

AI-Driven Tools and Their Impacts on EFL/ESL Speaking Skills: A Systematic Review in Asia Regional Context

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Abstract: This study systematically examines how AI-driven tools influence EFL/ESL learners' speaking skills across educational contexts in the Asia region. A comprehensive literature search (2020–2025) across Scopus, ERIC, IEEE Xplore, DOAJ, and JSTOR, guided by PRISMA protocols, yielded twenty empirical studies focused on AI-enhanced speaking instruction across the Asia region. Research spans elementary to tertiary levels, with concentrations in East and Southeast Asia (e.g., Taiwan, China, Malaysia), employing task-oriented chatbots, voice-based conversational agents, and generative AI platforms (e.g., ChatGPT, CoolE Bot). Quantitative results consistently show significant improvements in fluency, accuracy, vocabulary, and pronunciation when learners engage with AI tools versus traditional methods. Qualitative data reveal reduced speaking anxiety, increased willingness to communicate, and heightened self-efficacy and enjoyment. One study noted enhanced confidence without immediate performance gains using embodied GenAI chatbots, suggesting affective benefits may precede measurable skill improvements. Overall, AI offers scalable, personalized feedback that lowers affective barriers and fosters deliberate practice, though future research should investigate long-term outcomes, optimal integration strategies, and underrepresented regions (e.g., South and West Asia).

Keywords: Artificial Intelligence, EFL/ESL Speaking Skills, Chatbots, Systematic Literature review, Asia Region

INTRODUCTION

The integration of Artificial Intelligence (AI) has gained much attention for its potential to enhance second/foreign (L2) language learning experiences, particularly in improving speaking ability. AI-driven tools, such as chatbots, and generative AI models such as ChatGPT, deepseek, Gemini, introduced new possibilities for learners to practice their English-speaking skills with immediate, individualized feedback. While there might be considerations such as technical difficulties and over reliance on these advanced technologies (Mudawy, 2025; Sukumaran & Khair, 2024), AI tools can improve speaking accuracy and fluency (Dandu & Gomatam, 2023), giving accurate feedback such as word pronunciation and grammar correction (Tokahashi & Vate U-Lan, 2019), and in improving the willingness to communicate (WTC) (Fathi et al., 2024). These AI technologies allow them to engage in real-time conversational practice outside the classroom settings. These innovations are impactful in English as a Foreign Language (EFL) and English as a Second Language (ESL) learning contexts where students have limited exposure to natural spoken English and speaking difficulties that comes from teacher's poor proficiency, outdated teaching method, student's lack of interest and practice, poor course material design, and absence of internet access (Rajendran et al., 2024). As AI tools become better and more advanced, there is a growing demand for understanding its role in supporting EFL/ESL students' speaking ability across diverse learning settings.

Despite this interest, Systematic Literature Review (SLR) studies on AI tools for speaking skills are still limited. Du & Daniel (2024) is the most comprehensive to date, reviewing 24 studies on AI-powered chatbots in EFL speaking practice. Most of SLR studies addresses EFL/ESL language learning and teaching in general scope (Sharadgah & Sa'di, 2022; Almeahmadi, 2024; Iswari et al., 2024; Wang et al., 2024; Balci, 2024; Lo et al., 2024; Al-khreshehm, 2024). In contrast, in fact, AI in writing skill has seen more extensive attention (Afiliani et al., 2023; Phuoc, 2025; Teng, 2024; Alsaedi, 2024). Therefore, this imbalance in SLR attention between speaking and writing skills highlight a gap in understanding the impacts of AI on oral language skills.

Du & Daniel's study (2024) explores AI-powered chatbots in English speaking practice, which mainly focuses on East Asian settings, centers only on text/voice chatbots, and relies heavily on short-term intervention studies. Particularly in learning contexts, Asian regions offer a unique context for English learning, marked by diverse linguistic and cultural backgrounds, large classroom sizes, and different teaching-learning approaches. Despite these variations, existing SLR study only focuses on East Asian contexts, with limited exploration in regions like South Asia and Southeast Asia. Furthermore, the effects of diverse AI tools and the long-term impacts on students' speaking skills remain underexplored. Given these considerations, this study fills the gaps by collecting evidence from underrepresented Asian regions, more diverse AI tools, and including longitudinal studies. This study not only broadens the geographical contexts, but also adds more in understanding a diverse range of AI-driven tools in language learning. In addition, by including longitudinal studies, it gives deeper understanding into the long-term impacts of AI on learner's speaking abilities. Therefore, this study aims to explore the impacts of AI-driven tools on EFL/ESL learners' speaking skills across different Asian learning contexts, with the research question as follow: "What are the impacts of AI-driven tools on EFL/ESL learners' speaking skills in the Asia region?"

METHODS

This study systematically reviews studies about AI-driven tools and EFL/ESL speaking skills sourced from several databases which are Scopus, ERIC, IEEE Xplore, DOAJ, and JSTOR. This study is conducted according to Preferred Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines by Page et al. (2021). In all the databases, the same search strings were employed which are "chatbot" OR "conversational AI" OR "educational chatbot" OR "AI chatbot" AND "speaking skills" OR "EFL speaking" OR "ESL speaking". The period of the article spans from 2020 to 2025. After identifying the articles from databases and excluded duplicates between databases, selected articles are initially screened manually based on their title and abstract. After that, the articles are assessed for eligibility based on the inclusion criteria which are:

1. Empirical studies (qualitative, quantitative, mixed methods) conducted in Asia countries.
2. Focus on the topic of AI-driven tools for enhancing speaking skills.
3. Peer-reviewed articles or conference papers published in English during 2020-2025.

Exclusion criteria for article selection of this study are listed as follows:

1. Studies outside Asia countries or no regional context mentioned.
2. Non-empirical studies such as theoretical papers or reviews.
3. Irrelevant focus and inaccessible full texts.

After thorough inclusion and exclusion of studies based on the criteria above, selected papers are then processed to be analyzed and examined further. The procedures of article selection are visually displayed in Figure 1 below.

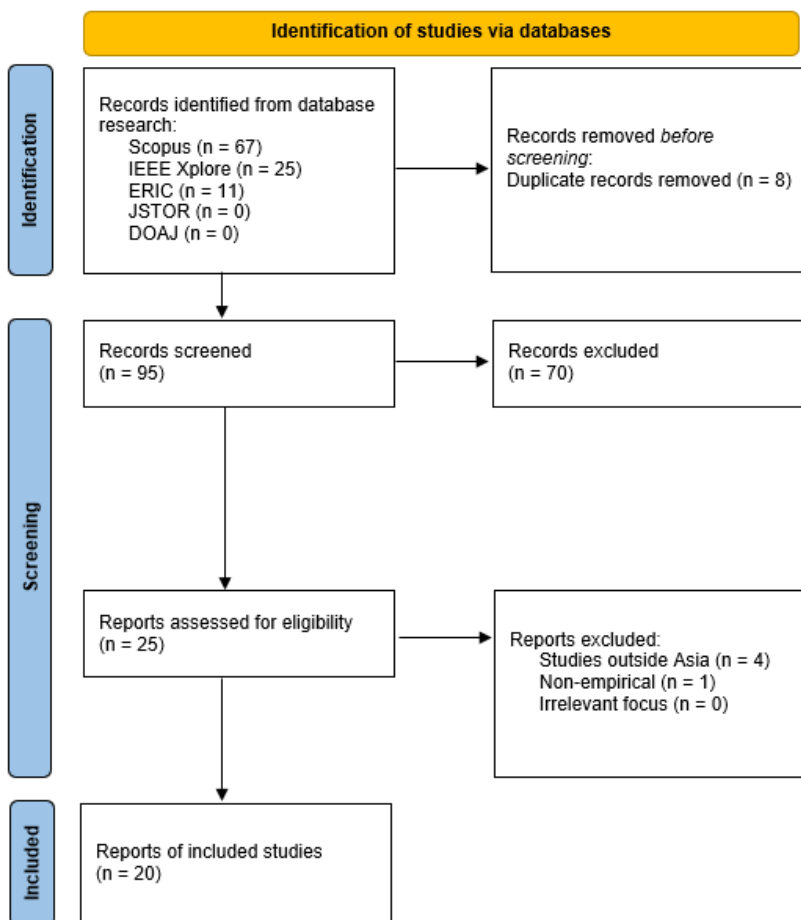


Figure 1. Visual display of selection procedure

RESULTS

This section provides a comprehensive overview of the included studies which explain their geographical distribution, years of publication, the types of AI tools examined, demographics of the participants, and the research methodologies employed in the synthesized studies.

Geographical Distribution

This systematic review tries to reflect various levels of research and AI adoption in language education across the Asian continent as it is the focus of the study. Most significantly, the most notable studies employed from East and Southeast Asian countries. Five studies from Taiwan leads the trends (Chien et al., 2024; Hsu et al., 2021, Hwang et al., 2022; Lin & Mubarak, 2021; Tai & Chen, 2024), which followed by 4 studies from China (Wang et al., 2024; Yuan, 2023; Zheng et al., 2025; Zhou et al., 2025), two studies from South Korea (Lee & Lim, 2023; Yang et al., 2022), two studies from Malaysia (Muniandhy & Selvanathan, 2025; Tan et al., 2024). Other countries included such as Indonesia (Wu et al., 2025), Vietnam (Duong & Suppasetsee, 2024), Philippines (Taeza, 2025), and a country from West Asia, Iran (Fathi et al., 2024), each contributes a single study to the synthesis. In addition, three studies which fall in the category of broader Asian context (Çakmak, 2022; Üstünbaş, 2024; Yildiz, 2024) were conducted in Turkey.

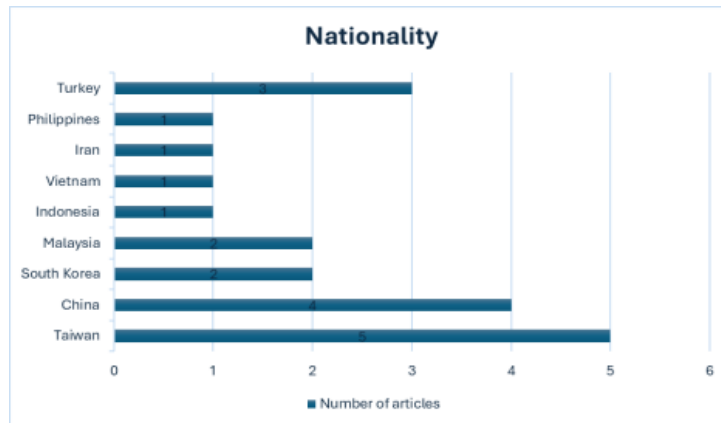


Figure 2. Visual display of geographical distribution

Publication Years

The overwhelming majority of the included studies are exceptionally recent, primarily published between 2021 and 2025. Specifically, seven studies were published in 2024 (Wang et al., 2024; Tai & Chen, 2024; Fathi et al., 2024; Tan et al., 2024; Yildiz, 2024; Üstünbaş, 2024; Duong & Suppasetseree, 2024), five in 2025 (Muniandhy & Selvanathan, 2025; Wu et al., 2025; Taeza, 2025; Zheng et al., 2025; Zhou et al., 2025), two in 2023 (Lee & Lim, 2023; Yuan, 2023), four in 2022 (Yang et al., 2022; Chien et al., 2022; Çakmak, 2022; Hwang et al., 2022), and two in 2021 (Lin & Mubarok, 2021; Hsu et al., 2021). This strong concentration of recent publications underscores that the application of AI-driven tools in language education, especially those leveraging advanced models like Large Language Models (LLMs) and Generative AI (GenAI), represents a rapidly evolving and contemporary field of research. The emergence of powerful AI technologies, such as GPT-4, aligning with this timeline, indicates that technological advancements are directly fueling this surge in academic interest. This recency suggests that the field is still in its early stages of understanding the long-term impacts and optimal integration strategies for these rapidly developing AI tools. Consequently, future research will need to continue adapting to technological advancements and explore the sustained effects of these interventions.

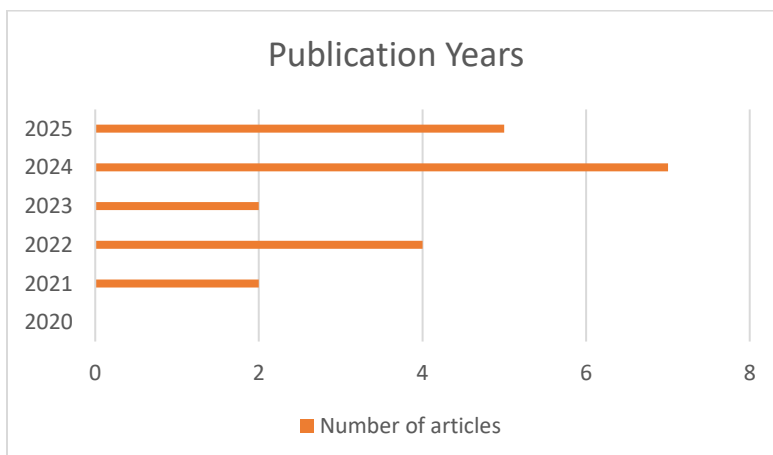


Figure 3. Visual display of publication years

Educational Levels

The studies encompassed a broad spectrum of learners, ranging from elementary school students in Taiwan (Tai & Chen, 2024; Hwang et al., 2022) and China (Yuan, 2023) to undergraduate and university students across Vietnam (Duong & Suppasetsee, 2024), Malaysia (Muniandhy & Selvanathan, 2025; Tan et al., 2024), Indonesia (Wu et al., 2025), the Philippines (Taeza, 2025), China (Zheng et al., 2025; Zhou et al., 2025; Wang et al., 2024), Iran (Fathi et al., 2024), and South Korea (Lee & Lim, 2023; Yang et al., 2022). The primary focus across these studies was on English as a Foreign Language (EFL) and English as a Second Language (ESL) learners, highlighting the widespread application of AI tools in contexts where English is not the native language.

Research Design Employed

Empirical research designs were prevalent among the included studies. Quasi-experimental designs were frequently employed, allowing for comparisons between experimental groups utilizing AI tools and control groups engaged in traditional learning methods (Duong & Suppasetsee, 2024; Wu et al., 2025; Taeza, 2025; Zhou et al., 2025; Hwang et al., 2022). Randomized controlled trials were also used in some investigations (Zheng et al., 2025; Fathi et al., 2024; Yildiz, 2024). A significant number of studies adopted mixed-methods approaches, combining quantitative data collection (e.g., pre- and post-tests, Likert scale questionnaires, standardized speaking tests) with qualitative insights derived from interviews, focus groups, and open-ended survey responses (Muniandhy & Selvanathan, 2025; Wu et al., 2025; Taeza, 2025; Zheng et al., 2025; Wang et al., 2024; Tai & Chen, 2024; Fathi et al., 2024; Yuan, 2023; Yildiz, 2024; Üstünbaş, 2024). This robust methodological approach indicates a comprehensive effort to understand both the measurable outcomes and the nuanced experiences and perceptions of learners interacting with AI-driven tools.

Table 1. Characteristics of included studies

ID	Author(s) & Year	Country	AI-Tool(s) Implemented	Participant
S1	Çakmak, 2022	Turkey	Replika	Turkish EFL Students
S2	Chien et al., 2022	Taiwan	AIML-Based LINE ChatBot	Taiwanese Students
S3	Duong & Suppasetsee, 2024	Vietnam	AI voice chatbot	Vietnamese Undergraduates
S4	Fathi et al., 2024	Iran	AI platform (Andy English Chatbot)	Iranian EFL learners
S5	Hsu et al., 2021	Taiwan	Task-oriented chatbot (TPBOT)	Taiwanese EFL learners (TOEIC scores <100)
S6	Hwang et al., 2022	Taiwan	Smart chatbot (Smart UEnglish)	Taiwanese Sixth-Grade Elementary Students (EFL)

S7	Lee & Lim, 2023	South Korea	Levelled Conversational Teachable Agent	English Language Learners
S8	Lin & Mubarak, 2021	Taiwan	Mind Map Guided AI Chatbot	University Flipped English Speaking Classroom
S9	Muniandhy & Selvanathan, 2025	Malaysia	ChatGPT	Malaysian ESL learners (Higher Education)
S10	Taeza, 2025	Philippines	AI-powered conversational chatbots	Filipino Intermediate ESL learners
S11	Tai & Chen, 2024	Taiwan	GAI chatbot (CoolE Bot)	Taiwanese Elementary EFL learners
S12	Tan et al., 2024	Malaysia	GenAI for English Learning in VR (EasyEnglish)	Malaysian Undergraduate Non-Native English Speakers
S13	Üstünbas, U., 2024	Turkey	ChatGPT	Turkish EFL learners (Higher Education)
S14	Wang et al., 2024	China	Conversational GenAI chatbots (Typebot, D-ID Agent)	Chinese Undergraduates (EFL)
S15	Wu et al., 2025	Indonesia	AI chatbots	Indonesian First-Year University Students (EFL)
S16	Yang et al., 2022	South Korea	Task-based voice chatbot (Ellie)	Korean EFL learners (10-15 years)
S17	Yildiz, C., 2024	Turkey	ChatGPT	Turkish EFL learners
S18	Yuan, Y., 2023	China	AI Chatbots	China Elementary Students (EFL)
S19	Zheng et al., 2025	China	ChatGPT	China Freshmen (EFL)
S20	Zhou et al., 2025	China	AI chatbot integrated MABL framework	China Non-English Major University Students (EFL)

Table 2. Outcomes and effects of included studies

ID	Primary Objective	Speaking Skills/Affective Factors Addressed	Key Finding(s)
S1	Effect of chatbot human interaction on L2 speaking performance and anxiety	L2 speaking performance, speaking anxiety	Negative perceptions due to difficulties in being understood precisely potentially increasing anxiety, performance with Replika better than peer interactions
S2	Influence in contextual English learning	Speaking and listening ability, motivation	Slightly enhanced performance; Improved extrinsic/intrinsic motivation
S3	Effects on English speaking skills	Overall speaking skills (hedging, grammar, vocab)	Significant improvement in speaking skills
S4	Impact on speaking skills and WTC	Fluency, coherence, lexicon, grammar, pronunciation, WTC	More effective in improving speaking skills and WTC
S5	Proposing system for speaking practice	English speaking skills, fear of speaking	Helped improve speaking skills, eliminated fear
S6	Facilitating authentic contextual EFL speaking	Learning achievement, English speaking abilities	Significantly higher learning achievement
S7	Designing a levelled agent for motivation and independent study	Motivation, independent study	Motivated students with personalized approach
S8	Investigating approach in EFL flipped-speaking classroom	Speaking performance, learning performance, interaction	Promoted speaking and learning performance, organized interaction
S9	Effectiveness as partnering tool in flipped classroom	Speaking skills, challenges	Significant implications for stakeholders
S10	Role in enhancing SLA	Speaking proficiency, engagement, confidence, WTC, anxiety	Higher gains in speaking proficiency, WTC self-confidence
S11	Impact on speaking skills (individual/paired)	Speaking skills, enjoyment, motivation, anxiety, confidence	Significantly improved speaking skills; enjoyable, motivating, engaging
S12	Usability study of GenAI in VR	Conversation quality, grammar/vocabulary correction, diverse responses	Satisfactory conversation quality; effective correction, diverse responses
S13	How Turkish EFL learners use ChatGPT for speaking	Speaking practice, human-like conversations	Helpful for practicing English outside classroom

S14	Impact of different GenAI chatbots	WTC, FLSA, SPCC, Speaking performance	Visually embodied GenAI improved WTC, SPCC, reduced FLSA; no significant difference in speaking performance
S15	Effects in think– pair– share activities	FLSA, FLE, speaking performance	Reduced FLSA, enhanced FLE, Improved speaking performance
S16	Appropriateness of task design and performance	English conversation engagement, task success rates	High task success rates, positive potential
S17	Effect on speaking self-efficacy	Speaking self-efficacy, confidence, stress levels	Noteworthy enhancements in speaking self-efficacy and confidence
S18	Efficacy for EFL learning in primary education	Oral English proficiency, WTC	Significantly improved oral English proficiency and WTC
S19	Effectiveness as collaborative dialogue partners	Oral proficiency, FLSA, WTC, self-efficacy	Enhanced oral proficiency, increased WTC, reduced FLSA, increased self-efficacy
S20	Impact on spoken English abilities	Fluency, appropriateness in spoken English	Significantly enhanced fluency and appropriateness

DISCUSSION

Enhancement of Core Speaking Components

There is ample evidence that AI-based tools directly enhance various underlying speaking skills. For instance, research with Vietnamese university students identified that the use of AI voice chatbots significantly enhanced overall English speaking ability, with specific gains in vocabulary, grammatical structures, and hedging expressions (Duong & Suppasetsee, 2024). Likewise, for think-pair-share tasks, Indonesian experimental group students working with AI chatbots spoke significantly better than a control group (Wu et al., 2025). In the Philippines too, speaking proficiency skill gains were significantly higher for ESL students practicing through chatbots (Taeza, 2025).

These findings were corroborated by research on Chinese university freshmen, demonstrating that Large Language Models (LLMs) like GPT-4 effectively enhanced their speaking capability (Zheng et al., 2025). Likewise, utilizing an AI chatbot-supported mobile assisted blended learning approach also enhanced Chinese university students' non-English-major spoken English fluency and appropriateness (Zhou et al., 2025). Besides that, A Generative AI (GAI) chatbot was found to substantially improve EFL learners' speaking proficiency, such as fluency, coherence, vocabulary, range and accuracy in grammar, and pronunciation, were more developed by Iranian EFL learners in AI-mediated conversations (Fathi et al., 2024). Incorporating AI chatbots also caused notable improvement in Chinese elementary students' oral English ability (Yuan, 2023) and improved Taiwanese elementary students' learning performance in English speaking significantly (Hwang et al., 2022). In fact, Taiwanese students learning with a task oriented chatbot were also contented and felt that their English-speaking ability had improved.

The outcomes, however, provide a practical subtlety. GenAI chatbots that possess embodied vision systematically boosted Willingness to Communicate (WTC), Self-Perceived Communicative Competence (SPCC), and Foreign Language Speaking Anxiety (FLSA), yet no

group difference in speaking performance occurred in one experiment with Chinese undergraduates, although numerous studies all reliably document straight improvements in speaking ability or performance (Wang et al., 2024). Such a result would suggest that there is not always a neat or direct correlation between the use of AI, psychological benefit, and measurable benefits in skill. This therefore challenges either whether contemporary conceptualizations of performance encompass all aspects of gains or which specific pedagogical frameworks or AI designs optimally facilitate transfer of affective gains to actual skill development.

Influence of Affective Factors

AI-powered tools also directly impact learners' affective states, which are at the core of long-term language learning, aside from directly enhancing skills. Foreign Language Speaking Anxiety (FLSA) has also decreased considerably, in a pattern that has been duplicated across studies. For example, LLMs greatly decreased foreign language anxiety among Chinese freshmen (Zheng et al., 2025), and AI chatbots greatly decreased FLSA among Indonesian students (Wu et al., 2025). For Chinese undergraduates, visually embodied GenAI chatbots also greatly decreased the level of FLSA (Wang et al., 2024). In addition, ChatGPT assisted Turkish EFL learners in controlling stress levels and gaining confidence (Yildiz, 2024), and a GAI chatbot in Taiwan provided rapport and positive emotions, enhanced confidence and reduced anxiety (Tai & Chen, 2024).

Alongside is the increasing Willingness to Communicate (WTC). Philippine ESL students demonstrated greater gains in WTC through chatbot-facilitated practice (Taeza, 2025). AI-assisted tasks more effectively fostered development in WTC among Iranian EFL students (Fathi et al., 2024), and LLMs enhanced Chinese students' willingness to speak English significantly (Zheng et al., 2025). Similarly, the use of AI chatbots significantly improved WTC in Chinese elementary school (Yuan, 2023), and the application of visually embodied GenAI chatbots substantially improved WTC among Chinese undergraduates (Wang et al., 2024).

Another prominent theme is the development of self-efficacy/confidence and language enjoyment (FLE). AI chatbots supported FLE among Indonesian learners (Wu et al., 2025), and Philippine ESL students developed self-confidence (Taeza, 2025). Taiwanese elementary school students perceived GAI chatbot-facilitated EFL speaking as enjoyable, interesting, and encouraging (Tai & Chen, 2024), and LLMs were found to improve Chinese participants' self-efficacy effectively (Zheng et al., 2025). Turkish EFL learners felt more confident in speaking due to ChatGPT (Yildiz, 2024), and Taiwanese learners broke their fear of English speaking through a task-based chatbot (Hsu et al., 2021).

Several studies have regularly reported that FLSA declines and WTC, enjoyment of the language, and self-efficacy enhance. These results strongly suggest a direct causal link. AI-based systems appear to create a secure, private, and supportive practice environment that effectively lowers the affective barriers conventionally associated with foreign language practice. More practice, and more confident practice, is then enabled and motivated by this better affective state, which is one of less anxiety and greater confidence. A basic requirement for skill development is more practice, especially deliberate practice with immediate feedback. Thus, the emotional advantages of AI tools are not just desirable by-products but also essential facilitators of actual language learning.

Specific AI Tool Applications and Their Differential Effects

The effectiveness of AI tools varies according to how and where they are implemented. Voice chatbots, for instance, have proven to be effective directly for improving speaking (Duong & Suppasetserree, 2024) and in achieving high task completion rates (Yang et al., 2022). Large

Language Models (LLMs) and Generative AI (GenAI) have high potential; GPT-4, for example, enhanced oral proficiency and a variety of affective variables (Zheng et al., 2025). ChatGPT is also referred to as a good partnering tool (Muniandhy & Selvanathan, 2025) and assists in promoting higher self-efficacy (Yildiz, 2024). The potential of GenAI to create diverse responses, avoid getting stuck in repetitive dialogue, and provide immediate grammar and vocabulary correction is also referred to as a key advantage (Tan et al., 2024).

Of particular interest are results on "visually embodied GenAI chatbots" (Wang et al., 2024) and "cartoonish, human-like characters, conversational style, and voice" (Tai & Chen, 2024). These features were found to create an "immersive learning experience and emotional support" (Wang et al., 2024) and build "rapport" with students (Tai & Chen, 2024). This implies that the AI's embodiment and appearance, beyond its fundamental language functionality, are essential in facilitating learner engagement, emotional attachment, and learning experience overall. This goes beyond the instrumental level of interaction, stimulating the psychological and social dimensions of human-AI interaction. This suggests that AI's success as a language learning platform is not only a question of how advanced its underlying language model is but also its personality, user interface, and its capacity to convey human-like social signals. Future AI educational design should thus take into account not only linguistic correctness but also psychological design principles in order to enhance engagement and minimize stress since the way the AI communicates can be as important as the content of the communication.

In addition, certain features in AI technologies were discovered to possess certain strengths. "Designed talk" and "free talk" functions of intelligent chatbots greatly enhanced learning accomplishment (Hwang et al., 2022). Levelled dialogue teachable agents, which are created to adjust to the proficiency level of learners, were discovered to engage with pupils with a human touch (Lee & Lim, 2023). Task-specific chatbots, such as TPBOT, functioned effectively for focused speaking practice and skill development (Hsu et al., 2021). Though VR-based GenAI is promising in terms of response variability and real-time feedback, research also suggests that there is a requirement for the optimization of its user interface and visual prompts (Tan et al., 2024).

Table 3. Synthesized impacts of AI tools on speaking skills

Impact Category	Positive Effect	Negative Effect	No Significant Difference	Key AI Tool Types Associated
Overall Speaking Skills/Performance	(S3, S15, S10, S19, S20, S11, S4, S6, S18, S5)	-	(S14)	AI voice chatbot, AI chatbots, conversational AI assistants, LLM (GPT-4), AI chatbot integrated MABL, GAI chatbot, AI platform, Smart chatbot, AI Chatbots, Task oriented chatbot, GenAI chatbots
Fluency & Coherence	(S4, S20)	-	-	AI platform, AI chatbot integrated MABL
Lexicon, Grammar, Pronunciation	(S3, S4, S12)	-	-	AI voice chatbot, AI platform, GenAI

Foreign Language Speaking Anxiety (FLSA)	(\$15, S19, S14, S11)	(\$1)	-	AI chatbots, LLM (GPT4), conversational GenAI chatbots, GAI chatbot, ChatGPT
Willingness to Communicate (WTC)	(\$10, S19, S4, S18, S14)	-	-	Conversational AI assistants, LLM (GPT-4), AI platform, AI Chatbots, conversational GenAI chatbots
Foreign Language Enjoyment (FLE)	(\$15, S11)	-	-	AI chatbots, GAI chatbot
Self-Efficacy/Confidence	(\$10, S19, S17)	-	-	Conversational AI assistants, LLM (GPT-4), ChatGPT
Motivation	(\$10, S11, S6, S7, S2)	-	-	Conversational AI assistants, GAI chatbot, Smart chatbot, Leveled Conversational Teachable Agent, LINE ChatBot
Engagement	(\$10, S20, S16)	-	-	Conversational AI assistants, AI chatbot integrated MABL, task based voice chatbot

CONCLUSION

This systematic review underscores the significant and predominantly positive role that AI driven tools play in enhancing speaking skills within the Asian context. The evidence consistently demonstrates improvements in core linguistic components such as fluency, grammar, vocabulary, and pronunciation (Duong & Suppasetsee, 2024; Fathi et al., 2024; Zhou et al., 2025; Tan et al., 2024), alongside profound positive effects on learners' affective states, including a reduction in foreign language speaking anxiety and an increase in willingness to communicate, language enjoyment, and self-efficacy (Wu et al., 2025; Taeza, 2025; Zheng et al., 2025; Wang et al., 2024; Tai & Chen, 2024; Fathi et al., 2024; Yuan, 2023; Yildiz, 2024). These affective benefits appear to be a crucial enabler for sustained engagement and practice, which are fundamental to skill development.

Ultimately, AI-driven tools represent a powerful frontier for language learning in Asian contexts, offering unprecedented opportunities for personalized, engaging, and anxiety-reduced practice. Realizing the full potential of these technologies necessitates thoughtful integration strategies by educators and policymakers, coupled with continuous refinement and targeted research to address existing limitations and explore the complex interplay between AI features, learner psychology, and measurable language acquisition outcomes.

REFERENCES

- Almehmedi, W. (2024). Exploring the potential of AI techniques in teaching English as a foreign language: A systematic literature review. *Asian Journal of Social Sciences and Management Studies*, 11(2), 22-31.

- Çakmak, F. (2022). Chatbot-Human Interaction and its effects on EFL students' L2 speaking performance and speaking anxiety. In *Novitas-ROYAL (Research on Youth and Language)* (pp. 113–131). <https://files.eric.ed.gov/fulltext/EJ1365002.pdf>
- Chien, Y., Wu, T., Lai, C., & Huang, Y. (2022). Investigation of the influence of Artificial Intelligence Markup Language-Based LINE ChatBot in contextual English learning. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.785752>
- Dandu, G., & Gomatam, M. (2023). An impact of artificial intelligence tools on technical students' ESL oral communication skills: a study. *Proceedings of SPIE - the International Society for Optical Engineering, 9*. <https://doi.org/10.1117/12.2686324>
- Duong, T., & Suppasetseree, S. (2024). The effects of an artificial intelligence voice chatbot on improving Vietnamese undergraduate students' Englishspeaking skills. *International Journal of Learning Teaching and Educational Research, 23*(3), 293–321. <https://doi.org/10.26803/ijlter.23.3.15>
- Fathi, J., Rahimi, M., & Derakhshan, A. (2024). Improving EFL learners' speaking skills and willingness to communicate via artificial intelligence-mediated interactions. *System, 121*, 103254. <https://doi.org/10.1016/j.system.2024.103254>
- Hsu, M., Chen, P., & Yu, C. (2021). Proposing a task-oriented chatbot system for EFL learners speaking practice. *Interactive Learning Environments, 31*(7), 4297–4308. <https://doi.org/10.1080/10494820.2021.1960864>
- Hwang, W., Guo, B., Hoang, A., Chang, C., & Wu, N. (2022). Facilitating authentic contextual EFL speaking and conversation with smart mechanisms and investigating its influence on learning achievements. *Computer Assisted Language Learning, 37*(7), 1632–1658. <https://doi.org/10.1080/09588221.2022.2095406>
- Lee, K., & Lim, S. (2023). Designing a leveled conversational teachable agent for English language learners. *Applied Sciences, 13*(11), 6541. <https://doi.org/10.3390/app13116541>
- Lin, C., & Mubarak, H. (2021). Learning Analytics for investigating the Mind Map-Guided AI Chatbot approach in an EFL flipped speaking classroom. *DOAJ (DOAJ: Directory of Open Access Journals)*. <https://doaj.org/article/8badf1f61d754d4298ef0f80e654e562>
- Mudawy, A. M. A. (2025). Exploring EFL learners' perceptions on the use of AI-Powered Conversational Tools to improve speaking fluency: a case study at Majmaah University. *Forum for Linguistic Studies, 7*(1). <https://doi.org/10.30564/fls.v7i1.7774>
- Muniandy, J., & Selvanathan, M. (2024). ChatGPT, a partnering tool to improve ESL learners' speaking skills: Case study in a Public University, Malaysia. *Teaching Public Administration*. <https://doi.org/10.1177/01447394241230152>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., . . . Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ, n71*. <https://doi.org/10.1136/bmj.n71>
- Rajendran, M., Subramanian, J., Ramesh, S., Lamessa, O., Prakash, A., & P, R. (2024). Investigation into the Source of Students' English Speaking Difficulties. *World Journal of English Language, 14*(3), 453. <https://doi.org/10.5430/wjel.v14n3p453>

- Sharadgah, T. A., & Sa'di, R. A. (2022). A systematic review of research on the use of artificial intelligence in English language teaching and learning (2015-2021): What are the current effects?. *Journal of Information Technology Education: Research*, 21.
- Sukumaran, S., & Khair, N. S. (2024). Exploring the role of AI platforms in improving English Speaking Skills in Malaysian Higher Education Institutions. *In CRC Press eBooks* (pp. 244– 254). <https://doi.org/10.1201/9781003400691-15>
- Taeza, J. (2025). The role of AI-powered chatbots in enhancing second language acquisition: An empirical investigation of conversational AI assistants. *Edelweiss Applied Science and Technology*, 9(3), 2616–2629. <https://doi.org/10.55214/25768484.v9i3.5853>
- Tai, T., & Chen, H. H. (2024). Navigating elementary EFL speaking skills with generative AI chatbots: Exploring individual and paired interactions. *Computers & Education*, 220, 105112. <https://doi.org/10.1016/j.compedu.2024.105112>
- Tan, B. S. (2024). Usability Study of GENAI for English learning in VR. *Pakistan Journal of Life and Social Sciences (PJLSS)*, 22(2). <https://doi.org/10.57239/pjlss-2024-22.2.00556>
- Tokahashi, Y., & Vate-U-Lan, P. (2019). Toward understanding the impact of artificial intelligence on education: An empirical research in Japan. In P. Griffiths & M. N. Kabir (Eds.), *Proceedings of the 1st European Conference on the Impact of Artificial Intelligence and Robotics (ECIAIR 2019)* (pp. 433–440). Academic Conferences and Publishing International Limited. <https://doi.org/10.34190/ECIAIR.19.091>
- Üstünbaş, Ü. (2024). Hey, GPT, can we have a chat?: A case study on EFL learners' AI speaking practice. *International Journal of Modern Education Studies*, 8(1). <https://doi.org/10.51383/ijonmes.2024.318>
- Wang, C., Zou, B., Du, Y., & Wang, Z. (2024). The Impact of Different Conversational Generative AI Chatbots on EFL Learners: an Analysis of Willingness to Communicate, Foreign Language Speaking Anxiety, and Self-perceived Communicative Competence. *System*, 103533. <https://doi.org/10.1016/j.system.2024.103533>
- Wu, T., Hapsari, I. P., & Huang, Y. (2025). Effects of incorporating AI chatbots into think–pair–share activities on EFL speaking anxiety, language enjoyment, and speaking performance. *Computer Assisted Language Learning*, 1–39. <https://doi.org/10.1080/09588221.2025.2478271>
- Yang, H., Kim, H., Lee, J. H., & Shin, D. (2022). Implementation of an AI chatbot as an English conversation partner in EFL speaking classes. *ReCALL*, 34(3), 327–343. <https://doi.org/10.1017/s0958344022000039>
- Yildiz, C. (2024). ChatGPT Integration in EFL Education: A Path to Enhanced Speaking Self Efficacy. In *Novitas-ROYAL (Research on Youth and Language)* (pp. 167–182) [Journal article]. <https://doi.org/10.5281/zenodo.13861137>
- Yuan, Y. (2023). An empirical study of the efficacy of AI chatbots for English as a foreign language learning in primary education. *Interactive Learning Environments*, 1–16. <https://doi.org/10.1080/10494820.2023.2282112>
- Zheng, Y., Zhou, Y., Chen, X., & Ye, X. (2025). The influence of large language models as collaborative dialogue partners on EFL English oral proficiency and foreign language anxiety. *Computer Assisted Language Learning*, 1–27. <https://doi.org/10.1080/09588221.2025.2453191>
- Zhou, Q., Hashim, H., & Sulaiman, N. A. (2025). Supporting English speaking practice in higher education: the impact of AI chatbot-integrated mobile-assisted blended

learning framework. *Education and Information Technologies.*
<https://doi.org/10.1007/s10639-025-13401-2>