

The Use of Chatgpt in Language Education

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Abstract

This study explores the multifaceted role of ChatGPT, an AI language model, in language teaching and learning contexts. Drawing upon a comprehensive review of literature and empirical studies, the benefits and disadvantages of integrating ChatGPT into language education are examined. Findings reveal that ChatGPT offers personalized feedback, facilitates customized lesson planning, and enhances language proficiency through individualized learning experiences. However, concerns regarding misinformation, lack of human connection, and ethical implications necessitate careful consideration. Implications for language teaching underscore the importance of strategic integration and educator training, while recommendations for further research highlight the need for addressing ChatGPT's limitations and exploring its potential in-depth. By addressing these considerations, educators can harness ChatGPT's capabilities to enhance language instruction and foster more effective learning outcomes.

Key words: *Artificial intelligence, AI, ChatGPT, Language learning and teaching*

Introduction

Artificial intelligence (AI) Effective communication is crucial when interacting with individuals of different language proficiency levels. In the present era of globalization, proficiency in multiple languages holds significant importance. It is vital to recognize the importance of language proficiency and its potential to enhance both personal and professional growth. Learning different languages is important to broaden cultural awareness, improve communication, and create new career opportunities. It helps to understand diverse cultures, develop intercultural communication skills, and build relationships with people from various backgrounds. Consequently, the ability to be proficient in multiple languages is an asset that should be prioritized in today's competitive environment. By recognizing this need and taking steps to develop language skills, individuals can broaden their horizons and enhance their communication abilities.

Technology has emerged as a pivotal component in the realm of education, essential to the teaching and learning processes. Educators can dramatically transform how knowledge is conveyed and assimilated by utilizing technological innovations. In the vast landscape of education, technology has unlocked a multitude of opportunities for both teachers

and students. It allows traditional teaching methods to become innovative, transforming classrooms into dynamic, interactive learning environments. From digital textbooks to online learning platforms, these technological advancements offer students a wealth of resources and diverse perspectives beyond the limitations of the physical classroom.

The evolution of technology paves the way for the emergence of Artificial Intelligence (AI), which has profoundly transformed various aspects worldwide (1). As Grassini (2) suggests the integration of AI into teaching and learning environments has substantial implications, offering considerable potential for enhancing educational outcomes. Studies have shown that AI technologies improve language learning experiences both cognitively and affectively, for example, by providing feedback (3) and reducing anxiety among L2 learners (4). On the other hand, a number of obstacles have also been identified in terms of the implementation of AI technologies for language learning and teaching including ethical and social concerns (5), reliability, and accuracy (6). As an AI language model, ChatGPT (Chat Generative Pretrained Transformer), a type of natural language processing (NLP) developed by OpenAI, has gained significant attention in the field of language teaching. Its ability to generate coherent and

contextually appropriate responses (7) makes it a promising tool for enhancing language learning experiences (6).

With the increasing integration of technology in education, understanding the role of AI language models like ChatGPT is crucial for language educators and learners. This review study aims to explore the various ways in which ChatGPT can be utilized effectively in language teaching, considering its potential benefits and drawbacks. The research questions are stated below:

RQ1. What are the benefits of ChatGPT in language teaching and learning?

RQ2. What are the disadvantages of ChatGPT in language teaching and learning?

Literature Review

There has been a recent increase in systematic review studies on the use of AI in language learning and teaching. Review research on 516 papers on AI in language instruction from 2000 to 2019 was carried out by Huang et al. (8) who discovered that language learners used AI in speaking, writing, reading, vocabulary, and grammar. The study found that after 2015, there was a noticeable surge in AI research on language acquisition. Despite being thorough, the study avoided going into particular effects, approaches, or applications in teaching and

learning in favor of concentrating on broad trends in AI papers and research.

Ji et al. (9) investigated the influence of teachers on AI-integrated language instruction. They looked at twenty-four empirical studies done between 2015 and 2021 that investigated the collaboration of conversational AI and language teachers. The benefits of artificial intelligence (AI) in the classroom are well known, but real evidence on specific strategies for AI-human teacher collaboration is hard to come by. Further research on the integration of conversational AI in language learning is recommended by the researchers in order to enhance teaching effectiveness and provide evidence-based recommendations. They also recommend looking at how conversational AIs could help instructors in the classroom, relieve some of their workload, and improve students' understanding of various cultures.

AI has made significant advancements in recent years, leading to the creation of Chat GPT. Since its launch in 2022, ChatGPT has gained worldwide popularity. It is an OpenAI-based tool that can understand and generate appropriate responses to natural language used in communication. The utilization of ChatGPT in the educational realm has sparked significant enthusiasm owing to its capacity to enhance students' learning encounters. Through furnishing prompt and tailored responses, this

technology possesses the capability to cater to individual student requirements, provide instant feedback, and aid in grasping intricate ideas. Consequently, it emerges as a promising instrument fostering students' active engagement and cognitive development by adjusting to their learning tempo and delivering ongoing assistance in their acquisition of knowledge (10). Chat GPT can create text that closely resembles human language and provide feedback at a level of human comprehension (11). This form of language allows people to communicate with computers naturally and interactively. In essence, Chat GPT is a well-known AI-based tool that enables people to engage in natural communication and receive relevant and natural responses (12).

Its effects have recently resulted in an increase in interest in education. This cutting-edge tool is transforming the way students are educated, advanced, and assisted in academic settings as a disruptive technology. To improve the teaching and learning experiences of educational agents, academic institutions are re-evaluating how to incorporate technology into their curricula (13). As a result, teachers ought to make use of this instrument in the classroom and present it as an additional resource that improves the educational process. However, it is crucial to emphasize that this tool does not replace the cognitive exercises

required for learning or other resources like reading, writing, or interacting with people.

Materials and Methods

Adopting a systematic review methodology, researchers sorted through relevant recent studies by using the Google Scholar database. Keywords including AI and ChatGPT in the context of language teaching and learning were searched such as "AI in language learning and teaching", "ChatGPT and language teaching and learning" and "AI and language". The titles and abstracts of the papers were reviewed for relevance. After a thorough assessment of the entire text, the papers that were going to be included were listed. The ones that (1) the content did not specifically address ChatGPT in language instruction; (2) they were not articles; and (3) the articles were not open-access were excluded. In order to address the research questions posed, a content analysis was carried out on the 15 research studies obtained.

Results and Discussion

RQ1. What are the benefits of ChatGPT in language teaching and learning?

The studies on the use of ChatGPT in education have identified several significant benefits of using this technology. One of the key advantages is that it enables teachers to create more detailed and customized lesson plans that are better suited to the needs of their students (14). With the help of ChatGPT, teachers can generate lessons that

are tailored to the learning style, pace, and interests of each student, leading to a more engaging and effective learning experience. This technology also allows teachers to provide personalized feedback to students, which can help them improve their understanding of the subject matter and make better progress toward their learning goals. Overall, the use of ChatGPT in education has the potential to enhance the quality of teaching and learning and can benefit both teachers and students in a variety of ways. According to Mohamed (15), ChatGPT's benefits which include real-time feedback, individualized training, a large knowledge base, natural language processing, human-like responses, and cost-effectiveness-can significantly improve EFL learning.

The efficiency of EFL teachers can also increase with the incorporation of ChatGPT into EFL teaching strategies. ChatGPT can enable students to practice language outside of the classroom, provide individualized feedback and assistance, and facilitate personalized and interactive language learning experiences by offering innovative and efficient methods for language education and assessment. Correspondingly, Perkins (16) delves into the practical application of Chat GPT as a means to facilitate the generation of formal assessments. As an instrument that enables the generation of text, ChatGPT serves as a

valuable asset in supporting assessments through the production of coherent and systematic formal assessment materials.

The studies also showed that the use of ChatGPT enhanced students' language skills. Baskara and Mukarto (17) state that the incorporation of ChatGPT into the teaching process can offer educators an opportunity to generate authentic materials, personalized exercises, and lesson plans that cater to the language proficiency requirements of students across various competencies such as reading comprehension, writing, as well as foster their motivation (18). The integration of this AI-driven platform in classroom settings can lead to desirable outcomes for language learners, providing them with a more tailored and engaging learning experience. With the creation of customized exercises, teachers can leverage ChatGPT to promote self-directed learning and enhance students' language skills in a personalized manner. Correspondingly, Fırat (19) highlights that ChatGPT is capable of engaging in multiple ongoing conversations, comprehending and responding to natural language input, and providing personalized and interactive support. These qualities make ChatGPT a promising tool for open education, as it can enhance self-reliance and autonomous learners, while also being practical and versatile. In line with these studies, Fauzi et al. (20) also concluded that the use of

ChatGPT improves students' language skills, facilitates collaboration, increases time efficiency, and provides support and motivation.

Xiao and Zi (21) conducted a small-scale qualitative investigation aiming to delve into students' perceptions and encounters with ChatGPT in language learning. Their research revealed that ChatGPT acts akin to a learning companion or personal tutor, offering tailored, easily accessible, and adaptable feedback. Moreover, it aids in enhancing language proficiency when students employ critical thinking skills, such as adjusting prompts, refining the model through training, and scrutinizing and selectively accepting its outputs. Additionally, it facilitates idea generation for brainstorming purposes. Crucially, the study demonstrated students' capacity to engage in critical analysis of the information provided by ChatGPT, showcasing their ability to modify prompts, refine ChatGPT's performance, verify responses, and selectively incorporate the information provided.

Young and Shishido (22) conducted a study to evaluate the effectiveness of ChatGPT in generating high-quality dialogue materials that are suitable for English as a Foreign Language (EFL) students. Using multiple readability metrics, the researchers analyzed the suitability of the dialogue materials produced by ChatGPT and

determined the target audience that could benefit the most. The findings of the study indicated that ChatGPT's dialogues are well-suited for students at the elementary level of the Common European Framework of Reference for Languages (CEFR) A2 level. The dialogues are easily understandable, making it possible for students at this level to comprehend most of the vocabulary used. Additionally, a considerable portion of the dialogues intended for the intermediate level (CEFR B1) provide ample opportunities for learning new words. The integration of AI-powered chatbots in EFL education has the potential to overcome limitations and provide valuable learning resources to students.

Apart from the EFL context, there are also some studies conducted in different languages. For example, Senyaman (23) investigates the potential benefits of integrating ChatGPT into the Arabic language learning process, focusing on its suitability for individual learners. Directed questions were asked to ChatGPT to evaluate its effectiveness in teaching Arabic, considering its design for facilitating natural communication in users' native languages. These inquiries covered various aspects such as vocabulary, pronunciation, grammar at different levels, translation tasks, text generation on specific topics, and explaining idiomatic

expressions. The study concludes that ChatGPT offers significant advantages in language learning, particularly in terms of providing personalized feedback, support, and guidance irrespective of time and location, and enhancing motivation, which are crucial factors in individual language acquisition.

Additionally, a study by Athanassopoulos et al. (24) assessed the effectiveness of ChatGPT as a feedback tool for foreign language writing among students. The study involved eight 15-year-old migrant/refugee students learning German in Greece. ChatGPT enhanced the vocabulary and grammar of their first writing attempt, resulting in an increase in word count and average word count per sentence. Overall, ChatGPT proved to be a promising language-learning tool for students with language difficulties.

Furthermore, Zileli (25) conducted a study to investigate the potential use of ChatGPT chatbot in helping individuals learn Turkish as a foreign language. The study explored various applications of ChatGPT, including dialogue interactions, word and sentence meanings, text comprehension, translation of English text to Turkish with feedback, pronunciation, reading texts, providing feedback on written texts, explanation of topics with examples, and preparation of exercises. The research concludes that ChatGPT can provide valuable feedback to

Turkish language learners in multiple areas, making the language learning process easier and contributing to the acquisition of the target language.

RQ2. What are the disadvantages of ChatGPT in language teaching and learning?

With the excessive use of the powerful AI language models, concerns have been raised regarding ChatGPT, and its legitimacy in the educational setting. It can provide false information and give inconvenient instructions on biased material. There are also moral concerns over the impact it will have on society given its capacity to combine information from various sources and produce unique responses to the same question. Using AI in education raises a number of ethical and legal concerns, including those related to privacy, data security, and intellectual property (14).

Mohamad (15) and Athanassopoulos et al. (24) have pointed out several drawbacks including the absence of human connection and personalized interaction, the potential for incorrect or unsuitable responses, difficulties in grasping context and meaning, limitations in providing feedback on pronunciation and intonation, cultural insensitivity, the possibility of being used as a tool for cheating, and various technical limitations. Additionally, he also emphasized that since ChatGPT cannot provide precise citations and references, it

might not be the most suitable or trustworthy tool.

Similarly, Perkins (16) examines the impact of Learning Management Systems (LMS) on academic integrity in Higher Education Institutions (HEIs) and students. It was suggested that the use of AI tools does not determine plagiarism or academic misconduct, but rather whether students make clear their use (13). The study suggests that the academic integrity policies of HEIs must be updated to consider future educational environments and determine if the specific use of LLMs constitutes academic misconduct. Başkara and Mukarto (17) highlight a few issues with using ChatGPT in EFL writing teaching, including ethical concerns, potential bias in AI and NLP technologies, and cautious design and implementation. Appropriate learning tasks and activities should be created, and students should be given clear directions, to ensure efficacy. The quality and accuracy of the text that AI and NLP systems, like ChatGPT, generate can be influenced by biases, which can have a detrimental effect on students' language acquisition and development.

Recent research has emphasized how crucial it is to provide educators and students with training in order to maximize the effective use of ChatGPT (19-21, 26). These results imply that although ChatGPT has the potential to be an important teaching

aid, its efficacy mostly depends on how well users comprehend its features and recommended usage procedures. Consequently, to ensure that educators and learners can fully utilize ChatGPT's potential to improve instruction, thorough training courses are essential. Through the provision of requisite skills and information, training programs can enable educators and learners to effectively utilize ChatGPT, hence promoting a more productive and enriching educational experience.

The studies reveal that ChatGPT struggles to aid language learners who are interested in any language different from English. For example, Arabic, ChatGPT ignores the Turkish translations of Arabic grammatical concepts and its pronunciation exercises follow English pronunciation guidelines (23). On the other hand, the tool misguides Turkish learners with extremely complicated constructs, improper sentence structures, and semantic errors (25). These findings show that ChatGPT needs to be further improved and modified to better meet the unique linguistic subtleties and educational needs of any language learners.

Conclusion

The utilization of ChatGPT in language teaching and learning presents numerous benefits as well as challenges. While ChatGPT offers personalized feedback, customized lesson plans, and thus, enhances

language proficiency; concerns regarding its potential for misinformation, lack of human connection, and cultural insensitivity require particular attention. Moreover, the ethical implications surrounding its use, including issues related to privacy, data security, and academic integrity, necessitate careful consideration within educational settings. Despite these drawbacks, with adequate training and refinement, ChatGPT can function as a valuable tool for augmenting language instruction, provided its limitations are properly addressed. Being aware of both ChatGPT's advantages and disadvantages, comprehensive training programs should be given top priority. Furthermore, continuous research and improvement are necessary to enhance ChatGPT's functionality, boost its dependability and accuracy, and resolve moral dilemmas related to its application in educational settings.

The implications for language instruction stress how crucial it is to carefully incorporate ChatGPT into instructional methods. Teachers should receive thorough training in order to make the most of ChatGPT's benefits and minimize its drawbacks. Additionally, in order to promote a well-rounded and successful approach to language training, curriculum designers should create learning tasks that make use of ChatGPT's advantages while resolving its disadvantages. Through the

recognition and intentional integration of ChatGPT into instructional practices, educators can improve student learning outcomes and experiences in a variety of linguistic environments.

Implications for language teaching emphasize the importance of integrating ChatGPT strategically into educational practices. Educators should undergo comprehensive training to effectively utilize ChatGPT's features and mitigate its limitations. Additionally, curriculum developers should design learning tasks that leverage ChatGPT's strengths while addressing its weaknesses, promoting a balanced and effective approach to language instruction. By recognizing ChatGPT's potential and incorporating it thoughtfully into pedagogical strategies, educators can enhance the learning experience and outcomes for students across diverse linguistic contexts.

Further studies should concentrate on addressing ChatGPT's shortcomings, examining its possibilities and expanding on them in terms of precision, dependability and cultural differences. Besides, more research on the long-term effects of ChatGPT integration on learner autonomy and language proficiency is needed. Also, comparative analyses comparing various AI-driven language models in various educational situations may provide insightful viewpoints on the relative

benefits and drawbacks of various technologies. This study contributes to the field by examining ChatGPT's function in language instruction and calls all the stakeholders to put this tool into good use for improving language education methods and practices.

Conflict of Interest

The authors declare that they have no conflicts of interest.

References

- Zhu C, Wang M, Li T, et al. How to harness the potential of chatgpt in education? *Knowledge Management E-Learning: An International Journal*. 2023;15(2):133–52. doi:10.34105/j.kmel.2023.15.008
- Grassini S. Shaping the future of education: Exploring the potential and consequences of AI and CHATGPT in educational settings. *Education Sciences*. 2023;13(7):692. doi:10.3390/educsci13070692
- Chen, X., Zou, D., Xie, H. R., et al. Twenty-five years of computer-assisted language learning: A Topic modeling analysis. *Language Learning & Technology*, 2021;25(3):151-185
- Weng X, Chiu TKF. Instructional design and learning outcomes of Intelligent Computer Assisted Language Learning: Systematic review in the field. *Computers and Education: Artificial Intelligence*. 2023;4:100117. doi:10.1016/j.caeai.2022.100117
- Hockly N. Artificial Intelligence in English language teaching: The good, the bad and the ugly. *RELC Journal*. 2023;54(2):445–51. doi:10.1177/00336882231168504
- Zhou T, Cao S, Zhou S, et al. Chinese intermediate English learners outdid chatgpt in deep cohesion: Evidence from English narrative writing. *System*. 2023;118:103141. doi:10.1016/j.system.2023.103141
- Tri Julianto I, Kurniadi D, Septiana Y, Sutedi A. Alternative text pre-processing using Chat GPT Open Ai. *Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI)*. 2023;12(1):67–77. doi:10.23887/janapati.v12i1.59746
- Huang, X., Zou, D., Cheng, G., et al. Trends, Research Issues and Applications of Artificial Intelligence in Language Education. *Educational Technology & Society*, 2023;26(1):112–131.
- Ji H, Han I, Ko Y. A systematic review of Conversational AI in language education: Focusing on the collaboration with human teachers. *Journal of Research on Technology in Education*. 2022;55(1):48–63. doi:10.1080/15391523.2022.2142873
- García Sánchez OV. Uso y Percepción de chatgpt en la educación superior. *Revista de Investigación en Tecnologías de la Información*. 2023;11(23):98–107. doi:10.36825/riti.11.23.009
- Bozkurt, A. Generative Artificial Intelligence (AI) powered conversational educational agents: The inevitable paradigm shift. *Asian Journal of Distance Education*, 2023;18(1):198-204.
- Sabzalieva, E. Valentini, A. Chat GPT and artificial intelligence in higher education. UNESCO. 2023. <https://unesdoc.unesco.org/ark:/48223/pf0000385146>
- García-Peñalvo FJ. La Percepción de la Inteligencia artificial en contextos Educativos Tras El Lanzamiento de chatgpt: Disrupción o Pánico. *Education in the Knowledge Society (EKS)*. 2023;24. doi:10.14201/eks.31279
- Javaid M, Haleem A, Singh RP, et al. Unlocking the opportunities through CHATGPT tool towards ameliorating the education system. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations*. 2023;3(2):100115. doi:10.1016/j.tbench.2023.100115
- Mohamed AM. Exploring the potential of an AI-based chatbot (CHATGPT) in enhancing English as a foreign language (EFL) teaching: Perceptions of EFL faculty members. *Education and Information Technologies*. 2023;29(3):3195–217. doi:10.1007/s10639-023-11917-z
- Perkins M. Academic integrity considerations of AI large language models in the post-pandemic era: Chatgpt and beyond. *Journal of University Teaching and Learning Practice*. 2023;20(2). doi:10.53761/1.20.02.07
- Baskara, R., Mukarto, M. Exploring the implications of Chat GPT for language learning in higher education. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 2023;7(2):343-358. DOI: 10.4018/IJCALLT.326135
- Baskara FR. Integrating CHATGPT into EFL writing instruction: Benefits and challenges. *International Journal of Education and Learning*. 2023;5(1):44–55. doi:10.31763/ijele.v5i1.858

19. Firat M. How chat GPT can transform autodidactic experiences and open education? 2023 Jan 12; doi:10.31219/osf.io/9ge8m
20. Fauzi F, Tuhuteru L, Sampe F, et al. Analysing the role of chatgpt in improving student productivity in higher education. *Journal on Education*. 2023;5(4):14886–91. doi:10.31004/joe.v5i4.2563
21. Xiao Y, Zhi Y. An exploratory study of EFL learners' use of CHATGPT for language learning tasks: Experience and perceptions. *Languages*. 2023;8(3):212. doi:10.3390/languages8030212
22. Young JC, Shishido M. Investigating OpenAI's CHATGPT potentials in generating Chatbot's dialogue for English as a foreign language learning. *International Journal of Advanced Computer Science and Applications*. 2023;14(6). doi:10.14569/ijacsa.2023.0140607
23. Şenyaman G. Arapça Yabancı Dil öğretiminde Yapay Zekânın Geleceği: Chatgpt örneği. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*. 2023;(33):1057–70. doi:10.29000/rumelide.1285940
24. Athanassopoulos S, Manoli P, Gouvi M, Lavidas K, et al. The use of chatgpt as a learning tool to improve foreign language writing in a multilingual and multicultural classroom. *Advances in Mobile Learning Educational Research*. 2023;3(2):818–24. doi:10.25082/amler.2023.02.009
25. Zileli EN. Chatgpt example in learning Turkish as a foreign language. *Uluslararası Karamanoğlu Mehmetbey Eğitim Araştırmaları Dergisi*. 2023;5(1):42–51. doi:10.47770/ukmead.1296013
26. Strzelecki A. To use or not to use chatgpt in higher education? A study of students' acceptance and use of Technology. *Interactive Learning Environments*. 2023;1(14). doi:10.1080/10494820.2023.2209881