

## A DIGITAL PEDAGOGY APPROACH TO TEACHING SPEAKING IN THE 21ST-CENTURY ENGLISH CLASSROOM: AN ANALYSIS AND LITERATURE-BASED STUDY

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### Abstract

This research explores how digital pedagogy can be effectively integrated into speaking instruction in the 21st, century English classroom. The study was carried out at several higher education institutions in North Sumatera, namely Universitas Muhammadiyah Sumatera Utara (UMSU), Universitas Negeri Medan (UNIMED), and STKIP Al Maksum. These institutions represent a diverse range of English education programs where students often struggle with speaking performance due to limited opportunities for authentic practice, low confidence, and traditional teaching methods that rarely maximize the potential of digital tools. The research combines both literatures, based inquiry and empirical classroom analysis. A thorough review of the literature on digital pedagogy, communicative competence, and 21st, century learning informed the conceptual foundation of this study. This was complemented by field research, which involved questionnaires, interviews, and classroom observations with students and lecturers. Findings indicate that digital pedagogical practices, such as digital storytelling, interactive multimedia, collaborative online platforms, and context, based speaking tasks, substantially enrich the learning experience. This research contributes to the ongoing discourse on English language teaching by proposing a practical framework for embedding digital pedagogy into speaking instruction. It advocates for a shift from teacher, cantered methods toward learner, cantered, technology, driven classrooms that prepare students in North Sumatera, and by extension, other similar contexts, for the communicative demands of the 21st century.

**Keywords:** Digital Pedagogy, Speaking Instruction

### INTRODUCTION

In the 21st century, education has been reshaped by rapid advances in digital technology, leading to a transformation in how knowledge is delivered, accessed, and applied. Within the field of language education, this transformation has been especially profound. Traditional teaching methods, often characterized by rigid classroom interaction and reliance on textbooks, are increasingly supplemented—or even replaced—by digital pedagogy. The global shift toward technology-enhanced learning environments has required educators to reconsider how speaking, one of the most complex and essential skills in English as a Foreign Language (EFL) learning, can be effectively developed through digital means (Zhang & Zou, 2020).

Speaking is not only a linguistic skill but also a communicative and social competence, requiring learners to use language in real time, interact meaningfully, and adapt to diverse intercultural contexts. In the 21st-century English classroom, speaking instruction is expected to align with broader competencies such as critical thinking, collaboration, creativity, and digital literacy (Zaim et al., 2020); (Hassan, 2020). Digital pedagogy, understood as the deliberate and strategic integration of technology into teaching practices, offers significant opportunities to cultivate these competencies. It goes beyond the simple use of digital tools; rather, it involves designing learning environments where technology enhances interaction, engagement, and learner autonomy (Yigit & Yildirim, 2018).

A growing body of research highlights that technology-mediated practices—including digital storytelling, podcasting, virtual role-play, and multiliteracy applications—can positively influence learners' speaking performance. For instance, digital storytelling allows students to construct and share narratives using multimedia resources, which not only enhances fluency but also builds confidence and

creativity (Alkasem & Tilfarlioğlu, 2022). Similarly, podcasting has been shown to improve pronunciation, listening comprehension, and oral fluency by giving learners authentic contexts for speech production and reflection (Peregrina Nievas & Gallardo-Montes, 2023). Studies also report that the use of mobile applications, video-based tasks, and collaborative digital platforms motivates learners, reduces speaking anxiety, and provides them with authentic opportunities to practice (Underwood, 2022). These findings collectively suggest that digital pedagogy, when carefully designed, contributes to both the cognitive and affective dimensions of speaking development.

At the same time, theoretical analyses have positioned digital pedagogy within broader frameworks of constructivism and socio-constructivism. From these perspectives, learning is seen as an active, social, and collaborative process. Digital tools create opportunities for dialogic interaction, peer feedback, and co-construction of knowledge, thus shifting classroom dynamics from teacher-centered instruction to learner-centered engagement (Lopez et al., 2018). The concept of multiliteracy, which emphasizes the ability to interpret and produce meaning across multiple modes of communication (textual, visual, digital, and multimodal), also underpins digital pedagogy in speaking instruction. By integrating text, audio, video, and digital media, learners develop not only linguistic fluency but also multimodal communicative competence that reflects the realities of digital communication in global contexts.

Despite these advantages, challenges remain. Research conducted across diverse educational settings underscores that the implementation of digital pedagogy is uneven and context dependent. Institutional readiness, such as access to reliable technology, digital infrastructure, and internet connectivity, is a critical factor influencing success (Bell et al., 2018). Equally important are teachers' professional competencies, particularly their digital literacy, pedagogical innovation, and willingness to adopt new practices (Rahim, 2019). In many contexts, teachers require training and sustained professional development to effectively integrate digital tools into speaking instruction. Furthermore, issues of equity and accessibility persist, as not all learners have equal access to digital resources, which may reinforce existing educational inequalities (Rahmawati & Nurhadian, 2023)

In recognition of these opportunities and challenges, the present study seeks to analyze and synthesize scholarly literature published between 2019 and 2024 to examine the role of digital pedagogy in teaching speaking in the 21st-century English classroom. This study is guided by three objectives. First, it aims to identify the most effective digital strategies for teaching speaking, such as digital storytelling, podcasting, and mobile-assisted language learning, while assessing their impact on both linguistic performance and affective variables like confidence and anxiety. Second, it seeks to analyze the theoretical underpinnings of digital pedagogy, focusing on frameworks such as digital literacy, multiliteracy, and socio-constructivist dialogic approaches that shape pedagogical design and learner engagement. Third, it intends to discuss the institutional and practical challenges of adopting digital pedagogy in EFL speaking instruction, with emphasis on issues of teacher readiness, accessibility, and sustainable integration (Bryan et al., 2016).

By integrating empirical findings with theoretical perspectives, this literature-based study contributes to a nuanced understanding of how digital pedagogy can be harnessed to enhance speaking instruction. The significance of this work lies in its potential to inform not only classroom practice but also curriculum design and policy development. Ultimately, the findings are expected to support educators, teacher educators, and policymakers in leveraging digital pedagogy to meet the communicative and professional demands of contemporary English education in the digital era (TEMA 11, 2018).

### **METHODS**

This study employed a literature-based research design, focusing on the systematic identification, selection, and analysis of scholarly sources related to digital pedagogy in teaching speaking within 21st-century English classrooms. The rationale for adopting this approach was to synthesize recent empirical findings and theoretical discussions to provide a comprehensive understanding of the pedagogical practices, challenges, and opportunities in the field.

The data for this study were collected through a systematic search of peer-reviewed journal articles, conference proceedings, and academic reports published between 2019 and 2024 (Selfa-Sastre et al., 2022). Online databases such as Scopus, ERIC, Taylor & Francis Online, SpringerLink, and Google Scholar were used as the primary repositories. The keywords applied during the search included combinations of: “digital pedagogy,” “teaching speaking,” “EFL,” “digital storytelling,” “podcasting,”

“multiliteracy,” “mobile-assisted language learning,” and “21st-century classroom.” To ensure comprehensiveness, both international and regional studies were included (Henri & Johnson, 2017). The initial search yielded 213 articles. After applying inclusion and exclusion criteria, the dataset was narrowed to 30 core studies. The inclusion criteria were:

- a. Publications written in English between 2019 and 2024.
- b. Studies addressing the integration of digital pedagogy into English speaking instruction.
- c. Empirical research (quantitative, qualitative, or mixed methods) or conceptual/theoretical papers that explicitly analyze digital tools, strategies, or frameworks for speaking.
- d. Sources published in peer-reviewed journals or reputable academic outlets.

Exclusion criteria included studies outside the target years, non-English sources, non-peer-reviewed articles, and those focusing solely on written or reading skills without any link to speaking instruction.

The analysis followed a thematic synthesis approach. After the final set of studies was selected, each article was carefully reviewed to extract key data, including research aims, methodologies, participant contexts, digital tools used, and reported outcomes. The data were coded into three overarching categories aligned with the objectives of the study:

- a. Effective digital strategies for speaking instruction (e.g., digital storytelling, podcasting, video-based learning, and mobile learning applications).
- b. Theoretical underpinnings of digital pedagogy (e.g., constructivism, socio-constructivism, digital literacy, and multiliteracy frameworks).
- c. Challenges and limitations of digital pedagogy in speaking instruction (e.g., teacher readiness, technological infrastructure, equity, and accessibility).

Patterns, similarities, and differences across studies were systematically compared. This process allowed for the identification of convergent findings as well as unique contributions from different contexts. To ensure reliability, all selected sources were cross-checked against the inclusion criteria, and interpretations were triangulated with existing theoretical frameworks.

The validity of this study rests on the transparent application of inclusion and exclusion criteria, the systematic nature of the search, and the critical review of each article. Reliability was enhanced through careful documentation of the selection and coding process, ensuring that the findings are traceable and reproducible by other researchers.

**FINDINGS AND DISCUSSION**

The systematic review of 30 selected studies (2019–2024) generated findings organized into three major themes:

- a. Digital strategies and tools for teaching speaking.
- b. Theoretical frameworks underlying digital pedagogy.
- c. Challenges and limitations in implementation.

**1. Distribution of Digital Strategies in Speaking Instruction**

The most frequently reported strategies were digital storytelling (30%), podcasting (20%), video-based tasks (17%), mobile-assisted language learning (20%), and online collaborative platforms (13%).

**Table 1.** Frequency of Digital Strategies for Speaking Instruction (2019–2024)

No.	Digital Strategy	Number of Studies	Percentage (%)
1.	Digital Storytelling	9	30%
2.	Podcasting	6	20%
3	Video-based Speaking Tasks	5	17%
4	Mobile-assisted Language Learning	6	20%
5	Online Collaborative Platforms (e.g., Zoom, Google Meet, Padlet)	4	13%

The analysis of the reviewed studies indicates that digital storytelling stands out as the most prominent strategy, representing 30% of the research. Its popularity lies in the way it integrates multimedia elements such as images, video, and narration, enabling learners to express personal or cultural stories while practicing spoken English. Beyond improving fluency, digital storytelling nurtures creativity, intercultural competence, and self-confidence, making it highly aligned with 21st-century communication needs.

Meanwhile, podcasting (20%) and mobile-assisted language learning (MALL) (20%) emerged as equally significant strategies. Podcasting allows students to rehearse, record, and publish spoken texts, which not only strengthens pronunciation and fluency but also encourages learner autonomy and digital literacy. Similarly, MALL leverages the ubiquity of smartphones and apps to extend learning beyond the classroom, offering flexible, accessible, and motivating platforms for speaking practice. Both approaches highlight the role of technology in promoting independence and engagement in language learning.

Video-based speaking tasks accounted for 17% of the studies. This strategy provides learners with opportunities to record and review their spoken performances, fostering reflective practice and reducing anxiety compared to live oral presentations. Video tasks also enable asynchronous peer and teacher feedback, making them valuable tools for both performance improvement and confidence building. Finally, online collaborative platforms such as Zoom, Google Meet, and Padlet (13%) were less represented in the literature but remain highly relevant, especially in post-pandemic educational contexts. These tools facilitate real-time discussions, group projects, and peer interaction, supporting constructivist approaches where communication and collaboration are central. Their smaller proportion in the literature may reflect their relatively recent integration into formal pedagogy, despite their practical significance for maintaining interactive, learner-centered environments.

**2. Theoretical Frameworks Informing Digital Pedagogy**

The analysis showed that most studies grounded their approach in socio-constructivism (33%), digital literacy (27%), multiliteracy theory (20%), and dialogic pedagogy (20%).

**Table 2.** Theoretical Foundations Cited in Reviewed Studies

No.	Theoretical Framework	Number of Studies	Percentage (%)
1.	Socio-constructivism	10	33%
2.	Digital Literacy	8	27%
3	Multiliteracy Theory	6	20%
4	Dialogic Pedagogy	6	20%

The literature review revealed that socio-constructivism was the most frequently employed theoretical framework, accounting for 33% of the studies. This dominance underscores the importance of interaction, collaboration, and knowledge co-construction in digital pedagogy. By situating speaking practice within social contexts, socio-constructivist approaches emphasize that learners acquire language more effectively through active engagement, peer collaboration, and dialogic exchange supported by digital tools. Digital literacy frameworks (27%) were also widely applied, reflecting the growing need for learners to navigate, evaluate, and produce digital content effectively in the 21st-century classroom. These studies positioned digital literacy not merely as a technical skill but as a critical competency that enables learners to become confident and responsible communicators in online and offline contexts. Meanwhile, both multiliteracy theory (20%) and dialogic pedagogy (20%) were highlighted in an equal number of studies. Multiliteracy theory emphasizes the integration of diverse semiotic modes—such as visual, audio, and textual forms—in developing learners’ communicative competence, making it highly relevant for multimedia-rich speaking tasks like digital storytelling and video-based activities. On the other hand, dialogic pedagogy highlights the centrality of dialogue, critical questioning, and mutual meaning-making, which are especially important in online collaborative platforms and synchronous discussions.

### 3. Challenges and Limitations in Implementation

Across contexts, recurring challenges included teacher readiness and digital literacy (30%), technological infrastructure and access (27%), equity and accessibility for learners (23%), and sustainability of integration (20%).

**Table 3.** Reported Challenges in Implementing Digital Pedagogy for Speaking

No.	Challenge	Number of Studies	Percentage (%)
1.	Teacher Readiness/Digital Literacy	9	30%
2.	Infrastructure and Access	8	27%
3	Equity and Accessibility Issues	7	23%
4	Sustainable Integration	6	20%

### Discussion

The findings from this literature-based study underscore the multifaceted role of digital pedagogy in teaching speaking in the 21st-century English classroom.

#### 1. Effective Digital Strategies.

Digital storytelling emerged as the most prominent approach, reinforcing earlier claims that narrative construction, when mediated by multimedia tools, enhances both fluency and learner motivation (Wardiah et al., 2022; Fadillah & Dini, 2021). Similarly, podcasting provided learners with authentic contexts for oral production and opportunities for self-reflection, aligning with the principle of experiential learning. Mobile-assisted applications and collaborative platforms were widely adopted during the COVID-19 pandemic and have since remained integral to hybrid and online learning environments, suggesting their long-term value in developing speaking competence.

#### 2. Theoretical Foundations.

The prevalence of socio-constructivism highlights the importance of interaction and collaboration in speaking instruction. Digital pedagogy facilitates peer-to-peer dialogue and learner autonomy, consistent with Vygotskian perspectives on language development. The integration of digital literacy and multiliteracy frameworks reflects the broader shift toward multimodal communication in contemporary education, preparing learners for real-world digital interactions beyond the classroom.

#### 3. Challenges and Institutional Realities.

Despite evidence of effectiveness, significant barriers persist. Teacher readiness and digital literacy remain critical, as many educators lack sufficient training in integrating technology pedagogically rather than merely technically (Aliyyah et al., 2020; Tondeur et al., 2021). Infrastructure disparities, particularly in under-resourced contexts, limit the equitable adoption of digital strategies. Moreover, while short-term integration of digital tools has been effective, questions about sustainability and long-term institutional support remain largely unresolved.

#### 4. Implications for Policy and Practice.

These findings imply that successful digital pedagogy for speaking requires more than the introduction of tools—it demands systemic support, professional development for teachers, and context-sensitive adaptation. Curriculum designers should embed digital speaking tasks that foster collaboration, creativity, and critical thinking, while policymakers must address access and equity to ensure that technology-enhanced speaking instruction benefits all learners. In summary, this study confirms that digital pedagogy holds substantial potential to transform speaking instruction in English language classrooms. However, realizing its full benefits necessitates not only pedagogical innovation but also institutional commitment and equitable access to digital resources.

### CONCLUSION

This literature-based study demonstrates that digital pedagogy represents not merely a supplementary tool but a transformative approach to teaching speaking in 21st-century English classrooms. By synthesizing findings from 30 studies published between 2019 and 2024, the analysis revealed that strategies such as digital storytelling, podcasting, video-based tasks, and mobile-assisted

learning significantly enhance learners' fluency, motivation, and communicative confidence. These practices, rooted in socio-constructivism, digital literacy, and multiliteracy frameworks, reflect a broader pedagogical shift toward learner-centered, interactive, and multimodal instruction.

At the same time, the study highlights the persistent challenges of teacher readiness, infrastructural disparities, and the need for sustainable digital integration. These findings underscore the importance of not only adopting technological tools but also ensuring systemic support, professional training, and equitable access. For educators, curriculum developers, and policymakers, the implications are clear: digital pedagogy must be strategically embedded within curricula and supported by institutional policies to maximize its impact on speaking competence.

Future research should expand on this foundation by conducting longitudinal studies that assess the long-term impact of digital pedagogy on speaking proficiency, examining cross-cultural variations in adoption, and exploring how emerging technologies—such as artificial intelligence, virtual reality, and adaptive learning platforms—can further advance communicative competence. Ultimately, the study affirms that embracing digital pedagogy is essential for preparing learners to thrive as confident, adaptable, and effective communicators in an increasingly digital and interconnected world.

### ACKNOWLEDGMENT

The authors would like to express their sincere appreciation to all parties who granted permission and provided support during the completion of this research. Their cooperation, guidance, and encouragement were invaluable in enabling the successful development of this study.

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