



Students' Perceptions on Using AI: Factors, Benefits, and Challenges in Influencing Their Speaking Performances

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Abstract. This study explores students' perceptions of the factors, benefits, and challenges associated with using Artificial Intelligence (AI) to improve their speaking performances. Employing a qualitative approach, data were collected from language learners through semi-structured interviews and focus group discussions. The findings reveal that students perceive several key factors influencing the effectiveness of AI in enhancing their speaking abilities, including the quality and relevance of AI-generated feedback, user-friendliness of the AI interface, and alignment with individual learning styles and goals. The benefits of using AI comprise increased exposure to authentic language input, personalized feedback on pronunciation and grammar, and the opportunity to practice speaking in a low-stakes environment. However, challenges emerge, such as technical limitations of AI systems, the need for human interaction and guidance, and potential over-reliance on AI-generated feedback. The study discusses implications for language educators and proposes strategies for effectively integrating AI into speaking instruction while addressing identified challenges. This research contributes to the growing body of knowledge on the application of AI in language learning and provides insights into students' experiences and perceptions, informing the design and implementation of AI-assisted language learning programs to enhance speaking performances and create engaging learning experiences.

Keywords: English for Specific Purposes, Generative AI, Speaking Performances

1 Introduction

The rapid advancement of AI has profoundly impacted education, including language learning. Generative AI, such as ChatGPT, has immense potential to transform English language teaching (Baskara & Mukarto, 2023; Kostka & Toncelli, 2023). These AI systems generate contextually relevant responses, enhancing learning experiences (Nam & Nguyen, 2022). In English for Specific Purposes (ESP), AI integration shows promise in providing personalized learning experiences, instant feedback, and interactive practice (Alberth, 2023; Escalante et al., 2023; Li et al., 2023).

Theoretical frameworks like the CAF model (Housen et al., 2012) evaluate language performance, especially in speaking. The UTAUT (Venkatesh et al., 2016) helps understand students' acceptance and use of AI tools. CALL theories (Chapelle, 2009)

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and the Sociocultural Theory of Second Language Acquisition (Lantolf, 2000) provide context for understanding how AI supports language learning. These frameworks offer a comprehensive approach to understanding AI-assisted language production and learning.

Empirical studies show that AI can benefit language education. For example, Cai et al. (2023) found that perceived usefulness, ease of use, and enjoyment influence learners' attitudes toward AI-assisted language learning. Similarly, Liu et al. (2024) highlighted the potential of AI to enhance students' writing development. However, more research is needed to understand how AI specifically impacts speaking performance. Despite the growing research on AI in language education, there is a lack of studies examining students' perceptions of AI use on their speaking performance, especially within the ESP context. This gap is significant as speaking skills are crucial for effective communication in fields like international business management. Previous studies have explored the integration of AI with other learning tools, but the combination of AI and speaking performance in ESP remains underexplored.

This study aims to investigate students' perceptions of AI use in their speaking performance, focusing on factors, benefits, and challenges. Using the CAF model as a theoretical framework, we seek to understand how AI influences the complexity, accuracy, and fluency of students' spoken English. Additionally, employing the UTAUT model, we aim to explore factors influencing students' acceptance and use of AI in language learning. Drawing insights from CALL theories and the Sociocultural Theory of Second Language Acquisition, we strive to offer a comprehensive view of AI-assisted language learning, particularly in the context of speaking performance.

The significance of this study lies in its potential to inform pedagogical practices in ESP courses, particularly in the context of international business management. Understanding students' perceptions and experiences of AI becomes crucial as educators integrate AI into curricula. Furthermore, this research contributes to the ongoing dialogue about the ethical and practical implications of AI in education, addressing concerns about overdependence and the need for balanced integration.

By exploring students' perceptions of AI use in relation to their speaking performance, this study aims to provide valuable insights for educators, researchers, and policymakers in the field of language education. The findings will contribute to the knowledge on AI-assisted language learning and offer practical recommendations for using AI to enhance speaking skills in ESP contexts.

2 Methodology

This qualitative study employs a phenomenological approach to explore students' perceptions of AI use in improving English speaking skills within international business management education. Thirty second-semester students from the International Business Management program were selected through purposive sampling. Data collection involved semi-structured interviews (30-45 minutes each) and open-ended questionnaires, enabling methodological triangulation. Thematic analysis, following Braun & Clarke's (2006) six-phase approach, was used to analyze the data. The analysis was informed by CAF model, UTAUT, and CALL theories. Two researchers independently coded a subset of data to ensure reliability. Ethical considerations

included obtaining approval, informed consent, and ensuring confidentiality. This methodology aims to provide comprehensive insights into the factors, benefits, and challenges students perceive in using AI for language learning in an international business context.

3 Result and Discussion

3.1 Result

Based on the result of the students' responses, there are several themes were constructed in explaining the Factors, benefits, and challenges of using AI toward the students' speaking performances.

Factors Influencing AI Use in Speaking Performance

Accessibility and Convenience. The accessibility and convenience of AI tools emerge as a primary factor influencing their use in language learning, particularly for improving speaking performance. Students consistently highlight the ability to engage with AI-powered language learning resources at any time and from any location as a significant motivator. This 24/7 availability allows learners to practice speaking English beyond the constraints of traditional classroom settings, fitting language learning into their individual schedules and lifestyles.

Respondent #14 exemplifies this sentiment: "With AI, I can continue to practice my English speaking skills even outside the classroom." This flexibility is particularly valuable for students juggling multiple responsibilities or those who prefer to learn at their own pace. Similarly, Respondent #24 emphasizes the control AI tools provide over the learning process: "By having access to additional resources like ChatGPT, I can set my own learning pace and have control over my learning time and method."

The convenience factor extends beyond mere availability. AI tools often provide instant feedback and responses, allowing students to engage in rapid, iterative practice sessions. This immediacy is highly valued in the context of speaking practice, where real-time feedback can lead to immediate improvements. Respondent #7 highlights this aspect: "DeepL influences English fluency because, with this AI, I easily understand or find out anything in English vocabulary." The ease of access and quick results contribute to increased engagement and more frequent practice, potentially accelerating the development of speaking skills.

Personalized Learning Experience. The capacity of AI to offer a personalized learning experience emerges as another crucial factor influencing its use for improving speaking performance. AI tools can adapt to individual learner needs, providing tailored feedback, customized exercises, and personalized learning paths. This level of individualization is particularly valuable in the context of speaking practice, where learners often have diverse strengths, weaknesses, and goals.

Respondent #28 articulates this benefit clearly: "ChatGPT helps me improve my fluency in speaking English by providing instant feedback and proper sentence

modeling.” This personalized feedback allows students to focus on their specific areas of weakness, whether it’s pronunciation, grammar, or vocabulary usage in speaking contexts. The AI’s ability to model correct sentence structures and provide immediate corrections contributes to a more targeted and efficient learning process.

Furthermore, the personalization extends to the level of difficulty and complexity of the language practice. As Respondent #22 notes: “AI gives me instant feedback on sentence or phrase usage, allowing me to understand and correct mistakes in my English speaking skills.” This adaptive approach ensures that learners are consistently challenged at an appropriate level, neither overwhelmed by content that’s too difficult nor bored by exercises that are too easy. The result is a more engaging and effective learning experience that can lead to faster improvements in speaking skills.

Technological Integration and Familiarity. The integration of AI into daily life and students’ familiarity with technology significantly influence the adoption of AI tools for language learning, particularly for speaking practice. As AI becomes more ubiquitous in various aspects of life, students who are comfortable with technology appear more likely to leverage these tools for improving their English speaking skills.

Respondent #23 illustrates this point: “Some AIs explain the difference between using vocabulary according to the level demanded, and from there we can certainly know how to improve our English level.” This comment suggests that technologically savvy students can navigate and utilize AI’s more advanced features, such as adjusting language complexity levels, to enhance their learning experience.

Moreover, the integration of AI with other familiar technologies, such as smartphones and tablets, makes the tools more accessible and less intimidating. Respondent #4 mentions: “ChatGPT can help me enrich my English vocabulary by suggesting new words and examples of their use.” This seamless integration allows students to incorporate language learning into their daily routines, making the process of improving speaking skills feel more natural and less like a separate, daunting task.

The technological familiarity also extends to the user interface and interaction methods of AI tools. Students who are accustomed to chat interfaces or voice assistants may find it more natural to practice speaking with AI. As Respondent #29 notes: “AI like ChatGPT can increase enthusiasm for learning and practicing speaking English in class because it provides opportunities to interact with English interactively and get instant feedback.” This interactivity, reminiscent of popular social media and messaging platforms, can make the learning process more engaging and less intimidating for tech-savvy students.

Benefits of AI Use in Speaking Performance

Vocabulary Expansion and Contextual Learning. One of the most significant benefits of AI use in improving speaking performance is its ability to facilitate vocabulary expansion and contextual learning. AI tools provide students with access to a vast repository of words and phrases, often presented in context, which helps learners understand not just the meanings of new words but also how to use them appropriately in conversation.

Respondent #2 highlights this benefit: "Through AI, I can find new vocabulary and even English grammar that I have never heard before." This exposure to new vocabulary, especially terms and expressions that might not be encountered in traditional textbooks, enriches students' linguistic repertoire. The AI's ability to provide examples and explanations further enhances the learning process.

Moreover, the contextual learning aspect is crucial for developing natural-sounding speech. As Respondent #20 notes: "Very helpful in acquiring new vocabulary. Very helpful, because the new vocabulary will increase my knowledge in language and indirectly, I will try to speak the vocabulary." This indicates that students are not just memorizing words, but are motivated to actively incorporate new vocabulary into their speaking practice. The AI's ability to provide varied contexts and usage examples helps students understand the nuances of word choice and collocation, contributing to more sophisticated and native-like speech patterns.

Grammar and Pronunciation Improvement. AI tools have shown remarkable effectiveness in helping students improve their grammar and pronunciation, two critical components of speaking performance. The immediate feedback and corrections provided by AI systems allow learners to identify and rectify errors in real time, fostering rapid improvement.

Respondent #28 exemplifies this benefit: "ChatGPT helped me to improve my grammar and pronunciation by providing corrections and suggestions directly while speaking." This real-time feedback is particularly valuable for speaking practice, as it allows students to make immediate adjustments to their speech patterns. Unlike traditional methods where feedback might be delayed, AI provides instant corrections, helping to prevent the reinforcement of incorrect habits.

The improvement extends beyond mere error correction. As Respondent #14 states: "Of course, from first hesitating or not knowing at all, I now know how to pronounce and write correctly." This suggests that AI tools are helping students build confidence in their language use, moving from uncertainty to assurance in both pronunciation and grammar. The ability to practice repeatedly with AI, without fear of judgment, allows students to experiment with complex grammatical structures and challenging pronunciations, gradually incorporating these elements into their natural speech.

Enhanced Confidence and Fluency. Perhaps one of the most transformative benefits of AI use in language learning is its ability to enhance students' confidence and, consequently, their fluency in speaking English. The low-pressure environment provided by AI tools allows students to practice without the anxiety often associated with speaking a foreign language in front of others.

Respondent #15 articulates this benefit clearly: "AI helps increase self-confidence and confidence in speaking English by providing opportunities to practice without pressure, provide instant feedback, and facilitate structured learning." This stress-free environment encourages more frequent practice and risk-taking in language use, both of which are crucial for developing fluency.

Furthermore, the consistent practice and feedback loop established through AI use contributes to increased automaticity in language production. As Respondent #29 notes: "Using AI like ChatGPT can increase enthusiasm for learning and practicing speaking English in class because it provides opportunities to interact with English interactively

and get instant feedback.” This enthusiasm and increased practice led to greater ease in producing English speech, a key component of fluency. The interactive nature of AI tools simulates real conversation, helping students become more comfortable with the spontaneous nature of spoken language.

Challenges of AI Use in Speaking Performance

Over-reliance and Authenticity Concerns. While AI tools offer numerous benefits, a significant challenge that emerges is the risk of over-reliance and concerns about the authenticity of language production. Some students express worry that excessive dependence on AI might hinder their ability to communicate naturally and spontaneously in real-life situations.

Respondent #25 articulates this concern: “AI sometimes makes my ideas rigid, so if it’s used, it’s very obvious that the whole thing is using AI.” This comment highlights the fear that AI-assisted language might sound artificial or lack the natural flow of human conversation. There’s a risk that students might become too dependent on AI-generated phrases or structures, potentially limiting their ability to express original thoughts fluently.

Moreover, the challenge extends to the development of critical thinking skills in language use. As Respondent #30 notes: “AI is not very influential in speaking English, ChatGPT or perplexity I use more often to improve grammar in sentences or paragraphs.” This suggests that while AI is helpful for certain aspects of language learning, it may not adequately support the development of higher-order language skills required for spontaneous speech, such as rapid idea formation and articulation in real-time conversations.

Limited Impact on Real-time Speaking Fluency. Another significant challenge is the perceived limitation of AI tools in directly improving real-time speaking fluency. While AI is effective in many aspects of language learning, some students find that it doesn’t adequately prepare them for the spontaneity and immediacy required in real-life speaking situations.

Respondent #3 clearly states this limitation: “I would say that AI has helped me with pretty much everything. But not with English fluency.” This comment suggests that while AI tools are beneficial for various language learning components, they may fall short in replicating the unpredictable nature of real conversations, which is crucial for developing true fluency.

The challenge is further highlighted by Respondent #1: “Very influential, especially when there are new words that are difficult to understand.” While this comment acknowledges AI’s usefulness in vocabulary acquisition, it also implicitly suggests that the tool’s influence might be limited to more structured aspects of language learning, rather than the dynamic, context-dependent nature of fluent speech. The inability of AI to fully simulate the pressure and spontaneity of real-time human interaction may leave some aspects of fluency development unaddressed.

Lack of Human Interaction and Contextual Understanding. A critical challenge in using AI to improve speaking performance is its limitation in replicating genuine human interaction and understanding complex contextual nuances in language use. Despite

advanced natural language processing capabilities, AI still falls short in capturing the full spectrum of human communication, which includes cultural nuances, emotional cues, and contextual subtleties.

Respondent #9 succinctly captures this challenge: "While AI can provide many benefits, human interaction remains key in effective learning." This statement underscores the irreplaceable value of human-to-human interaction in language learning, particularly for developing speaking skills. Human interactions provide authentic, unpredictable scenarios that are crucial for developing real-world communication skills.

Furthermore, the challenge extends to the AI's ability to understand and respond to the full context of a conversation. As Respondent #12 notes: "AI doesn't affect reading fluency, it only helps to understand." This comment, while specifically mentioning reading, points to a broader limitation of AI in comprehending and producing language with the same depth and nuance as human interlocutors. The lack of shared experiences, cultural knowledge, and emotional intelligence in AI systems can limit their effectiveness in helping learners navigate the complex, context-dependent nature of real-world speaking situations.

3.2 Discussion

This study's findings provide insights into students' perceptions of AI use in relation to their speaking performance in English for Specific Purposes (ESP) contexts. The results highlight three main areas: factors influencing AI use, benefits of AI integration, and challenges encountered. These findings align with and diverge from previous research in the field of AI-assisted language learning, particularly in the context of speaking skills development.

The factors influencing AI use, namely accessibility and convenience, personalized learning experience, and technological integration and familiarity, support existing literature on technology acceptance in education. The emphasis on accessibility and convenience echoes the findings of Cai et al. (2023), who identified ease of use as a significant factor in students' attitudes towards AI-assisted language learning. This aligns with the Unified Theory of Acceptance and Use of Technology (UTAUT) Venkatesh et al. (2016), which emphasizes effort expectancy in technology adoption. However, this study extends beyond ease of use, highlighting the importance of 24/7 availability and integrating language learning into students' daily routines. This finding suggests that AI tools may be valuable for ESP students who balance language learning with professional commitments, adding nuance to Computer-Assisted Language Learning (CALL) theories discussed by Chapelle (2009).

The benefit of vocabulary expansion and contextual learning aligns with previous research on AI in language education. For instance, Li et al. (2023) noted the potential of ChatGPT in providing varied language learning contexts. This study provides specific insights into how AI tools facilitate the application of new vocabulary in speaking contexts, crucial for ESP learners. This finding supports the Complexity, Accuracy, and Fluency (CAF) model (Housen et al., 2012), particularly in enhancing the complexity of spoken language. Furthermore, it extends Baskara and Mukarto's (2023) work on ChatGPT's implications for language learning in higher education by focusing on its impact on speaking skills in ESP contexts. The use of AI can improve

grammar and pronunciation, as shown by Kostka and Toncelli (2023). This study goes further by demonstrating how real-time feedback can lead to rapid improvements in pronunciation and grammar in speaking contexts. This finding is significant for ESP contexts, where accuracy is crucial. The study also contrasts with previous research, such as Liu et al. (2024), by focusing on the benefits of AI in speaking confidence. This suggests that AI tools can reduce language anxiety in oral communication, which is important for ESP learners. However, the study also identified challenges related to over-reliance and authenticity, echoing concerns raised by Yang et al. (2024) about the ethical implications of AI in education. The study indicates that ESP learners may be more discerning in their use of AI tools. Moreover, the study found that AI may be more effective in supporting preparatory speaking activities rather than impromptu communication skills, which are important in professional contexts. This finding adds nuance to the potential of AI in language learning, as explored by Kusuma et al. (2024). The lack of human interaction and contextual understanding in AI tools relates to criticisms of AI's limitations in capturing the nuances of human communication. This study provides insights into how these limitations affect ESP learners in navigating complex, context-dependent professional communication. The findings emphasize the continued importance of human instruction and interaction in ESP contexts, alongside AI tools. This perspective supports the balanced approach advocated by Nam and Nguyen (2022) in their study on AI in professional contexts.

Overall, this study supports the potential of AI in language learning but also highlights specific challenges in ESP contexts. AI tools benefit vocabulary development and grammar improvement but may struggle with the more nuanced aspects of professional communication. The study contributes to a balanced understanding of AI's role in language education for ESP learners and underscores the need for a thoughtful integration of AI tools alongside traditional approaches. This perspective aligns with discussions on the ethical and practical implications of AI in education, as discussed by Yang et al. (2024), providing valuable insights for the future development and implementation of AI-assisted language learning in ESP contexts.

4 Conclusion

This study provides a nuanced understanding of students' perceptions regarding the use of AI in enhancing their speaking performance within ESP contexts. The findings reveal a complex interplay of factors influencing AI adoption, including accessibility, personalization, and technological familiarity. While AI tools demonstrate significant benefits in vocabulary expansion, grammar improvement, and confidence-building, they also present challenges such as the risk of over-reliance and limitations in replicating authentic, spontaneous communication. The study underscores the potential of AI as a powerful complement to traditional language learning approaches, particularly in ESP settings where precise, professional communication is crucial. However, it also highlights the irreplaceable value of human interaction and the need for a balanced integration of AI that addresses the complex, context-dependent nature of real-world communication. These findings contribute to the growing body of knowledge on AI-assisted language learning, offering valuable insights for educators,

researchers, and policymakers in developing effective, ethically sound strategies for leveraging AI in ESP instruction. Ultimately, this research advocates for a thoughtful approach to AI integration in language education, one that maximizes its benefits while acknowledging its limitations, thereby enhancing the overall quality of ESP learning experiences and outcomes.

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References

- Alberth. (2023). The use of ChatGPT in academic writing: A blessing or a curse in disguise? *TEFLIN Journal*, 34(2), 337–352. <https://doi.org/10.15639/teflinjournal.v34i2/337-352>
- Baskara, R., & Mukarto. (2023). Exploring the implications of ChatGPT for language learning in higher education. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 7(2), 343–358.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Cai, Q., Lin, Y., & Yu, Z. (2023). Factors influencing learner attitudes towards ChatGPT-assisted language learning in higher education. *International Journal of Human-Computer Interaction*, 1–15. <https://doi.org/https://doi.org/10.1080/10447318.2023.2261725>
- Chapelle, C. A. (2009). The relationship between second language acquisition theory and computer-assisted language learning. *The Modern Language Journal*, 93, 741–753. <https://doi.org/10.1111/j.1540-4781.2009.00970.x>
- Escalante, J., Pack, A., & Barrett, A. (2023). AI-generated feedback on writing: insights into efficacy and ENL student preference. *International Journal of Educational Technology in Higher Education*, 20(57). <https://doi.org/https://doi.org/10.1186/s41239-023-00425-2>
- Housen, A., Kuiken, F., & Vedder, I. (2012). Complexity, accuracy and fluency. *Dimensions of L2 Performance and Proficiency: Complexity, Accuracy and Fluency in SLA*, 32, 1–20.
- Kostka, I., & Toncelli, R. (2023). Exploring applications of ChatGPT to English language teaching: Opportunities, challenges, and recommendations. *TESL-EJ*, 27(3), 1–19. <https://doi.org/https://doi.org/10.55593/ej.27107int>
- Kusuma, I. P. I., Roni, M., Dewi, K. S., & Mahendrayana, G. (2024). Revealing the potential of ChatGPT for English language teaching: EFL preservice teachers' teaching practicum experience. *Studies in English Language and Education*, 11(2), 650–670. <https://doi.org/10.24815/siele.v11i2.34748>
- Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford University

Press.

- Li, B., Bonk, C. J., & Kou, X. (2023). Exploring the multilingual applications of ChatGPT: uncovering Language Learning affordances in YouTube videos. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 13(1), 1–22. <https://doi.org/10.4018/IJCALLT.326135>
- Liu, M., Zhang, L. J., & Biebricher, C. (2024). Investigating students' cognitive processes in generative AI-assisted digital multimodal composing and traditional writing. *Computers & Education*, 211(104977), 1–21. <https://doi.org/https://doi.org/10.1016/j.compedu.2023.104977>
- Nam, V. H., & Nguyen, T. K. C. (2022). The impact of AI chatbot on customer willingness to pay: An Empirical Investigation in the Hospitality Industry. *Journal of Trade Science*. <https://doi.org/10.54404/jts.2022.10.04.09>
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. *Journal of the Association for Information Systems*, 17(5), 328–376.
- Yang, Z., Wu, J. G., & Xie, H. (2024). Taming Frankenstein's monster: Ethical considerations relating to generative artificial intelligence in education. *Asia Pacific Journal of Education*, 1–14. <https://doi.org/10.1080/02188791.2023.2300137>

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