



LIS Students' Perceptions of ChatGPT Integration in Teaching and Learning

Shahid Mehmood*, Muhammad Faisal

University of Sahiwal, Pakistan

*Correspondence E-mail: mhershahid123@gmail.com

ABSTRACT

Generative Pre-trained Transformer (GPT) architecture, specifically ChatGPT (debuted as GPT-3.5 in 2022 and upgraded to GPT-4 in 2023), has significantly transformed academic environments by offering capabilities like summarization, essay writing, and code generation. This study aimed to assess the awareness, usage, and perception of Library and Information Science (LIS) students regarding ChatGPT as an educational aid at Minhaj University Lahore. The methodology employed a descriptive analysis via a random sampling survey of 77 LIS students. Data was collected using three Yes/No inquiries regarding familiarity, occasional usage, and permission for researchers to utilize ChatGPT for educational purposes. The results demonstrated high awareness, with 81% of respondents familiar with ChatGPT. However, actual usage was only moderate, with a near-equal split between occasional users (51%) and non-users (49%). Crucially, a significant majority (62%) endorsed the use of ChatGPT for educational reasons, signaling growing acceptance. In conclusion, LIS students at Minhaj University Lahore are highly aware of and generally positive towards ChatGPT's educational utility, despite moderate practical adoption. The findings suggest a need for institutional policies and training to ensure ethical and constructive integration of AI literacy into higher education.

© 2025 Edulib

ARTICLE INFO

Article History:

Submitted/Received 29 May 2025

First Revised 12 Jun 2025

Accepted 12 Jul 2025

First Available Online 01 Nov 2025

Publication Date 01 Nov 2025

Keywords:

ChatGPT,

Lahore,

LIS students,

Minhaj University.

1. INTRODUCTION

The advent of Generative Artificial Intelligence (GenAI), particularly the large language models (LLMs) developed on the Generative Pre-trained Transformer (GPT) architecture, represents a watershed moment in the history of information access and higher education (Dempere et al., 2023; Ng et al., 2025). OpenAI's ChatGPT, which debuted in 2022 with the GPT-3.5 model and was swiftly improved to GPT-4 in 2023, has distinguished itself through its ability to understand complex context and user prompts to generate highly coherent, human-like text. (Miraz et al., 2025; OpenAI, 2023). Its applications are broad, encompassing tasks such as answering questions, summarizing texts, composing essays, translating languages, and generating code, which has led to widespread global interest (Bumbach, 2024; Miraz et al., 2025).

The adoption of ChatGPT has sparked significant changes across various sectors, particularly in education, evolving from a novel tool to an essential resource that enhances both learning experiences and academic productivity (Das & J.V., 2024; Kasneci et al., 2023; Zhang & Tur, 2023). Though worries regarding academic integrity and critical thinking remain, it is widely employed as a supplement for learning, writing, and linguistic help in academic contexts (Cong-Lem et al., 2024; Dwivedi et al., 2023). The model's potential to create plausible but inaccurate or biased information has also been noted, underlining the necessity for ethical and responsible use (Aljabr et al., 2024; Zhou et al., 2023). GPT-4's 2023 release improved reasoning, multilingual processing, and nuanced comprehension (OpenAI, 2023). The chatbot's incorporation with Microsoft Word, Bing, and educational applications shows its expanding power (Haque et al., 2023). ChatGPT pioneers human-machine interaction while generative AI evolves.

ChatGPT improves productivity and communication in many sectors. It instantly generates summaries, explanations, and writing support for students and scholars (Adetayo et al. 2024; Huber et al., 2024; Maphoto et al., 2024). It helps professionals write emails, produce content, and brainstorm. ChatGPT can handle common customer support questions, reducing time and boosting response rates. Grammar corrections and vocabulary recommendations help language learners. Developers profit from code writing and debugging. Teachers use it to make tests, lesson plans, and study aids. Nevertheless, the widespread adoption of ChatGPT brings forth considerable ethical and pedagogical concerns. Key issues include preserving academic integrity and the risk of degrading students' critical thinking skills due to an over-reliance on AI-generated content. Numerous studies have indicated that while ChatGPT generates outputs that may appear coherent, they can often be factually inaccurate or biased, highlighting an urgent need for ethical and responsible implementation in all contexts (Miraz et al., 2025; Sain & Thelma, 2023). Although the advancement of GPT-4 addresses some issues related to reasoning and comprehension, the critical challenge of ensuring ethical and constructive use remains substantial (Li et al., 2024). This is particularly vital for the academic community engaged in information-centric disciplines, where understanding students' perceptions and behaviors towards this powerful but troublesome technology is essential (Shahzad et al., 2024; Sila et al., 2023).

Numerous studies have been undertaken in recent years examining the application of ChatGPT in educational settings both internationally and domestically. Das and J.V. (2024) investigated the attitudes of higher education students in India about ChatGPT, revealing that the majority saw it as a beneficial resource for learning and academic support, while also highlighting ethical problems and the potential for disinformation. In a similar vein, Ngo

(2023) examined university students' perceptions of ChatGPT in educational contexts, revealing that numerous students valued the AI's ability to provide rapid responses and learning assistance, while simultaneously expressing reservations regarding excessive dependence and the veracity of its content. In a separate study, [Aruleba et al. \(2023\)](#) investigated students enrolled in a computer science course. They found a pronounced tendency to utilise ChatGPT for assignments and learning, while expressing apprehensions about its effects on students' critical thinking and creativity.

In the context of Pakistan, [Alghazo et al. \(2025\)](#) performed a survey with 400 university students, indicating that although students appreciated ChatGPT's ease and academic utility, a significant percentage expressed concerns over academic dishonesty and the exploitation of AI. [Baqir & Nayab \(2024\)](#) investigated students in English language classrooms in southern Punjab and discovered that many saw ChatGPT as a convenient learning companion. However, there were sporadic concerns over the AI's correctness and contextual relevance. [Shahzad et al. \(2024\)](#) examined the determinants affecting the adoption of ChatGPT in higher education, emphasising the importance of trust and perceived simplicity of use as key elements in students' readiness to incorporate AI into their academic practices. These findings together underscore an emerging worldwide and local trend of measured optimism among students toward the utilisation of ChatGPT in education, contingent upon its ethical and constructive application.

Despite the growing literature on GenAI's role in education, a vital research gap remains regarding the perceptions and adoption behaviors of Library and Information Science (LIS) students. This demographic is critical due to their training in information literacy, knowledge organization, and ethical use of information resources. LIS students are positioned uniquely within the digital revolution and are expected to guide future generations in utilizing information tools responsibly. Therefore, understanding their perspectives on tools like ChatGPT—which challenge conventional definitions of source credibility and originality—is imperative. Key questions linger: Do LIS students exhibit higher skepticism toward ChatGPT's outputs? Do they have a more nuanced, ethically informed approach to AI compared to their peers in other fields? How do they balance the tool's efficiency with its potential risks to academic integrity, which conflicts with their professional ethos? The research objects are as follows:

- (i) To assess the awareness level of Library and Information Science students regarding ChatGPT.
- (ii) To ascertain if students utilise ChatGPT as an educational helper.
- (iii) To comprehend LIS students' perceptions regarding the utilisation of ChatGPT by fellow research students for educational objectives.

Filling this specific research gap is crucial for developing policies and curricula that reflect the realities of AI adoption among the next generation of information professionals. This study aims to provide empirical evidence regarding how LIS students navigate the challenges posed by generative AI, offering insights that can guide future curriculum development globally. By contributing high-quality, regionally specific data from Minhaj University Lahore, Pakistan, this research diversifies existing literature often dominated by Western or East Asian contexts. Ultimately, the findings will help inform LIS departments and university administrations about the necessity for mandatory AI literacy training and revised academic policies that safeguard academic integrity while fostering critical thinking.

2. METHODS

This research employed a random sampling survey approach and descriptive analysis among university faculty members in higher education. The research had 77 individuals. The participants were from the Department of Library and Information Science at Minhaj University Lahore. The study was performed in the first week of January 2025. Three inquiries were posed to elicit input in the form of a Yes or No response. The inquiries aimed to assess the awareness level of Library and Information Science students and their perceptions of ChatGPT. The further inquiries are as follows:

- (i) Are you familiar with ChatGPT?
- (ii) Do you occasionally utilise ChatGPT?
- (iii) Should researchers be permitted to utilise ChatGPT for educational purposes?

The replies are presented in Table 1, below.

Table 1. Quantity of replies to the study inquiry "Yes/No".

Question	Yes	No
1. Are you familiar with ChatGPT?	62	15
2. Do you occasionally utilise ChatGPT?	39	38
3. Do you think that researchers Should be permitted to utilise ChatGPT for educational purposes?	48	29

In response to question number 1, "Have you heard about ChatGPT?", Seventy-seven individuals provided comments, with 65 answering Yes and 15 answering No. Consequently, 81% of the respondents were cognizant of ChatGPT, whereas 19% were not. This can be represented visually in the pie chart format seen in Figure 1.

1. Are you familiar with ChatGPT?

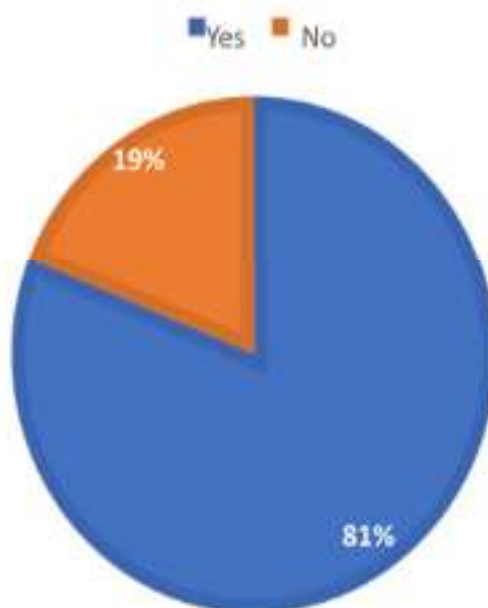


Figure 1. Faculty Member Who Were Aware of ChatGPT.

Source: Author's research, 2025.

The inquiry "Are you familiar with ChatGPT?" seeks to ascertain respondents' knowledge or awareness of the AI tool ChatGPT. Of the 77 responders, 62 said "Yes" and 15 answered "No". This signifies that a substantial majority (roughly 81%) are acquainted with ChatGPT.

2. Do you occasionally utilise ChatGPT?

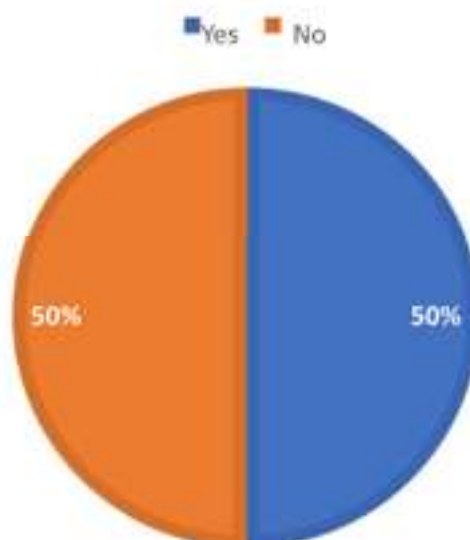


Figure 2. Faculty Members Who Sometimes Use ChatGPT for Productive Teaching.

Source: Author's research, 2025.

The average score for the question "Do you occasionally utilise ChatGPT?" is roughly 0.51, reflecting a nearly equal distribution between occasional users (39) and non-users (38).

The pie graphic demonstrates that the utilisation of ChatGPT among participants is nearly evenly distributed. With a mean of 0.51, slightly more than half of the participants indicate occasional usage, implying moderate interaction with the instrument. This balance indicates varying degrees of awareness, accessibility, or perceived utility of ChatGPT in academic or quotidian activities.

3. Do you think that researchers Should be permitted to utilise ChatGPT for educational purposes?

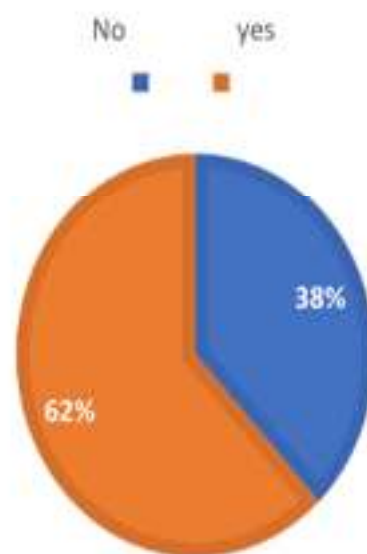


Figure 3. Faculty Members' Opinions Whether Students Will Be Allowed or Not to use ChatGPT.

Source: Author's research, 2025.

The mean value of 0.62 signifies that around 62% of respondents advocate for the utilisation of ChatGPT by academics for educational reasons. This majority indicates an increasing acceptance of AI techniques inside academic settings. The support may arise from ChatGPT's capacity to augment productivity, offer writing aid, and facilitate knowledge retrieval. The 38% who disapproved may indicate apprehensions around abuse, plagiarism, or excessive dependence on AI-generated material.

3. RESULTS AND DISCUSSION

The study's results indicated a significant knowledge of ChatGPT among faculty members. Of the 77 participants, 62 acknowledged familiarities with ChatGPT, whereas just 15 did not. This indicates that around 81% of respondents are cognizant of this AI-based technique, signifying extensive recognition and exposure within academic circles. The 81% awareness rate is not only high but indicates a widespread and mature acknowledgment of this powerful

AI-driven technology within the academic environment. This finding is consistent with global trends that highlight the accelerated integration of Generative AI into higher education discourse (Oprea & Bâra, 2025; Wu, et al., 2024). The rapid, viral spread of ChatGPT since its 2022 debut has ensured that it is no longer a niche tool but a mainstream phenomenon.

This high awareness among LIS students is particularly significant and can be attributed to several factors inherently linked to their professional training (Dube et al., 2024; Hirsh, 2024; University of Iowa, 2025):

- (i) **The Nature of LIS Discipline:** LIS students are professionally trained in information literacy, monitoring technological trends, and sophisticated information retrieval techniques. Their curriculum intrinsically requires them to seek out, identify, and critically evaluate emerging information tools and platforms. Their high familiarity score reflects a professional imperative to remain current with digital innovations.
- (ii) **Affirmation of Regional Trends:** The finding strongly corroborates observations from the broader Pakistani academic context. For instance, the research by Alghazo et al. (2025), surveying students across various universities in Pakistan, also indicated a high degree of acceptance and awareness regarding the academic utility of ChatGPT among the student body. This suggests that ChatGPT has transcended its initial novelty phase and is firmly established as a recognized tool among the educated youth in Pakistan.
- (iii) **The Shift in Academic Discourse:** The widespread awareness implies that academic debate within the LIS Department should no longer center on if ChatGPT exists, but must now pivot to how to ethically govern, teach, and harness the tool effectively. The high baseline knowledge provides fertile ground for immediate, advanced discussion on AI literacy, information ethics, and curriculum modification.

The level of awareness suggests that the first stage of technology adoption, knowledge acquisition, is complete. The LIS curriculum must now rapidly advance to the subsequent stages, such as critical evaluation and ethical integration. The LIS students, by virtue of their training, is expected to possess a knowledge base superior to general academic cohorts, and this 81% awareness confirms their readiness for advanced AI Literacy instruction.

Despite the overwhelming awareness, the findings regarding the actual, practical utilization of ChatGPT show a moderate and closely divided engagement. The replies concerning actual usage were nearly evenly distributed. A total of 39 individuals 51% reported occasional use of the tool, whereas 38 reported non-use of ChatGPT. This approximate equilibrium, with an average score of 0.51, indicates modest involvement with the instrument. It emphasises that although many are investigating its potential, an equivalent number may not yet recognise its significance or have opted not to include it in their academic methodologies. This presents a substantial gap between awareness (81%) and adoption (51%).

This marked discrepancy is the most critical finding of the study, suggesting that a significant barrier to adoption exists beyond mere technological access or knowledge. This gap is likely driven by factors intimately linked to the professional training and ethical consciousness of LIS students (Dube et al., 2024; Hirsh, 2024; University of Iowa, 2025):

- (i) **Professional Skepticism and Verification Burden:** As future information professionals, LIS students are trained to be highly critical evaluators of sources. They are acutely aware of the LLM's inherent limitations, namely its propensity for "hallucinations" (factually incorrect but plausibly worded content) and biases. This professional skepticism may function as a deterrent to routine adoption. Students might perceive that the time required for fact-checking and verifying ChatGPT's output negates the

efficiency gained from its initial content generation. This aligns with findings from [Ngo \(2023\)](#), who noted that student hesitation was often rooted in doubts regarding the veracity of AI-generated content.

- (ii) **Ethical Concerns and Academic Integrity:** For a discipline founded on the integrity of information, concerns about plagiarism, misuse, and academic honesty are exceptionally salient. Despite the tool's convenience, LIS students may be consciously self-regulating their use to preempt ethical dilemmas that could compromise their future professional credibility. The 51% adoption rate suggests that the LIS cohort is currently in a state of transitional negotiation with the technology, investigating the technology's utility but have not yet fully embraced it due to ethical reservations.
- (iii) **Pedagogical and Institutional Uncertainty:** The 49% non-use figure may also reflect a lack of clear institutional guidelines or pedagogical instruction on *how* to use ChatGPT responsibly. Without explicit faculty approval or training on ethical integration, risk-averse students, especially those focused on professional ethics, may simply choose non-use to avoid potential academic sanctions.

The moderate utilization rate signals that the LIS community is currently exercising a degree of "information prudence." The challenge is now to capitalize on the 51% who are using the tool by transforming their ad-hoc engagement into structured, ethical, and pedagogically sound usage.

When respondents were asked whether researchers (implicitly, their peers) should be permitted to utilize ChatGPT for educational purposes, a clear majority supported its allowance, 48 people expressed approval, while 29 objected. This result, with a mean of 0.62, signifies that a majority of faculty members endorse the academic use of ChatGPT. This majority acknowledges the prospective advantages of ChatGPT, including improved efficiency, support in academic writing, and augmented access to information. Nonetheless, the significant percentage of disagreement (38%) indicates apprehensions around academic integrity, potential abuse, or excessive reliance on AI-generated content.

The majority support for permissible use reflects a pragmatic acknowledgment of ChatGPT's potential academic benefits. This endorsement is likely driven by the recognition that the tool can significantly augment productivity by assisting with tasks such as drafting, brainstorming, improving syntax and grammar, and gaining quick summaries of complex concepts ([de Leon et al., 2024](#)). The LIS students view the tool not as a replacement for intellectual effort but as a highly efficient academic augmentor.

However, the substantial 38% minority who expressed reservations cannot be overlooked; they represent the conscience of the LIS profession confronting the challenge of GenAI:

- (i) **Ethical Vigilance:** This minority underscores the persistent and valid concerns highlighted globally, particularly regarding academic integrity and the potential for misuse to complete assignments without genuine intellectual effort ([Reiss, 2021](#); [Stahl & Eke, 2024](#), [Zeb et al., 2024](#)).
- (ii) **Fear of Over-reliance:** The dissenters fear that the ease of use will lead to an erosion of core LIS skills, such as independent research, deep reading, and original critical analysis—skills central to their future professional roles ([Reiss, 2021](#); [Stahl & Eke, 2024](#); [Zeb et al., 2024](#)).
- (iii) **The Conflict of Efficiency vs. Ethics:** The division reflects the contemporary tension in academia: the drive for efficiency versus the preservation of rigorous academic standards ([Reiss, 2021](#); [Stahl & Eke, 2024](#); [Zeb et al., 2024](#)).

The balance between approval and dissent mirrors the findings of [Alghazo et al. \(2025\)](#) and [Aruleba et al. \(2023\)](#) across different disciplines in Pakistan and globally, confirming that acceptance of AI benefits coexists with serious ethical anxieties. The LIS students' majority acceptance suggests they are ready to engage with the tool, provided it is governed by clear ethical guidelines. This places a direct responsibility on LIS educators and university administrators to provide the necessary ethical framework.

In conclusion, the results indicate that ChatGPT is widely recognised among teachers, utilised to a moderate extent, and generally regarded as a valuable instructional tool, albeit with some misgivings.

The results of this study indicate an increasing familiarity and measured interaction with ChatGPT among academic staff members. A significant majority (81%) of respondents indicated familiarity with ChatGPT, highlighting its extensive use in educational settings. This elevated awareness indicates that the dialogue surrounding artificial intelligence in education, especially generative AI technologies such as ChatGPT, has garnered substantial momentum.

Notwithstanding this familiarity, the real utilisation of ChatGPT remains limited and essentially equitable. The results indicate a division in practical adoption, with 39 individuals (51%) using the tool infrequently and 38 (49%) not utilising it. This may be ascribed to variables including disparate degrees of digital literacy, uncertainty about AI trustworthiness, or apprehensions surrounding ethical consequences. The almost equal distribution highlights a transitional stage in which faculty members are investigating the technology but have not fully adopted it.

A significant majority (62%) of respondents endorse the notion that academics should be permitted to utilise ChatGPT for instructional purposes. This indicates a positive perspective on the possibilities of AI in academia, especially for improving instructional efficiency, content generation, and knowledge distribution. Nonetheless, the 38% who opposed its utilisation underscore valid concerns, possibly focused on academic integrity, misuse, or excessive dependence on AI-generated content.

The conversation reveals a progressive yet prudent academic atmosphere in which ChatGPT is well-known, somewhat utilised, and progressively endorsed for educational incorporation. The varied replies indicate a necessity for enhanced awareness, training, and policy direction to guarantee the appropriate and successful utilisation of AI technologies such as ChatGPT in higher education.

Even so, the convergence of the three findings, high awareness, moderate use, and majority acceptance, carries profound implications for the LIS field, which traditionally serves as the guardian of information literacy and academic integrity. The fact that 81% of LIS students are aware of ChatGPT compels the explicit integration of AI Literacy into the established Information Literacy frameworks. AI Literacy is no longer optional; it is a fundamental component of 21st century information skills. The professional training of LIS students demands that their stance on technology usage reflects the highest ethical standards. The results confirm an ethical conflict that must be formally addressed. The findings are not just a reflection of the students; they directly impact the evolving role of the LIS Department and the professional librarian.

The study provides vital empirical data specific to the Pakistani context, which is often underrepresented in global AI literature. The results suggest that the LIS students at Minhaj University Lahore are globally connected in terms of awareness and technologically ready. However, the moderate utilization indicates that local institutional support, ethical

frameworks, and clear policy guidance are necessary to convert this awareness into constructive academic output. The findings urge Pakistani universities to move swiftly from “prohibiting” AI to “governing” its use, positioning LIS departments as the leaders in this policy development.

The study reveals that ChatGPT is a known and generally accepted technology among LIS students at Minhaj University Lahore. The high awareness (81%) confirms its mainstream status, and the majority approval for its use (62%) demonstrates a pragmatic acceptance of its benefits. However, the moderate utilization (51%) highlights the inherent ethical prudence and critical skepticism central to the LIS discipline. The 38% dissent serves as a powerful reminder of the imperative to maintain academic integrity.

The primary implication is the undeniable need for formalizing AI literacy within the LIS curriculum. The future LIS professional must be an expert not only in retrieving information but in critically evaluating machine-generated knowledge. Future research should focus on the qualitative aspects of LIS student usage, exploring *how* and *why* they use the tool, and the specific ethical dilemmas they face. This will provide the necessary foundation for robust, evidence-based policy recommendations.

4. CONCLUSION

This study embarked on a crucial investigation into the evolving pedagogical landscape shaped by Generative Artificial Intelligence (GenAI), specifically by assessing the awareness, usage, and perception of ChatGPT among Library and Information Science (LIS) students at Minhaj University Lahore. The findings offer a valuable empirical benchmark, particularly within the underrepresented context of South Asian LIS education, illuminating how the next generation of information professionals is engaging with this powerful but ethically complex technology. The core results are unequivocal: LIS students exhibit an overwhelming awareness of ChatGPT (81%), signaling its deep penetration into the academic discourse. However, this high awareness is tempered by a moderate practical adoption rate, with only 51% identifying as occasional users. Crucially, a significant majority (62%) endorsed the tool's utility as an educational aid, framing it as a resource that enhances productivity and facilitates learning.

The pattern of high awareness juxtaposed with cautious, moderate usage is the most compelling finding of this research, suggesting a nuanced, professionally informed engagement with GenAI. LIS students, whose professional ethos is fundamentally anchored in information literacy, source credibility, and ethical information stewardship, appear to be approaching ChatGPT with a level of inherent skepticism that distinguishes them from peers in less information-centric disciplines. Their moderate usage may reflect an internal conflict: recognizing the tool's immense efficiency in transactional tasks like summarization and drafting, yet remaining acutely mindful of its inherent risks, such as “hallucination,” embedded bias, and the potential erosion of critical thinking skills—all concerns deeply antithetical to the core LIS mission. The majority endorsement for educational use, therefore, should not be interpreted as unconditional acceptance but rather as a pragmatic willingness to integrate GenAI responsibly, provided appropriate ethical and pedagogical guardrails are actively implemented.

These results carry profound policy and pedagogical implications for LIS programs globally and are a critical data point for the future of academic integrity in the digital age. First, the data underscores the urgent necessity for mandatory Critical AI Literacy to be

integrated directly into the LIS curriculum. This integration must transcend basic technical instruction, embedding the principles of AI ethics, including recognizing bias, ensuring accountability, and critically evaluating AI-generated outputs for intellectual property and factual accuracy—skills that are now core to the information professional's mandate. LIS faculty are uniquely positioned and must, therefore, act as "early adopters" and expert guides, training students to effectively navigate the complex information landscape increasingly shaped by non-human actors. Second, institutional leaders at Minhaj University and across the higher education sector must urgently address the prevailing policy vacuum, which leaves both students and faculty vulnerable to ambiguity and academic integrity violations. Clear, transparent, and ethically sound policies must be developed that govern the permissible and required uses of GenAI, accompanied by a systemic shift in assessment design towards emphasizing higher-order cognitive skills and complex problem-solving that cannot be easily outsourced to an AI, thereby safeguarding the authenticity and quality of student learning.

Despite the robust initial insights, this study is constrained by its single-institution focus and reliance on a descriptive, quantitative approach. The sample size, while adequate for an initial assessment, limits generalizability, and the "Yes/No" inquiries do not fully capture the qualitative complexity of *why* students use or refrain from using ChatGPT. Therefore, future research should transition to a mixed-methods or purely qualitative methodology, employing in-depth interviews or focus groups to unpack the motivations and ethical decision-making processes that underpin the observed moderate usage rate. A comparative study, juxtaposing the perceptions of LIS students with those from disciplines less concerned with information ethics, would further elucidate the unique and critical influence of LIS professional training on GenAI adoption. Ultimately, the future success of the LIS profession is inextricably linked to the responsible and critical integration of tools like ChatGPT. This research serves as a critical call to action for LIS educators to proactively shape this digital transition to ensure they produce information professionals who are not merely passive users of AI, but ethical, critical, and accountable navigators and teachers in the AI-driven information world.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

6. REFERENCES

- Adetayo, A. J., Asiru, M. A., & Oladokun, B. D. (2024). Student perceptions of libraries and librarians: Factors in non-enrollment in LIS programs. *The Journal of Academic Librarianship*, 50 (5), 102935. <https://doi.org/10.1016/j.acalib.2024.102935>
- Alghazo, R., Fatima, G., Malik, M., Abdelhamid, S. E., Jahanzaib, M., Nayab, D., & Raza, A. (2025). Exploring ChatGPT's role in higher education: Perspectives from Pakistani university students on academic integrity and ethical challenges. *Education Sciences*, 15(2), 158. <https://doi.org/10.3390/educsci15020158>
- Aljabr, F. S., & Al-Ahdal, A. A. M. H. (2024). Ethical and pedagogical implications of AI in language education: An empirical study at Ha'il University. *Acta Psychologica*, 251, 104605. <https://doi.org/10.1016/j.actpsy.2024.104605>

- Aruleba, K., Sanusi, I. T., Obaido, G., & Ogbuokiri, B. (2023). Integrating ChatGPT in a Computer Science Course: Students' Perceptions and Suggestions. *arXiv preprint arXiv:2402.01640*. <https://arxiv.org/abs/2402.01640>
- Baqir, M., & Nayab, D. (2024). Exploring Students' Attitudes towards Using ChatGPT in English Language Classroom at University Level. *Pakistan Social Sciences Review*, 8(III), 29. <https://ojs.pssr.org.pk/journal/article/view/745>
- Bumbach, M. D. (2024). The use of AI powered ChatGPT for nursing education. *Journal of Nursing Education*, 63(8), 564–567. <https://doi.org/10.3928/01484834-20240318-04>
- Cong-Lem, N., Soyoof, A., & Tsering, D. (2024). A Systematic Review of the Limitations and Associated Opportunities of ChatGPT. *International Journal of Human–Computer Interaction*, 41(7), 3851–3866. <https://doi.org/10.1080/10447318.2024.2344142>
- Das, S. R., & JV, M. (2024). Perceptions of Higher Education Students towards ChatGPT Usage. *International Journal of Technology in Education*, 7(1), 86–106. <https://doi.org/10.46328/ijte.583>
- Dempere, J., Modugu, K., Hesham, A., & Ramasamy, L. K. (2023). The impact of ChatGPT on higher education. *Frontiers in Education*, 8. <https://doi.org/10.3389/feduc.2023.1206936>
- Dube, T. V., Rammutoa, M. W., & Matatiele, R. (2024). Skills and competencies of academic librarians to use information technology tools in the digital era: A systematic literature review. *Information Development*, 0(0). <https://doi.org/10.1177/02666669241302054>
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., . . . Wright, R. (2023). Opinion Paper: “So what if ChatGPT wrote it?” Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- Haque, A., Zhang, Y., & Rahman, M. M. (2023). ChatGPT in Education: Opportunities and Threats. *Computers and Education: Artificial Intelligence*, 4, 100123. <https://doi.org/10.1016/j.caeai.2023.100123>
- Hirsh, S. (2024). Academic faculty in Library and Information science. In *Elsevier eBooks*. <https://doi.org/10.1016/b978-0-323-95689-5.00187-5>
- Huber, S.E., Kiili, K., Nebel, S. et al. (2024). Leveraging the Potential of Large Language Models in Education Through Playful and Game-Based Learning. *Educ Psychol Rev* 36, 25 (2024). <https://doi.org/10.1007/s10648-024-09868-z>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., . . . Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- de Leon, L. C. R., Flores, L. V., & Alomo, A. R. L. (2024). Artificial Intelligence and Filipino Academic Librarians: Perceptions, Challenges and Opportunities. *Journal of the Australian Library and Information Association*, 73(1), 66–83. <https://doi.org/10.1080/24750158.2024.2305993>
- Li, M., Enkhtur, A., Cheng, F., & Yamamoto, B. A. (2024). Ethical implications of ChatGPT in higher education: A scoping review. *Journal of Interdisciplinary Studies in Education*, 13, 55–68. <https://ojed.org/jise/article/view/6072>

- Maphoto, K.B., Sevnarayan, K., Mohale, N.E., Suliman, Z., Ntsopi, T.J. and Mokoena, D. (2024). 'Advancing Students' Academic Excellence in Distance Education: Exploring the Potential of Generative AI Integration to Improve Academic Writing Skills'. *Open Praxis*, 16(2), p. 142–159. <https://doi.org/10.55982/openpraxis.16.2.649>
- Miraz, M. H., Jin, H. H., Mahmood, M., Hasan, M. T., Sarkar, J. B., Salleh, N. M., & Chowdhury, A. Y. (2025). ChatGPT's application in management education: In-depth critical analysis of opportunities, threats, and strategies. *Multidisciplinary Reviews*, 8(10), 2025338. <https://doi.org/10.31893/multirev.2025338>
- Ng, D. T. K., Chan, E. K. C., & Lo, C. K. (2025). Opportunities, Challenges and school Strategies for Integrating Generative AI in Education. *Computers and Education Artificial Intelligence*, 100373. <https://doi.org/10.1016/j.caeai.2025.100373>
- Ngo, T. T. A. (2023). The Perception by University Students of the Use of ChatGPT in Education. *International Journal of Emerging Technologies in Learning*, 18(17), 4–19. <https://doi.org/10.3991/ijet.v18i17.39019>
- Oprea, S., & Bâra, A. (2025). Transforming Education with Large Language Models. Trends, Themes and Untapped Potential. *IEEE Access*, 13, 87292–87312. <https://doi.org/10.1109/access.2025.3570649>
- OpenAI. (2023). *GPT-4 Technical Report*. OpenAI. <https://openai.com/research/gpt-4>
- Reiss, M. J. (2021). The use of AI in education: Practicalities and ethical considerations. *London Review of Education*, 19(1). <https://doi.org/10.14324/lre.19.1.05>
- Sain, Z. H., & Thelma, C. C. (2023). The Future of ChatGPT in the Pakistani Education System: Transforming Learning and Teaching Dynamics. *International Journal of Instructional Technology*, 2(2), 1–10. <https://doi.org/10.33650/ijit.v2i2.9355>
- Shahzad, M. F., Xu, S., & Javed, I. (2024). ChatGPT Awareness, Acceptance, and Adoption in Higher Education: The Role of Trust as a Cornerstone. *International Journal of Educational Technology in Higher Education*, 21, 46. <https://doi.org/10.1186/s41239-024-00478-x>
- Stahl, B. C., Eke, D. (2024). The ethics of ChatGPT – Exploring the ethical issues of an emerging technology. *International Journal of Information Management*, 74, 102700. <https://doi.org/10.1016/j.ijinfomgt.2023.102700>
- University of Iowa. (2025). *What is Library and Information Science?* School of Library and Information Science - Graduate College | the University of Iowa. <https://slis.uiowa.edu/about/what-library-and-information-science>
- Wu, D., Chen, M., Chen, X., & Liu, X. (2024). Analyzing K-12 AI education: A large language model study of classroom instruction on learning theories, pedagogy, tools, and AI literacy. *Computers and Education Artificial Intelligence*, 100295. <https://doi.org/10.1016/j.caeai.2024.100295>

- Zeb, Ali & Ullah, Rafid & Karim, Rehmat. (2024). Exploring the role of ChatGPT in higher education: opportunities, challenges and ethical considerations. *The International Journal of Information and Learning Technology*, 41. <https://doi.org/10.1108/IJILT-04-2023-0046>
- Zhang, P., & Tur, G. (2023). A systematic review of ChatGPT use in K-12 education. *European Journal of Education*, 59(2). <https://doi.org/10.1111/ejed.12599>