METHODOLOGY FOR DEVELOPING STUDENTS' ENGLISH SPEAKING SKILLS THROUGH DIGITAL EDUCATIONAL TOOLS

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Abstract

The development of English-speaking skills remains a significant challenge in foreign language education, particularly in contexts where learners have limited opportunities to communicate in English outside the classroom. Digital educational tools offer opportunities to expand speaking practice, facilitate interaction, provide feedback, and support independent learning. This article examines methodological approaches to developing students' English-speaking skills through digital storytelling, interactive learning media, information and communication technologies (ICT), artificial intelligence (AI), and online learning platforms. The study employs an integrative literature review and conceptual synthesis of ten scholarly publications addressing technology-supported speaking instruction across different educational contexts. The analysis organizes the methodological principles into five interconnected stages: diagnostic assessment, digital tool selection, scaffolded speaking practice, collaborative communication, and performance evaluation. The proposed framework emphasizes the alignment of technological affordances with communicative objectives, learner proficiency, and assessment criteria. It also considers teacher mediation, digital accessibility, and responsible AI integration as essential conditions for effective implementation. The article provides a theoretically grounded methodology that teachers can adapt to different educational levels and learning environments.

Keywords: *digital educational tools, English-speaking skills, teaching methodology, digital storytelling, artificial intelligence, communicative competence, technology-enhanced learning, speaking assessment.*

Introduction

English-speaking proficiency has become an important educational objective in an increasingly interconnected world. Students are expected not only to

understand grammatical structures and acquire vocabulary but also to communicate ideas clearly, participate in discussions, respond appropriately to questions, and express opinions in different social and academic contexts. However, developing speaking skills remains challenging in many English as a Foreign Language (EFL) environments. Limited exposure to authentic communication, insufficient classroom interaction, anxiety about making mistakes, and restricted opportunities for individualized feedback may prevent learners from developing confidence and fluency. These challenges highlight the need for teaching methodologies that extend speaking practice beyond conventional classroom activities.

Digital educational tools provide opportunities to address these limitations by creating flexible, interactive, and multimodal learning environments. These tools include digital storytelling platforms, video-conferencing applications, interactive presentation software, speech-recording applications, online discussion environments, learning management systems, and artificial intelligence (AI)-supported language-learning resources. When appropriately integrated into instruction, such technologies can enable learners to record speeches, rehearse presentations, participate in online discussions, collaborate on digital projects, and receive feedback on their performance.

Digital storytelling represents one promising approach to technology-supported speaking instruction. By combining narrative structure, images, audio, and video, digital storytelling encourages learners to organize ideas and communicate meaningfully. Nair and Yunus (2021) examined the use of digital storytelling in improving speaking skills through a systematic literature review, establishing a relevant research foundation for considering storytelling as a technology-supported language-learning approach. Its pedagogical value lies in connecting language production with purposeful content creation rather than limiting speaking practice to isolated linguistic exercises.

Other approaches emphasize the integration of digital resources into broader instructional designs. Criollo-C et al. (2022) investigated a hybrid methodology for improving English-speaking skills through mobile applications. Madhavi et al. (2023) addressed the development of learners' speaking skills through ICT and AI tools, while Asratie et al. (2023) examined educational technology tools in relation to EFL students' speaking performance. These research directions suggest that the methodological question extends beyond identifying useful technologies: teachers must determine how digital resources should be selected, sequenced, and integrated into learning activities.

The relevance of this issue also varies across educational levels. Ahmad et al. (2026) addressed interactive digital media for elementary school students, whereas Hermansyah et al. (2026) focused on digital learning media for teaching public speaking to junior high school students. Pinandhita (2025) considered digital tools alongside learning strategies in Indonesian university EFL contexts. Khomyshak (2022) examined digital learning technologies in the linguomethodological preparation of future foreign-language teachers. Meanwhile, Akbar (2024) and Liu (2025) addressed online learning tools and the integration of digital educational resources in English-language education.

Despite the growing range of available technologies, their educational value depends on the quality of instructional design. Technology use does not automatically produce communicative competence. Activities must provide meaningful opportunities for language production, interaction, feedback, and reflection. Teachers must also account for differences in learners' proficiency, digital literacy, access to devices, and confidence in speaking.

Accordingly, this article aims to develop a theoretically grounded methodology for improving students' English-speaking skills through digital educational tools. It seeks to identify the principal methodological stages, explain the relationship between digital resources and communicative objectives, and propose an adaptable framework for classroom implementation. The article contributes a structured approach that connects technology selection, guided practice, collaborative communication, and assessment within a coherent pedagogical process.

Methods

This study adopts an integrative literature review and conceptual synthesis design. The purpose is to examine selected scholarly contributions concerning digital educational technologies and English-speaking instruction, identify recurring methodological themes, and formulate a framework for practical implementation. Unlike an experimental study, the research does not collect new learner-performance data or test the proposed methodology with a participant group. Its findings therefore represent a conceptual synthesis rather than a measurement of intervention effectiveness.

The review is based on ten publications supplied for the study. The selected literature covers digital storytelling, mobile applications, hybrid learning, ICT and AI tools, educational technology, interactive digital media, online learning, and teacher preparation. The publications also represent different educational contexts, including elementary education, secondary education, and higher education. This diversity makes it possible to consider methodological principles that may be

adapted across learner groups while recognizing that particular activities and technologies require contextual adjustment.

The publications were considered according to three principal criteria: relevance to English-speaking development, explicit attention to digital educational tools or technology-supported instruction, and potential contribution to methodological planning or assessment. Studies addressing digital storytelling, interactive speaking activities, hybrid learning, and technology-supported teaching were particularly relevant because they connect technological resources with instructional practices.

The selected publications were organized into four thematic categories. The first category concerned digital content creation, including digital storytelling and presentation-based speaking activities. The second addressed interactive and technology-supported practice, including mobile applications, online learning tools, and digital media. The third focused on ICT and AI integration, particularly the relationship between digital resources, learner participation, and feedback. The fourth addressed instructional design and professional preparation, including hybrid methodologies and the digital competencies required of language teachers.

This classification was intended to establish a common analytical structure across publications that differ in their educational settings and research objectives. It was not treated as evidence that all studies used comparable methods, populations, or outcome measures.

The literature was examined through four analytical operations: thematic analysis, comparative analysis, methodological abstraction, and conceptual synthesis.

First, thematic analysis was used to identify the principal instructional functions associated with digital educational tools. These functions included providing language input, supporting repeated practice, enabling content creation, facilitating interaction, delivering feedback, and documenting speaking performance.

Second, comparative analysis was used to distinguish the pedagogical contributions of different technological approaches. For example, digital storytelling emphasizes the organization and delivery of narratives, whereas interactive platforms can support exchanges between learners. AI-supported tools may provide additional opportunities for individualized practice, while hybrid approaches combine digital activities with classroom interaction. These functions are complementary but should not be assumed to produce identical learning outcomes.

Third, methodological abstraction was used to identify instructional principles that could be applied across different technologies. These principles included setting explicit communicative objectives, matching task complexity to proficiency level, providing structured preparation, ensuring repeated opportunities for meaningful speaking, and evaluating performance against transparent criteria.

Finally, conceptual synthesis brought these principles together into a five-stage methodological framework: diagnostic assessment, tool selection, scaffolded speaking practice, collaborative communication, and performance evaluation. The framework was developed to connect the selection of technology with the instructional activities and assessment procedures through which speaking development is pursued.

The proposed framework is guided by the principle of pedagogical alignment. Each digital activity should serve a clearly identified speaking objective, and the expected learning outcome should determine the choice of tool rather than the reverse.

The first stage, diagnostic assessment, identifies learners' existing abilities and areas requiring improvement. The second stage, tool selection, matches digital resources to the identified needs. The third stage, scaffolded speaking practice, moves learners from supported language production toward more independent performance. The fourth stage, collaborative communication, creates opportunities to use English for authentic or realistically simulated purposes. The fifth stage, performance evaluation, uses defined criteria to assess progress and guide subsequent learning activities.

These stages are conceptually sequential but can operate cyclically. Assessment may reveal new learning needs, prompting teachers to modify the selected tools, adjust task difficulty, or introduce additional practice. In this way, the framework connects instructional planning with continuous improvement.

To avoid overstating the evidence, the synthesis distinguishes between methodological recommendations derived from the literature and empirically demonstrated outcomes. The ten publications were supplied as bibliographic references rather than as a complete, independently verified database of full-text studies. Consequently, the review does not claim exhaustive coverage of the field, formal risk-of-bias assessment, or quantitative aggregation of effect sizes.

The study also recognizes that the selected publications differ in educational context and research design. Findings from elementary learners cannot automatically be generalized to university students, and evidence concerning learner perceptions cannot be treated as equivalent to measured speaking improvement. The

proposed framework should therefore be understood as a theoretically informed methodological model requiring further empirical evaluation.

Results

The conceptual synthesis resulted in five interconnected methodological components for developing English-speaking skills through digital educational tools. Together, these components provide a structured process for connecting learner needs, technological resources, speaking activities, and assessment.

The first component is the identification of learners' existing speaking abilities and specific learning needs. Before introducing digital tools, teachers should establish a baseline profile covering fluency, pronunciation, grammatical accuracy, vocabulary use, comprehensibility, and interaction. A short oral interview, a recorded response to a familiar topic, or a brief presentation can provide an initial indication of learners' strengths and difficulties.

Diagnostic assessment should lead to specific instructional objectives. For example, a learner who struggles to organize ideas may benefit from digital storytelling and presentation planning. A learner who hesitates frequently may require structured speaking prompts and repeated oral practice. Learners who pronounce individual words accurately but struggle in conversation may need more interactive tasks.

This approach makes digital tool selection responsive to educational needs rather than driven by technological novelty. It also establishes criteria against which subsequent speaking performance can be evaluated.

The second component is the purposeful selection of digital educational resources. The literature represented by Nair and Yunus (2021), Criollo-C et al. (2022), and Madhavi et al. (2023) provides different starting points for considering storytelling, mobile-supported learning, and ICT or AI integration.

Digital storytelling is appropriate for narrative production, sequencing ideas, and practicing extended speech. Audio-recording tools support repeated rehearsal and self-monitoring. Video-conferencing and online discussion platforms facilitate synchronous interaction, while collaborative digital environments support group projects and shared presentations. AI-supported tools may provide additional practice opportunities, language suggestions, or automated feedback, depending on their actual capabilities.

Tool selection should consider accessibility, usability, learner proficiency, privacy, and the availability of teacher support. A sophisticated platform is not necessarily more educationally effective than a simple recording application if the latter better serves the learning objective.

The third component involves organizing speaking activities into manageable stages. A recommended sequence begins with language preparation, continues with guided production, and progresses toward independent communication.

During preparation, learners examine a model, collect relevant vocabulary, organize ideas, and identify useful expressions. During guided practice, they complete structured dialogues, record short responses, or rehearse presentations. During independent production, they deliver a narrative, explain a process, participate in a discussion, or present a personal viewpoint.

Digital storytelling can be incorporated by asking learners to develop a short narrative using images, recorded narration, and a clear beginning, middle, and conclusion. Similarly, presentation software can support public-speaking tasks by allowing learners to organize visual materials and rehearse their oral delivery.

Repeated practice should focus on meaningful improvement rather than repetition alone. Learners can record an initial version, receive feedback, identify two or three priority areas, and produce a revised version. This process encourages self-monitoring and makes revision an integral part of speaking development.

The fourth component is the use of digital environments to create opportunities for interaction. Speaking proficiency requires more than delivering prepared monologues: learners must also ask questions, respond to others, clarify meaning, and sustain conversations.

Teachers can organize online interviews, paired discussions, collaborative storytelling, group presentations, and recorded debates. For instance, students may conduct short interviews on everyday topics, exchange recordings with classmates, and prepare follow-up questions based on the information obtained.

Technology-supported projects can connect individual practice with collaborative communication. The work of Asratie et al. (2023), Pinandhita (2025), and Liu (2025) is relevant to examining the broader relationship between educational technologies, learning strategies, speaking performance, and participation. Nevertheless, participation should be distinguished from learning outcomes: posting frequently or completing digital tasks does not necessarily demonstrate improved oral proficiency.

The fifth component is the systematic assessment of speaking performance. A practical assessment rubric should include fluency, pronunciation and comprehensibility, vocabulary, grammatical accuracy, task achievement, and interaction where relevant. The relative importance of each criterion should reflect the task’s purpose and learners’ proficiency level.

Teachers can combine teacher assessment, peer feedback, and learner self-assessment. Recorded speeches allow learners to compare earlier and later performances, identify recurring difficulties, and set new goals. Automated feedback may supplement this process but should not replace professional judgment, particularly when evaluating meaning, appropriateness, and the quality of interaction.

The five components form a cyclical process: diagnostic evidence informs tool selection; selected tools support scaffolded and collaborative practice; assessment identifies progress and remaining needs; and these findings guide the next instructional cycle. The principal outcome of the synthesis is therefore a coherent methodological framework rather than a claim that one particular digital platform is universally superior.

Discussion

The proposed framework emphasizes that the development of English-speaking skills through digital educational tools depends on the relationship between technology, task design, and teacher guidance. The availability of digital resources expands the range of possible learning activities, but educational improvement requires purposeful integration into a coherent instructional sequence.

An important implication concerns the distinction between language practice and communicative competence. Digital exercises can help learners rehearse pronunciation, retrieve vocabulary, and organize sentences. However, effective communication also requires responding to unexpected questions, interpreting a conversation partner’s intentions, clarifying misunderstandings, and adapting language to context. Therefore, individual digital exercises should be connected to interactive tasks in which learners use language to achieve meaningful purposes.

Digital storytelling illustrates this relationship. Preparing a digital narrative requires learners to select content, organize ideas, and communicate a coherent message. Nair and Yunus (2021) provide a relevant literature-based foundation for examining storytelling as a means of supporting speaking development. Nevertheless, storytelling activities should include opportunities for spontaneous responses and follow-up questions if the objective is to develop interaction alongside prepared speech.

The integration of AI and other ICT tools creates additional methodological possibilities. Madhavi et al. (2023) address ICT and AI in speaking development, highlighting a relevant area for technology-supported language instruction. AI-enabled tools may allow learners to practice conversational exchanges, receive

language suggestions, and revise spoken responses. However, automated feedback may be inaccurate, incomplete, or insensitive to contextual meaning. Teachers should therefore encourage learners to evaluate feedback critically rather than accept every recommendation as correct.

Teacher competence is consequently central to successful implementation. Khomyshak (2022) examines digital technologies in the methodological training of future foreign-language teachers, making teacher preparation an important part of the wider discussion. Teachers need to evaluate the pedagogical suitability of digital resources, design accessible activities, establish assessment criteria, and protect learners' personal information. Digital competence should include not only the ability to operate applications but also the ability to determine when their use contributes meaningfully to learning.

Another consideration is the diversity of educational settings. Younger learners may benefit from short, visually supported tasks, storytelling, and structured dialogues. Secondary-school learners may engage in guided presentations, interviews, and collaborative projects. University students may require academic discussions, professional presentations, and argument-based speaking activities. The studies by Ahmad et al. (2026), Hermansyah et al. (2026), and Pinandhita (2025) address different educational contexts, underscoring the need to adapt methodological choices to learners' developmental and academic needs rather than applying an identical model everywhere.

Accessibility and equity also deserve attention. Unequal access to reliable internet, suitable devices, paid applications, and quiet recording environments can limit participation. Teachers should provide alternatives, such as offline preparation, low-bandwidth resources, and in-class recording opportunities. Privacy protections are particularly important when students upload audio recordings or videos to third-party platforms.

The proposed methodology has limitations. It is a conceptual framework synthesized from ten selected publications, not an experimentally validated intervention. The studies vary in scope and educational context, and the available bibliographic information does not support a quantitative comparison of their outcomes. Future research should implement the framework with clearly defined participant groups, use validated speaking assessment rubrics, compare baseline and post-intervention performance, and document the duration and intensity of digital practice. Such investigations would help establish which combinations of tools and instructional strategies are most useful for particular learner populations.

Conclusion

This article has proposed a five-stage methodology for developing students' English-speaking skills through digital educational tools. The framework connects diagnostic assessment, purposeful tool selection, scaffolded speaking practice, collaborative communication, and performance evaluation. It brings together digital storytelling, interactive media, online learning environments, and AI-supported resources within a coherent pedagogical process.

The central conclusion is that digital technologies should be selected according to communicative objectives and integrated with structured practice, meaningful interaction, and constructive feedback. Their educational value depends not simply on access to applications but on the quality of instructional design, the teacher's methodological competence, and the learner's active participation.

In practical terms, teachers should begin by identifying speaking difficulties, choose accessible tools that address those needs, organize progressive speaking activities, and evaluate performance through transparent criteria. Digital feedback should complement rather than replace teacher guidance, while accessibility, privacy, and responsible AI use should remain integral to planning.

As the framework has not yet been experimentally validated, its effectiveness should be examined through future empirical research involving diverse learner groups and clearly specified assessment procedures. Such research would strengthen the evidence base for technology-enhanced speaking instruction and support the development of context-sensitive teaching methodologies.

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