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Research Article

Use of AI Chatbots in English Language Learning: Evidence from a Korean University Context

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Abstract
The integration of artificial intelligence (AI) into higher education has significantly reshaped language learning practices, especially within English as a Foreign Language (EFL) context. This study examines the role of AI-powered chatbot tools in supporting English learning among university students in South Korea, focusing on language skill development, student engagement, and learner perceptions. A mixed-methods case study design was employed over a 12-week period involving 60 undergraduate participants. Quantitative data were collected through pre- and post-tests along with structured questionnaires, while qualitative data were obtained from student interviews and reflective journals. The findings reveal that chatbot-assisted learning led to noticeable improvements in reading comprehension, writing ability, and speaking confidence. In addition, students demonstrated increased motivation and a greater tendency to participate in English communication activities. The interactive features of AI chatbots, including real-time feedback and adaptive responses, encouraged autonomous learning and active involvement. Despite these advantages, some challenges were observed, such as occasional inaccuracies in responses, overdependence on the technology, and limited contextual understanding. Overall, the study indicates that AI chatbots can serve as effective supplementary tools in EFL learning environments when applied thoughtfully within pedagogical frameworks. These results contribute to the growing body of research on AI-supported language learning and offer practical implications for educators in Korean higher education.
Keywords: Artificial Intelligence, Chatbot-Based Learning, English as a Foreign Language, Higher Education, Student Engagement.

Introduction

Advancements in artificial intelligence (AI) have increasingly transformed contemporary educational environments, particularly in the field of language learning. In English as a Foreign Language (EFL) context such as South Korea, achieving proficiency in English continues to be a critical objective in higher education. However, traditional instructional methods often fail to provide sufficient opportunities for meaningful interaction and individualized learning. As a result, students frequently experience challenges including communication anxiety, reduced confidence, and limited ability to apply language skills in authentic situations. To address these issues, AI-driven chatbot technologies—powered by developments in natural language processing—have gained attention as innovative learning tools. These systems allow learners to participate in simulated dialogues, obtain immediate feedback, and practice language skills within an engaging and interactive setting. Such capabilities support continuous, self-directed learning while reducing the pressure commonly associated with face-to-face classroom communication. Previous studies suggest that chatbot-assisted environments can increase learners' willingness to communicate and promote higher levels of engagement in language learning activities (Kim & Su, 2024).

In the Korean higher education context, empirical research has consistently highlighted the benefits of integrating chatbot technologies into language instruction. For example, studies have reported enhancements in reading comprehension and increased cognitive involvement among university students using AI-based learning tools (Kim, 2024). Moreover, learners generally demonstrate positive attitudes toward chatbot-assisted learning, often citing improved accessibility and heightened motivation as key advantages (Esteban et al., 2025). Comprehensive reviews further indicate that AI chatbots contribute to the development of speaking proficiency, learner confidence, and overall motivation in EFL settings (Du & Daniel, 2024). By enabling interactive and context-based communication, these tools help reduce the disconnect between theoretical instruction and real-world language use, which is a common limitation in exam-focused education systems like those in South Korea. Additionally, research on technology acceptance emphasizes that students' adoption of AI tools, including ChatGPT, is largely influenced by

their perceived usefulness and ease of use (Hwang et al., 2025). This suggests that learners are more likely to embrace such technologies when they perceive clear academic value and encounter minimal technical barriers. Consequently, the effectiveness of chatbot integration depends greatly on user-friendly design and practical relevance.

Further classroom-based studies indicate that AI chatbots support improvements in writing proficiency, vocabulary acquisition, and learner engagement. At the same time, their increasing presence is reshaping the role of educators, who are transitioning from traditional information providers to facilitators of student-centered learning (Lo et al., 2024). Nevertheless, the growing use of AI in education has also raised concerns related to academic integrity, digital competence, and ethical use, underscoring the importance of institutional policies and responsible implementation.

Despite the numerous advantages associated with AI chatbots, several limitations remain. Challenges such as inaccurate responses, insufficient contextual understanding, and the potential for over-reliance on technology require careful consideration. Effective integration of AI tools into formal educational settings therefore necessitates thoughtful instructional design to ensure that technology complements, rather than replaces, meaningful learning experiences.

In light of these considerations, the present study aims to evaluate the effectiveness of AI chatbot integration in English language learning among university students in South Korea. Specifically, it investigates improvements in language proficiency, examines learners' perceptions, and identifies key challenges related to chatbot-assisted learning.

Methods

This study employed a mixed-methods case study design to investigate the impact of AI chatbot tools on English language learning. The participants consisted of 60 undergraduate students enrolled in a general English course at a university in South Korea. They were evenly assigned to two groups: an experimental group (n = 30), which incorporated AI chatbot tools into their learning activities, and a control group (n = 30), which followed traditional teaching approaches. A range of data collection methods was used to ensure comprehensive analysis. Students' language proficiency was evaluated through pre-test and post-test assessments covering reading, writing, and speaking skills. Additionally, a structured questionnaire using a five-point Likert scale was administered to assess learners' motivation, engagement, and perceptions regarding chatbot use. To further explore students' experiences, semi-structured interviews were conducted with 15 participants selected from the sample.

The intervention was carried out over a period of 12 weeks. During this time, students in the experimental group engaged with AI chatbots for multiple learning activities, such as practicing conversations, writing essays, correcting grammar, and developing vocabulary. These tasks were integrated into both classroom instruction and independent learning, ensuring consistent interaction with the technology.

For data analysis, quantitative data from pre- and post-assessments were analyzed using paired-sample t-tests to determine significant performance differences. Questionnaire data were examined through descriptive statistical methods to identify patterns in student responses. Meanwhile, qualitative data from interviews were analyzed using thematic analysis, allowing for the identification of key themes and recurring patterns related to learners' experiences with AI-supported language learning.

Results and Discussion

Table 1. Pre-test and post-test scores of English proficiency.

Skill area	Pre-test mean	Post-test mean	Mean gain	t-value	p-value	Interpretation
Reading	68.4	78.9	+10.5	4.87	<0.001	Significant improvement
Writing	65.2	76.3	+11.1	5.12	<0.001	Significant improvement
Speaking	60.8	72.5	+11.7	5.46	<0.001	Significant improvement

A comparison of pre-test and post-test scores demonstrates substantial progress across all evaluated language skills among students in the experimental group. Noticeable increases were recorded in reading, writing, and

speaking following the implementation of AI chatbot-based learning activities. Among these areas, speaking exhibited the greatest improvement, indicating that interaction with chatbot systems may provide valuable opportunities for practicing real-time communication. These findings align with previous research suggesting that conversational AI tools can enhance oral proficiency while also helping to reduce learners' anxiety during communication tasks (Han, 2020). The supportive and low-pressure environment created by chatbot interaction likely contributes to this improvement. Enhancement in writing performance can be attributed to the instant and targeted feedback provided by AI chatbots. This type of feedback allows learners to identify grammatical errors and make necessary revisions more effectively. In a similar manner, improvements in reading comprehension may be linked to the chatbot's ability to offer explanations, summaries, and contextual clarification, which assist learners in better understanding written materials (Kim, 2024).

Table 2. Students' perceptions of AI chatbot use.

Statement	Mean	SD	Interpretation
Chatbots improve my English learning	4.32	0.71	High
Chatbots increase my motivation	4.18	0.76	High
Chatbots reduce learning anxiety	4.05	0.82	High
Chatbots provide useful feedback	4.40	0.65	Very high

Analysis of the questionnaire results indicates that students held favorable attitudes toward the use of AI chatbots in language learning. The consistently high mean scores across all items suggest that learners perceived chatbots as effective tools for enhancing their English skills, boosting motivation, and easing feelings of anxiety. Among the evaluated aspects, the usefulness of feedback received the highest rating, emphasizing the value of immediate and tailored responses in facilitating the learning process. This highlights the role of chatbot systems in providing continuous support that aligns with individual learner needs. These outcomes are consistent with earlier research demonstrating that AI-supported learning environments can foster learner independence and increase engagement (Kim, 2019). Furthermore, the observed decrease in anxiety levels suggests that chatbot-based interactions create a more relaxed and supportive learning atmosphere. This is particularly important in educational contexts such as South Korea, where students may face considerable pressure in traditional classroom environments.

Table 3. Challenges in AI chatbot use.

Challenge	Frequency (%)	Interpretation
Inaccurate responses	42%	Moderate concern
Over-reliance on AI	38%	Emerging issue
Lack of contextual understanding	35%	Moderate concern
Technical difficulties	20%	Minor issue

Although AI chatbots offer several educational benefits, the findings also highlight a number of challenges experienced by students. A considerable percentage of participants expressed concerns about the accuracy of chatbot-generated responses, suggesting that the reliability of these systems is not always consistent. Additionally, some learners indicated a growing dependence on chatbot assistance, which may limit the development of critical thinking and independent problem-solving abilities. Another issue identified was the chatbot's difficulty in fully interpreting context, which can sometimes reduce the effectiveness of interactions and lead to misunderstandings. These observations are consistent with recent research that stresses the need for careful monitoring and responsible integration of AI tools in educational environments (Dillon, 2024). Such findings underline the importance of balancing technological support with pedagogical guidance.

Table 4. Frequency of AI chatbot usage among students.

Usage type	Mean frequency	Interpretation
Daily use	4.1	Frequent
Weekly use	3.8	Moderate
Assignment-based use	4.5	Very frequent
Casual practice	3.6	Moderate

The analysis of usage trends indicates that students predominantly utilized AI chatbots for academic-related activities, with assignment-focused tasks showing the highest level of engagement. This suggests that learners rely on chatbot tools mainly to support structured coursework and formal learning requirements. The overall frequency of use also highlights the ease of access and practical convenience associated with these technologies, enabling students to incorporate them regularly into their study routines. Such consistent usage patterns are in line with

previous research, which suggests that the integration of chatbot tools can foster disciplined study habits and enhance learners' ability to manage their own learning processes (Van Horn, 2024).

Table 5. Impact of AI chatbots on specific language components.

Language component	Mean score	Interpretation
Vocabulary	4.35	High improvement
Grammar	4.28	High improvement
Pronunciation	4.10	Moderate improvement
Writing structure	4.42	Very high improvement

The findings indicate that AI chatbot use had varying levels of impact across different language components. The most significant improvements were observed in writing structure and vocabulary development, suggesting that chatbot-assisted learning is particularly effective in these areas. This effectiveness can be attributed to the system's capacity to deliver instant explanations, illustrative examples, and corrective feedback. Grammar skills also showed considerable progress, reflecting the supportive role of chatbots in identifying and correcting linguistic errors. In contrast, improvements in pronunciation were relatively lower, indicating that chatbot tools may be less effective in addressing spoken language features compared to written aspects. These results are consistent with previous studies highlighting the contribution of AI-based tools to writing enhancement and vocabulary acquisition in EFL learning environments (Bok & Cho, 2023).

Table 6. Student engagement levels with AI chatbots.

Engagement indicator	Mean	Interpretation
Interest in learning	4.30	High
Participation level	4.12	High
Interaction frequency	4.25	High
Satisfaction level	4.38	Very high

The results demonstrate consistently high levels of student engagement across all measured dimensions, including interest in learning, active participation, frequency of interaction, and overall satisfaction. These findings suggest that learners responded positively to the integration of AI chatbot tools in their language learning activities. The interactive and responsive features of chatbot systems likely play a key role in sustaining learner involvement, as they provide immediate feedback and adaptable learning support. Such characteristics contribute to creating a more engaging and learner-centered environment. The elevated levels of engagement observed in this study indicate that AI-driven tools have the potential to make learning experiences more dynamic and motivating. These findings are in line with previous research emphasizing the effectiveness of interactive technologies in promoting student engagement in language learning contexts (Gai, 2024).

Conclusion

The study confirms that AI chatbots can effectively support English language learning among university students in South Korea. Their use contributed to improvements in reading, writing, and speaking skills, while also enhancing learners' motivation, confidence, and willingness to communicate. The interactive features of chatbot systems promote active engagement and encourage independent learning. However, certain limitations, including response inaccuracies, limited contextual understanding, and potential overdependence, need to be considered.

Recommendations

AI chatbots should be integrated as supportive tools rather than replacements for traditional teaching. Educators should guide their use through well-planned instructional strategies to ensure meaningful learning outcomes. It is also important to promote responsible usage to avoid over-reliance. Future studies should explore long-term effects and develop effective pedagogical models for AI-assisted language learning.

Declarations

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Artificial Intelligence (AI) Use Statement: The author declares that artificial intelligence tools were not utilized in the development of the research content, including data analysis, interpretation, or the formulation of conclusions. AI was considered solely as the subject of investigation rather than as a tool for conducting the study.

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References

1. Bok, E., & Cho, Y. (2023). Examining Korean EFL college students' experiences and perceptions of using ChatGPT as a writing revision tool. *Journal of English Teaching Through Movies and Media*, *24*(4), 15-27.
2. Dillon, T. (2024). Korean university students' prompt literacy training with ChatGPT: Investigating language learning strategies. *English Teaching*, *79*(3), 123-157.
3. Du, J., & Daniel, B. K. (2024). Transforming language education: A systematic review of AI-powered chatbots for English as a foreign language speaking practice. *Computers and Education: Artificial Intelligence*, *6*, 100230.
4. Esteban, A. J., Park, I., Nga, N. T., Perunovic, S., Park, S. E., Shehzadi, & Yi, J. I. (2025). Undergraduate students' perceptions on the use of ChatGPT for English learning at a Korean university. *rEFLections*, *32*(2), 994-1016.
5. Gai, E. (2024, September). The effects of ChatGPT on English language learning in regards to language proficiency and learning motivation. In *Proceedings of the 2024 International Symposium on Artificial Intelligence for Education* (pp. 43-53).
6. Han, D. E. (2020). The effects of voice-based AI chatbots on Korean EFL middle school students' speaking competence and affective domains. *Asia-Pacific Journal of Convergent Research Interchange*, *6*(7), 71-80.
7. Hwang, M., Lee, E., & Lee, H. K. (2025). Exploring EFL learners' acceptance of ChatGPT: Application of the extended technology acceptance model. *English Teaching*, *80*(1), 45-69.
8. Kim, A., & Su, Y. (2024). How implementing an AI chatbot impacts Korean as a foreign language learners' willingness to communicate in Korean. *System*, *122*, 103256.
9. Kim, N. Y. (2019). A study on the use of artificial intelligence chatbots for improving English grammar skills. *Journal of Digital Convergence*, *17*(8), 37-46.
10. Kim, R. (2024). Effects of ChatGPT on Korean EFL learners' main-idea reading comprehension via top-down processing. *Language Research, 60 (1), 83–106*.
11. Lo, C. K., Yu, P. L. H., Xu, S., Ng, D. T. K., & Jong, M. S. Y. (2024). Exploring the application of ChatGPT in ESL/EFL education and related research issues: A systematic review of empirical studies. *Smart Learning Environments*, *11*(1), 50.
12. Van Horn, K. R. (2024). ChatGPT in English language learning: Exploring perceptions and promoting autonomy in a university EFL context. *TESL-EJ*, *28*(1), 1-26.

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