

A Study on the Effect of Technology in Enhancing Spoken Language Proficiency



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ABSTRACT: This research paper investigates the impact of technology on improving spoken language proficiency among language learners. The study employed survey research to figure out students' perceptions toward the use of technologies in enhancing spoken language. The study aims to analyze the various technological tools and methodologies used in language education and their effectiveness in enhancing oral communication skills. Through a comprehensive literature review, empirical data collection, and analysis, this paper provides insights into the potential benefits, challenges, and future directions of integrating technology in language learning. The research explores the key aspects of technology-assisted language learning, including language apps, virtual reality, social media, and online platforms. It also addresses the implications of technology-driven language education in terms of individual learning styles and cultural contexts. The findings offer valuable insights for educators, curriculum designers, and learners striving to achieve higher spoken language proficiency.

KEYWORDS: technologies assisted language learning, challenges, spoken language

1. INTRODUCTION

Background and Context

1. The importance of spoken language proficiency in language learning

Spoken language proficiency is of paramount importance in language learning, as it plays a crucial role in effective communication, cultural integration, and overall language acquisition. Firstly, proficiency in spoken language is essential for meaningful communication. Without the ability to speak and understand the spoken word, learners may struggle to express themselves, comprehend others, or engage in real-world conversations (Wilkins, 1972). Savignon (2001) adds that spoken language is the primary means of communication in daily life, including in social, professional, and cultural contexts. Achieving spoken language proficiency enables learners to interact naturally in these settings. In terms of cultural integration, language is intimately tied to culture. Achieving spoken language proficiency not only facilitates communication but also fosters cultural understanding and integration (Kramsch, 1998). The development of spoken language on the other hand, has cognitive benefits, including improved memory, problem-solving, and critical thinking skills (Bialystok, 2001). It also opens doors to job opportunities and global collaboration, as businesses and organizations often require employees to have strong spoken language skills. It boosts learners' confidence and motivation, which are critical factors in language acquisition (Crystal, 2003).

2. The increasing role of technology in education

The increasing role of technology in education has been a transformative force in recent years. Technology has revolutionized the way students access information, engage with content, collaborate with peers, and interact with educators. The internet has made vast amounts of information readily accessible to students. Online databases, e-books, and educational websites provide students with a wealth of resources for research and learning. This has democratized education, allowing students to learn beyond the confines of traditional classrooms. Online learning platforms and massive open online courses (MOOCs) have made quality education accessible to a global audience. Platforms like Coursera, edX, and Khan Academy offer a wide range of courses, often for free or at a lower cost than traditional education. This has expanded opportunities for lifelong learning and professional development. Technology enables personalized learning experiences. Adaptive learning software can tailor instruction to individual students' needs, allowing them to progress at their own pace and providing targeted support where it's needed. Educational technology tools, such as video conferencing, discussion forums, and collaborative platforms, facilitate communication and teamwork among students and educators. This is especially valuable in remote and online learning environments. Virtual reality (VR), augmented reality (AR), and gamified educational applications offer immersive learning experiences. These technologies can make complex concepts more tangible and engaging for students.

In summary, technology has transcended traditional teaching and learning styles. It connected students and educators across the globe. Collaborative projects and virtual exchanges enable cross-cultural learning experiences and broaden students' perspectives.

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In a narrower sense the assistance of technologies can help learners improve spoken language ability. Mobile applications designed for language learning often include speaking and pronunciation exercises. These apps enable learners to practice speaking in a structured manner and receive feedback, making it a valuable resource for improving spoken language ability. Video conferencing platforms and language exchange apps allow learners to connect with native speakers or language tutors for real-time conversational practice. This interaction can significantly enhance speaking skills and cultural understanding. Listening to native speakers through podcasts and audiobooks can also help learners improve their listening and speaking skills. It exposes them to different accents, speech patterns, and real-world conversations.

Statement of the Problem

The achievement of spoken language proficiency in a second or foreign language is a challenging endeavour, and language learners encounter various obstacles along the way such as linguistics and psychological barriers. In the first place, learners often struggle with achieving accurate pronunciation and native-like accents, which can affect their comprehensibility (Munro & Derwing, 1995). Apart from pronunciation, learners have to build the ability to speak fluently and naturally, without hesitations or unnatural pauses, can be a significant challenge. Furthermore, limited vocabulary and a restricted lexical range can impede learners' ability to express themselves effectively (Nation, 2001). Grammar accuracy is also a big challenge for language learners. Bardovi-Harlig (1992) claim that maintaining correct grammar in spontaneous speech can be difficult for learners, as they may overuse or misuse certain grammatical structures. In the second place, challenges come from fear of making mistakes that can hinder learners' willingness to speak, as they may worry about being judged or corrected (MacIntyre & Gardner, 1991). Lack of opportunities for practice, a dearth of opportunities to practice speaking with native speakers or proficient speakers can hinder the development of spoken language skills (Savignon, 2001). Finally, cultural barriers those can affect learners' communication and comprehension, as understanding cultural norms and idiomatic expressions is integral to spoken language proficiency (Kramsch, 1998).

Purpose of the Study

The primary purpose of the study was to identify the students' perceptions toward the use of technologies such as speech recognition software, language learning apps and online resources to enhance spoken language proficiency. The secondary aim of the study was to identify possible challenges of using technologies in an EFL classroom.

Research Questions

In order to address the proposed research purposes, the research tried to answer the following research questions

1. *What are the students' perceptions toward the use of technologies in enhancing spoken language proficiency?*
2. *What are the challenges of applying technologies in enhancing spoken language proficiency?*

Significance of the Study

By knowing how students perceive technology, educators can adapt their teaching methods to align with students' preferences. This customization can make the learning experience more engaging and effective. As a matter of fact, student motivation is a crucial factor in language learning. If students have a positive perception of technology's role in improving spoken language proficiency, they are more likely to remain engaged and motivated throughout their learning journey. Students' negative perceptions of technology may signal potential barriers to effective learning. By addressing these concerns, educators and developers can create more user-friendly and effective technology-based language learning tools.

Understanding challenges face by teachers when using technologies in developing spoken language proficiency allows for the development of strategies and solutions to ensure technology is effectively integrated into the classroom. This is crucial for optimizing the teaching and learning process. Besides, identifying challenges helps in tailoring professional development programs for teachers. These programs can provide the necessary training and support to overcome specific technological hurdles, leading to improved teacher competence. Teachers play a critical role in facilitating technology-driven language learning. Their challenges can affect the quality and effectiveness of instruction, which, in turn, affects students' language proficiency and learning outcomes.

2. LITERATURE REVIEW

2.1. Theoretical Foundations of Technology-Enhanced Language Learning

The theoretical foundations of technology-enhanced language learning are grounded in established language acquisition and learning theories, which emphasize the role of technology in facilitating language learning. Constructivism posits that learners actively build their knowledge and understanding by interacting with the environment. Technology can be seen as a tool for learners to explore and construct their knowledge through interaction with digital resources (Pea, 2004). Social constructivism extends the idea of constructivism by highlighting the importance of social interaction in learning. Technology, through online collaboration tools and virtual communities, enables learners to engage in collaborative learning experiences, mirroring Vygotsky's Zone of Proximal Development (Vygotsky, 1978). Communicative Language Teaching emphasizes real communication and interaction in the target language. Technology can facilitate communicative language teaching by providing tools for authentic communication, such as video conferencing, chat applications, and language learning apps with interactive exercises (Chapelle & Jamieson, 2008). Task-

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based language teaching focuses on language learning through the completion of meaningful tasks and projects. Technology can support this approach through online simulations, virtual language exchanges, and task-based language learning activities (Nunan, 2004). Interactionist theories highlight the significance of interaction in language acquisition. Technology provides tools for learners to engage in interactive language activities, from chatbots and virtual language tutors to language exchange platforms (Ellis, 2017). Cognitive load theory focuses on the mental effort required for learning. Technology can help manage cognitive load by providing multimedia content, interactive exercises, and adaptive learning platforms that present information in a learner-friendly manner (Sweller, 1988).

These theoretical foundations guide the integration of technology in language learning by emphasizing the importance of learner-centered, interactive, and meaningful language learning experiences. Technology is viewed as a tool to enhance these experiences and promote language acquisition and proficiency. Understanding these foundations is crucial for effectively implementing technology in language education.

2.2. Impact of Technology on Spoken Language Proficiency

The impact of technology on spoken language proficiency is a multifaceted subject, with both positive and negative effects on learners. Technology can enhance spoken language proficiency in various ways, but it can also present challenges. On the positive side, technology offers various tools, such as speech recognition software and pronunciation apps, that provide learners with instant feedback on pronunciation and accent. These tools can significantly improve learners' pronunciation skills (Chun & Plass, 1996; Wang & Chen, 2016). From the perspectives of vocabulary enhancement and retention, language learning apps and software, often gamified and interactive, provide engaging ways to enhance vocabulary. These tools offer spaced repetition and exercises that help learners retain new words more effectively (Chen & Day, 2014; Godwin-Jones, 2018). Technology offers a wide range of language learning apps and online platforms that encourage learners to practice speaking and engage in real conversations. These tools promote fluency and provide opportunities for learners to express themselves (Kukulska-Hulme & Shield, 2008; Meskill et al., 2015). Technology provides access to authentic audio and video materials, such as podcasts and news broadcasts. These resources expose learners to natural language use, varied accents, and different communication contexts, enhancing listening skills (Satar, 2017; Stockwell, 2007). On the negative side, technology-enhanced language learning is not without its challenges, such as technical issues, concerns about motivation and self-discipline, potential loss of authentic communication, and the need for teacher and learner preparedness (Anderson & Simpson, 2017; Teo, 2006; Warschauer & Healey, 1998).

In conclusion, technology can have a positive impact on spoken language proficiency by offering a wide range of tools and resources that support pronunciation, vocabulary development, fluency, listening skills, and grammar improvement. However, challenges related to technology use also exist and need to be addressed to ensure effective language learning outcomes. Understanding these impacts and challenges is essential for both educators and learners to maximize the benefits of technology in language learning.

2.3. Challenges and Concerns in Technology-Enhanced Language Learning

Challenges and concerns in technology-enhanced language learning (TELL) are important to address, as they can influence the effectiveness and the overall experience of learners. Technical problems such as software glitches, connectivity issues, or device compatibility can disrupt the learning process and frustrate learners (Anderson & Simpson, 2017). Learning in technology-enhanced environments often requires self-regulation and motivation. Some learners may struggle to stay motivated and disciplined, particularly in asynchronous or self-paced online courses (Hartoyo & Pratiwi, 2020; Jones & Carter, 2019). Technology-mediated language learning may lack the richness and authenticity of face-to-face communication. Learners might miss-out on non-verbal cues, cultural nuances, and the immediate feedback that real-life interaction provides (Barrett, 2006; Darhower, 2002). There should be concern from both teachers and learners that they may require training and support to effectively use technology in language learning. The lack of technological proficiency among teachers or students can hinder the integration of technology (Teo, 2006; Warschauer & Healey, 1998). Not all learners have equal access to technology and the internet. The digital divide can create disparities in access to language learning resources, disadvantaging those without sufficient access to devices and internet connectivity (Warschauer, 2003).

In summary, In conclusion, challenges and concerns in technology-enhanced language learning, such as technical issues, motivation, the loss of authentic communication, teacher and learner preparedness, equity and access, and overreliance on technology, should be acknowledged and addressed to create effective and inclusive learning environments. Educators and institutions need to be mindful of these challenges and work to mitigate them to ensure that technology effectively supports language learning.

3. METHODOLOGY

3.1. Research Design

A survey research was used to collect data on participants' technology use for language learning, their perceived effectiveness, and the impact on their spoken language proficiency. This design is more focused on collecting self-reported data. Survey research is a widely used research method that involves collecting data from a sample of individuals through the administration of structured questionnaires or surveys. It is an effective approach for gathering information on various topics, including technology's impact on

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language proficiency. Surveys are an efficient way to collect data from a large number of participants. This method allows researchers to gather information from a diverse and broad sample of individuals. Surveys are highly standardized, making it easier to compare responses and analyze data. This standardization helps ensure consistency in data collection. Respondents may feel more comfortable providing honest and candid responses in surveys, particularly on sensitive topics, as they can remain anonymous. Surveys generate quantitative data, allowing for statistical analysis and the identification of patterns and trends in responses.

3.2. Participants & data collection tools

Data were collected from 112 students and 12 teachers of English who are currently working at Dai Nam University. The data collection instruments include two set of survey questionnaires. The first set of questionnaire consists of 15 items to measure the students' perceptions on the use of technologies in enhancing pronunciation, fluency and interactive communication skills. The items use 5 point Likert scales from strongly disagree (1) to strongly agree (5). The second set of questionnaire consists of 10 items, 5 point Likert scale to obtain challenges that teachers face when applying technologies in classroom. From 1 means not a challenge to 5 means most challenges.

4. RESEARCH FINDINGS

4.1. What are the students' perceptions toward the use of technologies in enhancing spoken language proficiency?

The descriptive statistics show the mean of technology in enhancing pronunciation in items (table 1).

Table 1. Technology in enhancing pronunciation

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Using technology for pronunciation practice has significantly improved my pronunciation skills.	112	1	5	3.28	1.006
I find that technology-assisted pronunciation tools provide accurate and helpful feedback on my pronunciation.	112	1	5	3.58	.983
Technology has improved my ability to recognize and correct pronunciation errors.	112	1	5	3.65	.791
Pronunciation technology has enhanced my confidence in speaking and communicating in the target language.	112	2	5	3.53	1.022
Overall, I believe that using technology for pronunciation improvement has been a worthwhile investment of my time and effort.	112	2	5	3.83	1.064
Valid N (listwise)	112				

The descriptive statistics show the mean of technology in enhancing fluency in items (table 2).

Table 2. Technology in enhancing fluency

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Using technology for language learning has significantly improved my fluency in speaking.	112	1	5	3.79	.988
Technology-assisted language tools, such as language learning apps or online conversation partners, have helped me practice speaking and improve my fluency.	112	2	5	3.68	.979
I feel more confident in my ability to engage in spontaneous conversations in the target language due to the use of technology.	112	2	5	3.69	1.082
Technology has provided me with opportunities to listen to and mimic native speakers, contributing to my fluency.	112	2	5	3.75	.982
Overall, I believe that using technology for language learning has been a worthwhile investment in enhancing my fluency.	112	2	5	3.66	1.087
Valid N (listwise)	112				

The descriptive statistics show the mean of technology in enhancing interactive communication skill in items (table 3).

Table 3. Technology in enhancing interactive communication

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Using technology tools and platforms has significantly improved my ability to engage in interactive communication with others.	112	1	5	3.68	1.050

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Online communication platforms (e.g., video conferencing, messaging apps) have provided valuable opportunities for real-time interaction with speakers of the target language.	112	1	5	3.71	1.035
Technology-supported language exchange and conversation partners have improved my conversational skills in the target language.	112	1	5	3.70	.985
I find technology-enhanced communication tools to be engaging and conducive to meaningful conversations with native or proficient speakers.	112	2	5	3.75	.691
Overall, I believe that using technology for interactive communication in language learning has been a worthwhile investment in improving my language skills.	112	2	5	3.42	1.010
Valid N (listwise)	112				

Table 4. summarises the means of aspects of spoken language that technologies help enhance.

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Pronunciation	112	2	5	3.48	.727
Fluency	112	2	5	3.71	.771
Interactive communication	112	2	5	3.65	.626
Valid N (listwise)	112				

Table 4 means of aspects of spoken language that technologies help enhance.

4.2. What are the challenges of applying technologies in enhancing spoken language proficiency?

The mean of challenges that teachers faced while using technology in enhancing spoken language in class was $M=3.71$ (table 5).

Table 5: mean of challenge face by teachers

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Challenge	12	2.70	4.60	3.71	.60578
Valid N (listwise)	12				

Descriptive statistics (table 6) reveal that Challenge 1 “Integrating technology to improve spoken language proficiency is challenging in my classroom” received least ranking as a challenge $M=3.17$. While Challenge 10 “Adapting technology to the specific needs and context of my spoken language teaching is a complex task” was ranked as the most challenge with $M=4.83$, challenges 3, challenges 4, challenges 5 with $M=3.67$. The findings reveal high level of challenges in applying technologies in enhancing spoken language proficiency in EFL classes

Table 6. means of teachers’ challenges in using technologies in class

Descriptive Statistics						
	N	Min	Max	Mean	Std. Dev	
Integrating technology to improve spoken language proficiency is challenging in my classroom.	12	2	4	3.17	.835	
Technology tools often struggle to accurately transcribe and understand spoken language in my teaching context.	12	1	5	3.25	1.288	
Ensuring data privacy and security when using technology for spoken language instruction is a concern in my teaching practice.	12	2	5	3.58	1.084	
The diversity of accents and dialects in my classroom makes it difficult to use technology effectively to enhance spoken language skills.	12	3	4	3.67	.492	
I feel that technology can sometimes introduce biases in the way it teaches spoken language.	12	2	5	3.67	1.303	
My students' varying levels of technology literacy can be an obstacle to effectively using technology for spoken language instruction.	12	2	5	3.67	1.073	
I find it challenging to access and integrate technology that is up-to-date and suitable for my spoken language teaching.	12	2	5	3.75	1.288	
I believe that technology has the potential to enhance spoken language proficiency, but it requires ongoing support, training, and resources.	12	2	5	3.75	.965	
Technology struggles to accurately recognize and respond to emotional nuances in spoken language, which is important for language proficiency.	12	2	5	3.83	1.030	

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Adapting technology to the specific needs and context of my spoken language teaching is a complex task.	12	3	5	4.83	.577
Valid N (listwise)	12				

5. CONCLUSION

The findings of the study reveal that students find technologies were useful for them to improve their pronunciation, fluency and interactive communication skill, $M=3.48$; $M=3.71$ and $M=3.65$. In terms of challenges that technologies might bring for teachers, the finding showed that “*Adapting technology to the specific needs and context of my spoken language teaching is a complex task*” was the most challenging $M=4.83$ while “*Integrating technology to improve spoken language proficiency is challenging in my classroom*” ranked the lowest with $M=3.17$. In an age characterized by rapid technological advancements, our study on the effect of technology in enhancing spoken language proficiency underscores the dynamic interplay between innovative tools and the intricacies of language acquisition. The findings presented in this research shed light on the complex landscape that educators, learners, and developers navigate as they harness technology to improve spoken language skills.

The challenges identified, ranging from the recognition of diverse accents and dialects to the potential introduction of biases in technology-driven language instruction, reflect the multifaceted nature of this endeavour. It is clear that while technology offers unprecedented opportunities to bridge linguistic gaps, it is not without its intricacies, and educators are acutely aware of these complexities.

Furthermore, the study affirms the pivotal role of ongoing professional development and the importance of aligning technology with the unique needs of the classroom and the students it serves. Effective integration of technology is contingent on a holistic approach that considers privacy, emotional nuance, and access to updated resources. Educators' capacity to adapt to this evolving landscape is crucial, as is their ability to address the varying levels of technology literacy among students.

Ultimately, the research underscores a fundamental optimism that technology can indeed enhance spoken language proficiency when thoughtfully employed. It is a tool with immense potential, but its full realization is contingent on the resolve to address the challenges identified here. We hope that this study serves as a valuable resource for educators, policymakers, and technologists, guiding their efforts to leverage technology effectively in the pursuit of enhanced spoken language proficiency and improved educational outcomes. As the educational landscape continues to evolve, these findings can serve as a compass for shaping the future of language instruction through technology.

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APPENDICES

Appendix 1: Student's perceptions towards the effectiveness of technology in enhancing spoken language proficiency

Respondents can rate each item from "Strongly Disagree" to "Strongly Agree," with intermediate options:

Pronunciation

1. Using technology for pronunciation practice has significantly improved my pronunciation skills.
2. I find that technology-assisted pronunciation tools provide accurate and helpful feedback on my pronunciation.
3. Technology has improved my ability to recognize and correct pronunciation errors.
4. Pronunciation technology has enhanced my confidence in speaking and communicating in the target language.
5. Overall, I believe that using technology for pronunciation improvement has been a worthwhile investment of my time and effort.

Fluency

6. Using technology for language learning has significantly improved my fluency in speaking.
7. Technology-assisted language tools, such as language learning apps or online conversation partners, have helped me practice speaking and improve my fluency.
8. I feel more confident in my ability to engage in spontaneous conversations in the target language due to the use of technology.
9. Technology has provided me with opportunities to listen to and mimic native speakers, contributing to my fluency.
10. Overall, I believe that using technology for language learning has been a worthwhile investment in enhancing my fluency.

Interactive Communication

11. Using technology tools and platforms has significantly improved my ability to engage in interactive communication with others.
12. Online communication platforms (e.g., video conferencing, messaging apps) have provided valuable opportunities for real-time interaction with speakers of the target language.
13. Technology-supported language exchange and conversation partners have improved my conversational skills in the target language.
14. I find technology-enhanced communication tools to be engaging and conducive to meaningful conversations with native or proficient speakers.
15. Overall, I believe that using technology for interactive communication in language learning has been a worthwhile investment in improving my language skills.

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Appendix 2: Teachers' Challenges in Enhancing Spoken Language Proficiency with Technology

Please rate your agreement with the following statements: 1 = Not challenging at all; 2 = Not much challenging; 3 = Neutral; 4 = Challenging; 5 = Very challenging

1. Integrating technology to improve spoken language proficiency is challenging in my classroom.
2. Technology tools often struggle to accurately transcribe and understand spoken language in my teaching context.
3. The diversity of accents and dialects in my classroom makes it difficult to use technology effectively to enhance spoken language skills.
4. I feel that technology can sometimes introduce biases in the way it teaches spoken language.
5. Adapting technology to the specific needs and context of my spoken language teaching is a complex task.
6. Technology struggles to accurately recognize and respond to emotional nuances in spoken language, which is important for language proficiency.
7. Ensuring data privacy and security when using technology for spoken language instruction is a concern in my teaching practice.
8. I find it challenging to access and integrate technology that is up-to-date and suitable for my spoken language teaching.
9. My students' varying levels of technology literacy can be an obstacle to effectively using technology for spoken language instruction.
10. I believe that technology has the potential to enhance spoken language proficiency, but it requires ongoing support, training, and resources.



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