/GCSE boards. Although the sample reflects curricular diversity, CBSE dominance may influence overall perceptions and adoption trends.
- **User-Focused Applications:** ChatGPT is most frequently used for reading promotion (64%), supporting teachers and students (46%), and answering reference queries (43%). Its comparatively lower use in cataloguing (22%) and collection development (18%) suggests that AI currently enhances user-oriented services rather than technical processing functions. This observation aligns with Kumar (2022), who noted that AI adoption typically strengthens public-facing services before transforming backend operations.
- **Enhancement of Learning:** A majority (62%) agree that ChatGPT contributes to improved learning and research skills, highlighting its perceived academic value.
- **Accuracy and Reliability:** Most respondents consider ChatGPT reliable for school-level academic queries, though some emphasize the need for verification, reflecting a cautious level of trust.

- **Service Efficiency:** Approximately 82% believe that ChatGPT improves the speed and efficiency of library services, demonstrating its operational benefits.
- **Ethical Concerns:** Misuse and plagiarism (63%) emerge as the primary concerns, reflecting broader global debates surrounding generative AI in education.
- **Need for Training:** A strong consensus (93%) supports the need for formal training, reinforcing Ayinde et al. (2024), who emphasize professional development as essential for sustainable AI integration.
- **Supportive Role of AI:** The majority perceive ChatGPT as a complementary tool that augments, rather than replaces, the professional role of librarians.

Overall, the findings confirm that ChatGPT has established a meaningful presence within school library environments. While its contributions to learning support and service efficiency are widely recognized, successful implementation depends on ethical safeguards, structured training, and clear institutional policies. With balanced and responsible integration, ChatGPT can function as a constructive partner in advancing the educational mission of school libraries.

LIMITATIONS OF THE STUDY

This study has certain limitations that should be acknowledged. First, the research focuses exclusively on ChatGPT as a representative AI tool. Given the rapid evolution of artificial intelligence technologies, new tools may emerge with different capabilities, which could influence the future findings.

Second, the study employed a descriptive survey design based on self-reported responses from 156 school librarians. As such, the findings reflect perceptions rather than direct performance measurements. The use of convenience sampling and the dominance of CBSE-affiliated respondents may limit the generalizability of the results across all school systems in India.

Third, the cross-sectional nature of the study restricts the ability to assess long-term impacts on students' critical thinking, deep learning, and information literacy development.

Additionally, the opaque nature of generative AI systems prevents researchers from examining underlying algorithms and training data, making it difficult to fully evaluate issues related to bias or response accuracy. Future research employing longitudinal designs and comparative analysis of multiple AI tools would provide deeper and more comprehensive insights.

CONCLUSION

This study examined the integration and impact of ChatGPT in Indian school libraries. The findings reveal high levels of awareness and increasing adoption of AI tools among library professionals. ChatGPT is primarily utilised for reading promotion, reference assistance, and academic support, contributing to improved service efficiency and enhanced student engagement. Respondents largely perceive it as a supportive tool that strengthens research capabilities and facilitates quicker access to information.

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At the same time, significant concerns persist. Issues related to plagiarism, ethical misuse, and information accuracy highlight the need for structured governance frameworks. The strong demand for formal training underscores the importance of digital literacy frameworks and institutional guidelines to ensure responsible implementation.

Overall, the study confirms that ChatGPT possesses considerable potential to enhance school library services and learning environments. However, its long-term effectiveness depends on balanced integration, ethical oversight, and continuous professional development. When supported by clear policies and critical awareness, AI can function as a constructive partner in advancing the educational mission of school libraries in the digital era.

RECOMMENDATIONS

The findings indicate that ChatGPT has evolved from a novel concept into a functional resource within Indian school libraries, particularly in reading promotion and user-support services. To ensure that this integration remains sustainable, responsible, and pedagogically sound, the following recommendations are proposed:

- ✓ **Establish Formal AI Literacy Frameworks:** Schools should develop clear institutional policies defining acceptable and unacceptable AI usage to address concerns related to plagiarism and ethical misuse.
- ✓ **Implement Structured Professional Development:** As 93% of respondents emphasised the need for training, educational authorities should organize workshops on AI ethics, prompt design, and verification of AI-generated content.
- ✓ **Integrate AI into Information Literacy Instruction:** Librarians should guide students to use AI as a research support tool rather than a primary information source, emphasising validation through authoritative databases.
- ✓ **Prioritize Human-Centric Applications:** Since ChatGPT is most effective in user-facing functions such as reading promotion (64%), libraries should focus on engagement-oriented and personalized learning applications.
- ✓ **Adopt Verification-Oriented Practices:** Given that a notable proportion of respondents consider AI outputs only “sometimes accurate,” structured fact-checking frameworks should be embedded into AI-assisted research practices.
- ✓ **Strengthen Data Privacy Measures:** Institutions should establish secure usage protocols to safeguard student information during AI interactions.
- ✓ **Monitor Long-Term Educational Impact:** Periodic evaluations should assess whether AI tools are enhancing, rather than diminishing, students’ independent thinking and critical inquiry skills.

These recommendations promote a balanced integration of AI within school libraries. Technology should enhance, rather than replace, foundational academic values. With appropriate policies, training, and ethical oversight, ChatGPT can function as a reliable and constructive partner in the evolving educational landscape.

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