

The Impact of Artificial Intelligence on Language Learners' Critical Thinking Skills, Language Learning, And Academic Integrity

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ABSTRACT

The rapid integration of Artificial Intelligence (AI) tools such as ChatGPT into academic settings has transformed the ways students engage with learning and writing. While these tools provide efficiency, idea generation, and language support, their overuse has sparked growing concerns among educators, institutions, and researchers. This paper investigates the effects of overreliance on ChatGPT in higher education, with particular focus on three key areas: critical thinking, language learning, and academic integrity. Employing a qualitative, literature-based methodology, the study systematically reviewed peer-reviewed articles published between 2020 and 2025 from databases such as Scopus, Web of Science, and ScienceDirect. Findings indicate that frequent dependence on ChatGPT can hinder students' development of critical thinking by encouraging cognitive offloading, superficial engagement with content, and uncritical acceptance of AI-generated information. Similarly, overreliance on the tool disrupts independent language learning, as ChatGPT often provides generic, non-personalised responses that cannot replicate authentic human interaction or address complex linguistic and cultural nuances. Furthermore, the study highlights rising academic integrity concerns, including plagiarism, blurred authorship, inequities in assessment, and the inability of current institutional frameworks to detect AI-generated work effectively. While ChatGPT offers significant potential for enhancing efficiency and supporting writing mechanics, unchecked reliance poses risks to students' creativity, autonomy, and authentic learning. The review concludes by calling for improved AI literacy among educators and students, updated institutional policies, and further empirical research to explore long-term implications. Balancing AI use with pedagogical integrity is essential to safeguard academic development and ensure ethical adoption in education.

Keywords: Artificial intelligence, excessive dependence, cognitive engagement, writing skills, integrity

INTRODUCTION

Artificial intelligence (AI) tools such as ChatGPT are being integrated into academic life rapidly in this constantly changing technological landscape [1]. The generative artificial tool offers students a convenient way to enhance their learning experience and productivity efficiently, which adapts to users' understanding [2]. Despite its convenience for students, most common AI tools like ChatGPT have raised concerns about the consequences of overreliance on such tools. The increasing reliance on AI tools in the educational environment has sparked both enthusiasm and concern among educators, students, and academic institutions [3]. While AI helps in generating ideas and completing tasks [4], its prolonged usage may negatively impact students' educational development and independence by hindering the cultivation of critical thinking skills, undermining language learning, and raising significant concerns regarding academic integrity. Furthermore, students who value efficiency over academic work may develop a dependent mindset from the usage of AI-generated content, compromising their core academic competencies and lowering their motivation to interact extensively with academic materials [5]. Therefore, this paper aims to examine how overreliance on ChatGPT affects students' critical thinking and cognitive engagement in writing tasks. Additionally, it also aims to explore the impact of

AI specifically ChatGPT on students’ language learning and to identify emerging issues related to academic integrity and the use of AI tools in academic writing. The objectives as well as the relevant research questions are listed here.

Aim & Research Questions

Research Aims:

RO1: To explore how the use of ChatGPT influences students’ development of critical thinking skills.

RO2: To examine the impact of ChatGPT on students’ language learning?

RO3: To identify the academic integrity concerns that may arise when students use AI tools for academic writing.

Research Questions:

RQ1: In what ways does ChatGPT usage influences students’ critical thinking skills?

RQ2: How does ChatGPT affect students’ language learning?

RQ3: What are the academic integrity concerns associated with students’ use of AI tools in academic writing?

METHODOLOGY

This paper adopted a qualitative, literature-based research design to address the three research objectives and three corresponding research questions. This paper utilizes a systematic review and synthesis of recent scholarly literature to explore the topic comprehensively as its methodology.

Based on their relevance to the central focus of the paper, their contribution to the field and their alignment with the research objectives, several peer-reviewed journal articles published between 2020–2025 were selected. 25 articles were retrieved from reputable academic databases such as Scopus, Web of Science, Google Scholar, and ScienceDirect using a combination of keywords including artificial intelligence, excessive dependence, cognitive engagement, writing skills, and integrity. These papers were conducted using various methodologies as shown in Fig.1.

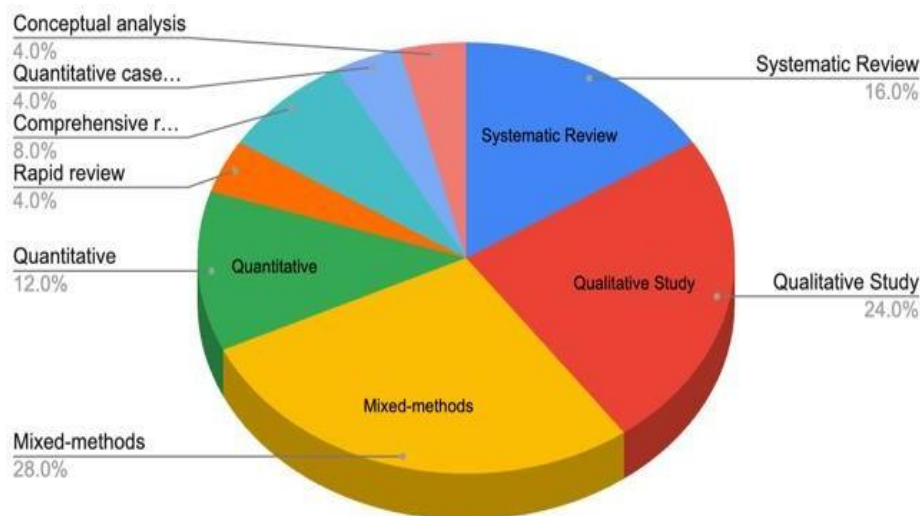


Fig. 1 Methodologies used in previous studies.

LITERATURE REVIEW

Major findings in literature review

Based on all the literature review, listed below are the keywords that were collected representing the findings of the studies. Those identified keywords are:

Key words used in describing negative impacts of AI:

inversion effects

cognitive and critical thinking decline

loss of authorial voice

shallow engagement

reduce deep learning

loss of authentic voice

reduce creativity

over dependency

cognitive offloading

cheating and plagiarism

irresponsible use

challenges in translating natural language inputs

integrity issues

accuracy

cultural bias

lack genuine interaction

over reliance

job security threat

exactness of information

impact on education sector

not superior to traditional method

higher plagiarism tendency

hallucinated content

dampen independence

lack policy

increase higher academic workload

time pressure

low academic performance

memory loss

procrastination

Key words used in describing positive impacts of AI:

support personalised learning

enhance writing mechanics and feedback

negative correlation between AI and critical thinking

improve quality and variety of speech synthesis system

no adverse impact on motivation

aid language acquisition

stimulate interactive dialogue, learning

should be integrated in curriculum

promote learning content production

efficiency and engagement boost

These keywords are further discussed in the following sections that are divided into three main aspects: Hindrance of Critical Thinking Skills Development, Disruption of Language Learning and Rise of Academic Integrity Concerns.

Hindrance of Critical Thinking Skills Development

The emergence of AI tools such as ChatGPT in today's education has greatly sparked debate over its effect on students' academic writing skills, typically critical thinking. Some might argue that AI tools can assist students with tackling academic tasks, enhancing students' learning efficiency. As mentioned by [6], AI tools can help students with managing repetitive tasks, boosting their efficiency and reducing their mental load. Nevertheless, some studies have proven otherwise, highlighting concerns on its overuse. [7] pointed out that overreliance on ChatGPT can hinder students' engagement in reflective thinking while hindering their high order thinking skills development. This is parallel with the observation made by [8], emphasising that there is a negative relationship between students' reliance on AI tools in completing assignments and problem-solving skills. Additionally, [6] and [8] stressed that the false credibility in AI-generated contents and responses could cause students to impulsively accept the information, neglecting their ability to critically evaluate the content validity.

This concern was further backed up by [6], signifying that cognitive offloading caused by reliance on AI is a driving force to the hindrance of students' critical thinking. More specifically, his study demonstrated that overreliance of AI tools corresponds with reduced critical thinking scores, typically among students and younger users. Likewise, [2] added that AI tools may diminish students' engagement with the learning content, ultimately leading to superficial learning despite its ability to support writing mechanics. Moreover, there have been concerns highlighting that students may lose their authenticity and become over-reliant on answers derived from AI tools, causing jeopardy on their creativity and critical engagement ([2], [3]).

Disruption of Language Learning

Next, overreliance on ChatGPT negatively affects students' ability to learn language independently. N7 argues that AI tools were built to transform old practices into a more structural and engaging approach. This leads to the facilitation of language models, employing machine-learning algorithms and generating human-like language ([10], [11]). However, a study carried out by [9] proved otherwise, justifying that ChatGPT limits its own capacity to provide personalised feedback. Additionally, [12] explained that even though AI is proven to be beneficial, the tool remains unreliable to conduct care work that requires empathy as a contributing factor due to the inability to comprehend human emotions and morality. This corresponds to research conducted by [13]

who emphasised that language learning is a thorough process that cannot be fully replicated by AI. He added that the lack of comprehension will affect the richness and effectiveness of students' learning experience.

Furthermore, [20] stated his concerns on how overreliance on AI could limit opportunities for real human connection which is essential for language acquisition. The inaccuracy of ChatGPT's responses, which are incredibly generic, reduces its ability to emotionally connect with the users, causing a decline in the process of learning a language [15]. Similarly, [16] emphasised that meeting students' emotional and social requirements during the learning process is challenging because ChatGPT lacks the authentic human interaction and communication experiences despite its ability to mimic human conversation. In addition, [17] supported this by stating that AI-powered language learning may not be able to handle intricate linguistic or cultural problems as it lacks the comprehensive knowledge of human teachers.

Rise of Academic Integrity Concerns

Over-reliance on ChatGPT usage has raised concerns about integrity and plagiarism. While meant to assist with ideation and structure, ChatGPT is now used to write assignments with minimal input. As seen in [18], this reliance hinders skills development as students focus efficiency rather than improving their skills. Similarly, [19] highlighted how educational institutions struggle with outdated plagiarism-detection software and lack of training in identifying AI-generated text, emphasizing the need for clearer policies.

Beyond plagiarism, ChatGPT complicates authorship in academic work. A study conducted by [20] claimed that ChatGPT's output often mirrored human writing so closely that it is difficult to determine the original author. This aligns with the observation by [19], claiming that these tools generate output based on unattributed sources, leading to unintentional appropriation of ideas. This becomes concerning when students submit ChatGPT-generated content with no personal input as it no longer represents their intellectual ownership. Consequently, [21] suggest that ChatGPT undermines academic integrity by generating content with minimal input, thus lacking genuine authorship.

As students find ease in utilising ChatGPT, overusing the tool for assignments bypasses the core purpose of university education which is promoting independent thinking and knowledge generation [22]. Some students may be more tech-savvy and can utilize AI tools effectively, while others lack the tools or knowledge [23]. Therefore, students who use ChatGPT may get better grades than peers who work independently, resulting in inequity and unfair competition in assessments ([24], [25], [23]).

FINDINGS AND DISCUSSION

Based on the review and synthesis of recent literature, three key findings emerged that address the research objectives and questions of this paper.

Firstly, the use of ChatGPT has both supportive and limiting effects on students' critical thinking skills. While AI tools can reduce students' cognitive load by handling repetitive tasks and providing quick access to information [6], overreliance on these tools may hinder the development of higher-order thinking skills. Several studies highlighted that when students depend too heavily on AI-generated content, they are less likely to engage deeply with learning materials or critically evaluate the accuracy and credibility of the information presented ([7], [8]). This phenomenon, referred to as cognitive offloading, may lead to superficial understanding and a decline in problem-solving and reflective thinking abilities, especially among younger learners.

Secondly, the findings indicate that ChatGPT has mixed implications for language learning. While it can facilitate language practice and provide structured feedback, the tool lacks the emotional depth, cultural understanding, and adaptability of human instructors ([12], [17]). Its generic and sometimes inaccurate responses limit its capacity to provide meaningful interaction, which is crucial for effective language acquisition ([16], [15]). This suggests that while ChatGPT can complement language learning, it cannot replace authentic, interpersonal communication necessary for mastering a language. Overreliance on AI may therefore restrict students' opportunities to develop independent learning strategies and meaningful linguistic engagement.

Lastly, the use of ChatGPT raises significant concerns regarding academic integrity. Studies report that some students use AI tools to complete assignments with minimal personal input, which challenges traditional notions of authorship and originality ([18], [20]). The difficulty of distinguishing AI-generated text from human writing further complicates plagiarism detection and policy enforcement [19]. Additionally, unequal access to AI tools creates issues of fairness, as students with greater technological resources may gain an advantage over others [23].

In summary, the findings highlight a dual perspective: ChatGPT has the potential to enhance learning when used responsibly, yet its overuse may hinder critical thinking, limit authentic language learning, and raise ethical challenges for educators and institutions.

CONCLUSION

This literature review emphasised three major concerns resulting from the overreliance on ChatGPT in students' academic performance: hindered critical thinking, weakened language learning, and growing academic integrity issues. While the AI tool provides various benefits, its extensive usage of dependence could threaten students' academic development and the quality of their work. As educators may face difficulties in assessing students' authentic abilities, institutions may encounter challenges in maintaining academic integrity standards. These findings point to the necessity of accountability and awareness when integrating AI into the academic landscape.

Hence, future research should focus on studies that further explore the long-term impact of continuous exposure to AI tools on students' learning habits in different academic fields. Educators could improve their AI literacy, obtain essential training for the correct usage of AI in educational settings, and further assist students with the use of the tools in their tasks. By addressing these academic concerns collectively, a future where AI technology is a significant influence that adjusts to students' changing preferences, upholds ethics, and supports overall educational goals is possible.

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REFERENCES

1. Aina Al Mardhia Ismail. (2024). Over-reliance of AI tools in academic writing tasks: The Malaysian tertiary level context. *E-Prosidings Persidangan Antarabangsa Sains Sosial & Kemanusiaan kali ke-9 (PASAK9 2024)*, 1(1), 218-224.
2. Naima Sahli, Khaldia Boughena, Amina Abdelhadi. (2024). A systematic review of empirical studies on the impact of artificial intelligence on university students' writing skills. *Annals of the University of Craiova, Psychology-Pedagogy Series*, 23(46/2), 285–297. <https://doi.org/10.52846/AUCPP.2024.2.210bed, K.,>
3. Bauer, E., Grif, S., Graesser, A. C., Schüttr, K., & Seiler, M. (2025). Looking beyond the hype: Understanding the effects of AI on learning. *Educational Psychology Review*, 37(45). <https://doi.org/10.1007/s10648-025-10020-8>
4. Sayeed Salih, Omayma Husain, Mosab Hamdan, Samah Abdelsalam, Hashim Elshafie & Abdelwahed Motwakel. (2024). Transforming education with AI: A systematic review of ChatGPT's role in learning, academic practices, and institutional adoption. *Results in Engineering*, <https://doi.org/10.1016/j.rineng.2024.103837>
5. Muhammad Abbas, Farooq Ahmed Jam, Tariq Iqbal Khan. (2024). Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students. *International Journal of Educational Technology in Higher Education*, 21(1). <https://doi.org/10.1186/s41239-024-00444-7>
6. Gerlich, M. (2025). AI tools in society: Impacts on cognitive offloading and the future of critical thinking. *Societies*, 15(1), Article 6. <https://doi.org/10.3390/soc15010006>
7. Sevilla Muñoz, T. C., Barrios Aquise, M., & Flores Cisneros, R. M. (2025). ChatGPT in education: A review of its impact on personalized learning, critical thinking, and academic writing (2023–2025). *Journal of Xidian University*, 19(5), 330–338. <https://doi.org/10.5281/Zenodo.15378864>

8. Çela, E., Fonkam, M., & Potluri, R. M. (2024). Risks of AI-assisted learning on student critical thinking: A case study of Albania. *International Journal of Risk and Contingency Management*, 12(1), 1–19. <https://doi.org/10.4018/IJRCM.350185>
9. Nadine M. (2024) Exploring the Impact of Using Chat GPT on Learners' Motivation in the Writing Classroom: The Case of Second Year Students at Larbi Tébéssi University, University of Tebessa, 1-136. http://oldspace.univ_tebessa.dz:8080/xmlui/handle/123456789/12186
10. Hatim Abdelhak Dida, Chakravarthy, D., & Fazle Rabbi. (2023). ChatGPT and Big Data: Enhancing Text-to-Speech conversion. *Mesopotamian Journal of Big Data*, 31–35. <https://doi.org/10.58496/mjbd/2023/005>
11. Maddigan, P., & Susnjak, T. (2023). Chat2VIS: Generating Data Visualizations via Natural Language Using ChatGPT, Codex and GPT-3 Large Language Models. *IEEE Access*, 11, 45181-45193. <https://ieeexplore.ieee.org/document/10121440>
12. Atlas, S. (2023). ChatGPT for Higher Education and Professional Development: A Guide to Conversational AI. The University of Rhode Island, 1-135. https://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1547&context=cba_facpubs
13. Kartal, G. (2023). Contemporary language teaching and learning with ChatGPT. *Contemporary Research in Language and Linguistics*, 1(1), 59-70. <https://crljournal.org/index.php/crlj/article/view/10/9>
14. Chen L., Chen P., & Lin Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, 8, 75264-75278. <https://doi.org/10.1109/ACCESS.2020.2988510>
15. Meniado, J. C. (2023). The impact of ChatGPT on English language teaching, learning, and assessment: A rapid review of literature. *Arab World English Journal*, 14(4), 3–18. <https://doi.org/10.24093/awej/vol14no4.1>
16. Wang, J., Sheng, Q., Melor Md Yunus, & Karmila Rafiqah M. Rafiq (2023). Integrating ChatGPT into English Language Teaching and Learning: Strengths and Weaknesses. *International Journal of Academic Research in Business & Social Sciences*, 13(12). <https://doi.org/10.6007/ijarbss/v13-i12/20251>
17. Dhanapal C., N. Asharudeen, & Sabina Yasmin Alfaruque. (2024). Impact of Artificial Intelligence Versus Traditional Instruction for Language Learning: A Survey. *World Journal of English Language*, 14(2), 182. <https://doi.org/10.5430/wjel.v14n2p182>
18. Reiter, L., Jörling, M., Fuchs, C., & Böhm, R. (2025). Student (mis)use of generative ai tools for university-related tasks. *International Journal of Human-Computer Interaction*. Advance online publication. <https://doi.org/10.1080/10447318.2025.2462083>
19. Tayyiba Asim, Nazma Shaheen, Atiya Tasneem, Mahjabeen Mohammed Yousuf. (2025). The role of chatgpt in student writing: Opportunities and challenges in addressing plagiarism. *South Eastern European Journal of Public Health*, 5990–6008. <https://www.seejph.com/index.php/seejph/article/view/5511>
20. Sana Sarwar, Marium Bushra, Zenab Azmat Ullah, Samreen Hadi. (2025). “Plagiarism in the Age of AI: Exploring the Role of CHATGPT in Student Writing and Academic Integrity.” *Journal of Information Systems Engineering & Management*, 10(14s), 868–883. <https://doi.org/10.52783/jisem.v10i14s.2404>
21. Balalle, H., & Pannilage, S. (2025). Reassessing academic integrity in the age of AI: A systematic literature review on AI and academic integrity. *Social Sciences & Humanities Open*, 11, 101299. <https://doi.org/10.1016/j.ssaho.2025.101299>
22. Kipelo Obed, William A.L. Anangisye, Philipo Sanga; Academic integrity considerations of using ChatGPT in assessment activities among university student teachers. *Quality Assurance in Education* 11 February 2025; 33 (2): 305–320. <https://doi.org/10.1108/QAE-06-2024-0100>
23. Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, 61(2), 228–239. <https://doi.org/10.1080/14703297.2023.2190148>
24. Ogugua, D., Yoon, S. N., & Lee, D. (2023). Academic integrity in a digital era: Should the use of ChatGPT be banned in schools? *Global Business and Finance Review*, 28(7), 1–10. <https://doi.org/10.17549/gbfr.2023.28.7.1> Reiter, L.,
25. 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., Stadler, M., Weller, J., Kuhn, J., & Kasneci, G. (2023). ChatGPT for



good? On opportunities and challenges of large language models for education. Learning and Individual Differences, 103, <https://doi.org/10.1016/j.lindif.2023.102274>