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ESCUELA DE DERECHO, EDUCACIÓN Y SOCIEDAD

CARRERA DE PEDAGOGIA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

RESEARCH REPORT

COMMUNICATIVE GAMES USING AI AS A DIDACTIC RESOURCE TO IMPROVE STUDENTS´ ENGLISH LANGUAGE FLUENCY

INFORME DE INVESTIGACIÓN:

JUEGOS COMUNICATIVOS UTILIZANDO LA IA COMO RECURSO PARA MEJORAR LA FLUIDEZ DEL IDIOMA INGLÉS DE LOS ESTUDIANTES

LÍNEA DE INVESTIGACIÓN:

EDUCACIÓN, COMUNICACIÓN, CULTURA, SOCIEDAD Y VALORES

PREVIO AL TÍTULO ACADÉMICO DE:

LICENCIADO EN PEDAGOGÍA DEL IDIOMA INGLÉS

AUTOR:

ELIANA ELIZABETH RAMÍREZ HURTADO

ASESOR:

Dr. HAYDEÉ RAMÍREZ LOZADA, PhD

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COMITÉ EVALUADOR

COMO MIEMBORS DEL COMITÉ EVALUADOR DEL TRABAJO DE INTEGRACION CURRICULAR DE LA PUCE ESMERALDAS, CERTIFICAMOS QUE HEMOS LEÍDO EL TRABAJO ELABORADO POR ELIANA ELIZABETH RAMÍREZ HURTADO, TITULADO **JUEGOS COMUNICATIVOS UTILIZANDO LA IA COMO RECURSO PARA MEJORAR LA FLUIDEZ DEL IDIOMA DE LOS ESTUDIANTES**, Y SUGERIMOS SU APORBACION POR CUMPLIR CON LOS REQUISITOS ESTABLECIDOS PARA LA OBTENCION DEL TITULO DE LICENCIADA EN PEDAGOGIA DE LOS IDIOMAS.

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Director de carrera	**Docente asesor**
MSc. Marjorie Perlaza Rodríguez	Dr. Haydeé Ramírez Lozada

La aprobación y aceptación final de este trabajo están condicionadas a la entrega, por parte de la estudiante, de las copias finales del mismo. Por medio de la presente, certifico que he leído este trabajo elaborado bajo mi dirección y recomiendo que sea aceptado por cumplir con los requisitos exigidos para la obtención del grado correspondiente.

CERTIFICADO DEL DIRECTOR

Yo**, Dr. Haydeé Ramírez Lozada**, en calidad de directora de este trabajo certifico haber revisado que el mismo cumple los requisitos de calidad, originalidad y presentación exigibles y que se han incorporado las sugerencias del tribunal al trabajo de grado.

Dr. Haydeé Ramírez Lozada

1755930375

DECLARACIÓN DEL AUTOR

Yo, **Eliana Elizabeth Ramírez Hurtado**, afirmo que la investigación contenida en el presente informe de investigación es única, autentica y de carácter personal.

El contenido de este trabajo constituye una responsabilidad legal y académica legitima de la autora y de la PUCE Esmeraldas.

Eliana Elizabeth Ramírez Hurtado

0803237080

DEDICATORIA

Dedico este trabajo primeramente a Dios, mi guía supremo y fuente inagotable de sabiduría, quien ilumina mi camino en los momentos de oscuridad y me brinda la fortaleza necesaria para levantarme en cada tropiezo. Gracias por las bendiciones recibidas y por permitirme alcanzar esta meta tan importante en mi vida.

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Abstract

Oral fluency is often one of the most challenging skills for learners of English as a Foreign Language (EFL), especially in academic contexts where opportunities for spoken interaction are limited. This study examines the use of communicative games supported by artificial intelligence (AI) as a way to support the development of students' English-speaking fluency. A mixed-methods approach was applied using a quasi-experimental design with pre-test and post-test. The AI-supported communicative games were applied with university students to promote regular practice in a supportive learning context. Speaking fluency was measured through words per minute (WPM) and through the evaluation of fluency, accuracy, vocabulary, and coherence. After the intervention students showed improvement in oral performance, with average WPM increasing from 96.91 to 115.73, and gains observed across all speaking indicators. These findings indicate that AI-supported communicative games can effectively support the development of speaking fluency when thoughtfully integrated into classroom practice and guided by the teacher.

Keywords: Artificial intelligence, communicative games, speaking fluency, oral interaction, EFL learners

Resumen

La fluidez oral suele ser una de las habilidades más desafiantes para los estudiantes de inglés como lengua extranjera (EFL), especialmente en contextos académicos donde las oportunidades de interacción oral son limitadas. Este estudio examina el uso de juegos comunicativos apoyados en inteligencia artificial (IA) como una forma de favorecer el desarrollo de la fluidez oral en inglés de los estudiantes. Se aplicó un enfoque de métodos mixtos mediante un diseño cuasi experimental con preprueba y posprueba. Los juegos comunicativos apoyados en IA se implementaron con estudiantes universitarios para promover

una práctica oral regular en un contexto de aprendizaje de apoyo. La fluidez oral se evaluó a través del cálculo de palabras por minuto (WPM) y mediante la valoración de la fluidez, la precisión, el vocabulario y la coherencia. Después de la intervención, los estudiantes mostraron mejoras en su desempeño oral, con un aumento del WPM promedio de 96.91 a 115.73 y avances en todos los indicadores de la producción oral. Estos resultados muestran que los juegos comunicativos apoyados en IA pueden contribuir de manera efectiva al desarrollo de la fluidez oral cuando se integran de forma adecuada en la práctica docente y con la orientación del profesor.

Palabras clave: Inteligencia artificial, juegos comunicativos, fluidez oral, aprendices de inglés como lengua extranjera.

Introduction

Learning a foreign language is more than vocabulary and grammar. For many EFL learners, speaking effectively, presenting ideas confidently, and doing so without hesitation represent one of the main challenges. Pituxcoosuvarn et al. (2025) point out that one of the main difficulties in developing spoken fluency is the lack of authentic communication practice and consistent feedback, which limits learners' confidence.

An effective way to improve students' speaking fluency is through the integration of AI-based communicative games in the classroom. AI tools such as chatbots and adaptive learning platforms create interactive and personalized spaces where learners can practice speaking, receive immediate feedback, and engage in simulated real-life communication, which supports fluency development (Qassrawi et al., 2024**).** Similarly, according to Grab (2025), artificial intelligence has significantly transformed English language learning by enabling more individualized interactions that enhance speaking fluency. However, the benefits of communicative games do not occur automatically, as their effectiveness depends on how they are implemented in the classroom.

These activities encourage active engagement and meaningful interaction among learners. When integrated with AI, communicative games become more dynamic and responsive by offering immediate, personalized feedback that supports language development. Therefore, the following research question arises: How can AI-supported communicative games improve students' English-speaking fluency?

The general objective of the study is to analyze the contribution of AI-supported communicative games to the development of English-speaking fluency among EFL students. Specifically, the study aims to implement AI-supported communicative games that promote oral interaction in the classroom, to measure students' speaking fluency before and after the

intervention, and to explore learners' perceptions of the usefulness of these games in improving their oral fluency.

Communicative Language Teaching (CLT)

Communicative Language Teaching (CLT) is commonly used in English classrooms because it focuses on real communication rather than only learning grammar rules. This approach is based on the concept of communicative competence, originally introduced by Hymes (1972), which emphasizes the appropriate use of language in different social contexts. Later, Richards (2006) discussed this concept within the framework of CLT, highlighting its importance for meaningful classroom interaction. In CLT classrooms, teachers act as facilitators, creating opportunities for students to share ideas, interact with others and use language freely (Larsen-Freeman & Anderson, 2011).

AI-Supported Language Learning

Generative AI in education is defined as a transformative approach that goes beyond traditional AI, enabling adaptive and personalized learning environments that respond to individual student needs. Guettala et al. (2024) explain that these AI models have evolved from traditional methods to systems capable of generating content, adapting activities, and

accommodating different learning styles, which has important implications for teaching and the development of learner competence. Building on this, (Macinska & Vinkler, 2024) highlight that AI-supported tools allow students to set personal goals and monitor their progress and take responsibility for their own learning. Furthermore, these technologies provide immediate feedback and scaffolding, helping learners correct mistakes strengthen self-efficacy, motivation, and persistence.

Speaking and fluency

Speaking is a productive skill that requires more than just the correct use of vocabulary and grammatical structures. According to Brown (2007), effective speaking involves not only linguistic elements, such as pronunciation and grammar, but also the ability to organize ideas clearly and adjust language to different contexts and audiences. From this perspective, fluency is closely connected to using language in a meaningful way. Nation and Newton (2009) suggest that fluency develops through regular practice that allows learners to process language quickly and naturally, while Richards (2006) emphasizes that this practice is more effective when it occurs through authentic communicative tasks.

Motivation and engagement theory

According to Dörnyei (2001), motivation is essential for success in language learning because it shapes how learners start, continue and manage their learning efforts. In his process- model of motivation, the actional phase focuses on keeping students interested and involved while learning takes place. He also explains that learners are more likely to stay motivated when activities are enjoyable and challenging without being overwhelming. In current educational settings, games and AI-based tools support this idea by offering learning experiences that adjust students' level.

Antecedents

Previous research has consistently demonstrated the efficacy of communicative games in encouraging oral contact in EFL settings. According to Obando-Mejía et al. (2023), using communicative games improved student participation and spontaneous oral production, resulting in better speaking performance. Similarly, research conducted with young EFL learners in Indonesia by Ardayati and Ramasari (2025) found that game-based communicative

activities provided engaging learning settings that facilitated active oral use of English and enhanced students' involvement in speaking tasks. Together, these data indicate that communicative games provide a solid pedagogical foundation for the development of oral abilities in EFL classrooms.

More recent studies have expanded this line of research by combining artificial intelligence into game-based language acquisition. Gu (2024) developed AI-powered English teaching games and evaluated their educational efficiency, finding that these tools increased learner engagement and facilitated interactive language practice through adaptive and personalized features. A related study carried out in Indonesia with Generation Z learners Citraningtyas and Cendana (2024) revealed that AI-based English games greatly improved students' communication skills, particularly in task-based and interactive speaking exercises.

Similarly, Alenezi and Alenezi (2025) examined the effectiveness of chatbot-assisted learning among secondary school English as a Foreign Language (EFL) students. They reported statistically significant improvements in learners' conversational competence, confidence, and oral engagement. While this research did not address game-based learning specifically, the results strongly support the effectiveness of AI-mediated interaction in developing spoken English.

Methodology

This study adopted a quantitative, quasi-experimental design to examine the effects of AI-supported communicative games on students' English-speaking fluency. A pre-test and post-test were administered using the same AI-based system to ensure consistency in assessment.

Participants were second-level university students enrolled in a Pedagogy of National and Foreign Languages program in Ecuador. Convenience sampling was employed, including only those students who completed all sessions and assessments.

Data collection involved two main instruments. First, an AI-based speaking performance test measured students' speaking rate through words per minute (WPM) and evaluated fluency, accuracy, vocabulary, and coherence. Second, a Likert-scale questionnaire was used to gather students' perceptions regarding the use of AI-supported communicative games.

Procedures

The study followed three main stages. First, students completed a pre-test using the AI-based speaking assessment system to establish their initial level of fluency. Second, the intervention was implemented through a series of AI-supported communicative game sessions conducted during regular class time. In each session, students interacted with the AI system, which assumed different conversational roles depending on the communicative task assigned.

Finally, a post-test was administered using the same AI-based system to measure changes in speaking fluency.

Results

Table 1 presents the AI-supported communicative games implemented during the intervention, which were designed to promote oral interaction and support the development of students' speaking fluency.

Table 1

AI role in Communicative games

Game name	Topic	AI role
Mini interview	Personal information	Act as a friendly interviewer encouraging a two-way conversation
Favorite artist conversation	Favorite singer, actor or musician	Act as a fan, asking follow-up questions to simulate conversation
Planning a trip with friends	Travel plans (destinations, transport, activities)	Act as a friend, prompting questions and suggestions during trip planning
Christmas plan	Personal Christmas plan	Act as a friendly conversational partner, asking and answering questions about Christmas activities
Family conversation	Family members and relationship	Act as conversational partner, asking questions about family members and relationships.
Daily routine conversation	Daily routines	Act as conversational partner, engaging in two-way conversation about daily routine

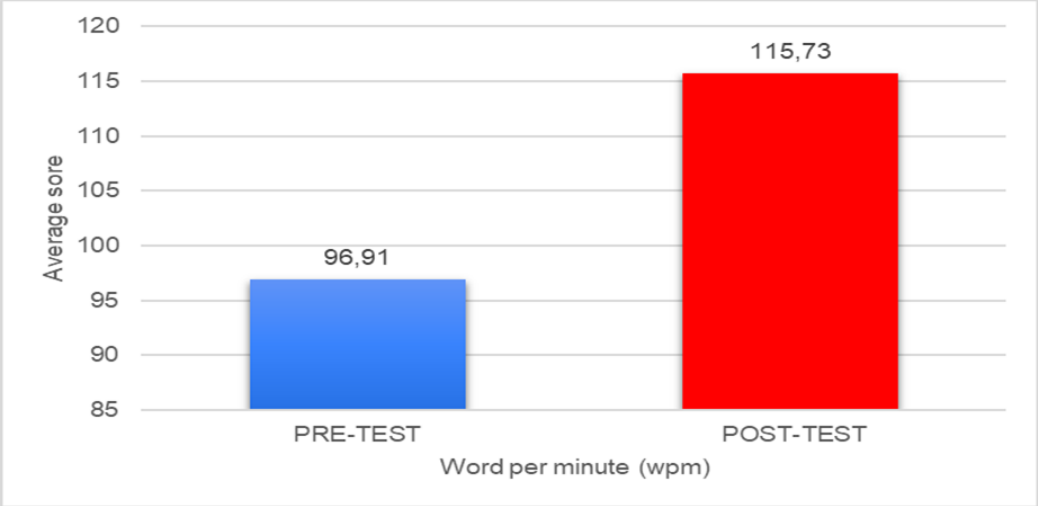
Note. The table summarizes the main features of the AI-supported communicative games

Regarding the pre-test and post-test results shown in Figure 1, students' average words per minute (WPM) increased notably. The average score rose from 96.91 in the pretest to 115.73 in the post-test, demonstrating that practice with AI-supported activities boosted

speaking speed. These gains point to improved fluency and increase confidence in oral production, suggesting that AI-supported speaking practice positively impacted students' ability to produce language more efficiently.

Figure 1

Comparison of words per minute before and after the implementation of AI-based communicative games

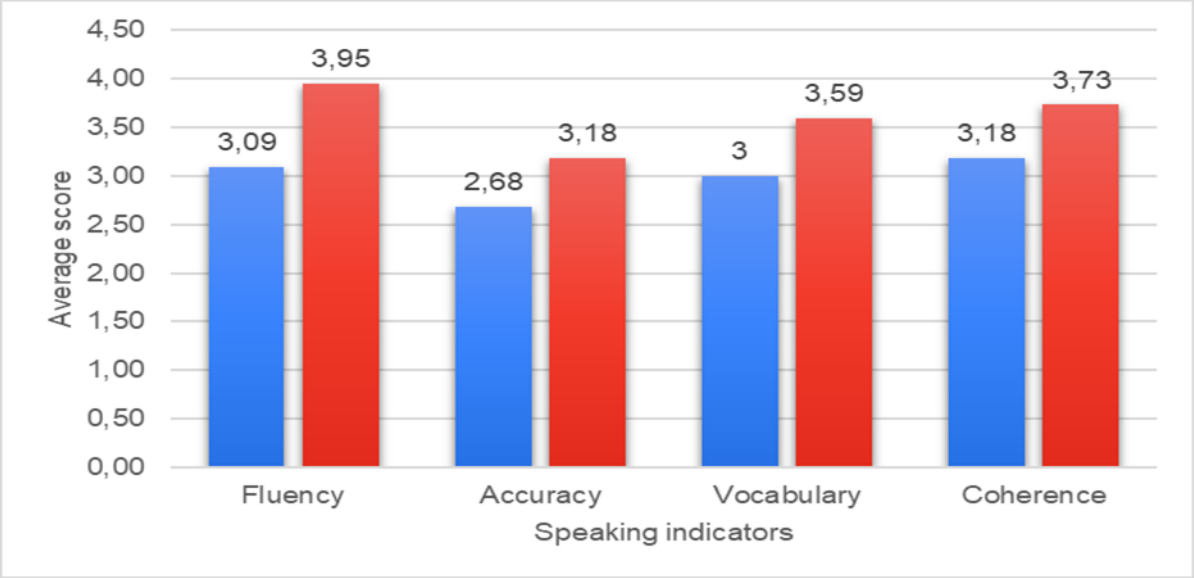


Note. Data was obtained from students speaking performance in the pre-test and post-test.

Figure 2 presents the mean scores of four speaking skills indicators, fluency, accuracy, vocabulary and coherence in the pre-test and post-test phases. Following the intervention, all indicators showed marked improvements: fluency rose from 3.09 to 3.95, accuracy from 2.68 to 3.18, vocabulary from 3.00 to 3.59 and coherence from 3.19 to 3.73.

Figure 2

Comparison of mean scores in speaking skill indicators before and after the implementation of AI-based communicative games.

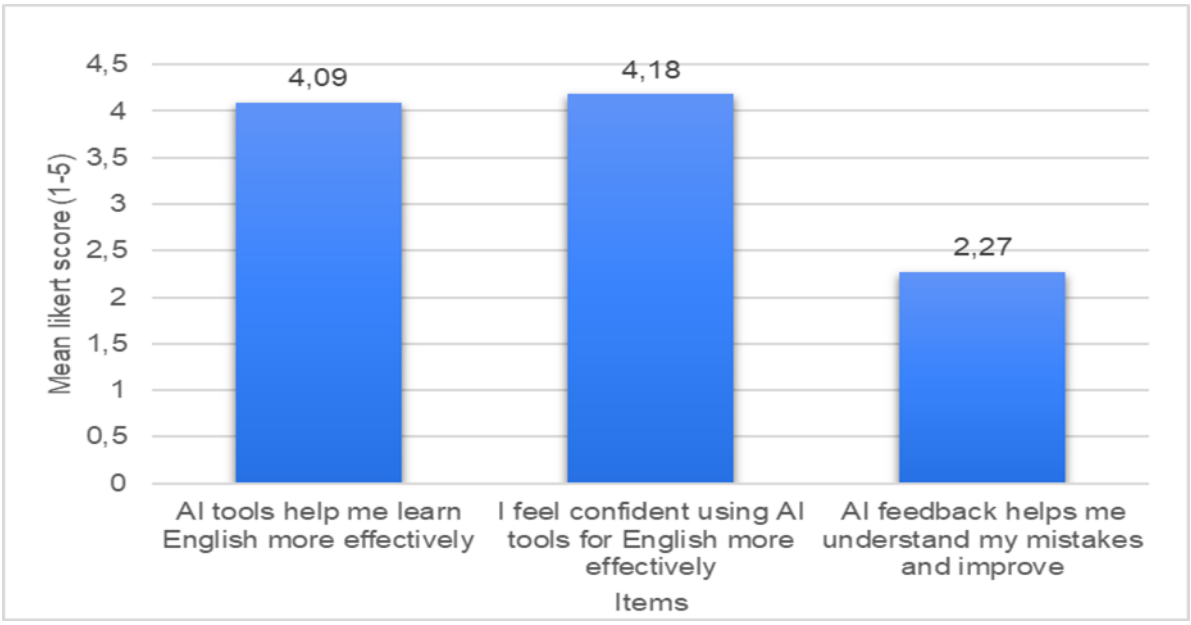


Note. ChatGPT rated the student's speaking performance on a scale from 1 to 5

Figure 3 shows what students think about using AI for learning English. Overall, students had positive views on how helpful AI tools are. For example, the statement "AI tools help me learn English more effectively" received a mean score of 4.09, indicating strong agreement. Students also felt confident using these tools, with the statement "I feel confident using AI tools for English learning" scoring 4.18. However, not all responses were positive. The statement that AI feedback helps students understand and correct their mistakes received a lower score of 2.27.

Figure 3

Dimension A. Perceptions of AI in English learning

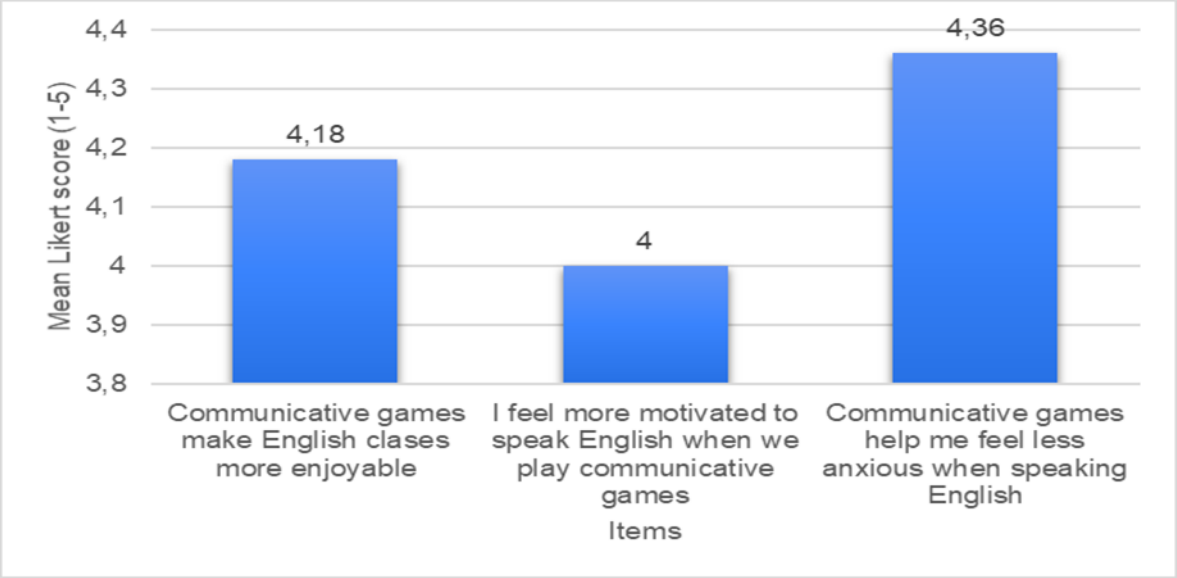


Note. The data shown came from a survey completed by the students

Figure 4 shows students´ feelings about communicative games and their engagement in class. The results indicate that students enjoy these activities. The statement "Communicative games make English classes more enjoyable" received a mean score of 4.18. Students also reported that these games motivated them to speak English more, with a score of 4.00 for that statement. Anxiety during speaking activities was lower, scoring 4.36. This suggests that communicative games help students feel less anxious when speaking in English.

Figure 4

Dimension B. Perceptions of communicative games and engagement

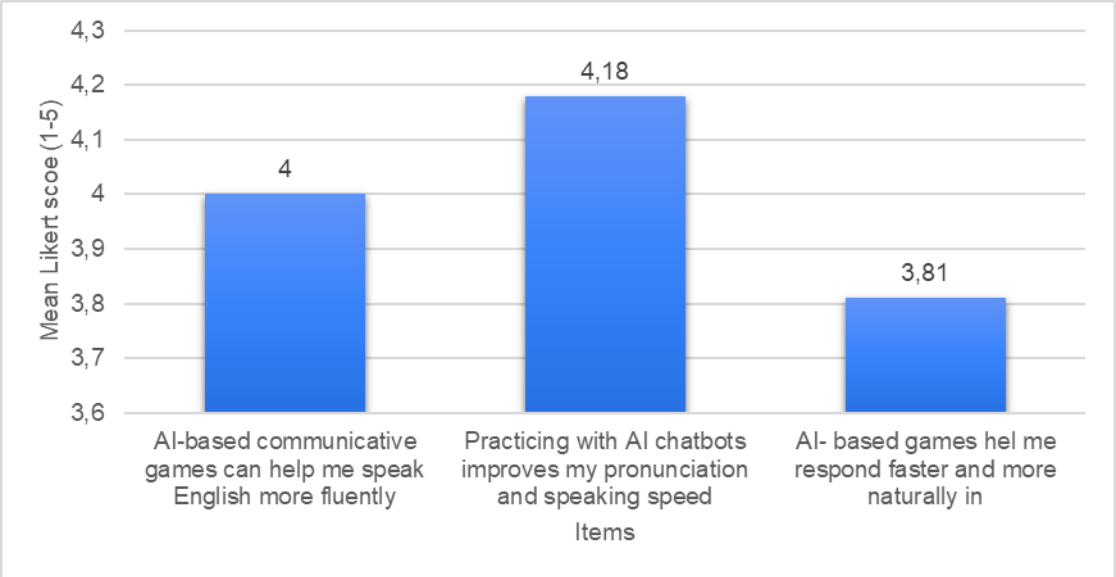


Note. The data shown came from a survey completed by the students

Figure 5 shows that students expressed positive opinions of how AI-based communicative games help improve their English fluency. Students agreed that these games support them in speaking more smoothly, with a score of 4.00 for the statement about speaking more fluently. They also felt that interacting with chatbots helped them improve their pronunciation and speaking speed, which received a higher score of 4.18. In addition, students reported that the games helped them respond faster and more naturally during conversations, with a score of 3.81. Overall, these results suggest that students find AI-based games useful for developing their speaking fluency.

Figure 5

Dimension C. Perceived impact of AI-based communicative games on fluency

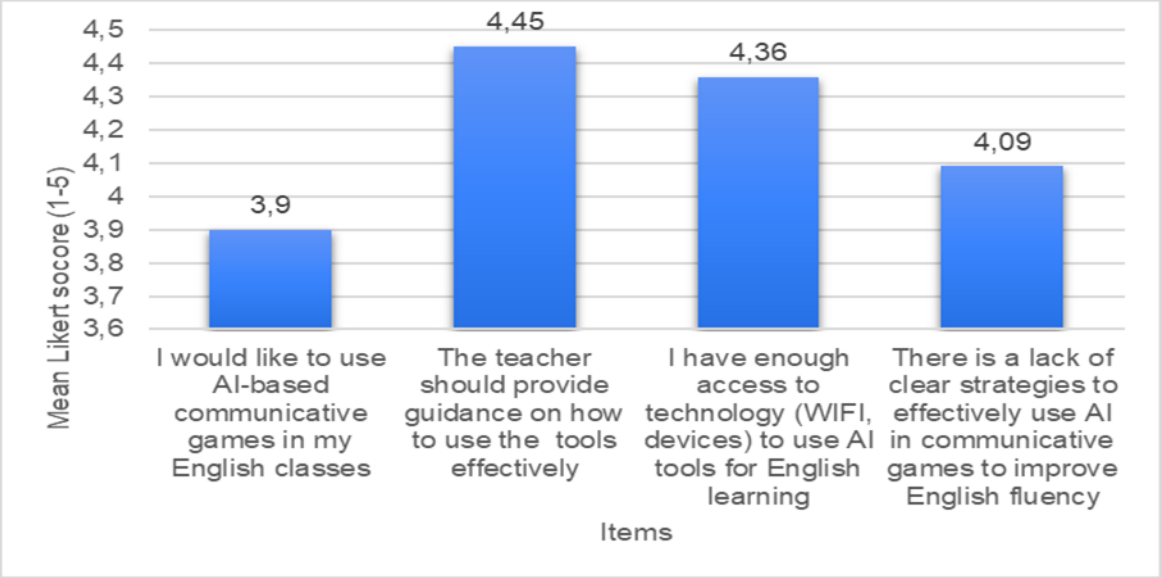


Note. The data shown came from a survey completed by the students

Figure 6 indicates that students showed interest in using AI-supported communicative games in their English classes, with an average score of 3.9. In contrast, the strongest agreement was related to the importance of teacher guidance for the effective use of these tools, which obtained a score of 4.45. Students also reported having adequate access to technological resources, including internet connection and digital devices, to support the use of AI in English learning, with a score of 4.36. Nevertheless, some hesitation was observed, as participants pointed out that clear strategies for applying AI in communicative games to enhance speaking fluency are still not well defined, reflected in a score of 4.09.

Figure 6

Dimension Methodological and practical conditions



Note. The data shown came from a survey completed by the students

Discussion

The results of this study show that AI-supported communicative games have a positive effect on the development of English-speaking fluency among students. Students who participated in these activities demonstrated improvement in words per minute, as well as in fluency, accuracy, vocabulary, and coherence. The results suggest that learners were able to communicate more clearly and with better confidence. These findings are consistent with previous research that emphasizes the contribution of communicative games promoting oral interaction and spontaneous speech. Obando-Mejía et al. (2023) observed that communicative games increase student participation and help reduce hesitation during speaking tasks. Likewise, Ardayati and Ramasari (2025) found that game-based activities

create engaging learning environments that support oral language use, which may account for the improvements in fluency and vocabulary identified in this study. In addition, the results align with Gu (2024), who highlighted that AI-driven educational games maintain learner engagement through interactive and adaptive elements, providing more opportunities for continuous speaking practice.

The improvement in students' speaking abilities is supported by the findings of Citraningtyas and Cendana (2024), who reported that AI-based English games help develop communication skills, especially during interactive speaking activities. Similarly, Alenezi and Alenezi (2025) found that AI tools not specifically designed as games, such as chatbots, can also enhance learners' conversational competence and confidence.

Students' perceptions also help explain the effects of AI-supported communicative games. Most participants reported higher motivation, greater enjoyment during learning activities, and a lower level of anxiety when speaking. These perceptions are consistent with Dörnyei's motivation theory, which highlights the importance of positive learning experiences, and active participation in the learning process.

Conclusion

AI-supported communicative games were created to improve students' English-speaking fluency, and the results showed progress in multiple aspects of oral performance. Students increased their speaking rate and also showed better control of accuracy, vocabulary, and coherence, reflecting more consistent speaking ability. The structure of the activities helped students feel more confident. Within this process, teacher involvement

remains essential, as learners require guidance to understand and use the feedback provided by AI tools effectively

The use of communicative teaching approaches together with technological tools can support the development of students speaking skills. This combination allows learners to practice English in ways that are more active and relevant to classroom learning. In addition, AI-supported speaking activities offer extra opportunities for oral practice, especially in educational contexts where students have limited chances to use English in everyday communication.

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