THE DIGITAL TOOLS IN IMPROVING LISTENING AND SPEAKING SKILLS OF ENGLISH LANGUAGE LEARNERS

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Abstract. *This article examines the role of digital tools in enhancing listening and speaking skills among English language learners (ELLs). Drawing on a synthesis of recent research, the article explores how technologies such as mobile-assisted language learning (MALL), dialogue-based computer-assisted systems, podcasts, multimedia resources and other digital applications contribute to skill development. Key findings indicate that these tools promote increased motivation, engagement and proficiency through interactive and authentic learning experiences. However, challenges including cognitive load, access disparities and the need for pedagogical integration are highlighted. The discussion frames these insights within a bioecological model, emphasizing the interplay of individual, environmental and systemic factors. Recommendations for educators and future research are provided to optimize the use of digital tools in ELL contexts.*

Keywords: *digital tools, English language learners, listening skills, speaking skills, mobile-assisted language learning, technology-enhanced language learning*

Introduction

In an increasingly globalized world, proficiency in English as a second or foreign language is essential for academic, professional and social success. Listening and speaking skills, often referred to as receptive and productive oral competencies, form the foundation of effective communication. However, traditional classroom methods frequently fall short in providing sufficient practice opportunities, particularly for learners in non-English-speaking environments. Digital tools have emerged as transformative resources, offering interactive, accessible, and personalized learning experiences that address these limitations.

This article synthesizes evidence from selected research studies on the application of digital tools to improve listening and speaking skills among English language learners (ELLs). The focus is on technologies that facilitate authentic language exposure, feedback mechanisms and collaborative interactions. By reviewing meta-analyses, systematic reviews and empirical investigations, the article identifies effective strategies, potential benefits and persistent challenges. The analysis is grounded in the bioecological model of human development (Bronfenbrenner & Morris, 2006), which posits that learning outcomes are influenced by interactions across microsystems (e.g., classroom tools), mesosystems (e.g., teacher-student dynamics), exosystems (e.g., institutional support), macrosystems (e.g., cultural contexts), and chronosystems (e.g., events like the COVID-19 pandemic).The provided researches serve as the basis for this synthesis, encompassing diverse methodologies.

such as meta-analyses, systematic reviews, and experimental studies. These sources were selected for their relevance to technology-enhanced language learning (TELL) and their emphasis on oral skills.

Literature Review

Digital Tools for Listening Skills Development

Listening comprehension involves processing auditory input to derive meaning, a skill often challenged by factors such as accent variation, speech rate and contextual noise. Digital tools mitigate these issues by providing controlled, repeatable, and multimodal exposure.

Mobile-assisted language learning (MALL) has been particularly effective in this domain. A synthetic review of MALL applications in English listening instruction demonstrated that these tools enhance quantitative and qualitative outcomes, including improved tone recognition, accent differentiation, and vocabulary acquisition (Li & Singh, 2024). For instance, MALL facilitates self-directed learning through apps that offer personalized feedback and cultural immersion, leading to greater learner autonomy and motivation.

Systematic reviews further corroborate these benefits. An analysis of technology-enhanced L2 listening development from 2000 to 2022 identified 13 types of tools, including multimedia resources and intelligent tutoring systems, that support tasks ranging from comprehension exercises to interactive simulations (Zhang et al., 2023). The review highlighted the role of multimedia in reducing cognitive load by integrating audio with visual cues, resulting in better retention and transfer of skills.

Multimedia resources specifically tailored for listening and speaking training have shown promising results. A study on the application effects of multimedia in English oral training found that tools incorporating video, audio, and interactive elements significantly improved listening proficiency by providing authentic contexts and immediate feedback (Zhu, 2025). This aligns with broader reviews of technology-supported language learning, which emphasize the integration of 21st-century skills like critical thinking through multimodal inputs (Shadiev & Wang, 2022).

Meta-analyses provide quantitative evidence of efficacy. A three-level meta-analysis of dialogue-based computer-assisted language learning (CALL) systems for L2 speaking development, which inherently supports listening through conversational practice, reported moderate to large effect sizes on oral skills. Similarly, a meta-analysis of MALL applications revealed a moderate-to-strong overall effect on L2 achievement, with benefits extending to listening due to spaced repetition and multimodal features (Mihaylova et al., 2022).

Digital Tools for Speaking Skills Development

Speaking skills require productive output, often hindered by anxiety, limited practice, and lack of feedback. Digital tools address these by enabling low-stakes practice and real-time corrections.

Podcast-integrated instruction has emerged as a key method. A study on podcast-enhanced speaking lessons found improvements in informal digital learning of English,

(IDLE), academic engagement, and speaking proficiency, attributing gains to the tool's ability to foster autonomous practice and exposure to native speech patterns (Peng et al., 2025).

Digital storytelling (DST) also supports speaking development. An investigation into DST's impact on EFL speaking skills among junior high students reported significant improvements, as the tool encouraged narrative construction and oral rehearsal (Murad et al., 2023). This approach aligns with recommendations from previous research, which advocate for technology choices that promote positive attitudes and sustained engagement (Dauzón-Ledesma & Izquierdo, 2017).

Broader trends in TELL underscore the role of emerging technologies. A performance analysis of TELL in English education identified core trends such as flipped learning and game-based approaches, which enhance speaking through interactive simulations and peer feedback (Hasumi & Chiu, 2024). For example, dialogue-based CALL systems allow learners to engage in virtual conversations, improving fluency and pronunciation.

Meta-analytic evidence reinforces these findings. Reviews indicate that technology-supported interventions yield positive outcomes in speaking, particularly when incorporating collaborative elements and adaptive feedback (Shadiev & Wang, 2022; Mihaylova et al., 2022).

Integrated Digital Tools for Listening and Speaking

Many digital tools are designed to address both listening and speaking skills concurrently, capitalizing on the inherently interconnected nature of these receptive and productive oral competencies. This integrated approach allows learners to engage in activities that simulate authentic communication scenarios, where comprehension of spoken input directly informs and enhances oral output. For example, multimedia resources frequently incorporate synchronized audio-visual elements, such as interactive videos or adaptive audio platforms, that present authentic spoken language while prompting learners to produce spoken responses through recording, shadowing, or dialogue simulation tasks. Such combinations foster holistic oral proficiency by reinforcing phonological awareness, intonation patterns, and discourse structures across both input and output modalities (Zhu, 2025).

Systematic reviews have consistently affirmed the efficacy of these integrated strategies. In particular, approaches employing mobile-assisted language learning (MALL) enable seamless transitions between receptive practice such as listening to podcasts, audio clips, or conversational recordings and productive exercises, including pronunciation drills, spoken repetition, or interactive speaking prompts. These tools support balanced skill development by providing repeated, scaffolded exposure to natural speech patterns alongside opportunities for immediate application and self-assessment, thereby promoting fluency, accuracy, and confidence in oral communication (Zhang et al., 2023). Empirical evidence further indicates that such dual-focus interventions contribute to improved segmental and suprasegmental

features in speaking while simultaneously strengthening listening comprehension under varied conditions, including diverse accents and speech rates.

Beyond individual tool functionalities, broader pedagogical frameworks underscore the value of integration. For instance, dialogue-based computer-assisted language learning (CALL) systems facilitate conversational exchanges that inherently require attentive listening to system-generated speech followed by appropriate spoken replies, thus bridging the two skills in real-time interactive contexts. Similarly, podcast-integrated instruction encourages learners to listen to episodic content for meaning extraction before engaging in follow-up speaking tasks, such as summarization or discussion, which enhances both receptive processing and expressive articulation (Peng et al., 2025). Digital storytelling platforms extend this synergy by requiring learners to comprehend narrative audio models while constructing and recording their own spoken stories, thereby cultivating narrative competence alongside listening discrimination skills (Murad et al., 2023).

Despite these advantages, several challenges warrant careful consideration. High cognitive load can arise when multimedia elements overwhelm learners with simultaneous audio, visual, and interactive demands, potentially hindering rather than supporting processing in lower-proficiency contexts (Mihaylova et al., 2022). Additionally, studies evaluating tool efficacy often exhibit methodological biases, such as small sample sizes, lack of long-term follow-up, or reliance on self-reported measures, which may inflate perceived benefits and limit generalizability (Mihaylova et al., 2022). Prior research also highlights the importance of learner-centered selection criteria, where tools are chosen not solely for technological novelty but with attention to individual attitudinal factors, including motivation, perceived usefulness, and prior technology familiarity, to optimize engagement and sustained use (Dauzón-Ledesma & Izquierdo, 2017).

To address these issues effectively, educators are encouraged to adopt strategies that align digital tools with specific learning objectives, learner profiles and contextual constraints. This includes providing structured guidance on tool navigation, incorporating formative feedback mechanisms and monitoring for signs of overload or disengagement. When implemented thoughtfully, integrated digital tools offer substantial potential to create dynamic, learner-responsive environments that advance both listening and speaking proficiency in a cohesive manner, ultimately supporting more effective oral language development among English language learners.

Methodology

This review synthesizes findings from 10 key studies provided as source materials, focusing on those published between 2017 and 2026. Selection criteria prioritized relevance to digital tools, listening/speaking skills, and ELL contexts. Sources include meta-analyses, systematic reviews and empirical investigations. Data were extracted from abstracts, introductions, methods, results and discussions to identify patterns in tool efficacy, benefits, and challenges.

Findings

Digital tools consistently demonstrate positive impacts on English language learners' (ELLs) listening and speaking skills across a range of empirical investigations, meta-analyses and systematic reviews. Mobile-assisted language learning (MALL) applications and dialogue-based computer-assisted language learning (CALL) systems notably enhance learner autonomy, self-directed practice, and overall engagement by offering flexible, interactive opportunities for repeated exposure and production in low-anxiety environments (Li & Singh, 2024). These systems support individualized pacing and immediate feedback mechanisms, which contribute to sustained motivation and improved confidence in handling authentic spoken input and output.

Podcasts and digital storytelling (DST) further advance speaking proficiency through exposure to genuine, context-rich language materials and structured production tasks. Podcast-integrated instruction promotes informal digital learning of English (IDLE), elevates academic engagement, and refines speaking competencies by encouraging learners to process native-like speech patterns before generating their own responses (Peng et al., 2025). Similarly, DST facilitates narrative development and oral rehearsal, leading to measurable gains in fluency, pronunciation, and motivational levels, particularly among adolescent EFL learners in diverse cultural settings (Murad et al., 2023).

Multimedia resources and broader technology-enhanced language learning (TELL) frameworks provide comprehensive support for integrated skill development. By combining auditory input with visual and interactive elements, these approaches enable holistic oral proficiency gains, including enhanced comprehension of varied accents, improved segmentation of natural speech, and refined spoken expression (Zhu, 2025; Shadiev & Wang, 2022). Such tools align with constructivist principles, fostering active participation and the application of 21st-century skills like collaboration and critical thinking within language practice.

Meta-analytic syntheses quantify these benefits, revealing effect sizes that range from moderate to strong in favor of technology-supported interventions over traditional methods. For instance, mobile language applications yield a moderate-to-strong overall effect on L2 achievement, encompassing listening and speaking components through features like spaced repetition and multimodal input (Mihaylova et al., 2022). Systematic examinations of technology-enhanced L2 listening development since 2000 similarly affirm positive outcomes in skill acquisition and affective factors, such as reduced anxiety and increased enjoyment, though methodological considerations, including potential publication bias, necessitate interpretive caution (Zhang et al., 2023).

Emerging trends in the field continue to emphasize innovative pedagogical models that amplify interactive skill-building. Flipped learning, often combined with gamified elements, allows learners to engage with preparatory listening materials autonomously before participating in classroom-based speaking activities, thereby optimizing in-class time for communicative practice and yielding substantial improvements in oral proficiency (Hasumi,

& Chiu, 2024). Digital game-based learning (DGBL) environments similarly promote engagement through immersive, motivational contexts that integrate listening comprehension with speaking production, supporting strategy use and affective engagement. These trends reflect a shift toward multimodal and learner-centered designs, influenced by advancements in artificial intelligence and adaptive technologies.

In collectivist educational settings, where group harmony and shared learning experiences are prioritized, technology integration tends to occur more readily and produce stronger collaborative outcomes, as learners benefit from peer-supported digital interactions (Dauzón-Ledesma & Izquierdo, 2017). Conversely, individualist or resource-constrained contexts may encounter barriers related to access or attitudinal resistance, underscoring the need for culturally responsive implementation strategies.

Overall, the evidence positions digital tools as valuable assets in addressing longstanding challenges in ELL oral skill development, such as limited authentic practice and affective hurdles. While methodological limitations in some studies highlight the importance of longitudinal research, the consistent pattern of positive effects, particularly when tools are pedagogically aligned and contextually adapted, supports their continued integration into EFL/ESL curricula to foster more effective, motivating and equitable language learning experiences.

Discussion

Framed within Bronfenbrenner and Morris's (2006) bioecological model of human development, digital tools function as integral components of the techno-subsystem, a dimension increasingly recognized within the microsystem that encompasses interactions between learners and both living (e.g., peers, instructors) and nonliving (e.g., hardware, software applications) elements of communication, information, and recreation technologies in immediate environments. This techno-subsystem directly shapes processes, such as learner-tool engagement, where English language learners (ELLs) interact with mobile-assisted language learning (MALL) applications, dialogue-based computer-assisted language learning (CALL) systems, podcasts, or multimedia resources to practice listening and speaking skills. These interactions influence microsystem dynamics, including individual engagement with authentic audio input, self-paced pronunciation exercises, and real-time feedback mechanisms that promote active language production (Hasumi & Chiu, 2024).

Digital tools facilitate linkages and processes between multiple microsystems, such as connections between home-based app usage and classroom activities or between peer collaborations via shared digital platforms and formal instructional settings. For example, collaborative features in tools like Google Docs or virtual dialogue systems enable peer-supported speaking practice that bridges informal digital learning environments with educational contexts, thereby enhancing communicative competence and reducing performance anxiety through extended social interactions (Shadiev & Wang, 2022).

Exosystem factors exert indirect yet significant influences on these processes. Institutional support and policies on technology infrastructure, funding allocations for devices,

and reliable internet access and administrative decisions regarding curriculum integration of TELL tools, determines the availability and quality of digital resources without the learner's direct involvement. Government and ministerial policies further shape these exosystem elements by establishing guidelines for multimodal and technology-enhanced language instruction, as emphasized in national educational frameworks that prioritize digital transformation. Broader technological industry developments also affect the authenticity and safety of language materials accessible to learners (Mihaylova et al., 2022).

Macrosystem elements, including cultural norms, societal values surrounding technology adoption in education and prevailing attitudes toward English as a global language, influence implementation at all levels. In collectivist cultural contexts, where group-oriented learning and shared experiences are emphasized, digital tools may be more readily integrated through collaborative features that align with communal values, fostering higher levels of peer engagement and positive attitudinal outcomes (Dauzón-Ledesma & Izquierdo, 2017). Conversely, individualistic or resource-limited settings may encounter resistance or inequities stemming from differing expectations regarding technology's role in language acquisition.

The chronosystem accounts for temporal dimensions and life transitions that alter these dynamics over time. The COVID-19 pandemic exemplifies a chronosystem influence, as the abrupt shift to emergency remote teaching accelerated the adoption of TELL tools worldwide, expanding access to online listening and speaking resources while simultaneously exposing persistent disparities in digital infrastructure, device ownership, and technological literacy across socioeconomic groups (Shadiev & Wang, 2022; Hasumi & Chiu, 2024). Such events highlight how historical and evolving circumstances can either amplify or constrain the benefits of digital interventions.

The benefits of these technology-supported approaches are substantial and multifaceted. Reduced anxiety in low-stakes digital environments, heightened motivation through gamified or interactive elements, and tangible skill gains in listening comprehension (e.g., accent differentiation, speech segmentation) and speaking proficiency (e.g., fluency, pronunciation) represent key outcomes consistently reported across studies (Li & Singh, 2024; Peng et al., 2025). Nevertheless, challenges remain prominent, including access inequities that disadvantage learners in under-resourced regions, potential cognitive overload from multimodal demands, and methodological limitations in efficacy research, such as risks of bias and variable evidence quality (Mihaylova et al., 2022; Zhang et al., 2023).

To optimize these opportunities, educators must adopt pedagogical integration strategies that prioritize learner diversity, including proficiency levels, cultural backgrounds and individual learning preferences. This involves careful tool selection aligned with specific instructional objectives, provision of structured scaffolding and feedback and ongoing monitoring to mitigate overload or disengagement. By attending to the interplay across microsystem, mesosystem, exosystem, macrosystem, and chronosystem levels, while leveraging the techno-subsystem's affordances, practitioners can create more responsive and effective environments for developing oral language skills among ELLs. Future research,

should further explore these multilevel interactions longitudinally to refine theoretical applications and inform evidence-based practices in technology-enhanced language education.

Conclusion

The evidence indicates that digital tools play a significant role in improving English language learners' listening and speaking skills. Technologies such as mobile-assisted language learning applications, dialogue-based CALL systems, podcasts, digital storytelling and multimedia platforms enhance oral proficiency by providing authentic input, interactive practice, personalized feedback, and low-anxiety environments. Reported gains include better accent and tone recognition, improved speech segmentation, vocabulary growth, enhanced pronunciation, and increased fluency. Affective outcomes such as stronger motivation, learner autonomy, engagement and reduced anxiety further support sustained oral skill development. Despite these benefits, effective implementation requires attention to persistent challenges, including cognitive overload from multimodal designs, methodological limitations in existing research, unequal access to digital resources, and the risk of overreliance on technology at the expense of human interaction. Maximizing impact therefore depends on equitable access, longitudinal and methodologically rigorous research, and careful pedagogical integration supported by teacher training, curricular alignment, and culturally responsive design. When embedded within supportive educational ecosystems and balanced with communicative practice, digital tools offer a powerful and sustainable means of advancing listening and speaking proficiency among English language learners.

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