

# Preparing Educators to Leverage Technology for Oral Language Development: Teacher Training for Technology Integration

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## Abstract

**Purpose:** This study aimed to examine how specific training programs enable English language teachers to effectively integrate technology to develop students' oral language abilities. It identifies the key professional competencies, training approaches, and institutional support systems for successful technology integration in speaking and listening development.

**Research Methodology:** A mixed-methods approach was used, including both quantitative and qualitative methods. The sample included 180 English teachers and trainers from Namangan, Uzbekistan, supplemented with international best practices. Data were collected through surveys, observations, and interviews and analyzed using statistical and thematic methods.

**Results:** Key findings include: (a) practice-based professional development (PD) with hands-on workshops, digital tool microteaching, and coaching yields the best results; (b) teachers' digital proficiency and pedagogical understanding of oral activities influence technology adoption in classrooms; and (c) infrastructure and institutional policy are crucial for successful technology implementation.

**Conclusions:** Effective teacher-training programs should focus on practice-based PD and coaching. Teachers' digital competence and pedagogical methods for oral activities are vital. Institutional infrastructure and supportive policies are necessary for successful technology integration into classrooms. An evidence-based teacher-training system is essential for scaling technology-based oral language instruction.

**Limitations:** The study is limited by its small sample size, short-term outcomes, and regional focus, which limit its generalizability.

**Contributions:** This study provides evidence for effective teacher training programs and offers recommendations for scalable technology-based oral language instruction.

**Keywords:** *Mobile-Assisted Language Learning, Oral Language Development, Professional Development, Teacher Training, Technology Integration*

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## 1. Introduction

In recent years, the integration of technology in language education has proven to be a transformative tool for fostering not only linguistic but also cognitive development (Shaikh, 2025). The shift from traditional methods to digital-based approaches has enabled educators to break free from the conventional boundaries of classroom learning, offering students more interactive and engaging ways to practice their language skills (Abdirasulovna, 2025; Abdupattahovna, 2025). In particular, the use of various digital platforms, such as language learning apps, video conferencing tools, and virtual

classrooms, has significantly impacted how speaking and listening skills are taught and learned (Abdusalomovna, 2025; Mustofa et al., 2025).

These technologies allow students to communicate with peers and instructors from different parts of the world, opening opportunities for cross-cultural exchanges and enhancing the real-life applicability of their language skills. The COVID-19 pandemic accelerated this digital transition, revealing both the potential and challenges that come with it (Kizi, 2025). However, despite these promising outcomes, the effective use of technology in teaching speaking and listening still faces several hurdles. One of the major challenges is the lack of digital literacy among educators, especially in developing countries such as Uzbekistan.

While teachers have access to an array of technological tools, they often lack the necessary training to incorporate these tools effectively into their pedagogical practices (Salgado & Paglinawan, 2025). This gap in digital competency is particularly concerning in the context of oral language development, where the nuances of verbal communication and interaction cannot be fully captured by technology without proper guidance and understanding of the subject. In many cases, teachers may feel overwhelmed by the sheer number of available tools and may struggle to select the most appropriate tools for their students' needs. Furthermore, designing digital activities that are both engaging and pedagogically sound remains a significant challenge.

Another key issue is the adaptation of traditional language teaching methods to digital environments. Oral language teaching, which has traditionally relied on face-to-face interactions, presents unique challenges when it is transferred to an online or blended learning environment. Effective speaking and listening activities often require immediate feedback, peer interaction, and a dynamic atmosphere that fosters real-time communication. Technology can replicate some of these interactions, but not all, and it is crucial for teachers to know how to use these tools to create an engaging, communicative environment.

For example, video conferencing tools such as Zoom and Microsoft Teams may offer virtual face-to-face interactions, but they cannot fully replace the spontaneous, organic communication that occurs in a physical classroom setting. This gap necessitates thoughtful planning and the ability to use digital tools to maintain the essence of real-world communication. Therefore, teacher training programs must focus not only on building teachers' digital competencies but also on developing their ability to design and implement effective oral language activities. A successful training program should provide teachers with the knowledge of how to select and adapt technology to fit specific learning goals, as well as strategies for integrating speaking and listening activities into a variety of digital platforms.

Furthermore, such programs should emphasize the importance of student engagement and participation, ensuring that technology is not merely a substitution for traditional methods but an enhancement of the overall learning experience. Effective training should also include assessment elements to help teachers learn how to evaluate students' oral language proficiency in digital settings and provide constructive feedback. In addition to focusing on digital tools and pedagogy, teacher training programs should consider the cultural context in which they are applied. In Uzbekistan, as in many other countries, the transition to digital learning has shifted cultural attitudes towards education and technology.

While some educators embrace the digitalization of teaching, others may be hesitant or face challenges related to access, infrastructure, and support issues. Training programs must address these disparities by providing flexible solutions that can be tailored to various regions, schools, and teacher backgrounds. This may involve providing support for teachers who lack access to high-speed Internet or modern devices, ensuring that technology does not become a barrier to effective teaching but rather an opportunity to bridge gaps in resources.

Moreover, the involvement of stakeholders such as government agencies, educational institutions, and private organizations is essential for creating an ecosystem that supports the integration of technology in language education. Initiatives such as the British Council CPD programs and the USAID and English-Speaking Nation (ESN) projects have already made significant strides in promoting professional development in Uzbekistan, but there is still room for further collaboration and growth (Pusari, 2025). By working together, these stakeholders can help create a comprehensive framework for language teacher training that includes ongoing professional development, access to resources, and a community of practice in which teachers can share experiences and learn from each other.

The ultimate goal of these training programs is to create a sustainable model for oral language instruction that prepares students to meet the demands of the global knowledge economy. By equipping teachers with the necessary skills to use technology effectively in language teaching, we can ensure that students are not only proficient in speaking and listening but also capable of engaging in meaningful communication in a variety of contexts. As the world continues to become more interconnected, the ability to communicate effectively in a second language will be a key factor in students' success in both their academic and professional lives. Therefore, teacher training programs that focus on enhancing speaking and listening skills through technology are essential for preparing students for future challenges and opportunities. By addressing the challenges faced by teachers and providing them with the tools and support they need, we can create a more effective, inclusive, and engaging language-learning environment for all (Kupchyk & Litvinchuk, 2025).

## **2. Literature Review**

### ***2.1 Technology Integration in Language Education: Global Perspectives***

Technology Integration in Language Education: Global Perspectives The worldwide educational community now views technology integration in language teaching as a transformative method that transforms students learning of spoken communication skills. Warschauer (2000) explained that digital technologies enable classrooms to expand their boundaries, thus enabling students to practice authentic communication through digital spaces. Chappelle and Sauro (2017) show that technology-based teaching methods in education enable students to work independently while offering customized learning paths and multiple resource types that benefit their spoken language abilities. Research studies have focused on two main technological areas: artificial intelligence (AI) and mobile-assisted language learning (MALL).

Loewen et al. (2019) shows that mobile applications including Duolingo and Busuu provide structured vocabulary and speaking exercises although they do not provide extensive opportunities for interactive speaking practice. According to Sun (2023), the use of AI-based speech recognition software enables students to receive instant pronunciation feedback, which helps them improve their oral fluency. The research indicates that teachers need training that covers both tool operation and effective pedagogical methods to achieve optimal results in oral communication.

The increasing reliance on technology in language education has also increased the importance of teacher competence in effectively integrating these tools. As digital tools and resources become more prevalent, it is crucial for educators to not only be familiar with these technologies but also to understand how to design and implement activities that foster meaningful language practice in the classroom. According to Nurjanah, Cahyono, Suryati, and Effendi (2025), teachers must develop both technical and pedagogical skills to effectively integrate technology into their classrooms. This includes understanding how to select appropriate tools, adapt them to the teaching context, and evaluate their effectiveness in promoting language acquisition, particularly speaking skills.

Moreover, incorporating technology into language teaching has the potential to address some of the traditional challenges in oral language instruction. For example, in large classrooms or situations where

students have limited opportunities to interact with peers in face-to-face settings, digital platforms offer students the ability to practice speaking at their own pace in a less intimidating environment. As noted by Çakır (2016), mobile-assisted language learning (MALL) platforms enable learners to practice speaking in informal settings, providing them with valuable opportunities for language output that might not otherwise be possible in traditional classroom environments. This asynchronous interaction allows students to practice speaking skills at their convenience, thus promoting self-regulated learning.

While the potential for technology to enhance speaking and listening skills is evident, it is equally important to consider how these tools can facilitate collaborative learning. Wang and Devitt (2026) highlight the importance of social interaction in language learning, suggesting that technologies such as online discussion forums, video-based interactions, and collaborative platforms can encourage peer-to-peer communication. This collaborative approach enhances students' engagement and motivation by providing them with opportunities to engage in meaningful dialogue with others. The ability to communicate in real time through digital spaces allows learners to practice conversational skills in a flexible and accessible manner. Thus, it is essential that teacher training programs emphasize the integration of collaborative tools alongside individual practice tools to ensure that students have a comprehensive learning experience.

## ***2.2 Teacher Training and Pedagogical Readiness***

Research shows that digital tools exist in abundance, yet teachers face difficulties when it comes to using them effectively. The TPACK framework by Voogt, Fisser, Pareja Roblin, Tondeur, and van Braak (2012) demonstrates that technology integration success depends on teachers' equal expertise in technology skills, pedagogical methods, and content knowledge. Teachers who do not possess all three elements of technological knowledge, pedagogical strategies, and content expertise will face difficulties when trying to use technology to teach oral language skills.

Research shows that in-service teacher training programs lead to substantial improvements in both technology proficiency and teaching confidence among educators. According to Hockly (2015), systematic training programs enabled teachers to create interactive oral activities through video blogging and online conferencing tools. Ghomi and Redecker (2019) demonstrated that digital competence training for teachers enables them to create better learning environments through oral practice support, performance assessment, and student motivation maintenance in blended learning settings.

Effective teacher training programs are essential to ensure that educators are well-equipped to integrate technology into their teaching practices, especially for oral language development. These programs must not only focus on improving technical proficiency but also on enhancing pedagogical understanding and strategies for effective teaching. For example, training programs that emphasize the use of digital tools in language teaching should provide teachers with concrete examples and case studies on how to implement technology effectively. Additionally, these programs should support teachers in developing their own ability to design engaging and effective oral language activities that incorporate technology, enabling students to practice their speaking and listening skills in authentic and interactive ways.

Moreover, teacher training programs should foster a deeper understanding of how technology supports student-centered learning. One of the advantages of using technology in language teaching is its potential to cater to diverse student needs by offering personalized learning experiences for students. Technologies such as adaptive learning platforms, which adjust content based on students' individual progress, allow teachers to provide more targeted support for learners at different levels of proficiency. By incorporating these technologies into lesson plans, teachers can create more inclusive learning environments that support all students in developing their speaking and listening skills.

Another crucial aspect of teacher training is ensuring that teachers are not only proficient in using technology but also able to critically assess and reflect on its effectiveness in the classroom. Training should include components for evaluating the quality of digital resources, assessing the learning outcomes of technology-enhanced language activities, and adapting these activities based on student feedback and performance. This reflection allows teachers to continuously improve their use of technology and make informed decisions about which tools are most effective in achieving the desired learning outcomes.

Furthermore, teacher training should address the challenges teachers may face when incorporating technology into their classrooms, such as issues related to access, infrastructure, and student engagement. In many parts of the world, access to high-speed Internet, modern devices, and digital literacy support can be limited. In these cases, teacher training programs must provide practical solutions for overcoming these barriers, such as teaching educators how to maximize the use of available resources or adapt lessons for different technological environments. By equipping teachers with strategies to overcome these challenges, training programs can help ensure that technology is used effectively, even in resource-constrained settings.

Finally, it is essential that teacher training be ongoing and adaptable. As technology continues to evolve rapidly, so too must the skills and strategies required to use it effectively in language teaching and learning. Therefore, professional development should be an ongoing process, with opportunities for teachers to update their skills and learn about new tools and methods. By fostering a culture of continuous learning, teacher training programs can help ensure that educators are always prepared to meet the changing needs of their students and the demands of an increasingly digital world.

### ***2.3 The Uzbek Context: Challenges and Innovations***

The Uzbek government has established the integration of information and communication technologies (ICT) in education as a core objective for national educational modernization efforts. Tursunov, Juraev, Stuchlík, and Kološ (2021) state that Uzbekistan's teacher training programs now focus on teaching digital platforms to boost English language achievement results for students. The educational system faces three major obstacles: restricted Internet access, outdated technology, and diverse teacher skill levels in digital education (Khaydarov, Islambekova, ogli Muxiddinov, & Rasulova, 2020).

New educational projects have begun to emerge despite the existing obstacles. According to Urolov et al. (2019), the implementation of mobile applications by Uzbek English teachers led to better student involvement and participation in class. Akbarov (2022) demonstrated that students achieved superior oral proficiency results when they received blended learning that combined classroom sessions with digital platform use instead of traditional classroom teaching alone. Research findings show that Uzbekistan continues to understand the value of technology for oral language development despite ongoing structural barriers.

Despite these challenges, Uzbekistan is making strides in incorporating technology into its education system, particularly in enhancing oral language skills. The government's continued investment in digital infrastructure and teacher-training programs reflects its commitment to overcoming existing barriers. These efforts are particularly evident in English language education, where technology is increasingly seen as a tool for bridging gaps in language learning outcomes. However, the uneven distribution of resources and varying levels of digital literacy among teachers remain significant challenges.

In response to these issues, there has been a growing emphasis on providing targeted professional development opportunities for teachers to build their confidence and competence in the use of digital tools. These programs often focus on practical applications, such as mobile apps and online platforms,

to make language learning more interactive and accessible. This shift is particularly important as it allows teachers to offer more personalized and engaging learning experiences for students, particularly in oral communication skills. Furthermore, blended learning models that combine face-to-face instruction with digital resources have shown positive results in terms of student engagement and proficiency. This approach is seen as a promising pathway for scaling up digital integration across schools in Uzbekistan, thus paving the way for more effective and inclusive language education.

#### ***2.4 Technology for Oral Communication: Tools and Pedagogies***

Multiple researchers from Uzbekistan and worldwide agree that teachers need to select suitable technology tools that support oral communication needs. Richards and McGahan (2017) explained how video conferencing tools such as Zoom and Microsoft Teams enable students to interact face-to-face in real time despite cultural differences. Khakimov, Salakhutdinov, Omolikov, and Utaganov (2022) demonstrated that Uzbek students who used Flipgrid to create video recordings gained better speaking skills and confidence than those who only interacted in traditional classroom settings.

The educational method of gamification has proven successful through the implementation of Kahoot. According to Gee (2015), the educational platform drives students to participate more in spoken activities through its ability to create interactive learning experiences that hold meaning. The research of Uzbek scholars Rakhimova and Shomurodov (2021) confirms that game-based speaking activities enhance student interest and classroom involvement in English language education.

#### ***2.5 Gaps in the Literature***

Although some progress has been made, multiple knowledge gaps continue to exist. Research on the extended impact of technology-based oral language development needs more attention because current studies focus on short-term effects only. Research on student outcomes dominates the field; however, there has been limited investigation into how teacher training programmes affect the development of oral proficiency skills. Tursunov et al. (2021) emphasized the need for specific educational frameworks that connect international best practices to Uzbekistan's current educational system requirements.

Although research on technology-based oral language development has progressed, many aspects still require further exploration. One area that requires more attention is the long-term impact of technology on oral language learning. Most existing studies focus on short-term effects, such as improvements in test results or student engagement in technology-based learning activities. However, little research has addressed how technology can have a lasting impact on students' oral language proficiency over time.

Furthermore, while much research has explored the outcomes achieved by students in technology-based language learning, there is a lack of studies on how teacher training programs affect the development of their oral language skills. Further research is needed to understand how training programs can improve the quality of oral language teaching and how they can be adapted to meet the specific needs of teaching in various educational contexts. Tursunov et al. (2021) highlighted the importance of designing a comprehensive educational framework that integrates international best practices while also considering the needs and challenges of Uzbekistan's education system. Therefore, further research is required to bridge the gap between theory and practice in this field.

### **3. Methodology**

This study adopted a comprehensive mixed-methods approach, combining quantitative and qualitative data collection techniques to examine the effectiveness of technology integration in language teaching, specifically for the development of oral language skills (M. Riazi & C. Candlin, 2014). The research methodology was designed to gather both numerical data that could demonstrate measurable outcomes and qualitative insights that would help in understanding the lived experiences of teachers. By combining these approaches, this study aimed to provide a holistic view of the impact of technology on

language teaching and the readiness of teachers to integrate it into their practice (A. M. Riazi & C. N. Candlin, 2014).

### **3.1 Participants**

The study involved a sample of 120 teacher trainees and 35 in-service teachers from two universities in Uzbekistan and one partner institution in Europe. Participants were selected using stratified random sampling, ensuring representation across gender, teaching experience, and familiarity with educational technologies. This approach was intended to capture a wide range of perspectives and experiences from individuals at different stages of their professional careers, thus allowing for more generalizable results. All participants were informed of the purpose of the study, and their participation was voluntary. All collected data were anonymized to protect the participants' identities.

### **3.2 Instruments**

This study utilized several instruments to gather data.

1. Technology Integration Survey (TIS): A 30-item questionnaire adapted from the TPACK framework (Mishra & Koehler, 2006) that measures technological knowledge, pedagogical skills, and attitudes toward integrating digital tools into oral language teaching. The survey responses were rated on a 5-point Likert scale, with 1 indicating strong disagreement and 5 indicating strong agreement.
2. Oral Language Development Rubric (OLDR): This rubric, adapted from Richards (2017), focuses on key sub-skills such as pronunciation, fluency, interaction, and comprehension. Each subskill was scored on a 4-point proficiency scale (1 = novice, 4 = advanced), providing an objective measure of improvements in oral proficiency.
3. Interview Protocol: Semi-structured interviews were conducted with the participants to explore their perceptions of the barriers and enablers of using technology in oral communication classes. The open-ended questions allowed the teachers to share their experiences, challenges, and suggestions regarding the integration of technology.
4. Observation Checklist: This checklist was used during classroom observations to assess the frequency and quality of technology-enhanced oral practice activities. Observations were focused on activities such as role plays via Zoom, AI-based pronunciation apps, and collaborative speaking tasks conducted on Google Meet.

### **3.3 Data Collection**

Data collection was conducted in three distinct phases.

1. Pre-training Survey: A baseline survey was administered at the start of the study to assess teachers' existing knowledge and attitudes toward the integration of technology in language teaching.
2. Teacher Training Workshops: Over eight weeks, participants attended workshops that included hands-on practice with digital tools such as Flipgrid, Duolingo for Schools, and AI-based speech recognition platforms. These workshops were designed to provide teachers with the skills needed to effectively integrate technology into their teaching practices.
3. Post-training Evaluation: After training, the participants were asked to complete the same instruments as in the pre-training phase, including surveys, interviews, and classroom observations. This post-training data allowed for a comparison of changes in the teachers' readiness and student outcomes.

### **3.4 Data Analysis**

Quantitative data were analyzed using SPSS v.27 to calculate descriptive statistics, including means, standard deviations, and percentages, and paired-sample t-tests were conducted to measure differences between pre- and post-training results. Qualitative data from the interviews were analyzed thematically, following the framework provided by Braun and Clarke (2006), to identify common themes and insights related to the teachers' experiences with technology integration.

## 4. Results and Discussions

### 4.1 Results

The results from the pre- and post-training assessments showed significant improvements in both teachers' readiness to integrate technology and students' oral language proficiency.

1. Technological Knowledge: The mean score for technological knowledge increased from 2.45 (pre-training) to 3.70 (post-training), indicating a substantial gain in teachers' digital competencies.
2. Pedagogical Knowledge: There marked improvement in pedagogical knowledge, with the mean score rising from 3.10 (pre-training) to 4.00 (post-training).

The assessment of students' oral proficiency revealed significant gains, particularly in terms of interaction and fluency.

| Subskill      | Pre-training Mean | Post-training Mean | Gain  |
|---------------|-------------------|--------------------|-------|
| Pronunciation | 1.85              | 2.90               | +1.05 |
| Fluency       | 2.10              | 3.05               | +0.95 |
| Interaction   | 2.00              | 3.20               | +1.20 |
| Comprehension | 2.25              | 3.15               | +0.90 |

### 4.2 Discussions

The findings highlight the positive impact of technology integration on oral language development. The mixed-methods approach provided a comprehensive understanding of both the quantitative improvements in teachers' digital skills and qualitative insights into their experiences. Teachers reported that the use of mobile applications, AI-based pronunciation tools, and video conferencing platforms enhanced their ability to teach speaking and listening skills effectively. This indicates that the integration of technology in language teaching not only helps improve student outcomes but also boosts teachers' confidence and competence.

However, challenges related to infrastructure and institutional support were also observed. Teachers encountered difficulties owing to inadequate access to devices and limited institutional support. These barriers hindered their ability to fully implement the training they received in their schools. The study suggests that overcoming these infrastructural challenges is essential to ensure the long-term success of technology integration in the classroom.

This study also emphasizes the importance of continuous professional development (CPD) for teachers to effectively use technology in language teaching. While initial training provides teachers with the necessary skills to integrate digital tools into their teaching, ongoing support and training are crucial for maintaining these skills over time. The findings suggest that, without continuous opportunities for practice and feedback, teachers may struggle to maintain or enhance their proficiency in using technology effectively. Therefore, providing structured, ongoing CPD programs that include hands-on training, peer collaboration, and opportunities for reflective practice is essential to ensure that teachers keep up with rapidly evolving technological tools.

Additionally, this study highlights the need for educational institutions to prioritize the development of supportive infrastructure for technology integration. Schools and universities must not only provide adequate devices and reliable Internet access but also ensure that teachers have the necessary technical support and resources to navigate digital tools successfully. This includes having dedicated technical staff and creating a culture in which technology is viewed as an essential component of modern education. Only when these barriers are addressed can the full potential of technology integration be realized, allowing both teachers and students to benefit from advancements in digital learning.

## 5. Conclusions

### 5.1 Conclusion

This study concludes that the integration of technology into language teaching has a significant positive impact on both teachers' preparedness and students' oral language proficiency. The combination of teacher training, practical experience with digital tools, and classroom implementation of technology-

enhanced activities led to noticeable improvements in students' speaking and listening skills. Furthermore, continuous professional development, including micro-teaching and coaching, is essential to maximize the benefits of technology integration in the classroom.

### 5.2 Research Limitations

While this study provides valuable insights into the effectiveness of technology integration in language teaching, it has some limitations. The sample size was relatively small, and the study was conducted in a limited geographic area, which may limit the generalizability of the findings to other populations. Additionally, this study focused on short-term outcomes and did not explore the long-term impact of technology on language proficiency. Future research should involve larger and more diverse samples and track the effects of technology integration over a longer period.

### 5.3 Suggestions and Directions for Future Research

Future studies should explore the long-term effects of technology on students' language proficiency and the sustainability of technology integration in classrooms. It would also be valuable to investigate how different technologies, such as virtual and augmented reality, can be used to enhance language learning. Further research should examine the role of institutional support, infrastructure development, and policy alignment in facilitating the effective use of technology in language education. This would provide a clearer understanding of the broader factors contributing to the success of technology integration in the classroom.

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