
IMPACT OF GENERATIVE AI TOOLS ON INFORMATION-SEEKING BEHAVIOR AND INFORMATION LITERACY OF UNIVERSITY STUDENTS IN INDIA: A SECONDARY DATA-BASED STUDY

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ABSTRACT

The advent of Generative Artificial Intelligence (AI) tools like Chat GPT, Google Gemini, Microsoft Copilot, and Claude has fundamentally reshaped the information landscape within universities and colleges. Digital learning platforms like SWAYAM, National Digital Library of India (NDLI), e-Shodh Sindhu, and the implementation of the National Education Policy (NEP) 2020 have already laid a solid groundwork for digital transformation in the field of education in India. How University students have changed their information literacy practices and information seeking behaviour in this changing world with the advent of Generative AI. The present paper is a secondary data analysis of the Indian and international literature that has been published since 2022 to 2026. This research uncovers that Generative AI tools enhance accessibility of information, learning efficiency and academic support. But there are issues, like misinformation, over reliance on AI tools, academic integrity, and a lack of critical evaluation skills, which are also visible. The paper draws attention to the need for information literacy frameworks with an AI component and the proactive initiative of academic libraries in India.

KEYWORDS: Generative AI, Information Literacy, Information-Seeking Behavior, ChatGPT, Academic Libraries, India, NEP 2020, NDLI.

INTRODUCTION

The world of higher education in India is changing at a rapid pace with the advent of digital technologies and Artificial Intelligence (AI). The Government of India has launched a number of initiatives over the last decade, including Digital India (2015), National Education

Policy (NEP) 2020, SWAYAM, e-PG Pathshala, e-Shodh Sindhu and the National Digital Library of India (NDLI).

Together, these efforts have helped to enhance digital availability of educational resources and to foster technology-based learning in colleges and universities. The Indian higher education landscape is characterized by a large number of universities (with the current count exceeding 1,100) and colleges (with over 40,000 colleges in the country), and the role of digital information systems and academic libraries is growing in importance to serve millions of learners. With more than 1,100 universities and more than 40,000 colleges in the country, the role of digital information systems and academic libraries is becoming increasingly important for serving millions of learners.

The education landscape is rapidly changing, and Generative Artificial Intelligence (Generative AI) is a disruptive and transformative technology. ChatGPT, Google Gemini, Microsoft Copilot, Claude, and Perplexity AI are some of the most popular tools that students and researchers are using to produce human-like responses, summarize information, aid with academic writing, and deliver immediate support for information. Generative AI differs from traditional search engines which tend to just point their users to other places, in that generative AI systems offer synthesized and conversational answers, which have redefined how we access and retrieve information.

The changes in technology have had a substantial effect on the information-seeking behavior of university students. Academic information was accessed using printed books, journals, library catalogues, databases like INFLIBNET and e-Shodh Sindhu and search engines like Google Scholar, traditionally. The information seeking process included: determining key terms, searching across several sources, critically evaluating retrieved information, and synthesizing information for academic purposes. Things have changed with the advent of Generative AI tools, though: Now, the same can be done with greater efficiency, conversation, and direction. Students have come to expect to ask natural language questions and get concise answers without necessarily verifying information from multiple sources.

Information literacy has emerged as an even more important literacy skill in higher education, along with changes in information behavior. The Association of College and Research Libraries (ACRL, 2016) defines information literacy as the ability to "recognize information needs, locate information effectively, evaluate information critically, and use information ethically. The world of AI is testing these skills as pupils increasingly use AI-generated texts without checking authenticity, authorship and source credibility. This presents significant issues about misinformation, AI bias and a loss of critical thinking skills in learners.

However, in the Indian context, these challenges are even more relevant because of the size and diversity of the students, the lack of digital literacy among them and the differential access to technological infrastructure. Rural and Semi-urban students are in the process of transitioning from traditional to digital learning environments, while urban students are quickly embracing AI tools in their academic journey. Such disparities in information literacy make it more difficult to establish a common set of information literacy competencies in higher education.

Furthermore, the use of Generative AI in educational contexts has raised novel ethical and educational questions. Academic honesty, plagiarism, reliance on AI, and authenticity of academic work are now at the forefront of the discussion in universities. As AI continues to shape the content landscape, educators and librarians are increasingly doubting the effectiveness of how AI-generated content is assessed, and whether the current assessment tools are sufficient in the age of AI. In this context, a great change in the role of the academic library in India is taking place. Libraries have traditionally been regarded as the keepers of information resources but today they are becoming digital learning hubs and digital information literacy training centers. Librarians are expected to facilitate access to information as well as critical evaluation of AI-generated information and to build up the skills of responsible use of digital and AI tools by students.

Hence, the present study aims at comprehending the impact of Generative AI tools on the information-seeking behavior and information literacy of the university students in India. The paper seeks to offer a holistic understanding of the opportunities and hurdles that Generative AI brings to the Indian higher education ecosystem by analysing secondary data from scholarly literature, policy documents and research studies.

The study concludes that Generative AI has helped to make information more accessible and more efficient in the learning process, but also requires rethinking information literacy frameworks to incorporate new aspects of AI literacy, critical examination of AI-generated information, and ethical information consumption. The academic library's role in preparing students for a responsible role in the knowledge society is all the more important in this era of AI.

The goals of the Study are to

To investigate the effect of the Generative AI tools on students' information seeking behaviour in India.

To analyze changes in information literacy practices due to AI adoption. To find the advantages and limitations of AI tools in higher education.

To assess the importance of academic libraries in the AI era information environment. To propose

strategies to incorporate AI literacy in the Indian universities.

Research Methodology

This study is based on **secondary data analysis**. Data were collected from:

- UGC and AISHE reports
- UNESCO AI in Education guidelines
- Indian LIS journals (DESIDOC, SRELS, ALIS)
- Peer-reviewed articles (2023–2026)
- Conference papers and institutional reports
- NDLI and NEP 2020 policy documents

A **thematic analysis approach** was used to identify patterns in information behavior and literacy trends.

Review of Literature

Research from the past few years suggests that Generative AI tools are rapidly being adopted in educational settings in India. In this study, students of Library and Information Science at the University of Delhi were found to heavily rely on ChatGPT for academic writing, assignment preparation, and concept clarification, though some apprehensions about the accuracy and reliability of information were also mentioned by the students (Margam, Pandey, and Bharti, 2024).

Similarly, Reddy et al. (2026) noted that AI tools are widely known and seen as beneficial for libraries, with a significant majority of Indian librarians finding them valuable in information retrieval, summarization, and reference services.

In addition, research from engineering and professional institutions has shown that there is growing use of AI tools for academic support, yet many engineering and professional institutions do not have formal policies or structured frameworks to guide AI integration into the teaching and learning process.

Praful Kumar (2024) noted that ChatGPT has markedly affected library users in Indian universities and their reliance on traditional library resources and databases has decreased.

All these studies underscore the change in academic information behaviour in India which is clear and accelerated because of the advent of Generative AI technologies.

Generative AI and Information-Seeking Behavior

Information-seeking behavior is the process by which people become aware of their

information need, look for information they are interested in, assess the available information sources, and subsequently use the information for academic or practical use. The traditional academic setting relied mainly on the libraries, the printed books, scholarly journals, institutional repositories, and search engines like Google Scholar and library databases as the primary sources for university students to access. This traditional approach of information retrieval is primarily keyword based, which requires users to search for the correct keywords, read multiple documents and critically assess the contents before using the information.

The advent of Generative Artificial Intelligence (AI) has ushered a substantial change in this longstanding trend. With the advent of Generative AI tools like ChatGPT, Google Gemini and Microsoft Copilot, accessing information has changed from a linear process to a conversational paradigm, where users can ask natural language questions and get immediate, synthesized responses. This change has made it easier to navigate to multiple databases and simplified the overall information retrieval process.

Table 1: Traditional vs AI-Based Information-Seeking Behavior.

Traditional Information System	Generative AI System
Keyword-based database search	Natural language prompts
Dependence on multiple sources	Single synthesized response
Manual reading and synthesis	AI-generated summarized output
Time-consuming search process	Instant response generation
Higher user effort in evaluation	Reduced initial effort, but verification required

A recent study shows that people from India's universities are starting to use Generative AI tools more because they are user-friendly, quick to give responses, and to explain complex academic topics simply (Zhang & Chen, 2024). This shift is from exploratory search behaviour to answer-oriented information consumption, in which information consumers focus on solving the problem rather than investigating the sources of information.

But this change also brings up some educational issues. This new experimental research by Mittal et al., (2026) reveals that students who heavily use an AI-based information system (IS) exhibit less critical evaluation processes and fewer information sources explored than students that use traditional search systems. Overall, the study indicates that Generative AI offers benefits for efficiency and accessibility but also highlights potential unintended consequences that could impact deep reading and analysis if it is not used responsibly.

This change is of special significance in the Indian higher education setting where information literacy levels range from one institution to another. Although AI tools make learning easier, they also raise concerns about learning using unvetted information, reliance on AI-generated

summaries, and the diminished engagement with authoritative academic sources. It is thus crucial to respect information literacy and practices that ensure source verification, critical thinking and ethical use of information alongside the benefits of Generative AI.

This will have an impact on information literacy.

Information literacy with Generative Artificial Intelligence isn't just about searching, finding, and evaluating information. It now covers how to critically evaluate the output of AI and recognizes the limitations of

AI, as well as the ethical considerations when using AI in the academic setting.

In this context, students must not only problem-solve to find the information that is relevant to them, but also analyze and assess the authenticity, accuracy and bias of machine-generated responses.

Positive Impacts

Adopting Generative AI tools in the academic context has brought a number of advantages to students' information literacy education:

- Improved access to learning content and materials
- Have a conceptually clearer explanation because it's simplified.
- Greater proficiency in language use and in academic writing and communication
- Help tailored to individual requests
- Enhanced exposure to other academic interpretations.

Negative Impacts

However, some issues are identified in the literature about the advantages of this:

- There is less use of source verification and citation checking.
- Risks of misinformation and fake content rise. The likelihood of misinformation and misleading content increases.
- The increasing reliance on AI-driven answers.
- May have a decreased ability to think critically and analyze.
- Reduction in independent research skills of students
- UNESCO (2023) places emphasis on this by noting that higher education systems need to incorporate AI literacy, enabling students to engage critically with AI tools, recognize their limitations, and responsibly leverage AI in their academic and research pursuits.

Role of Academic Libraries in India

Academic libraries are important in training students to be information literate, and their role is growing notably in the age of Generative AI. Libraries have traditionally been concerned with the access to information resources and the education of users in searching databases and research skills. With the advent of AI based tools, however, libraries today are expected to be hubs for AI literacy and digital competencies.

- Academic libraries are being expected to do more in the Indian higher education environment than ever before. Academic libraries are expected to do more in the Indian HE context than at any time in the past.
- Deliver AI literacy and digital awareness sessions for students and faculty.
- Educate users on the tools and processes of source evaluation, fact-checking and research validation.
- Encourage responsible and ethical use of Generative AI in academic pursuits
- Promote research data management and digital scholarship practices
- Create institutional policies and sensitisation campaigns regarding the use of AI.

Moreover, the alignment with the National Education Policy (NEP) 2020 is crucial, where it is focusing on digital integration, critical thinking, and multidisciplinary learning. In today's educational landscape, libraries need to align their services with information literacy and AI literacy standards in order to current their relevance. Libraries are thus required to combine information and AI literacy frameworks into their services, all the while keeping pace with the changing education environment.

DISCUSSION

From the results of this research, it is evident that the use of Generative AI has changed students' relationship with information in quite a radical way. The old-fashioned 'searching for information' approach to obtaining information from various sources is slowly giving way to the newer 'answering questions' paradigm where answers are directly taken from AI systems. This change can save a lot of time and thought, but also affects the richness of information engagement.

This shift as seen in the Indian scenario where there is a disparity in the level of digital literacy between urban and rural institutions poses both opportunities and challenges. On the other hand, the students gain access to knowledge faster, explanations are easier to understand and academic support is better. However, the dependence on AI systems without a clear

understanding of how information is created, verified, or validated is a growing concern. The two impacts of this is a concern: it is not about Generative AI, but about responsible and critical usage practices. Without proper guidance, students might start to depend increasingly on the output of the AI without verifying or critically analyzing the information themselves, thus missing out on essential skills of higher education learning outcomes.

Major Findings

The following are the major findings based on the analysis of secondary literature:

- The usage of Generative AI tools among Indian university students is rapidly increasing.
- ChatGPT continues to be the most popular AI tool in the academic world.
- The way people search for information is changing from traditional search engines to conversational AI systems.
- AI tools are preferred because they are quick, easy, and provide easy explanations.
- There is a sign of an erosion in critical evaluation and source verification skills for frequent AI users.
- The issue of academic integrity, plagiarism, and the use of AI-generated content in universities is rising in the Indian context.
- AI literacy and digital competency support in academic libraries is slowly growing.
- With digital transformation in its policy priority, NEP 2020 has created a robust framework, but the ethical dimensions of the use of AI need a greater focus.

Recommendations

Based on the results, the following suggestions are recommended:

- Literacy with Artificial Intelligence needs to be formally included in the curriculum of the universities along with the traditional information literacy course.
- Training initiatives in academic libraries should be expanded to include more in-depth training on source evaluation, fact-checking, and responsible usage of AI tools.
- Pupils should be encouraged to use reliable, scholarly and peer-reviewed sources to check AI-generated work.
- Academic institutions must establish concrete guidelines and regulations regarding the responsible and ethical application of Generative AI in their research and teaching activities.
- Librarians need to be educated in using AI tools for providing evolving information services to users.

Ethical, critical, and responsible use of AI technologies in higher education should be promoted through awareness programs.

CONCLUSION

Generative Artificial Intelligence (AI) has become a game-changer in the academic information space in India. It has also been rapidly adopted in higher education and is changing the conventional way that students seek out information, providing a more interactive, convenient and quicker way to access information. ChatGPT and other tools have changed the paradigm from source based search to direct, conversation and answers based search.

This transformation is not easy, however. The potential for using AI-generated content is raising significant questions about information authenticity, reliability and bias. Moreover, concerns like cheating, excessive dependence on AI-generated content and limited interaction with primary sources have emerged as a major concern in the realm of higher education in India. The concerns also apply to the steady erosion of critical thinking and independent analytical skills in students as a result of using AI tools without the guidance.

This dynamic context makes the tripartite role of academic librarians, teachers and policy makers very significant. A collaborative approach is needed to make sure that Generative AI tools are not a replacement for intellectual engagement and learning inquiry. Libraries, especially, need to be at the forefront of fostering AI literacy, not just information literacy, through the critical and ethical assessment of AI-generated information.

In conclusion, the integration of AI literacy, ethical understanding, and critical thinking skills into higher education systems will play a pivotal role in shaping the future of information literacy in India. The integration of Generative AI tools into education must be balanced to harness their potential without compromising academic standards or the academic independence of students.

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