PROMOTING ACTIVE COMMUNICATION USING GAME-BASED ICT AND AI-POWERED TOOLS

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Abstract. *One of the continuing problems in EFL (English as a Foreign Language) classrooms is active verbal interaction that seriously challenges almost every learner. AI-powered tools and game-based ICT can create interactive environments where students can practice speaking without feeling nervous and uncomfortable. Through a thorough and systematical review of studies published between 2020 and 2025, this research has been investigated to better understand how game-based ICT and AI-powered tools can encourage active communication among EFL learners. This study conducted an extensive literature review focusing on game-based ICT and AI tools in EFL contexts from the Scopus, Web of Science and ERIC databases, using inclusion criteria. According to extensive research, students can greatly improve their speaking abilities and considerably boost their confidence in communication and readiness to talk in a foreign language by using AI chatbots with LLM technology, voice-based conversational agents, and gamified ICT systems. These advanced technologies' key benefits include very detailed step-by-step instructions, immense stress relief, and immediate personalized feedback. Employing the combination of game-based ICT and AI-powered tools in EFL contexts has shown valuable promise for enhancing significantly students' communication abilities in a foreign language learning environment. Future research especially needs to give a particular focus on developing well-designed studies that follow ethical standards and create teaching methods which work at different educational levels.*

Keywords: *Game-based learning, ICT tools, AI-powered tools, EFL learners, speaking fluency, willingness to communicate, motivation, learner engagement, chatbots, large language models, flipped classroom, gamification.*

Introduction.

Active verbal communication, especially speaking, is the core goal and requirement in English as a Foreign Language education, but the learners often face tough challenges to join active interaction because of the limitations in the classroom. The classroom limits include the class sizes, the teacher–student interaction time and the learner anxiety (Smith, 2022). The classroom limits hold back interaction and also slow down the improvement of communication skills desperately. The rapid development of Information and Communication Technology (ICT) and Artificial Intelligence (AI) has allowed developers to build and develop practical innovative methods which enhance enormously active communication systems. The combination of game-based ICT methods through gamified flipped classrooms and simulations creates engaging spaces for learning which help students develop effortlessly better speaking abilities. Recent research shows that students in primary school who learned through Kahoot-based gamified flipped classrooms achieved higher

results in learning English as a foreign language and higher strengthened motivation and increased self-assurance (Alshiha, 2024).

Students can practice verbal communication through advanced AI-powered tools which include mainly chatbots and conversational agents and large-language-model (LLM) systems at their preferred individual speed. Latest research has shown that voice-based AI chatbots can help students effortlessly develop better communication skills through their language learning process of meaning negotiation and activity participation (Koç, 2024). EFL classrooms use chatbots to help students build their speaking skills through reduced speaking anxiety (Satiti, & Seytaningsih, 2024). Other studies have also revealed positive results from using game-based ICT and AI tools but there is no existing study that combines these findings to analyze their impact on EFL students' active communication skills. The fast-growing body of research about AI has shown its learning benefits but scientists need more studies to understand particularly its effects on speaking skills and long-term student outcomes (Lo, 2024). This review aims to unite past research findings to prove how game-based ICT and AI-powered tools enhance EFL classroom communication while creating recommendations for researchers and practitioners to build improved interactive learning systems.

Methods.

The research used full-scale systematic literature review to reveal how game-based ICT and AI-powered tools enhance EFL students' active communication skills. The review process followed PRISMA-style guidelines to clearly identify and fully assess and merge relevant studies which were published between 2020 and 2025. The research team conducted database searches through Scopus, Web of Science and ERIC platforms. Additionally, journal searches in Frontiers in Education, ReCALL, AWEJ and other EFL and educational technology peer-reviewed journals have also been performed by integrating the search terms such as "EFL and English language learning», «game-based learning", "gamification and AI chatbot", "conversational agent" and "large language model and speaking". Following that, the search results were optimized through the application of Boolean operators (AND and OR).

Results.

This research review analyzed game-based ICT and AI-powered tools which improve EFL students' active communication skills through speaking activities from 2020 to 2025. The following section presents the primary research findings and patterns.

1. Types of tools and their applications

1.1 AI conversational agents and chatbots

Currently, research studies give a specific focus on voice-based AI chatbots as their main subject of interest. The thorough meta-synthesis of voice-based AI chatbot research findings have revealed that these tools create significant improvements in students' oral communication skills and their vocabulary and conversation abilities (Koç, 2024).

A new open-access conversational system was developed for English language learners who achieved considerably higher engagement rates and better speaking test results, using a chatbot than users of the standard listen-and-repeat system (Cha, 2024).

Teachers who effectively implemented chatbots within their flipped classroom approach through a qualitative study, clearly demonstrated how chatbots functioned satisfactorily for dialogue practice, vocabulary enhancement, grammar explanations and

creative content development in both pre-class and in-class activities (Satiti, & Seytaningsih, 2024).

The middle-school EFL students have discovered chatbots to be a remarkably effective tool for building their speaking skills in a stress-free environment which led to significantly better communication abilities and much reduced anxiety levels (Shikun, 2024).

1.2 Large language model (LLM) tools

A chatbot system which uses Large Language Models (LLMs) has been created to teach English conversation to students learning foreign languages. In this research, scientists performed a design-and-development study to give an incentive to improve their model through prompt evaluation, system alignment assessment and teacher feedback analysis while they also presented ethical aspects and proposed practical methods to enhance adaptive feedback systems (Shikun, 2024).

Researchers, additionally, tested CHOP (ChatGPT-based platform for oral presentation practice) with 13 students in their EFL higher education setting where they studied student interactions with ChatGPT while experts thoroughly evaluated the system-generated feedback quality. As a result, this study findings have revealed both beneficial elements and required improvements of the system (Cha, 2024).

2. Communicative outcomes

2.1 Speaking proficiency and fluency

According to the sophisticated systematic review of AI chatbot impact, students who interact with chatbots regularly will finely develop their speaking abilities, vocabulary skills and sentence structure (Koç, 2024). Studies on speech-evolution programs have shown that EFL learners who extensively used speech-evaluation programs with AI systems achieved much better results in pronunciation development and oral complexity and fluency (Safitri, & Ciptaningrum, 2025). Another research compared in-depth AI bot performance to traditional interfaces to show that students who used the AI bot achieved significantly better speaking test results after a short intervention (Maysoruh, & Aisyah, 2025).

2.2 Engagement, Anxiety, and Willingness to Communicate

Students experience invaluable reduced language anxiety because AI chatbots create a judgment-free environment which multiple studies demonstrate leads to increased student strong willingness to speak (Maysoruh, & Aisyah, 2025). Teachers who regularly used flipped classrooms found that chatbots constantly helped students develop autonomy and confidence through their ability to practice before class and work with peers on tasks after class (Satiti & Seytaningsih, 2024). The research data from the sophisticated mixed-methods study showed that students who regularly used voice chatbots developed effective self-regulation skills through their ability to effortlessly maintain conversations and fix their own speaking mistakes during speaking activities (Shikun, 2024).

1. Pedagogical benefits

The system provides step-by-step individualized support through major response-based adjustments which generate specifically suitable prompts and feedback based on learner abilities, preference and requirements. The AI conversational system also smoothly enables students to practice speaking conveniently at any time because it provides highly flexible access to speaking activities which considerably help students make up for their restricted face-to-face contact time (Park, & Bae, 2024). The non-human conversation partner

creates a pleasant environment where students feel less anxious and fear about making silly mistakes which, as a result, leads them to willingly practice more and repeat their attempts (Satiti, & Seytaningsih, 2024). Teachers in flipped classrooms should also effectively employ chatbots to enable students to willingly participate in purposeful communication tasks instead of performing basic tedious practice activities (Alshiha, 2024).

2. Challenges and Risks

Chatbots instantly deliver feedback of varying quality because they sometimes fail to produce effectively accurate speech sounds, proper tone and deliver suitable responses for each situation (Cha, 2024). The constant use of conversational data by AI systems, moreover, has raised multiple serious concerns about user privacy and consent and data management practices (Lo, 2024). Excessive dependence on AI partners can create a substantial risk that students may greatly decrease their social interactions with teachers and their peers. The current research primarily investigates students in higher educational settings, but scientists desperately need to give a specific focus to studies more about K–12 students and different cultural backgrounds and lower proficiency levels (Park, & Bae, 2024). Most experimental studies conduct short-term interventions which largely prevent researchers from understanding in-depth how these interventions maintain their effects over time (Shikun, 2024).

3. Gaps Identified in the Literature

The current research notably lacks studies which rigorously monitor students' fluent speaking development throughout multiple academic periods. The advanced development of chatbots and LLM tools requires more research and studies that involve both teacher and learner participation in design-based studies (Lo, 2024). The current feedback systems strictly need significant improvement because they do not properly provide sufficient assistance for students to effectively develop their pronunciation, intonation skills and pragmatic communication abilities (Satiti, & Seytaningsih, 2024).The field desperately requires new ethical standards which will properly protect student data through AI-based speaking practice while allowing students to carefully maintain control of their learning path. The current research also desperately lacks sufficient studies about effective speaking development among students from different cultural backgrounds and age groups (Park, & Bae, 2024).

Discussion.

The research findings reveal that game-based ICT systems and AI-powered tools can efficiently stimulate student communication activities. The main communication activation happens through tasks which reasonably require immediate proper responses through problem-solving and role-playing activities. AI chatbots create an environment which seriously enables students to fully express their thoughts freely while completely protecting them from any kind of criticism (Smith, 2022, Shikun, 2024). The learning environment undeniably creates a relaxed and pleasant atmosphere which efficiently enables students to find others who share their interests. Research also shows that students significantly develop better speech skills through multiple chatbot dialogues which results in highly improved fluency and accuracy. Game-based platforms, additionally, effectively help learners stay committed and engaged (Alshiha, 2024). Learners are successfully pushed by points, levels, and challenges to speak more often and carefully complete communicative tasks which

regularly keep learners active even when classroom time is limited. It has been indicated by several studies that AI tools generate personalized communication programs which can adapt to students' unique learning preferences and requirements (Cha, 2024, Park, & Bae, 2024). These tools can thoroughly adjust their prompts and difficulty levels according to learner performance which freely enables students to develop their vocabulary recall, pronunciation and sentence structuring skills smoothly. The educational tools provide advantages to teachers who make every effort to use them effectively in their teaching environment. These AI tools profoundly enable teachers to effortlessly use them in combination with flipped and blended learning approaches. The pre-class chatbot activities decently help students meaningfully develop their skills for future in-class group work and complex discussions.

Despite providing various advantages to users, yet researchers have discovered multiple essential restrictions. AI systems can generate output which undoubtedly tend to contain unpredictable behavior and unstable results. According to recent indicated research results, teacher evaluations of automated pronunciation and grammar assessments do not meet the established professional standards which these tools have proven effective in achieving (Safitri, & Ciptaningrum, 2025). Students tend to get dependent on AI hints which may eventually result in lower authentic communication attempts (Lo, 2024, Park, & Bae, 2024). Through in-depth literature review, a lack of sufficient long-term data about students extending their study duration has been discovered. The short duration of most projects desperately prevents researchers from extensively determining whether participants maintain their improved communication skills. The current research process has revealed a lack of plenteous studies as well about young language learners who come from different cultural backgrounds (Maysoruh, & Aisyah, 2025). The research findings suggest that AI tools can certainly produce their highest results when teachers use them with thoughtful guidance, yet the use of these tools does not guarantee that students will surely develop their communication abilities (Satiti, & Seytaningsih, 2024). The considerate combination of specific tasks with teacher-led reflection and scheduled follow-up activities obviously enables students to apply their digital learning to actual conversations (Safitri, & Ciptaningrum, 2025). The research conducted between 2020 and 2025 clearly demonstrates that EFL students definitely develop active communication skills through consistent use of game-based ICT and AI-powered tools as these tools diligently enable students to speak more frequently while they experience less stress and learn to speak at their individual speed.

Conclusion.

Overall, extensive analysis suggests that EFL students can certainly achieve their best active communication skills through game-based ICT systems and AI-powered tools. Since, these platforms undeniably help students talk more often while totally reducing their stress and simply enabling them to improve their speaking abilities through steady enhancements of their fluency and accuracy. Students tend to obviously remain engaged through game-based activities which carefully combine obstacles with hands-on problem-solving content. AI chatbots and large language model tools considerably enable learners to willingly practice anytime through personalized prompts which receive instant feedback. The thoughtful combination of tools enables students to clearly maintain their interest and motivation during their extended work on communication. Teachers can definitely implement these tools

to progressively create additional inspiring learning opportunities outside the classroom while considerately implementing flipped learning approaches. These advanced tools enable students to experience completely different speaking activities which substantially help them develop better skills for willingly participating in classroom discussions. The research results also show multiple critical domains which need additional study on three recently identified main challenges which include achieving accurate feedback and addressing ethical problems and students' dependence on automated systems. The research findings unfortunately remain limited because latest studies focus on short-term investigations with homogeneous participant groups. The last evidence plainly demonstrated that game-based ICT systems and AI-powered tools completely enhance EFL student communication when teachers thoughtfully implement structured activities with proper guidance and ongoing practice.

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