Volume 5 | Issue 1 | 2025

http://langedutech.com

Language Education & Technology

A Qualitative Inquiry into EFL Learners' Opinions about an AI-Powered Speaking Tool

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Suggested citation: Civelek, M. & Hocaoglu, İ. (2025). A Qualitative Inquiry into EFL Learners' Opinions about an AI-Powered Speaking Tool. *Language Education and Technology*, *5*(1), 42-54.

Article Info

Date submitted: 19/06/2025

Date accepted: 04/07/2025

Date published: 07/07/2025

Research Article

Abstract

In EFL contexts, where learners have limited opportunities to practice the target language outside traditional classrooms, AI technologies hold great potential to expand practice opportunities. Thus, this paper aimed to investigate Turkish 9th-grade EFL learners' opinions about an AI-powered chatbot developed to provide speaking practice based on what they had learned at school. The participants were 20 EFL learners studying at a public high school in Rize, Turkiye. An open-ended questionnaire was employed to collect data, and content analysis was used to analyze it. The findings revealed that the chatbot, *TeaTalk*, was regarded as useful for enhancing speaking skills. Additionally, it supported learners in various language areas such as vocabulary, pronunciation, and grammar. The findings also showed that *TeaTalk* reduced learners' speaking anxiety while increasing their self-confidence and motivation. Furthermore, the participants expressed appreciation for the corrective and constructive feedback *TeaTalk* provided, and they praised the friendly and engaging environment it offered. However, a few participants complained that *TeaTalk* was sometimes unable to comprehend their pronunciation.

Keywords: Artificial intelligence, chatbot, speaking, AI-powered tools

1. Introduction

Artificial Intelligence (AI) technologies have undergone prominent development in the last decade. This has led AI to become prevalent in various sectors including education (Zou et al., 2023). As a result, AI technologies employing speech recognition and speech evaluation features were designed for language learning and practice (Zou et al., 2024). This has brought about a growing body of research on the efficacy of AI-powered tools to enhance learners' language performance in several areas such as speaking (Du & Daniel, 2024), listening (Zhou, 2020; Xing, 2023), reading (Singh et al., 2019; Hidayat, 2024), and writing (Song & Song, 2023; Kıvrak, 2024).

In order to communicate effectively and appropriately in a foreign language, learners are expected to become competent in a variety of areas. Among different aspects of language, speaking plays a vital role since it profoundly affects learners' overall language proficiency (Fathi et al., 2024). However, it is quite

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challenging for learners in English as a Foreign Language (EFL) settings to improve their speaking skills due to constraints such as limited time allocated to English lessons at schools (Civelek & Karatepe, 2021), inadequate opportunities to practice speaking outside the classroom (Zrekat & Al-Sohbani, 2022), and lack of willingness to communicate during class hours because of negative emotions (Peng, 2019; Fathi et al.,2024).

Skill Acquisition Theory highlighted the crucial role of practice to automate a particular skill (DeKeyser, 2015). Yet, the nature of EFL environments is likely to limit the amount of practice because of the above-mentioned constraints. Consequently, EFL learners encounter a variety of difficulties to facilitate their speaking performance. Nevertheless, these issues can be overcome with the support of AI technologies. They are believed to offer great potential for speaking practice beyond the traditional language classroom. As different from the earlier technologies for speaking practice, AI provides more than repetition and recording activities (Zou et al., 2024). Instead, AI technologies offer an individualized learning experience through several activities and personalized feedback (Hassani et al., 2016).

Multiple AI technologies have widened the area of investigation in Second Language Acquisition (SLA) research. Chatbots in particular have appeared to be one of the most researched tools to this end (Du & Daniel, 2024). Adamopoulou and Moussiades (2020) defined chatbots as software applications that are capable of understanding input and engaging in communication with users by means of natural language processing. That is, Chatbots provide users with real-life communication experience as if they are talking to individuals in real life.

Even though numerous studies have been carried out to investigate the impact of AI-powered chatbots on EFL learners' speaking performance (For example; Chen et al., 2023) they employed existing AI tools which were designed for general applications rather than educational purposes specifically. Thus, Du and Daniel (2024) called for an attempt to develop AI-powered chatbots to address learners' particular needs. Furthermore, existing research largely involves participants at college-level (Du & Daniel, 2024). Additionally, to the authors' knowledge, there is no study that employs a chatbot that is tailored to specific needs in the Turkish context. Thus, the present study aims to contribute to the growing body of research on the use of AI-powered chatbots to enhance EFL speaking skills by investigating the opinions of 9th grade high school students in Turkiye about an AI-powered chatbot TeaTalk which is specifically designed to provide them with the practice on the objectives they have learnt at school.

2. Literature Review

The advancements in AI technologies have shaped the way activities performed in diverse areas of life. This has brought about the question of to what extent AI can be useful to elevate language skills. As a result, a large number of studies have brought attention to the available AI technologies in the field of SLA. For instance, Chen et al. (2023) scrutinized the perceptions of university-level Taiwanese EFL learners about the use of Google Assistant to foster their language development. Based on the data from a questionnaire and interview protocols, they documented that the majority of the students expressed positive attitudes towards Google Assistant. Moreover, the participants expressed that engaging in interaction with Google Assistant contributed to listening ability, speaking skills, vocabulary knowledge as well as to their pronunciation. However, it was noted that learners with lower proficiency level of English were sometimes misunderstood by Google Assistant due to their mispronunciation of words.

Especially for speaking practice, it has been underscored that AI technologies hold abundant potential (Kessler, 2018). For example, Zou et al. (2024) carried out a mixed-method study to investigate the perceived benefits and drawbacks of EAP Talk that is an AI-powered tool tailored to provide speaking practice for EFL learners. The analysis of both qualitative and quantitative data has unravelled that EFL

learners mostly adopted positive views towards the tool. They stated that they improved their speaking skills in various aspects such as pronunciation, accuracy, read-aloud skills, and presentation skills. Additionally, it was reported that EAP talk allowed learners to practice speaking beyond the traditional classroom which the students praised. Furthermore, the participants expressed that they enjoyed their engagement with the tool which resulted in increased motivation. Moreover, it was noted that the variety of learning materials provided through AI-technologies boosted the quality and efficacy of input presented. On the other hand, inadequacy of voice recognition, insufficient feedback, and irrelevance of the material content to the participant learners' course were listed as the drawbacks.

Additionally, Dennis (2024) conducted a mixed-method study to shed light on university-level EFL learners' opinions of a speech recognition technology and its impact on the learners' speaking performance and pronunciation. The pre-test/post-test findings revealed that the speech recognition technology (SRT) significantly helped learners improve their speaking and pronunciation. Furthermore, the questionnaire results displayed that the majority of the learners held positive attitudes towards the SRT and considered it to be beneficial. In addition, it was documented that the participants praised some specific features of the SRT such as flexibility, immediate feedback on their performance, personalized learning experience, and user-friendly interface. Dennis' (2024) study revealed similar findings. It showed that such technology is promising for developing learners' pronunciation and speaking skills thanks to the opportunities it offers, such as instant feedback and repetitive practice, which are crucial for automatization.

Likewise, Mingyan et al. (2025) adopted the quasi-experimental research design to explore the efficacy of an AI-powered mobile app Liulishuo on EFL learners' speaking performance. Following a pre-test/post-test evaluation, the findings revealed that the experimental group outperformed the control group on their overall speaking performance. It was noted that the control group fell behind in terms of fluency and pronunciation whereas no statistically significant difference was found regarding grammar and vocabulary. That is, the results demonstrated that the impact of AI-powered mobile apps on different speaking sub-skills varied.

Instead of employing an existing AI tool, Hwang et al. (2022) introduced an AI-powered mobile app called Smart UEnglish. This application enabled EFL learners to interact in English in authentic contexts. It aimed to facilitate learners' speaking performance and lexical knowledge. It offered two forms of conversation practices namely "designed talk" and "free talk". The study employed a quasi-experimental design. Forty-three students were appointed to control and experimental groups. The participants interacted with the chatbot in the app for 10 weeks. The analysis of pre- and post-test results indicated that the achievement of experimental group was found to be significantly higher than the control group. In addition, the role of "designed talk" over "free talk" was highlighted since it provided learners with the opportunity to practice the sentence structures and vocabulary items they learnt during their classes.

As the above-mentioned studies have indicated, AI-powered technologies facilitate language development in EFL settings and learners express positive attitudes towards such tools. These tools leverage text-to-speech, speech-to-text, automatic language recognition, and natural language processing capabilities (Mingyan et al., 2025). With the help of these features, AI-powered technologies offer learners a self-learning environment outside the traditional language classroom (Dizon & Tang, 2019). Furthermore, they decrease learners' speaking anxiety and increase their willingness to communicate (Tai & Chen, 2023; Fathi et al., 2024). Moreover, it was reported that they have a motivating effect on learners by providing them with a stress-free environment (Yang et al. 2022).

The current study introduces an AI-powered mobile application "TeaTalk" for speaking practice. The primary purpose of the study is to shed light on the perceptions of Turkish EFL learners about the use of

TeaTalk for the development of speaking skills. Thus, the study seeks an answer to the following question:

1.What are the perceptions of 9th grade Turkish EFL learners about an AI-powered chatbot TeaTalk for improving their speaking skills?

3. Methodology

3.1. Research Design

The present study adopts a qualitative design to explore Turkish EFL learner's perceptions about the use of TeaTalk to develop their speaking performance. Qualitative research benefit from non-numerical data to reveal answers for the targeted research questions (Dörnyei, 2007).

3.2. Participants and Setting

20 Turkish EFL learners participated in the study. "Convenience sampling" technique was utilized for the selection of rthe participants (Cohen et al., 2007, p.113-114). They were 14 to 15 years old. They were 9th grade students at Çayeli Science High School. 12 of them were male and 8 of them were female students. In Turkiye, EFL education starts in the 2nd grade. That is, all the learners have been learning English for 8 years approximately. None of them have been to an English-speaking country before. Their school is located in the small city of Rize, which is in the Black Sea region of Turkiye. Therefore, they do not have the opportunity to practice English speaking in real life.

3.3. Designing Procedure of TeaTalk

TeaTalk has been designed as a solution to a crucial problem for Turkish high school students to facilitate their English speaking skills. It is an AI-powered mobile chatbot. Due to insufficient practice opportunities in traditional classrooms, speaking appears to lag behind other language skills in terms of development. The 9th grade students were considered to be targeted audience since they are required to develop EFL skills as part of their academic studies and use technology actively in other areas of their lives. Initially, the related literature was reviewed to identify the shortcomings of the existing AI-powered chatbots and subsequent steps were taken.

The TeaTalk application was developed through Unity which is a game development engine. Unity enabled us to integrate several AI functions such as text-to-speech, speech-to-text, natural language processing, and automatic language recognition to TeaTalk easily. The main screen of the application involve cultural components of the Black Sea region, especially the city of Rize which is famous for its tea. On TeaTalk, the students interact with a character named Temel (a traditional name in the Black Sea region) while sipping tea from a traditional Turkish tea glass in an authentic coffee shop. We aimed to increase learners' sense of belonging and motivation to interact with the tool by adding these cultural elements. That is, we intended to create a learning tool which not only offers a comforting and friendly environment for speaking practice but also represents the local identity.

The application provided learners with the opportunity to practice English related to five objectives they had learnt at school. These objectives were (1) giving and asking for advice, (2) expressing opinions about art, books, and films, (3) talking about daily routines, (4) talking about past, and (5) talking about future predictions. In other words, TeaTalk offered learners a "designed talk" experience as in Hwang et al.'s (2022) study. We aimed to enable learners to practice the language structures and vocabulary items they had learnt at school. Thus, some prompts were given to Unity as input. A sample prompt for talking about routines objective is as follows:

> "Your name is Temel. You are warm, polite, and friendly like someone from the Black Sea region in Turkiye. You speak only simple English. You always ask one short and easy question at a time about the user's daily routine. You ask about things like: What time do you wake up? What do you eat? When do you study? Do you work? How do you relax? What time do you sleep? You do not use hard words or small talk. You ask simple and direct questions. If the user makes English mistakes, you correct them by giving the right sentence in simple English. If the user talks about something else, you kindly bring them back to talking about daily routine. You never stop asking questions. All your questions are very easy, A1 or A2 level, so the user can understand and answer easily."

Communication takes place through speaking only on TeaTalk. Temel asks a question at a time regarding the chosen objective. The users are able to choose Temel's accent on the settings menu: American, British, or Indian. After the learners hear the question, they respond to Temel by utilizing the language structures they had been introduced at school. The learners' response is transformed into a text through Google speech-to-text service. However, the students are not allowed to make any changes on the sentences they performed by writing. TeaTalk analyses the learners' responses through OpenAI ChatGPT-3.5-turbo model and give feedback in case of grammatical or lexical errors. The students are able to view the chat history on the application thanks to the text-to-speech and speech-to-text functions.

After the completion of the design process, TeaTalk was tested by 20 participants who are not the participants of the current study. Based on the feedback received from them, necessary modifications were made to the application to minimize the technical issues.

Fig. 1. Sample images from the TeaTalk application

3.4. Data Collection and Analysis

The data was collected through a questionnaire consisting of two parts (see Appendix A). The questionnaire was prepared on Google Forms and shared with the participants through WhatsApp. The first part of the questionnaire involved questions aiming to gather demographic data about the participants such as age, gender, duration of English study, etc. The second part of the questionnaire included 10 open-ended questions. These questions seek to uncover the participants' perceptions of TeaTalk, the challenges they encounter while using it, and its perceived outcomes. The survey questions were presented in the participants' mother tongue (Turkish), as this was thought to enhance more accurate self-expression.

The data obtained from the open-ended questionnaire was analysed through content analysis. The recurring themes and categories in the participants' responses were determined. The findings were presented in tables. Each participant was assigned a number in the Results section rather than their names to protect their anonymity.

3.4. Procedure

The present study was carried out in 4 main steps. First, TeaTalk application was designed by considering the learners' needs and reviewing the current literature on the topic. Next, the participants were given access to the application. They were asked to practice speaking for 20 minutes every other day by choosing the objective determined by their teacher. This treatment lasted for two weeks. After the completion of the treatment period, the participants were asked to fill out an open-ended questionnaire. As the final step, the participants' answers to the questionnaire were analysed by the researchers.

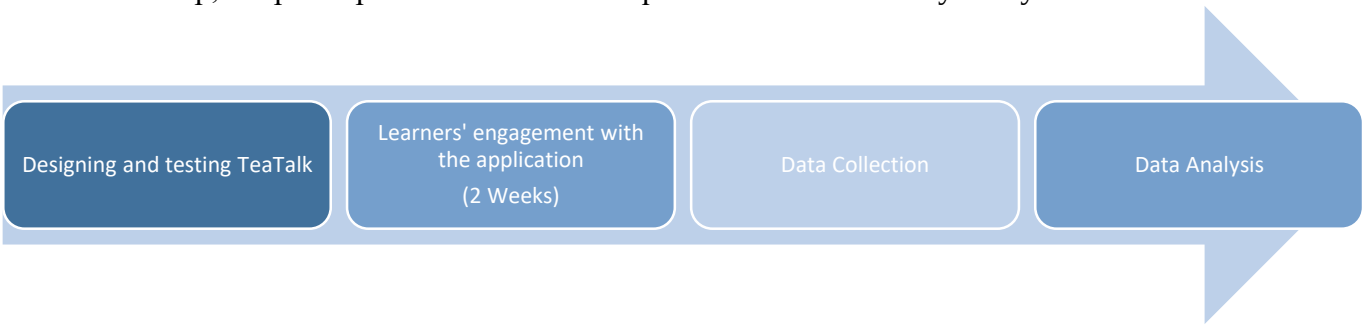

Fig. 2. Steps of the present study

4. Results

The research question of the present article probed the opinions of 9th grade Turkish EFL learners about an AI-powered chatbot TeaTalk for improving their speaking skills. In order to elucidate the answer to the research question, themes, categories, and codes derived from the open-ended questionnaire were demonstrated in Figure 3.

As shown in Figure 3, two main themes were identified throughout the data analysis: perceptions about TeaTalk and perceived outcomes of TeaTalk. The findings presented in Table 1 indicate the participants' perceptions of TeaTalk. As shown in Table 1, the participants expressed some benefits and challenges they experienced. As one of the benefits, more than half of the participants expressed that TeaTalk provided constructive and corrective feedback upon their mistakes (n=11). For instance, Participant 1 expressed "TeaTalk enabled me to notice my mistakes and learn from my mistakes". Likewise, Participant 7 stated "I had access to an AI tool. It showed me my mistakes and I think it can help me improve when I use it frequently".

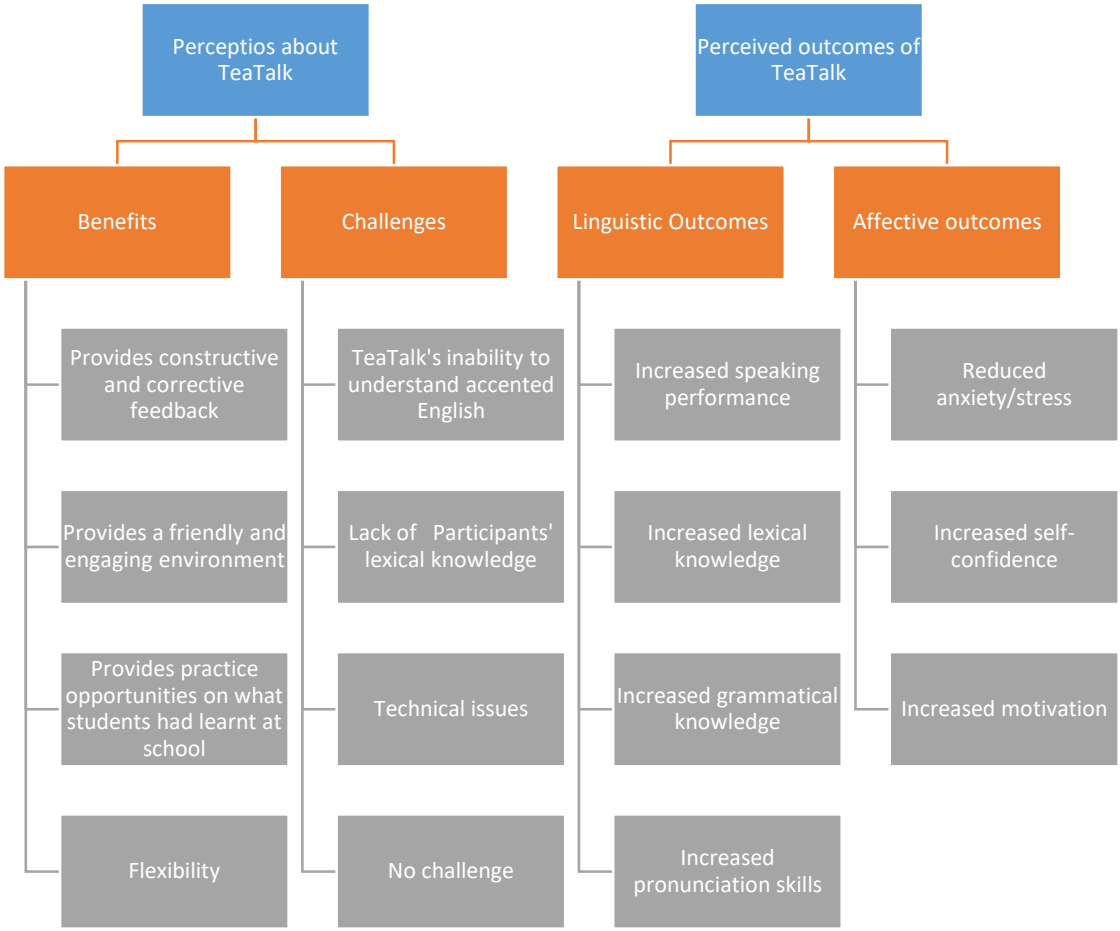

Fig. 3. Themes, categories, and codes obtained from the open-ended questionnaire

Table 1.

Perceptions about TeaTalk

Category	Code	Frequency	Percentage
Benefits	Provides constructive and corrective feedback	11	55%
	Provides a friendly and engaging environment	10	50%
	Provides practice opportunities on what students had learnt at school	11	55%
	Flexibility	2	10%
Challenges	TeaTalk's inability to understand accented English	5	25%
	Lack of Participants' lexical knowledge	2	10%
	Technical issues	7	35%
	No challenge	9	45%

Additionally, half of the participants praised the friendly and engaging environment TeaTalk provided (n=10). To illustrate, Participant 12 said “There is nobody to judge me around. I feel relaxed and I am not afraid of making mistakes. I feel like I am talking to a real person”. Moreover, 11 participants highlighted that TeaTalk provided them with the opportunity to practice what they had learnt at school. In other words, they expressed appreciation for the “designed talk” opportunity that TeaTalk offered. For example, Participant 7 asserted “We had already learnt about the objectives at school. Therefore, I already knew them. But thanks to TeaTalk, I had the opportunity to practice them. I revised and I remembered the sentence structures I had forgotten”. Finally, flexibility appeared in the data as one of the benefits of

TeaTalk. A few participants underscored the value of ability to study English whenever and wherever (n=2).

As presented in Table 1, he participants put forward some challenges as well. For instance, a quarter of the participants said that the chatbot was sometimes unable to understand their pronunciation (n=5). Additionally, few participants had difficulties to respond to some of the chatbot's questions due to their inadequate lexical repertoire (n=2). Furthermore, 7 students claimed they encountered technical issues. For illustration, Participant 16 said "my screen sometimes froze and I had to restart the application". Likewise, Participant 3 asserted "Error page have appeared on my screen twice". However, almost half of the participants expressed that they had had no challenge or technical issue throughout the time they had spent on TeaTalk.

Table 2.

Perceived outcomes of TeaTalk

Category	Code	Frequency	Percentage
Linguistic Outcomes	Increased speaking performance	17	85%
	Increased lexical knowledge	7	35%
	Increased grammatical knowledge	8	40%
	Increased pronunciation skills	8	40%
Affective Outcomes	Reduced anxiety/stress	18	90%
	Increased self-confidence	4	20%
	Increased motivation	7	35%

As demonstrated in Table 2, the use of TeaTalk resulted in linguistic and affective outcomes. As one of the linguistic outcomes, increase in speaking performance was listed by the majority of the participants (n=17). For instance, Participant 2 expressed "The application improved my speaking. I learnt how to give advice at school but I created a lot of advice sentences on TeaTalk. I realized that I could speak faster". In addition, some participants mentioned that they had learnt new vocabulary thanks to TeaTalk (n=7). For example, Participant 11 stated "There were unknown words in some questions. I checked them on the dictionary and noted them down. Therefore, I can say that I learnt new words (e.g. component)". As another linguistic outcome, increase in grammatical knowledge was reported (n=8). Finally, they reported that TeaTalk helped them improve their pronunciation skills. Participant 4 declared "Normally, I am shy to pronounce words in English but I was more relaxed on TeaTalk. Nobody could hear me. Moreover, I could hear the questions and read them at the same time. This helped me to learn the pronunciation of some words".

The interview findings released affective outcomes as well. Table 2 indicates that almost all the participants agreed TeaTalk decreased their speaking anxiety (n=18). For example, Participant 9 asserted "I feel very stressed while speaking English. I am afraid of making mistakes. I feel like everybody will laugh at me. Yet, I did not feel so on TeaTalk. I felt like talking to a real person but I knew that I was not talking to a real person". Similarly, Participant 13 stated "I felt more relaxed on TeaTalk than in the classroom. as there was no one to laugh at me". In addition, 4 participants stated that Teatalk enhanced their self-confidence. As an illustration, Participant 1 said "TeaTalk could understand when I spoke. I felt very proud when I realized that I could speak English". Lastly, 7 participants pointed out that they were more motivated to speak English.

5. Discussion

This current research is an attempt to shed light on Turkish EFL learners' opinions about an AI-powered chatbot TeaTalk. The findings indicated that the participants expressed mostly positive opinions about

TeaTalk. Most participants expressed appreciation for the corrective and constructive feedback the chatbot provided. Similarly, Hwang et al. (2024) highlighted automated personalized feedback as one of the prominent features of AI-powered chatbots. However, not all AI-powered chatbots were found effective to this end. For instance, the participants in Zou et al.'s (2024) study complained about the lack of quality feedback EAP Talk (an AI-powered chatbot) provided.

The participants also praised the friendly and engaging environment TeaTalk provided. Additionally, the participants stated that TeaTalk enabled them to practice what they had learnt at school. Zou et al. (2023) also underscored the significance of consistency between practice materials and academic objectives. In contrast to EAP Talk (Zou et al., 2024), TeaTalk is designed to address the participants' academic needs. Thus, it covered the objectives that they were introduced at school.

The participants also encountered some challenges or technical problems on TeaTalk. For instance, some participants asserted that they were unable to comprehend some questions due to their insufficient vocabulary knowledge. Moreover, the findings demonstrated that TeaTalk could not understand some participants' accented English. This finding is consistent with Moussalli and Cardoso's (2016) study in which the participants complained about an AI tool's inability to comprehend their pronunciation.

As the findings show, the participants believed that TeaTalk has brought about linguistic and affective outcomes for them. As one of the linguistic outcomes, the participants believed that TeaTalk significantly improved their speaking performance which is the main goal of the chatbot. This finding is in line with the previous studies (Chen et al., 2023; Dennis, 2024; Zou et al., 2024). Furthermore, the results showed that TeaTalk contributed to learners' lexical knowledge. Hwang et al. (2022) documented that AI-powered technologies are likely to facilitate learners' lexical knowledge. Likewise, Shawar and Atwell (2007) listed enhancing learners' vocabulary repertoire as one of the prominent functions of chatbots. It was also reported that TeaTalk enhanced learners' grammatical knowledge by giving feedback on their errors in contrast to Zou et al.'s (2024) study. Additionally, the participants expressed that TeaTalk had facilitated their pronunciation skills as in Chen et al.'s (2023) study.

Reduced anxiety/stress appeared as one of the most mentioned affective outcomes of TeaTalk use. Tai and Chen (2023) and Fathi et al. (2024) also asserted that AI-powered technologies offer a stress-free environment and this boosts learners' willingness to communicate. This stress-free environment facilitated learners' motivation to speak English as reported in Yang et al. (2022) and Chiu et al.'s (2023) research. Finally, participants stated that TeaTalk increased their self-confidence. Similarly, Mroz (2018) listed enhancing self-confidence as one of the affective outcomes of AI-powered tools.

6. Conclusion

This study sought to investigate Turkish 9th grade EFL learners' opinions about AI-powered chatbots for improving their speaking performance. Accordingly, an AI-powered mobile application called TeaTalk was developed. The findings demonstrated that the participants adopted mostly positive views of the chatbot. The participants reported that they improved in a variety of language areas such as speaking, pronunciation, vocabulary, and grammar which is in line with the literature on AI-powered tools to facilitate speaking ability. In addition, they stated that they benefited from the corrective and constructive feedback TeaTalk provided.

Furthermore, the learners praised the friendly and engaging environment TeaTalk offered which resulted in some affective outcomes such as reduced anxiety, increased motivation and self-confidence. The participants also appreciated that TeaTalk enabled them to utilize the language structures they had learnt

at school. That is, the chatbot offered them to practice what they had learnt previously beyond the traditional language classroom.

Some participants encountered some challenges such as inability to understand the addressed questions due to lack of vocabulary knowledge and TeaTalk's inadequacy of comprehending accented English. Yet, it is apparent that AI-powered chatbots have great potential to facilitate speaking fluency, accuracy, and pronunciation.

In summary, in EFL environments where learners have limited opportunities to engage in communication in English, AI-powered technologies demonstrate strong promise to develop speaking performance of EFL learners. Thus, more AI-powered technologies should be developed to address the needs of different learner groups. Furthermore, teachers and students should be equipped with necessary knowledge and skills to include AI-powered tools in their teaching/learning practices.

7. Limitations and Suggestions for Further Research

There are several limitations to this study that should be noted. First, this paper is a case study which examines a group of 20 high school students. Thus, the results are not generalizable. Furthermore, convenience sampling was chosen as the sampling method which may affect the generalizability and validity of the findings. The participants faced some technical issues. Even though the issues stemmed from TeaTalk or their device, they were likely to affect their perceptions. Thus, we suggest that more studies with larger groups should be conducted to investigate EFL learners' opinions of AI-powered chatbots to improve their speaking skills.

Furthermore, most studies in the field involve college-level students and this study included high school students. However, there are, to our knowledge, no studies focusing on young learners' perceptions of AI-powered tools to practice speaking. Thus, young learners' views of AI-powered tools should be investigated.

Finally, numerous studies presenting statistical data have been carried out to investigate the impact of AI-powered chatbots on speaking performance. Yet, the Turkish context lacks such studies. Therefore, we suggest that more studies to this end should be conducted in the Turkish context.

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Appendix A

Open-ended Questionnaire Questions

1. Could you share your overall impressions of the TeaTalk application? What kind of experience did using this app provide you?
2. Did using the TeaTalk application improve your English speaking skills? Do you think it would help improve your speaking skills if used more frequently? Why?
3. Did you face any difficulties while using TeaTalk? What challenges did you encounter?
4. Did you feel comfortable and confident while speaking English with TeaTalk? Why?
5. How did selecting a learning objective and practicing based on it affect your progress?
6. What kind of changes could be made to make this application more useful and effective?
7. Did you encounter any technical issues? Please describe the problem.
8. Would you recommend TeaTalk and similar applications to your friends who want to improve their English speaking skills? Why?
9. What are the differences and similarities between your English-speaking experience in the classroom and your experience speaking with TeaTalk? Explain how you felt in both situations.
10. Please encapsulate your experience with the TeaTalk application in a single word and explain the rationale behind your choice.