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Use of avatar-based instructional videos to improve oral communication in tenth grade EFL students

Uso de videos instruccionales basados en avatares para mejorar la comunicación oral en estudiantes de décimo año de EFL

[1]Franklyn Nkemakolam Ngoka
[2]Sara Stefany Jácome
[3]Fernando Patricio Riera

[2]Autor de correspondencia: nngokan@unemi.edu.ec

[1] Facultad de Posgrados. Universidad Estatal de Milagro. Ecuador.
nngokan@unemi.edu.ec
https://orcid.org/0009-0006-6672-2278

[2] Universidad Central del Ecuador. Ecuador.
sarajacome1011@gmail.com
https://orcid.org/0009-0000-2994-4898

[3] Facultad de Posgrados. Universidad Estatal de Milagro. Ecuador.
frierah@unemi.edu.ec
https://orcid.org/0009-0006-7570-1305

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Abstract

Developing oral communication skills remains a major challenge in english as a Foreign Language (EFL) context, particularly in public secondary schools in Ecuador, where learners face limited exposure to English, reduced instructional time, and high levels of speaking anxiety. This study aimed to examine the effectiveness of avatar-based instructional videos delivered through Mobile-Assisted Language Learning (MALL) in enhancing 10th-grade students' oral communication skills. A quasi-experimental pre–post design was implemented with 30 students aged 14–16 whose proficiency ranged from A1 to A2 (CEFR). Data was collected using an analytic speaking rubric assessing fluency, pronunciation, coherence, and vocabulary use, along with a student perception survey and classroom observations. The intervention lasted twelve weeks and involved twice-weekly avatar-based video activities featuring modeled language, guided repetition, and speaking prompts. Quantitative results showed notable improvements across all speaking dimensions, particularly in pronunciation, intonation, and communicative accuracy. Qualitative findings revealed increased confidence, reduced speaking anxiety, and greater willingness to communicate in English. It is noticeable that avatar-based MALL interventions provide an accessible and effective approach to supporting oral communication development and reducing affective barriers in low-resource EFL settings.

Resumen

El desarrollo de la comunicación oral continúa siendo uno de los principales desafíos en los contextos de inglés como Lengua Extranjera (EFL), especialmente en las instituciones públicas de educación secundaria en Ecuador, donde los estudiantes enfrentan una exposición limitada al idioma, escaso tiempo de instrucción y altos niveles de ansiedad al hablar. Este estudio tuvo como objetivo analizar la efectividad del uso de videos instruccionales basados en avatares, implementados a través del Aprendizaje de Lenguas Asistido por Dispositivos Móviles (MALL), para mejorar las habilidades de comunicación oral en estudiantes de décimo grado. Se empleó un

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diseño cuasi experimental de tipo pretest–postest con 30 estudiantes de entre 14 y 16 años, cuyo nivel de competencia lingüística se ubicó entre A1 y A2 según el Marco Común Europeo de Referencia para las Lenguas (MCER). La recolección de datos se realizó mediante una rúbrica analítica de evaluación del habla que midió fluidez, pronunciación, coherencia y uso del vocabulario, además de una encuesta de percepción estudiantil y observaciones en el aula. La intervención tuvo una duración de doce semanas e incluyó actividades con videos basados en avatares dos veces por semana, las cuales incorporaron modelado del lenguaje, repetición guiada y consignas de producción oral. Los resultados cuantitativos evidenciaron mejoras significativas en todas las dimensiones evaluadas, particularmente en pronunciación, entonación y precisión comunicativa. Asimismo, los hallazgos cualitativos revelaron un aumento en la confianza, una disminución de la ansiedad al hablar y una mayor disposición para comunicarse en inglés. En conjunto, los resultados sugieren que las intervenciones basadas en avatares mediante MALL constituyen una estrategia accesible y efectiva para fortalecer la comunicación oral y reducir las barreras afectivas en contextos EFL con recursos limitados.

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INTRODUCTION

Speaking is a fundamental productive skill that requires the simultaneous coordination of cognitive, linguistic, and social processes (Levelt, 1989; Burns & Seidlhofer, 2010). Developing this skill in a second language is even more challenging, particularly in English as a Foreign Language (EFL) contexts where authentic exposure is limited and opportunities for meaningful practice are largely confined to the classroom. These constraints are further compounded by psychological barriers such as high affective filters which discourage learners from taking risks and actively engaging in oral communication. As a result, many learners struggle to build speaking fluency, underscoring the need for innovative instructional approaches that leverage educational technology to create richer practice opportunities and accelerate skill development.

In the context of public education in Ecuador, the situation is particularly critical. Despite multiple curricular reforms aimed at improving national English proficiency (Ministerio de Educación, 2016), structural challenges within the classroom continue to hinder meaningful language development. Large class sizes and limited instructional time often compel teachers to prioritize grammar-focused instruction over communicative approaches, a pattern commonly observed in resource-restricted EFL settings (Richards, 2006). In more extreme cases, teachers rely heavily on the mother tongue to manage the classroom and deliver content, resulting in learning environments where Spanish remains dominant and student motivation to use English declines. This disconnect between policy intentions and classroom realities further reinforces the need for pedagogical innovations that create authentic opportunities for oral communication practice.

Building on these challenges, the use of avatars has emerged as a promising strategy to reduce the anxiety typically associated with face-to-face communication in EFL classrooms. In this context, the avatar functions as a protective "mask" or buffer that lowers affective filters

and encourages students to participate without fear of judgment, creating a sense of psychological safety often lacking in traditional oral interactions. This approach aligns with evidence showing that learners process information more effectively when verbal input is paired with visual elements and when they experience a sense of social connection with the material (Mayer, 2009). By interacting with avatars that simulate social presence, students can sustain higher levels of attention and engagement while avoiding the social pressure that commonly inhibits oral production.

This strategy is particularly well-suited to the realities of public education in Ecuador, where resource constraints and limited classroom time restrict opportunities for meaningful oral practice. Because the approach relies on Mobile-Assisted Language Learning (MALL), it avoids the high costs associated with virtual reality technologies and instead leverages video-based avatar interactions delivered through smartphone devices that are both accessible and widely used among students. By enabling learners to practice, repeat, and refine their speech beyond the classroom, this mobile-mediated approach provides the autonomy, frequency, and repetition necessary to support the automatization of oral production, thereby addressing the very limitations that hinder communicative skill development in traditional EFL settings.

Developing oral communication skills in a second language requires learners to coordinate cognitive, linguistic, and social processes simultaneously, making it one of the most demanding aspects of EFL learning (Levelt, 1989; Burns & Seidlhofer, 2010). Scholars such as Bygate (1987) have long emphasized the difference between possessing linguistic knowledge and the ability to use that knowledge spontaneously in real time. Building on this distinction, Canale and Swain (1980) proposed that communicative competence encompasses grammatical, sociolinguistic, and strategic competencies, the latter of which enables learners to manage communication breakdowns and compensate for linguistic limitations. Bachman (1990) further highlighted strategic competence as essential for intermediate learners who often rely on compensatory strategies when speaking.

These linguistic and cognitive demands intersect with affective variables that strongly influence oral performance. Foreign language classroom anxiety, first conceptualized by Horwitz et al. (1986), has been shown to significantly hinder learners' willingness to speak. More recent research indicates that this type of anxiety overloads working memory, preventing students from balancing linguistic accuracy with social self-consciousness (Melchor-Couto, 2017). Such affective barriers are especially prevalent among adolescents, who are often highly sensitive to peer evaluation and the fear of making mistakes.

In Ecuadorian public schools, these psychological challenges are compounded by structural and pedagogical constraints. Although the national curriculum emphasizes communicative competence, classroom realities frequently work against this objective (Ministerio de Educación, 2016). Teachers must manage large class sizes, limited instructional hours, and traditional assessment systems that prioritize grammar-based instruction (Richards, 2006). As a result, Spanish tends to dominate classroom interaction, limiting meaningful exposure to English and reducing opportunities for students to engage in authentic communicative practice. These conditions lead to low oral proficiency, decreased motivation, and limited fluency development among secondary-school learners.

To address these barriers, educational technology has become an important tool for expanding student access to oral practice, particularly in low-resource settings. Research in Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL) shows that technology-supported practice enhances autonomy, repetition, and multimodal learning, all of which support the automatization of oral skills (Reinders & Benson, 2017). Videos, in particular, have been shown to strengthen listening comprehension,

mimicry, and fluency by providing learners with both auditory and visual cues (Hernández & Rankin, 2018).

Within this technological landscape, avatars have emerged as a promising strategy for reducing anxiety and improving oral production. The effectiveness of avatars is grounded in the notion of presence, or the feeling of "being there," which helps lower the social pressure associated with direct human-to-human communication (Bailenson & Blascovich, 2004). Empirical studies demonstrate that avatars can enhance accuracy, fluency, and intrinsic motivation in language learners (Tai et al., 2020). Virtual environments that incorporate avatars also promote the negotiation of meaning, resulting in greater linguistic complexity than traditional classroom practices (Ebadi & Ebadijalal, 2017). Moreover, research indicates that pedagogical agents delivered through mobile devices can facilitate the transfer of practiced skills into real-world communication (Yeh et al., 2020).

The success of avatar-based videos is further supported by cognitive theories of multimedia learning. Paivio's Dual Coding Theory (1986) suggests that learning is more effective when information is processed through both verbal and visual channels. Mayer's work (2014, 2021) reinforces this idea, demonstrating that the combination of words, images, and social agency such as the presence of an avatar activates natural communication systems in the learner's brain, leading to deeper engagement and improved retention.

Finally, in contexts like Ecuador, the suitability of any educational innovation depends on its accessibility. Mobile-Assisted Language Learning (MALL) stands out as the most feasible approach given the widespread availability of smartphones among students (Klimova, 2018). MALL enables repetitive, autonomous practice outside the classroom, which is crucial in environments where instructional time is limited and opportunities for authentic communication are scarce (Soto et al., 2020). By combining avatars, videos, and mobile learning, educators can create anxiety-free, accessible, and engaging opportunities for students to develop their oral communication skills.

MATERIALS AND METHODS

The study was conducted in a public secondary school in Ecuador that follows the national English as a Foreign Language (EFL) curriculum. The participants were 10th-grade students between 14 and 16 years old, forming a class of 30 learners whose English proficiency ranged from A1 to A2 according to a test they took at the beginning of the study that follows the Common European Framework of Reference for Languages (CEFR). This population was selected because learners at this level typically struggle with oral communication due to limited exposure to English, restricted instructional time, and heightened speaking anxiety. Additionally, in this public-school, students often receive predominantly grammar-based instruction, making them suitable candidates for examining alternative methods that promote communicative practice.

A quasi-experimental pre–post design was employed to evaluate the effectiveness of avatar-based instructional videos delivered through Mobile-Assisted Language Learning (MALL) in improving students' oral communication skills. This design allowed the researchers to measure change over time by comparing students' performance before and after the intervention without disrupting the existing classroom structure or requiring a control group, which aligns with the practical constraints of public-school settings. The study adopted a mixed-approach methodology: quantitative data were obtained from speaking assessments, while qualitative observations were collected to capture insights into student engagement, participation, and anxiety levels throughout the intervention. The sequential

stages of the research process, including the diagnostic, intervention, and evaluation phases, are illustrated in Figure 1.

The intervention consisted of a series of short pedagogical videos featuring animated avatars designed to model dialogues, provide prompts, and simulate social interaction in English. These videos aimed to reduce affective pressure by allowing students to rehearse oral production in a psychologically safe environment. Each video followed a structured format that included (1) modeling of target phrases, (2) guided repetition, and (3) open-ended prompts requiring student responses.

The intervention lasted twelve weeks, with two sessions per week. During each session, students used their smartphones, either individually or shared among peers, to watch the videos and complete assigned speaking tasks. Outside the classroom, students were encouraged to review the videos and practice at their own pace. This mobile-based approach leveraged the widespread availability of smartphones in Ecuador and offered learners opportunities for autonomous, repeated oral practice that extended beyond classroom limitations.

The study employed three main instruments to collect data on students' oral communication skills and perceptions. First, an analytic speaking rubric adapted from established EFL assessment frameworks was used to evaluate students' oral performance across four dimensions: fluency, pronunciation, coherence, and vocabulary use. Each dimension was scored on a 1–5 scale. Second, individual pre- and post-speaking tasks were designed to elicit comparable samples of oral production, which were digitally recorded for later assessment. In addition, a brief student perception survey was administered to gather data on learners' experiences and perceived improvements.

Quantitative data from the speaking rubrics and surveys were processed and analyzed using IBM SPSS Statistics software, focusing on the comparison of means between the pre-test and post-test to determine the extent of improvement. For the qualitative component, the open-ended survey responses and classroom observations were analyzed through a thematic coding process, which allowed for the identification of recurring patterns related to students' confidence, motivation, and reduction of speaking anxiety. This dual analysis ensures the internal validity and reliability of the findings by triangulating objective performance gains with the subjective experiences of the participants.

Research Design

Phase 1: Diagnosis (Week 1): Administration of the oral pre-test and the initial survey to the 30 participants.
Phase 2: Intervention (Weeks 2–11): Implementation of avatar-based instructional videos through Mobile-Assisted Language Learning (MALL), with two sessions per week. The approach focused on language modeling and guided repetition.
Phase 3: Evaluation (Week 12): Administration of the oral post-test and the final survey.
Data analysis was conducted using IBM SPSS software.

RESULTS

The results of this study demonstrate a significant improvement in students' oral communication skills following the twelve-week intervention with avatar-based videos. As shown in Table 1, all dimensions evaluated through the analytic rubric exhibited an increase in their means. The most notable progress was recorded in **pronunciation**, which rose from

an initial mean of 2.30 to 4.65, and in **intonation and stress** patterns, which increased from 1.36 to 4.02. Furthermore, communicative accuracy improved from 1.12 to 3.68, while fluency rose from 1.69 to 2.95. These data, processed using IBM SPSS software, confirm that the visual and auditory modeling provided by the avatars facilitated the acquisition of phonological and structural competencies in the English language.

Table 1
Pre-test and Post-test results of communicative skills.

Criteria	***Pre-test Mean***	***Post-test Mean***
Know enough vocabulary	*1.25*	*2.85*
Have a good pronunciation	*2.30*	*4.65*
Use appropriate accuracy when communicate	*1.12*	*3.68*
Use fluent English when Speaking	*1.69*	*2.95*
Use correct tenses during the message	*1.10*	*2.72*
Use authenticity in the speech	*1.05*	*2.89*
Use formal style when speaking	*0.95*	*2.24*
Use a correct intonation and stress to communicate in English	*1.36*	*4.02*

Source: Own elaboration

On the other hand, the data obtained from the perception surveys (Table 2) reveal a substantial positive shift in the students' affective component. Prior to the intervention, confidence levels were low (M = 1.69) and speaking anxiety was high (M = 1.42). Following the use of MALL tools, confidence increased to 4.02, and the perception of **reduced anxiety** rose to 4.10. It is noteworthy that students gave the highest rating (M = 4.45) to the usefulness of avatar videos for improving their speech and expressed a clear preference for this technological method over traditional classroom activities (M = 4.30). The qualitative analysis through thematic coding reinforces these findings, suggesting that the avatar functioned as a mediator that reduced the fear of making mistakes and increased intrinsic motivation.

Table 2
Student perception Pre-survey and Post-survey results.

Criteria	***Pre-test Mean***	***Post-test Mean***
Feel confident when using English in class	*1.69*	*4.02*
Like to record themselves to practice English	*1.35*	*4.18*
Feel motivated to continue learning the target language	*1.58*	*4.25*
Can communicate in English fluently	*1.69*	*2.95*
Feel less anxious when speaking English	*1.42*	*4.10*
Believe avatar-based videos help improve speaking	*1.60*	*4.45*
Prefer practicing speaking with videos rather than only in class	*1.48*	*4.30*

Source: Own elaboration

DISCUSSION

In accordance with the objective defined for this research to analyze the effectiveness of using avatar-based instructional videos to improve oral communication skills, the goal was met by identifying significant improvements across all evaluated dimensions. The results indicated

that repeated exposure to language models and guided practice through MALL supported the development of communicative competence. These gains in pronunciation and prosody are supported by Mayer's Cognitive Theory of Multimedia Learning (2014) and Paivio's Dual Coding Theory (1986), where the combination of auditory and visual stimuli allowed students to notice and imitate phonological features more effectively.

Furthermore, the intervention demonstrated considerable affective benefits. The reduction in speaking anxiety and the increase in confidence align with the framework proposed by **Horwitz et al. (1986)** regarding the importance of managing the affective filter in the foreign language classroom. The use of avatars provided a psychologically safe environment that encouraged risk-taking and autonomous practice, overcoming the social barriers that commonly inhibit oral production in adolescents. This improvement in the willingness to communicate suggests that technological tools can mitigate structural limitations in public institutions, such as reduced instructional time and learning environments traditionally focused on grammar.

CONCLUSIONS

According to the results obtained in this research, there are sustained findings regarding the effectiveness of avatar-based videos delivered through MALL to strengthen oral communication in EFL students. A notable progress in clarity, intelligibility, and communicative accuracy was evidenced, leading to the conclusion that this strategy is an accessible and efficient alternative for low-resource contexts. Additionally, it was confirmed that the use of animated characters serves as an emotional buffer that increases motivation and significantly reduces anxiety regarding oral performance.

It is important to highlight that, although the results are valuable, this study has some restrictions that must be considered. First, the research was based on a sample of 30 students from a single institution, which could restrict the extrapolation of the findings to educational contexts with different characteristics. Furthermore, the quasi-experimental design without a control group limits the possibility of direct comparisons with traditional teaching methods in the same environment.

Another significant restriction lies in the duration of the study; while twelve weeks allowed for positive changes, long-term research is necessary to examine the sustainability of these improvements in fluency and language automation over time. Finally, it is suggested that future research include larger and more diverse samples to establish more robust causal mechanisms and validate scalable intervention tactics within the national public education system.

REFERENCES

Council of Europe. (2020). *Common European Framework of Reference for Languages: Learning, teaching, assessment – Companion volume*. Council of Europe Publishing. https://acortar.link/6vORAH

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Dhimolea, T. K., Kaplan-Rakowski, R., & Lin, L. (2022). A systematic review of research on high-immersion virtual reality for language learning. *TechTrends*, *66*, 810–824. https://acortar.link/zHO4zR

Ebadi, S., & Ebadijalal, M. (2017). The effect of Second Life as a virtual environment on the speaking ability of EFL learners. *International Journal of Computer-Assisted Language Learning and Teaching*, *7*(2), 1–19.

Galaczi, E., & Taylor, L. (2018). Interactional competence: Conceptualisations, operationalisations, and outstanding questions. *Language Assessment Quarterly*, *15*(3), 219–236. https://doi.org/10.1080/15434303.2018.1453816

Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, *70*(2), 125–132. https://acortar.link/TGAzxw

Hyland, K. (2019). *Second language writing* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/9781108635547

Klimova, B. (2018). Mobile phones and/or smartphones and their apps for teaching English as a foreign language. *Education and Information Technologies*, *23*(3), 1091–1099. https://doi.org/10.1007/s10639-017-9655-5

Larsen-Freeman, D. (2018). Looking ahead: Future directions in, and future research into, second language acquisition. *Foreign Language Annals*, *51*(1), 55–72. https://doi.org/10.1111/flan.12314

Levelt, W. J. M. (1989). *Speaking: From intention to articulation*. MIT Press.

Levis, J. M. (2018). *Intelligibility, oral communication, and the teaching of pronunciation*. Cambridge University Press. https://acortar.link/Flim2g

MacIntyre, P. D. (2020). Willingness to communicate, anxiety, and enjoyment. In J. M. Dewaele, C. Gkonou, & S. Mercer (Eds.), *The Routledge handbook of the psychology of language learning and teaching* (pp. 209–221). Routledge.

Mayer, R. E. (Ed.). (2014). *The Cambridge handbook of multimedia learning* (2nd ed.). Cambridge University Press.

Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press. https://acortar.link/XfQVW9

Melchor-Couto, S. (2017). Foreign language anxiety levels in Second Life oral interaction. *ReCALL*, *29*(1), 99–119. https://doi.org/10.1017/S095834401600018X

Ministerio de Educación. (2016). *English as a Foreign Language (EFL) curriculum*. Government of Ecuador. https://acortar.link/3MwJev

Nation, I. S. P. (2022). *Learning vocabulary in another language* (3rd ed.). Cambridge University Press. https://acortar.link/DMUoxN

Ortega, L. (2019). Sequences and processes in language learning. In G. Hogan-Brun & B. O'Rourke (Eds.), *The Palgrave handbook of minority languages and communities*. Palgrave Macmillan.

Paivio, A. (1986). *Mental representations: A dual coding approach*. Oxford University Press.

Richards, J. C. (2006). *Communicative language teaching today*. Cambridge University Press.

Skehan, P. (2018). *Second language task-based performance: Theory, research, assessment*. Routledge. https://acortar.link/rRIRJi

Soto, S. T., Intriago, E. A., & Villafuerte, J. S. (2020). Technology-enhanced teaching in Ecuadorian EFL classrooms. *International Journal of Learning, Teaching and Educational Research*, *19*(6), 143–161.

Tai, T. Y., Chen, H. H. J., & Todd, G. (2020). The impact of a virtual reality app on adolescent EFL learners' speaking performance. *Interactive Learning Environments*, *30*(7), 1–14. https://acortar.link/0w4a4i

Teimouri, Y., Goetze, J., & Plonsky, L. (2019). Second language anxiety and achievement: A meta-analysis. *Studies in Second Language Acquisition*, *41*(2), 363–387. https://acortar.link/dDimiu

Yeh, H. C., Tseng, S. S., & Heng, L. (2020). Enhancing EFL learners' speaking skills through a mobile-based role-playing activity. *International Journal of Mobile Learning and Organisation*, *14*(3), 322. https://acortar.link/J89qzw