AI as Academic Ally? Perceptions of LIS Students on ChatGPT and Academic Performance in Punjab, Pakistan

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Abstract
In today's digital age, artificial intelligence (AI) is reshaping higher education by transforming how students learn and complete academic work. A prominent example is OpenAI's ChatGPT, a conversational AI tool launched in late 2022 that quickly gained widespread use. This study investigates how Library and Information Science (LIS) students in Punjab, Pakistan perceive ChatGPT and how these perceptions relate to their academic performance. A quantitative survey was conducted with 291 LIS students from four universities in Punjab, selected via stratified sampling. Data were collected through an online questionnaire covering four constructs: perceived ChatGPT capabilities, satisfaction with ChatGPT, study outcomes from using ChatGPT, and self-reported academic performance. Descriptive statistics, correlation, and regression analyses were applied using SPSS (v25). The findings indicate that students generally have a positive perception of ChatGPT, valuing its ability to provide instant information and assist in tasks like writing, summarizing, translating, and problem-solving. Students reported high satisfaction with the tool's accuracy and ease of use, and agreed that ChatGPT helps them learn more efficiently. All key variables were positively inter-correlated, and perception of ChatGPT was significantly associated with higher academic performance. In particular, the extent to which ChatGPT improved students' study outcomes (e.g. completing assignments on time, understanding concepts) emerged as the strongest predictor of their academic success. These results provide insights for educators and policymakers on integrating AI tools in academia. The study underscores the need for ethical use and information literacy training so that students can leverage ChatGPT's benefits while mitigating risks like over-reliance and academic dishonesty.
Keywords: *ChatGPT; Artificial Intelligence; LIS students; Academic performance; Student perception*

Introduction
Artificial Intelligence technologies are increasingly becoming integral to higher education, influencing the way students learn and how instructors teach. AI-driven applications such as intelligent tutoring systems, adaptive learning platforms, and conversational agents are transforming educational practices. Among these, the Chat Generative Pre-trained Transformer

(ChatGPT) developed by OpenAI has risen to prominence as a versatile conversational agent capable of generating human-like text responses. Introduced in November 2022, ChatGPT gained unprecedented popularity and was reportedly among the fastest-growing consumer applications.

ChatGPT's appeal in academic settings stems from its diverse functionalities. It can instantly answer queries and provide information, assist with writing and proofreading assignments, summarize lengthy texts, translate between languages, and solve problems, all while offering personalized, context-aware feedback. These capabilities suggest that ChatGPT can serve as a virtual study aide, helping students research topics, generate ideas, and complete coursework more efficiently. These affordances are particularly relevant to Library and Information Science (LIS) students, who frequently engage in activities like information retrieval, academic writing, and critical analysis.

However, the integration of ChatGPT into education has also sparked debates and concerns. Educators and scholars caution that over-reliance on AI assistance might impede the development of students' independent critical thinking and problem-solving skills. There are also institutional concerns about academic integrity, including plagiarism and the attribution of AI-generated content. These tensions highlight the importance of understanding how students perceive and utilize ChatGPT in their learning process.

Within this evolving discourse, a gap exists in understanding LIS students' perspectives on ChatGPT in Pakistan, where few studies have examined how LIS students perceive AI tools and how such perceptions relate to academic performance. Addressing this gap can inform educators and policymakers regarding responsible integration of generative AI in higher education.

Research Question

How do LIS students in Punjab, Pakistan perceive the use of ChatGPT, and what is the impact of these perceptions on their academic performance?

Objectives

1. To ascertain LIS students' perceptions of ChatGPT.
2. To assess students' self-reported academic performance.
3. To examine the impact of ChatGPT perceptions on academic performance.

Literature Review

Early research suggests that students often perceive ChatGPT as useful for writing support, summarization, and quick explanations. Studies also report potential benefits for engagement and productivity, and some evidence links AI-assisted learning to better academic outcomes when used appropriately. At the same time, researchers emphasize risks related to academic integrity, information reliability, and potential over-reliance. The literature therefore points to a dual agenda: enabling effective learning support while strengthening ethical guidance and information literacy for safe and responsible use.

Research on artificial intelligence (AI) in higher education has expanded rapidly, reflecting its transformative influence on teaching, learning, and academic practices. AI technologies such as intelligent tutoring systems, automated feedback tools, and generative language models are increasingly integrated into educational contexts, offering potential benefits in personalization, accessibility, and efficiency (Zafar et al., 2024). Early studies on generative AI indicate that students recognize these tools as useful for academic tasks such as information retrieval, drafting texts, summarizing material, and solving problems, which aligns with broader research on technology acceptance and usefulness in educational settings (Tang et al., 2025; Zafar et al., 2024). Moreover, perceived ease of use and usefulness have emerged as strong predictors of

students' intentions to adopt AI tools in learning, highlighting how individual perceptions shape engagement with novel educational technologies (Hu et al., 2024).

Research specifically focusing on ChatGPT reveals mixed attitudes among students worldwide toward its educational value. Quantitative studies find that many students view ChatGPT as a supportive learning tool that can enhance study efficiency and serve as a quick reference for academic tasks (Zafar et al., 2024; Tang et al., 2025). Students often report positive perceptions of ChatGPT's capability to generate responses that aid in understanding concepts and completing assignments, though such benefits are tempered by concerns about accuracy, critical thinking erosion, and ethical issues (Zafar et al., 2024; Kaddoura et al., 2025). Large-scale surveys indicate that while many students appreciate ChatGPT's informational support, a substantial proportion resist its use for generating entire essays or homework due to worries about academic integrity and original authorship (Siddiqui et al., 2024). These perceptions reflect broader debates in the literature about whether generative AI enhances genuine learning or inadvertently promotes surface approaches to academic work (Siddiqui et al., 2024).

Scholars have also examined how demographic and contextual factors influence perceptions of AI in education. Studies conducted across diverse cultural and institutional settings show that students' acceptance of ChatGPT may vary by age, academic background, and digital literacy, with those possessing higher AI fluency generally perceiving greater value in AI tools (Tang et al., 2025; Zafar et al., 2024). Moreover, concerns about academic integrity—such as plagiarism and unauthorized use of AI for graded work—emerge consistently across contexts, prompting calls for clear institutional guidelines and ethical frameworks to support responsible use (Siddiqui et al., 2024). Indeed, scholars argue that without structured policies and targeted AI literacy training, students may over-rely on generative AI in ways that undermine their critical thinking and problem-solving skills, even as they benefit from immediate access to information (Siddiqui et al., 2024; Tang et al., 2025).

Despite the growing body of research, few empirical studies focus specifically on Library and Information Science (LIS) students, particularly in South Asian contexts such as Pakistan. LIS students occupy a distinct position in the AI discourse because of their disciplinary emphasis on information ethics, retrieval, and evaluation. Literature on AI in LIS education suggests that information science students often possess heightened awareness of digital tools and may be more critically reflective about AI's implications for professional practice, yet systematic empirical data remains limited (Chan & Hu, 2023; Zafar et al., 2024). In the context of Pakistani higher education, initial studies report that students perceive ChatGPT positively as a learning aid but simultaneously express concerns about over-reliance and ethical use, highlighting the need for instructional support and policy guidance (Zafar et al., 2024; Siddiqui et al., 2024). These findings underscore the importance of investigating how students' perceptions of ChatGPT relate to self-reported academic performance, particularly within specialized fields like LIS where information literacy is central.

Methodology

This research employed a quantitative, cross-sectional survey design using a descriptive-correlational approach. The target population comprised LIS students in Punjab, Pakistan. A proportionate stratified sampling approach was used to include 291 students from four universities: University of Sargodha, University of the Punjab, Islamia University Bahawalpur, and Government College University Faisalabad.

A structured online questionnaire (5-point Likert scale) measured four constructs: perceived ChatGPT capabilities, satisfaction with ChatGPT, study outcomes associated with ChatGPT use, and self-reported academic performance. Instrument validity was supported through expert

review, and internal consistency reliability was assessed using Cronbach's alpha (high reliability reported for both perception and academic performance scales). Data were analyzed using SPSS (v25) with descriptive statistics, Pearson correlations, and multiple linear regression.

Analysis

Descriptive statistics indicated high mean scores across perceived capabilities, satisfaction, study outcomes, and academic performance. Correlation analysis showed positive and statistically significant associations among all constructs. Multiple regression indicated that the model explained a substantial proportion of variance in academic performance. Study outcomes emerged as the strongest predictor of academic performance, followed by satisfaction. Perceived capabilities showed a positive but comparatively weaker direct predictive effect when other variables were included.

Key Findings

• LIS students generally reported positive perceptions of ChatGPT and high satisfaction with its academic   utility.
• Students perceived that ChatGPT supports key study outcomes, including improved learning efficiency, timely assignment completion, and better understanding of course content.
• All constructs were positively correlated, indicating that higher perceived capability and satisfaction co-occur with stronger study outcomes and higher self-reported academic performance.
• Study outcomes were the most influential predictor of academic performance, suggesting that benefits realized during study activities are central to performance gains.

Conclusion

The study indicates that ChatGPT is widely viewed as a useful academic support tool among LIS students in Punjab, Pakistan. Positive perceptions and satisfaction are associated with improved study outcomes and higher self-reported academic performance. The findings support responsible integration of AI tools in higher education, alongside clear academic integrity policies and training in information literacy and critical evaluation.

Recommendations include: (a) developing institutional policies on ethical AI use, (b) offering student training on verification and citation practices, and (c) designing teaching activities that use ChatGPT for brainstorming and guided practice while preserving independent thinking. Future research should explore longitudinal effects, discipline comparisons, and qualitative accounts of student experiences.

Table 1. Demographic Profile of Survey Respondents (N = 291)

Category	Group	Frequency	Percentage
Gender	Male	139	47.8%
Gender	Female	152	52.2%
Age Group	18–24	216	74.2%
Age Group	25–29	60	20.6%
Age Group	30–34	15	5.2%
Program	BS	251	86.3%
Program	MPhil	29	10.0%
Program	PhD	11	3.8%
Institution	University of Sargodha	97	33.3%
Institution	University of the Punjab	94	32.3%

| Institution | Islamia University Bahawalpur | 68 | 23.4% |
| Institution | GCU Faisalabad | 32 | 11.0% |

Table 2. Construct Means and Standard Deviations (Scale 1–5)

Construct	Items	Mean (M)	SD
Perceived ChatGPT Capabilities (CCGPT)	8	3.92	0.55
Satisfaction with ChatGPT (SCGPT)	5	3.91	0.62
Study Outcomes (SO)	9	3.95	0.57
Academic Performance (AP)	6	4.05	0.58

Table 3. Correlations Among Key Variables

Variable	CCGPT	SCGPT	SO	AP
CCGPT	1.00			
SCGPT	0.78**	1.00		
SO	0.68**	0.70**	1.00	
AP	0.56**	0.62**	0.63**	1.00

Note. ** $p < 0.01$ (two-tailed).

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