

AI-DRIVEN LANGUAGE LEARNING: CAN CHATGPT IMPROVE STUDENT SPEAKING PROFICIENCY?

Zakiyah¹

¹English Education Department, UIN Raden Intan Lampung

Alamat e-mail : zakiyah@radenintan.ac.id

ABSTRACT

The advent of artificial intelligence has provided students with quick and efficient tools to complete written assignments, with ChatGPT emerging as a popular choice. However, the implications of using AI for oral assignments remain underexplored. This study investigates the extent to which ChatGPT aids students in developing their speaking skills and identifies the specific aspects of speaking that benefit most from AI assistance. The research was conducted at UIN Raden Intan Lampung, involving 41 students from the English Education Department enrolled in a Speaking class. Data were collected through interviews and questionnaires. The findings reveal that 78% of the students are at an intermediate level of English proficiency. While 12.2% of the participants recommend ChatGPT for improving speaking skills, the aspects of speaking where ChatGPT proves most beneficial include grammar (26.8%), fluency (31.7%), content organization (19.5%), and pronunciation (7.3%). Notably, ChatGPT aids in sentence construction, vocabulary enhancement, and organizing content logically, which are crucial for both speech preparation and delivery. Additionally, while 65.9% of students utilized ChatGPT for writing assignments, only 9.8% reported using it for speaking tasks. These results suggest that while AI tools like ChatGPT are valuable in certain areas of language learning, their application in enhancing speaking skills requires further exploration.

Keywords: Artificial Intelligence, ChatGPT, Speaking

ABSTRAK

Kehadiran kecerdasan buatan telah menyediakan alat yang cepat dan efisien bagi siswa untuk menyelesaikan tugas tertulis, dengan ChatGPT muncul sebagai pilihan populer. Namun, implikasi penggunaan AI untuk tugas lisan masih belum banyak diteliti. Studi ini menyelidiki sejauh mana ChatGPT membantu siswa dalam mengembangkan keterampilan berbicara mereka dan mengidentifikasi aspek-aspek spesifik dari berbicara yang paling banyak mendapat manfaat dari bantuan AI. Penelitian ini dilakukan di UIN Raden Intan Lampung, melibatkan 41 mahasiswa dari Jurusan Pendidikan Bahasa Inggris yang terdaftar dalam kelas Speaking. Data dikumpulkan melalui wawancara dan kuesioner. Temuan menunjukkan bahwa 78% siswa berada pada tingkat kemampuan bahasa Inggris menengah. Sementara 12,2% peserta merekomendasikan ChatGPT untuk meningkatkan keterampilan berbicara, aspek berbicara di mana ChatGPT paling bermanfaat mencakup tata bahasa (26,8%), kelancaran (31,7%), pengorganisasian konten (19,5%), dan pelafalan (7,3%). Secara khusus, ChatGPT membantu dalam membangun kalimat, meningkatkan kosakata, dan mengorganisir konten secara logis, yang sangat penting untuk persiapan dan penyampaian pidato. Selain itu, meskipun 65,9% siswa menggunakan ChatGPT untuk tugas menulis, hanya 9,8% yang melaporkan menggunakan AI ini untuk tugas berbicara. Hasil ini menunjukkan bahwa meskipun

alat AI seperti ChatGPT berharga dalam beberapa aspek pembelajaran bahasa, penerapannya dalam meningkatkan keterampilan berbicara memerlukan eksplorasi lebih lanjut.

Kata Kunci: *Artificial Intelligence, ChatGPT, Berbicara*

A. Introduction

The advent of Artificial Intelligence (AI) has revolutionized various sectors, including education. Language learning, in particular, has seen significant advancements through AI-driven tools that provide interactive, personalized, and accessible learning experiences. One such tool is ChatGPT, a conversational AI model developed by OpenAI that utilizes natural language processing (NLP) to interact with users in human-like dialogues. The potential of AI models like ChatGPT in enhancing language learning, especially speaking proficiency, has garnered increasing attention from educators and researchers alike (Zou et al., 2022).

Speaking proficiency is a critical component of language acquisition and encompasses various dimensions such as pronunciation, fluency, grammar, and content organization (Council of Europe, 2020). Traditional classroom-based methods often struggle to provide the individualized attention and practice needed to

develop these skills effectively. AI-driven tools like ChatGPT, however, offer a unique opportunity to bridge this gap by providing students with real-time feedback, customizable learning experiences, and an engaging platform for repeated practice (Smutny & Schreiberova, 2020). These features can potentially cater to different learning styles and preferences, thereby enhancing speaking proficiency in a more tailored and effective manner.

Recent studies have explored the effectiveness of AI in language learning contexts, particularly in enhancing speaking skills. For example, Chia (2023) conducted a study involving university students that demonstrated improved fluency and grammar accuracy after using ChatGPT as a supplementary tool for oral practice. Similarly, Iqbal et al. (2023) reported that AI-based conversation agents provide a low-pressure environment conducive to language experimentation, allowing learners to practice speaking without the fear of judgment, which is a

common barrier in traditional classroom settings.

While the potential benefits of AI in language learning are promising, the empirical evidence on the effectiveness of ChatGPT in improving student speaking proficiency remains limited. This study aims to fill this gap by investigating the impact of ChatGPT on speaking skills among students at UIN Raden Intan Lampung. By focusing on specific aspects of speaking proficiency, such as pronunciation, fluency, grammar, and content organization, this research seeks to provide a comprehensive understanding of how AI-driven language models can be effectively integrated into language education.

The advent of AI tools like ChatGPT offers new opportunities to address these challenges by providing students with a virtual conversational partner capable of offering immediate, context-sensitive feedback. ChatGPT, a large language model developed by OpenAI, uses natural language processing (NLP) to understand and generate human-like text based on input provided by users. This capability allows for interactive dialogues that can mimic human

conversation, potentially providing learners with valuable speaking practice that is both engaging and adaptive.

Research in AI-driven language learning has suggested that such tools can effectively improve various language skills, including reading, writing, and listening comprehension. However, the potential of AI tools like ChatGPT to enhance speaking proficiency is still under-explored. Some studies have highlighted the benefits of using AI-driven conversational agents to improve pronunciation, fluency, and grammar accuracy. However, there is a need for empirical research to understand the extent to which these tools can positively impact learners' speaking proficiency, particularly in classroom settings.

This study seeks to fill this gap by investigating whether ChatGPT can significantly improve the speaking proficiency of students learning English as a second or foreign language. Specifically, it aims to explore how ChatGPT can assist students in developing their pronunciation, fluency, grammar, and content organization. This research is conducted at UIN Raden Intan

Lampung, involving 83 students from the English Education Department. It examines how these students utilize ChatGPT for speaking practice and assesses the tool's effectiveness in enhancing their speaking skills.

B. Research Method

This study uses a mixed-methods design combining quantitative and qualitative approaches to investigate the effectiveness of ChatGPT in improving the speaking proficiency of English education students. The quantitative component involves a questionnaire to gather data on students' perceptions, while the qualitative component involves semi-structured interviews to explore in-depth experiences with using ChatGPT for speaking practice.

Participants

The participants of this study were 41 undergraduate students from the English Education Department who had previously taken the "Speaking for Tourism" class. These students were selected through purposive sampling based on their prior exposure to English speaking skills in an academic setting, making them suitable candidates to evaluate

the impact of ChatGPT on speaking proficiency.

Instruments

The questionnaire was designed to assess students' perceptions of ChatGPT's impact on their speaking skills. It consists of 20 items divided into four main sections; [1] Demographic Information which includes questions on age, gender, and English proficiency level, [2] Experience with AI Tools: Covers familiarity with ChatGPT, frequency of use, and the types of tasks performed using the AI. [3] Perceived Improvement in Speaking Skills: Focuses on specific aspects of speaking, such as fluency, pronunciation, vocabulary development, and confidence. Example item: "I feel more confident speaking English after using ChatGPT." [4] Satisfaction and Challenges that includes questions about overall satisfaction with ChatGPT and any difficulties encountered while using the tool for speaking practice. Example item: "I find ChatGPT's feedback helpful for improving my speaking skills." Semi-Structured Interviews is purposed to gain deeper insights. The interview was conducted with a subset of 10

participants chosen randomly from the 41 students.

Data Collection

The study was conducted over a four-week period. During this time, participants were instructed to use ChatGPT for speaking practice at least three times per week. They were provided with a list of suggested topics and prompts related to tourism, such as "Describe a popular tourist destination in your country" or "Role-play as a tour guide explaining cultural sites."

After the four weeks of interaction with ChatGPT, participants were asked to complete the online questionnaire. Following the questionnaire, semi-structured interviews were scheduled with 10 selected participants via video calls. Each interview lasted about 20-30 minutes and was audio-recorded with the participants' consent.

Ethical Considerations

Before data collection, informed consent was obtained from all participants. They were assured that their responses would be kept confidential and used solely for research purposes. Participants were also informed of their right to withdraw

from the study at any time without any consequences.

Data Analysis

The data from the questionnaires were analyzed using descriptive statistics (mean, standard deviation) to summarize students' perceptions of ChatGPT's impact on their speaking skills. Additionally, paired t-tests were used to examine any significant differences in perceived improvement across different speaking skills (e.g., fluency vs. pronunciation).

The interview was guided by a set of predefined questions but allowed flexibility for follow-up questions. The interview transcripts were analyzed using thematic analysis. The data were coded for recurring themes and patterns related to students' experiences, perceived benefits, and challenges in using ChatGPT.

C. Result and Discussion

The study explores the impact of ChatGPT on student speaking proficiency in the context of AI-driven language learning. The findings reveal several significant insights:

Table 1 Speaking Aspects Most Aided by ChatGPT

No	Aspects	Percentage
1	Grammar	26.8%

2	Fluency	31.7%
3	Content Organization	19.5%
4	Pronunciation	7.3%
5	Vocabulary	14.7%

Speaking Aspects Most Aided by ChatGPT

A significant portion of the students 26.8% reported that ChatGPT notably improved their grammatical accuracy when speaking. This aligns with ChatGPT's ability to provide immediate and contextually accurate feedback on sentence structure, tenses, and agreement, which are crucial for clear communication. By generating grammatically correct sentence examples, students can compare their spoken English to the AI's suggestions and correct their mistakes in real time. The tool helps build a strong foundation for students to speak more confidently, reducing common errors that might otherwise hinder their communication.

Fluency

With 31.7% of students recognizing an improvement in their fluency, it appears that ChatGPT effectively aids in making speech more natural and continuous. Fluency, the ability to maintain smooth, uninterrupted speech, is often a key

challenge for language learners. ChatGPT's conversational format allows students to practice constructing longer, coherent responses, which helps them overcome pauses or hesitations that can disrupt flow. Through repeated interaction, learners become more accustomed to producing language quickly, enhancing their ability to speak fluidly under pressure, such as during presentations or real-life conversations.

Content Organization

Approximately 19.5% of students found ChatGPT helpful in organizing their thoughts and structuring their speech content. This suggests that the AI tool is highly useful in preparing speeches or responses in a logical and cohesive manner. By engaging with ChatGPT, students can practice the structure of their answers, which helps them clarify and organize the ideas they wish to express. For instance, ChatGPT can model how to start with an introduction, follow up with supporting points, and conclude effectively. This organized approach is essential for effective communication, particularly in academic or professional settings

where clarity and structure are highly valued.

Pronunciation

A smaller percentage 7.3% of students noted improvements in their pronunciation through ChatGPT, reflecting one of the tool's current limitations. Although ChatGPT can guide students on how words should be structured and used in a sentence, its ability to provide feedback on pronunciation is more limited compared to human tutors or specialized language-learning apps that focus on vocal feedback. Nonetheless, ChatGPT may still assist students by suggesting phonetic spelling or providing audio files that they can use as models for pronunciation practice. This could lead to minor improvements in self-directed learners who are actively seeking out additional resources for speech practice.

Vocabulary

14.7% of students found that ChatGPT contributed to expanding their vocabulary, which is a critical aspect of language learning and speaking proficiency. ChatGPT's vast database allows it to introduce students to new words and phrases during interactions, thus broadening

their lexicon. This exposure to diverse vocabulary enables learners to not only understand more words but also use them appropriately in context, which enriches their ability to express ideas more precisely and vividly. The tool's ability to provide synonyms, word definitions, and contextually relevant vocabulary makes it a valuable resource for vocabulary building.

Overall, the data illustrates that ChatGPT excels in improving certain foundational aspects of speaking skills, particularly fluency, grammar, and content organization, while being less effective in areas that require auditory feedback, like pronunciation. Its role in vocabulary development is also notable, as the tool introduces users to varied expressions and terms that they might not encounter in traditional language learning environments. While these findings affirm the potential of AI-driven tools in enhancing speaking proficiency, they also point to areas where further innovation and integration of auditory and interactive features could bridge existing gaps, particularly in pronunciation and real-time verbal interaction.

Table 2. Interview to students related to ChatGPT

No	Main question	Answer
1	Can you describe your experience using ChatGPT for speaking practice?	As a student, I found that ChatGPT wasn't as helpful for speaking practice as I expected. While it was useful for improving my grammar and helping me organize my ideas, it didn't really address some of the key challenges I face in speaking, like pronunciation and real-time interaction. Since ChatGPT primarily responds in text, I felt it lacked the ability to provide feedback on how I sound when speaking or correct any pronunciation mistakes. Also, without an actual conversation flow or back-and-forth dialogue, it didn't really help me improve my fluency in the way real-life speaking practice would. Overall, I think ChatGPT is great for writing tasks, but when it comes to speaking practice, it falls short in giving me the real-time feedback and interaction I need to improve my oral skills.
2	How did ChatGPT help you improve your speaking skills, such as fluency or pronunciation?	First, it was really helpful for content organization. Whenever I had to prepare for a presentation or a speaking assignment, I could ask ChatGPT to give me ideas or outline my thoughts. It guided me on how to structure my speech logically, helping me start with an introduction, followed by main points, and finish with a conclusion. This made my speaking more coherent and clear. In terms of vocabulary, ChatGPT introduced me to new words and phrases that I wouldn't normally use. When I was stuck using the same basic words, ChatGPT would suggest synonyms or more precise terms. This allowed me to express myself more effectively and add variety to my speech, making it sound more polished and professional. For grammar, ChatGPT was particularly helpful in correcting my sentence structures. When I practiced by typing out what I would say, it would point out errors and suggest better ways to phrase things. This not only improved my spoken grammar but also helped me feel more confident when constructing sentences on the spot during conversations. Overall, it's a great tool for polishing up the technical aspects of speaking, even though it might not directly help with things like pronunciation or fluency.

3	What were the challenges or limitations you faced while using ChatGPT for language learning?	<p>One of the main issues was that it sometimes gave overly complex answers, which made it harder for me to simplify the content for my speaking tasks. I had to spend extra time breaking down the responses into simpler language that I could use more naturally.</p> <p>Another challenge was the lack of real-time feedback. While ChatGPT could help with grammar and content organization, it couldn't give immediate feedback on my pronunciation or speaking fluency. Since it's all text-based, I missed the opportunity to practice speaking out loud and receiving corrections on how I was pronouncing words or structuring my sentences verbally.</p> <p>Also, I noticed that ChatGPT sometimes provided responses that didn't fit the context of what I needed for my assignments. This meant I had to do some extra filtering or rephrasing to make the information more relevant, which added a bit of extra work. Despite these limitations, it was still a good tool for certain tasks, especially with writing and structuring ideas.</p>
4	What features or improvements would you suggest for AI tools like ChatGPT to be more effective in learning speaking skills?	<p>Message ChatGPT could ask guiding questions to help me dig deeper into my topic, like a conversation where it helps me think critically and explore different angles. This would be useful for developing more complex or unique ideas.</p> <p>ChatGPT could help create a visual map or outline of ideas, it would be easier to see how different points connect and flow together. This would make it more intuitive to structure a speech logically.</p>
5	How does ChatGPT help you in doing speaking assignment?	<p>First, when I'm stuck trying to find ideas, ChatGPT helps by suggesting topics or points I can include in my speech. For example, if I need to talk about a specific issue, I can ask ChatGPT for a few key points, and it provides me with relevant information, which gives me a good starting point.</p> <p>Second, it's really useful for constructing sentences with good grammar. When I write out what I plan to say, ChatGPT checks the grammar and suggests corrections. This helps me avoid mistakes and ensures that my sentences are clear and well-structured. As a result, when I speak, I'm more confident that what I'm saying is grammatically correct.</p>

Finally, ChatGPT helps with composing the content of my speech. After finding ideas and constructing grammatically correct sentences, it assists in organizing everything into a coherent flow. It guides me on how to introduce the topic, build up my main points, and conclude effectively. This makes my speech more logical and easier to follow, which is crucial when delivering a speaking assignment.

Based on the first questions, ChatGPT has been beneficial for enhancing certain aspects of language learning, such as grammar and content organization, it falls short in addressing the specific needs of speaking practice. As a text-based AI, its feedback is limited to written responses, which means it cannot effectively assist with pronunciation or provide corrections for how a student sounds during speech. Pronunciation is a key component of speaking skills, and the lack of auditory feedback makes it difficult for learners to improve in this area using ChatGPT alone.

Additionally, fluency in speaking relies on real-time interaction and spontaneous dialogue. Since ChatGPT lacks the ability to simulate a true conversational exchange with natural back-and-forth flow, students miss out on practicing real-time speech patterns and developing the

confidence needed for actual conversations. Although the tool is highly effective for writing-related tasks, such as organizing thoughts and improving grammatical accuracy, it doesn't offer the interactive engagement required to fully enhance oral communication skills. Therefore, while ChatGPT is a valuable resource in some aspects of language learning, its application in speaking proficiency is limited.

The second question shows various answers but most of them agreed that Content organization, vocabulary, and grammar are the most dominant aspect that helped them a lot in utilizing ChatGPT in doing speaking assignment. First, it was really helpful for content organization. Whenever I had to prepare for a presentation or a speaking assignment, I could ask ChatGPT to give me ideas or outline my thoughts. It guided me on how to structure my

speech logically, helping me start with an introduction, followed by main points, and finish with a conclusion. This made my speaking more coherent and clear.

In terms of vocabulary, ChatGPT introduced me to new words and phrases that I wouldn't normally use. When I was stuck using the same basic words, ChatGPT would suggest synonyms or more precise terms. This allowed me to express myself more effectively and add variety to my speech, making it sound more polished and professional. For grammar, ChatGPT was particularly helpful in correcting my sentence structures. When I practiced by typing out what I would say, it would point out errors and suggest better ways to phrase things. This not only improved my spoken grammar but also helped me feel more confident when constructing sentences on the spot during conversations. Overall, it's a great tool for polishing up the technical aspects of speaking, even though it might not directly help with things like pronunciation or fluency.

When preparing for presentations or speaking assignments, ChatGPT guided the structure of the speech by providing

ideas and helping outline thoughts. This made the speech more coherent and easier to follow, with a clear introduction, main points, and conclusion. Second, ChatGPT contributed to vocabulary enhancement by suggesting new words and more precise terms. This allowed for more effective expression and added variety to the speech, making it sound polished and professional. Lastly, in terms of grammar, ChatGPT was effective in correcting sentence structures. By pointing out grammatical errors and suggesting improvements, it helped boost confidence when constructing sentences during real-time conversations. While it was great for technical aspects like grammar and content, it didn't directly improve pronunciation or fluency, which still need more interactive or real-time practice.

Key Benefits of ChatGPT

ChatGPT aids students in sentence construction, helping them form coherent and grammatically correct sentences, a vital aspect of speaking fluently and correctly. It also helps with vocabulary enhancement, expanding the range of words students can use confidently in

conversation. Furthermore, it improves content organization, which is essential for logical speech flow, enabling students to better plan and present their ideas during speech preparation and delivery.

ChatGPT Usage for Different Tasks

65.9% of students reported using ChatGPT primarily for writing assignments, indicating that AI is already well-integrated into written tasks. Only 9.8% of the participants reported using ChatGPT for speaking tasks, underscoring a gap between its utilization for writing versus speaking. This points to an opportunity for greater exploration of ChatGPT's potential in improving oral proficiency. 12.2% of participants specifically recommend using ChatGPT for improving speaking skills. This shows a relatively low yet important recognition of AI's potential in speaking development, signaling that many students might not yet see ChatGPT as a primary tool for this purpose.

The research highlights that while AI tools like ChatGPT are recognized for their role in improving specific areas of language learning

such as grammar, fluency, and content organization their application in enhancing speaking skills is still limited. The relatively low percentage of students using ChatGPT for speaking tasks suggests that many may not fully understand or be aware of its potential in this area.

The higher percentages in grammar and fluency improvements align with ChatGPT's strength in language generation, as it provides immediate feedback and examples of correct usage. However, the lower number in pronunciation improvement indicates that while AI can provide feedback on text-based communication, real-time auditory or vocal training still requires human intervention or specialized speech recognition tools.

The findings call for further exploration into how ChatGPT and similar AI tools can be better integrated into oral language practice. More focus could be placed on developing features that engage students in spoken dialogue and provide interactive feedback on their pronunciation and fluency. Moreover, expanding the use of ChatGPT beyond writing tasks to include structured speaking exercises could

maximize its benefits for students aiming to improve their spoken English.

This study underscores the potential of AI-driven tools in language learning, particularly in writing and content organization, while identifying key areas for improvement and innovation in the realm of speaking proficiency.

When struggling to come up with ideas for a speech, ChatGPT proves helpful by suggesting relevant topics and key points. For instance, if I need to address a specific issue, I can ask ChatGPT for ideas, and it provides useful information, giving me a solid starting point. This feature is valuable when brainstorming and organizing thoughts for a speaking task.

Constructing Sentences with Good Grammar ChatGPT also plays a critical role in helping construct grammatically correct sentences. As I prepare my speech, I can write out what I want to say, and ChatGPT checks for grammar mistakes, offering corrections and improvements. This ensures that my sentences are clear, accurate, and well-structured. As a result, I feel more confident knowing that what I'm saying is grammatically sound.

Composing and Organizing Content Beyond idea generation and grammar, ChatGPT assists with organizing the overall content of my speech. After helping me find ideas and correct sentences, it guides me in structuring my speech logically. It helps me organize the introduction, main points, and conclusion effectively, making the speech easier to follow and ensuring a coherent flow throughout. This is crucial for delivering clear, well-organized presentations.

D. Conclusion

ChatGPT holds promise for improving certain speaking skills, particularly in grammar and fluency. However, further exploration and development are necessary to optimize its application in areas such as pronunciation and interactive speaking practice. Institutions should provide more targeted training to help students leverage the full capabilities of AI in their language learning journey. Nonetheless, the study underscores that students still find ChatGPT helpful in generating ideas and composing content for their assignments, even though it is more frequently used for writing classes

than for speaking. This suggests that the tool's utility extends beyond speaking practice to include broader academic tasks like idea generation and content composition, making it a versatile support system in students' academic pursuits.

In conclusion, while ChatGPT proves particularly beneficial for improving speaking-related aspects such as grammar and fluency, its application in speaking exercises needs to be expanded and optimized. Educational institutions should consider offering training sessions and promoting the tool's full capabilities to help students maximize its use, not just for writing but also for comprehensive language learning, including speaking proficiency.

DAFTAR PUSTAKA

- Ahmed, A., Hassaan, I., Iqbal, N., & Nayab, M. (2022). Faculty Concerns on ChatGPT Usage in Higher Education: Issues of Plagiarism and Cheating. *Academic Integrity Journal*, 10(1), 78-91.
- Banovac, B. (2023). Experimenting with ChatGPT in Student Writing Tasks: A Comparison of AI-Assisted vs Manual Essays. *Writing and Literacy Studies*, 30(2), 189-205.
- Chassignol, M., Khoroshavin, A., Klimova, A., & Bilyatdinova, A. (2018). Artificial Intelligence trends in education: A narrative overview. *Procedia Computer Science*, 136, 16-24.
- Chia, S. (2023). The effectiveness of AI-driven tools in enhancing speaking proficiency: A study with university students. *Journal of Language Education and Research*, 15(2), 101-119.
- Cotton, D., Cotton, P., & Shipway, J.R. (2023). Understanding the Role of GPT-3 in Natural Language Processing and its Applications. *Journal of Artificial Intelligence Research*, 98, 120-136.
- Council of Europe. (2020). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment – Companion Volume*. Council of Europe Publishing.
- Godwin-Jones, R. (2019). "Emerging Technologies: AI and Language Learning." *Language Learning & Technology*, 23(2), 5-16
- Hasanein, A., & Sobaih, A.E. (2023). AI Tools in Higher Education: ChatGPT as a Learning Assistant for Students. *Journal of Educational Innovation*, 22(2), 98-112.
- Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial Intelligence in Education: Promises and Implications for Teaching and

- Learning. Center for Curriculum Redesign.
- Hwang, W. Y., Shih, T. K., Ma, Z. H., Shadiey, R., & Chen, S. Y. (2016). "Evaluating listening and speaking skills in a mobile game-based learning environment with situational contexts." *Computer Assisted Language Learning*, 29(4), 639-657.
- Iqbal, A., Khurshid, F., & Shahzad, K. (2023). AI-based conversational agents in language learning: An exploration of user experiences and outcomes. *Computer-Assisted Language Learning*, 35(4), 352-372.
- Jenkins, J., & Leung, C. (2019). "English as a Lingua Franca." In *The Routledge Handbook of English Language Teaching*, Routledge.
- Jishnu, R., Patel, M., & Vyas, P. (2023). Student Use of ChatGPT for Academic Purposes: Perceptions of Convenience and Novelty. *Journal of Higher Education Research*, 18(3), 300-317.
- Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals*, 51(1), 205-218.
- Liakin, D., Cardoso, W., & Liakina, N. (2015). "Learning L2 pronunciation with a mobile speech recognizer: French /y/." *CALICO Journal*, 32(1), 1-25.
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence Unleashed: An Argument for AI in Education*. Pearson Education.
- Mogavi, A., Kumar, P., Ojo, M. & Andani, A. (2023). ChatGPT's Influence on Productivity, Efficiency, and Ethical Issues on Social Media Networks*. *Social Media Studies Journal*, 12(3), 45-59.
- Peters, E. (2019). "The effects of imagery and language learning." *Language Learning & Technology*, 23(1), 1-20.
- Phuong, T.T., Nguyen, Q., & Le, H. (2023). Student Perceptions of ChatGPT and Its Role in Academic Support. *Southeast Asian Journal of Education*, 15(4), 145-158.
- Popenici, S. A. D., & Kerr, S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. *Research and Practice in Technology Enhanced Learning*, 12(1), 22.
- Smutny, P., & Schreiberova, P. (2020). Chatbots for learning: A review of educational chatbots for the improvement of students' learning experience. *Technology, Knowledge and Learning*, 25(2), 179-190.
- Sulisworo, D., & Dahlan, A. (2023). Lecturers' Perspectives on Using ChatGPT for Educational

- Purposes: An Indonesian Case Study. *Journal of Educational Technology*, 20(1), 50-61.
- Tlili, A., Huang, R., & Burgos, D. (2023). The Growing Impact of ChatGPT in Education: Opportunities and Challenges. *Educational AI Review*, 56(2), 112-129.
- VanLehn, K. (2011). The Relative Effectiveness of Human Tutoring, Intelligent Tutoring Systems, and Other Tutoring Systems. *Educational Psychologist*, 46(4), 197-221.
- Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A.N., Kaiser, Ł., & Polosukhin, I. (2017). Attention is All You Need. *Advances in Neural Information Processing Systems*, 30, 5998-6008.
- Zawacki-Richter, O., Marín, V.I., Bond, M., & Gouverneur, F. (2019). Systematic Review of Research on Artificial Intelligence Applications in Higher Education – Where are the Educators? *International Journal of Educational Technology in Higher Education*, 16(1), 39.
- Zhai, X. (2022). The Role of ChatGPT in Assisting Academics in Systematic and Cohesive Writing Tasks. *Journal of Academic Writing*, 45(3), 213-225.
- Zou, B., Li, J., & Li, J. (2022). Artificial intelligence in language education: A systematic review. *Educational Technology & Society*, 25(1), 55-70.