Online-Journals.org

iJIM International Journal of Interactive Mobile Technologies

iJIM | eISSN: 1865-7923 | Vol. 19 No. 22 (2025) | OPEN ACCESS

https://doi.org/10.3991/ijim.v19i22.57447

PAPER

Mobile Interaction Meets AI Tutoring: Using ChatGPT-4o to Boost Speaking Skills in EFL Classrooms

Behnam Behforouz[1,2] (✉), Abdullah Al Maqbali[2], Ali Al Ghaithi[2], Afrooz Poorghorban[3]

[1]University of Technology and Applied Sciences, Shinas, Oman

[2]Sohar University, Sohar, Oman

[3]Islamic Azad University Central Tehran Branch, Tehran, Iran

Behnam.Behforouz@utas.edu.om

ABSTRACT

The primary aim of this study was to implement the usage of ChatGPT-4o as an interactive artificial intelligence (AI) tool in the language learning context to measure its impact on the speaking skills of English as a Foreign Language (EFL) learners. To collect the required data, 62 Omani EFL learners with an intermediate level of English proficiency were randomly and equally divided into a control and an experimental group. To ensure the homogeneity of students in terms of speaking abilities, a pre-test was initially conducted. During the one-month treatment period, both groups received regular in-class training daily; however, the experimental group was engaged in the interactive and premium version of ChatGPT-4o outside of the classroom for extra practice and feedback. After the treatment, a post-test was administered to compare the performance of learners within their groups and in comparison with their counterparts. The findings of the study revealed that students' scores in both groups increased from pre- to post-test, which could be associated with the daily training; however, the performance of the experimental group in the post-test was significantly better than the control group, and this could be linked to the use of ChatGPT-4o as the facilitator of learning. Additionally, the analysis of the scores among experimental group participants revealed that task response (26.2%) and grammar (26.2%) received the highest increase after using AI, followed by vocabulary (24.6%) and pronunciation. The study's results are helpful for teachers, students, and institutions.

KEYWORDS

interactive mobile technologies, artificial intelligence (AI), ChatGPT-4o, speaking skills

1 INTRODUCTION

Speaking abilities are crucial in communication, mainly when the native language is not employed and the medium of communication is a foreign language. [1] assert that speaking is crucial for the acquisition and instruction of other languages. Employing a foreign language allows students to express their ideas verbally. It is believed that students should engage in speaking practice within everyday

Behforouz, B., Al Maqbali, A., Al Ghaithi, A., Poorghorban, A. (2025). Mobile Interaction Meets AI Tutoring: Using ChatGPT-4o to Boost Speaking Skills in EFL Classrooms. *International Journal of Interactive Mobile Technologies (iJIM)*, 19(22), pp. 34–49. https://doi.org/10.3991/ijim.v19i22.57447

Article submitted 2025-06-29. Revision uploaded 2025-09-15. Final acceptance 2025-09-26.

circumstances to develop competency. Therefore, the instructor needs to provide students with more speaking chances, incorporating exercises or examples that immerse them in authentic communication contexts [2]. Thus, special emphasis must be directed towards enhancing the speaking abilities of English as a Foreign Language (EFL) learners [3]. EFL learners must attain competency in spoken English, as it signifies their comprehension of the English language [4]. The effectiveness of English speaking is evaluated by the accuracy and fluency with which an individual utilizes spoken language in dialogue [5], [6], [7].

Students with considerable speaking proficiency may succeed in other language skills and improve their speaking ability via collaborative practice [8]. Proficient English-speaking skills enhance an individual's personal and professional growth. It augments self-confidence and expands networking prospects [9].

Speaking is the most challenging skill for many EFL learners, requiring language and cultural proficiency. According to [10], speaking obstacles may arise from the instructor, the curriculum, the resources, or the students themselves. [11] asserts that speaking English poses the most significant barrier for learners. EFL students frequently demonstrate stuttering during English conversations. This results from students' insufficient exposure to genuine contexts in which they may communicate and articulate themselves in English. Moreover, students lack exposure to the cultural contexts of native English speakers [2]. Regrettably, verbal proficiency is undervalued in educational institutions. Educators predominantly prioritize traditional methods that promote rote learning, rendering learners passive consumers of knowledge. They possess less motivation to attain competence in English. Learning English is a formidable obstacle, leading some to abandon their studies. EFL courses prioritize reading and writing skills. This essential capability is completely disregarded. As a result, learners struggle to express even a single sentence. Recently, the importance of speaking abilities has been underscored to attain desired objectives [11]. [12] argues that EFL learners encounter difficulties with speaking proficiency, and this issue encompasses several facets, including an insufficient pedagogical approach, overlooking the cultivation of speaking abilities, underscoring the importance of reading and writing, the lack of extensive experience, and seldom permission to students to cultivate their speaking abilities. [13], [14] discovered that EFL English programs often employed obsolete instructional approaches, lacking innovation or improvement, which resulted in insufficient practice and limited exposure to English-speaking environments. Consequently, incorporating creative educational technology skills into instructional and educational practices is important [15]. It is essential to combine innovative strategies [16] and effective teaching methods [17] with traditional literacy practices in today's globalized and technologically advanced context to enhance students' speaking proficiency [18].

Recent studies by language scholars have concentrated on the application of Information Technology (IT) in language education and acquisition [19], [20], [21], [22], [23]. The integration of technology in language instruction enhanced students' educational experiences by promoting personalized, interactive, and communicative learning processes [24], [8]. Language instructors have adopted IT to create digital language learning environments that engage students and accelerate language acquisition [25]. Innovative technology has allowed L2 language learners to enhance their speaking abilities within their language learning process [26].

Artificial intelligence (AI) technology can improve student learning and support instructors and offer a more adaptable approach to teaching with learning environments tailored to the unique needs of each student [27], [28], [29]. AI technology

is a valuable tool and an interactive teacher during the learning process. Adaptive learning solutions can help AI identify what each pupil excels at and what they need to work on [30]. This makes it easier to customize schooling. This phenomenon is the result of teachers and AI technology working together to create a comprehensive learning environment and ecosystem that enhances the overall quality of education. AI technology can assess how well students can speak, listen, write, and read in the English language. The AI learning platform can create a personalized lesson plan for each student, tailored to their specific needs and skills. A student who excels in speaking may be assigned challenging tasks or resources to help them further develop their talents [28], [31].

El Shazly [32] states that AI technologies are practical tools for learning because they are flexible, allow for interaction, and focus on the learner, all of which are crucial for enhancing speaking abilities. AI has also demonstrated its ability to enhance student engagement and improve interactive language learning methods, which is particularly important in today's schools [33]. [34] stated that chatbots are primarily used in education as part of artificial intelligence technology. AI voice chatbots, employing speech recognition and natural language processing algorithms, can converse with the same speed and clarity as humans [35] and are beneficial in educational contexts [36].

Among all the available AI tools, ChatGPT has the potential to assist language learners during the language learning process [37], [38], [39]. ChatGPT can serve as an intelligent assistant during the learning process, offering interactive support to students at any time and from any location. Besides addressing inquiries, ChatGPT can also organize data and provide feedback [40]. ChatGPT enables students to engage in discussions on novel topics and explore strategies for addressing tasks and challenging learning situations [41]. The use of ChatGPT in schools fosters flexibility and personalization in learning. [42] found that using ChatGPT enables the analysis of students' speech and provides them with individualized resources and assignments tailored to their needs and preferences. Additionally, ChatGPT assists teachers in preparing learning materials easily and quickly, leading to a focus on more advanced teaching techniques and course designs [43]. Teachers can utilize ChatGPT to generate ideas for lectures, presentations, training programs, and hands-on courses [44]. ChatGPT assists teachers in creating tests and assignments, grading them, and providing students with personalized feedback [45].

It seems essential to investigate how AI technologies can be used in real-life situations during the process of learning the English language. This illustrates how AI technologies support the design of effective teaching materials and enhance English language skills [28]. Although some studies have focused on AI and its impact on language learning, a gap remains in the literature regarding the effect of AI tools on the speaking skills of EFL learners. Further research is needed to determine precisely how AI aids EFL students in enhancing their speaking skills [46]. Numerous studies have investigated the potential benefits of AI-powered tools in helping individuals learn new words [47], enhancing their oral communication skills [48], and improving their academic performance overall [49]. However, there hasn't been any real-world research on how well ChatGPT works for improving speaking skills. Recent research has primarily focused on broad AI-enhanced tools or conventional chatbot systems, with less attention paid to the largely untapped potential of advanced language models [37]. This project will examine how well ChatGPT-4o helps Omani intermediate EFL learners improve their speaking skills. It will also provide a

comprehensive review of the research on how massive language models can be effectively utilized in language instruction. The subsequent research issues will be examined comprehensively as well:

1. Does the incorporation of ChatGPT-4o as an interactive learning tool significantly enhance the speaking abilities of Omani intermediate EFL learners?

2 LITERATURE REVIEW

2.1 AI and speaking skills

Zhang [50] investigated how chatbot interactions can enhance students' speaking proficiency, encompassing fluency, pronunciation, intonation, and stress patterns. A sample of university students enrolled in an English course participated in the study. While there were no discernible variations in pronunciation across proficiency levels, the results showed that students' speaking skills had significantly improved, particularly in fluency and intonation. Students made significant progress in tasks that involved speaking and interacting with others. The results indicate that chatbots can help students become more engaged and improve their communication skills. This suggests that more research into these new educational tools may be necessary to help students learn languages in a variety of ways.

Taeza [51] examined the role of AI-powered chatbots in improving speaking proficiency. Participants were 60 intermediate ESL learners, divided into two groups: an experimental group that engaged in structured interactions with a conversational AI chatbot and a control group that utilized conventional language practice techniques. According to the findings, the experimental group showed noticeably larger increases in speaking ability, as well as greater gains in self-confidence and a stronger desire for communication. Additionally, participants` qualitative feedback also indicated increased practice and motivation, along with decreased anxiety. The practical implications recommend incorporating chatbots into language curricula to provide additional speaking practice, particularly in situations where there are limited teachers.

Celik et al. [52] investigated ChatGPT's impact on the speaking self-efficacy of Iraqi EFL learners. During the eight-week treatment period, forty-four students willingly entered to represent the control or experimental group. Students in the experimental group used ChatGPT as a speaking tutor to enhance their learning in class on themes assigned according to the coursebook, whereas students in the control group participated in speaking sessions during class. Results revealed that ChatGPT is a promising tool for enhancing students' speaking self-efficacy scores because it provides a supportive environment for receiving constructive feedback, allows recordings to be played repeatedly, and tailors instruction to each learner's level. As a result, they could speak more confidently and with less fear.

Vu et al. [53] examined the effectiveness of an AI-based method in helping EFL college students enhance their speaking and pronunciation skills in English. The study's goal was to determine how an AI system and a LINE bot, which utilized Microsoft's Azure technology, impacted students' ability to speak and pronounce words. The experimental group utilized AI technologies, while the control group employed traditional teaching techniques. The results showed that the experimental group had far better pronunciation and speaking skills than the control group.

This shows that AI technologies can help students become more independent and improve their language skills in real-life situations.

Almutairi and Alghammas [54] investigated how the ELSA app can enhance basic speaking skills, including pronunciation, fluency, coherence, and vocabulary of Saudi students. The results show that the students in the experimental group made significant improvements in all areas of speaking, including vocabulary range, fluency, coherence, and pronunciation. The results of the study indicate that the ELSA app offers a beneficial interactive learning environment and significantly enhances the speaking abilities of EFL learners.

3 METHOD

3.1 Participants

The study's sample consisted of 62 Omani EFL learners who participated voluntarily in this study and were randomly assigned to either a control or experimental group, with 31 students in each group. The participants were native Arabic speakers aged 19 to 21. The institution's evaluations indicated that these students possess an intermediate level of competency in the English language. These students were selected from a foundation department at one of Oman's higher education institutions. The national curriculum of Oman requires learners to complete one to two academic years in the General Foundation Program (GFP). The GFP program is mandatory and a prerequisite for higher education in Oman. Thus, to secure entry into specialized areas, the GFP program offers students a range of subjects, including English, Mathematics, and IT, with English serving as the medium of instruction.

3.2 Instruments

To collect the required information on the speaking skills of the participants, a few instruments were employed by the researchers.

Speaking examination tools. The speaking examination had three segments. Section 1, with 5 minutes, consisted of 31 scenarios, each including 3 to 4 questions on typical subjects, such as hometowns and college memories. The second phase consisted of 30 scenarios, each lasting roughly 5 to 6 minutes, during which students received the second part of the dialogue and had to formulate questions based on those responses. This component was designed to assess students' grammatical proficiency in using tenses. The final section of the examination comprised 17 pictorial narratives and cartographic representations. Students could choose to create their narratives using visual tales or maps. In the former scenario, students were allotted one minute, along with a pen and paper, to compose prompts and utterances for their speaking tasks. In the latter scenario, students were provided one minute to examine the map and become familiar with its location, with two to three minutes allotted to this part. The speaking examination was scored out of 20 for intermediate students, with evaluation factors including task response, lexical resources, grammar, and pronunciation, each worth 5 marks. Two examiners evaluated the learners while their voices were recorded accordingly. The variance between the markers must not exceed 3 points.

ChatGPT-4o interactive voice application. The second and main instrument employed by the researchers to collect the speaking information of the students was the ChatGPT-4o interactive voice application, which was only applicable on mobile phones. This version was premium, and the researcher supplied it for 30 users during the treatment period.

There are several benefits to using this specific tool in the speaking improvement process for students. Students can access ChatGPT-4o at any time and from any location, allowing them to practice speaking according to their preferences. This obviates the necessity for in-person language tutors or conversation partners.

Even if language learners do not use the correct linguistic terms, ChatGPT-4o can still understand the words and phrases they attempt to convey and will rewrite the sentences with proper grammar. Additionally, the individual feedback learners receive is tailored to their needs and level of competence [55].

3.3 Procedures

This study was conducted during the third term of 2025 at the university for one month. The research included 62 intermediate learners who were informed that their participation was voluntary and were then divided into treatment and control groups. The speaking pre-test was administered one week prior to the start of the treatment period. The researcher taught both groups the basics and steps to improve their speaking skills, but the treatment group also utilized ChatGPT-4o as a means to practice speaking outside of class. To ensure that everyone knew how to utilize ChatGPT-4o correctly, the researcher held a session for students in the experimental group and provided an example to help them with any problems that might arise. The researcher created a ChatGPT-4o for each student. The students were given speaking requirements at the intermediate level and were instructed to use the precise prompts that the investigator had developed.

The experimental group participated in four 45-minute speaking sessions per week in class, using the university's authorized textbook and teaching methods. The themes were "Describing Daily Routines," "Making and Responding to Suggestions," "Expressing Preferences," and "Narrating Past Events." Students planned communication tasks in class, such as role-playing (for example, planning a vacation with a friend), filling in knowledge gaps, and engaging in group discussions. The teacher often observed these exercises in class, providing students with general commentary on how well they used language, how fluent they were, and how suitable their expressions were, as well as offering some lexical and grammatical tips to improve the learners' speaking abilities.

Students in the experimental group were required to conduct speaking exercises outside of class every day using the mobile version of ChatGPT-4o. The tasks were like what they learned in class. For example, after a lesson on ideas, the students used ChatGPT-4o to converse with AI as if they were peers while planning a weekend trip. In another project about historical events, students shared a personal story with ChatGPT-4o and then answered questions, such as "How did you feel at that time?" ChatGPT-4o provides students with quick feedback by rephrasing, replacing words, and correcting sentences. Teachers monitored students' AI-driven conversations by having them upload screenshots and write brief reflective notes. This ensured that students used the app and received meaningful feedback. The teacher examined some of these exchanges more closely and made additional comments during class to help students better understand and address common issues.

The control group had four 45-minute speaking sessions in class that included the same topics and activities as the experimental group. The teacher taught in class, providing general feedback on students' progress, monitoring participation, and encouraging engagement. The control group received no assistance from AI or practice speaking outside of school. Their speaking practice was restricted to the classroom, where the instructor was in charge, and there was no extra technology to help them.

3.4 Data analysis

Initially, it was essential to assess the normality of the data in the pre- and post-test of the speaking test to select the most suitable parametric or nonparametric test for comparison. Therefore, a Shapiro-Wilk test for normality was conducted, and the results are presented in Table 1.

Table 1. The results of the normality test in the pre- and post-test

	Groups	Shapiro-Wilk		
		Statistic	df	Sig.
Pre-test	Control	.915	31	.017
	Experiment	.939	31	.076
Post-test	Control	.920	31	.024
	Experiment	.951	31	.171

Table 1 shows that the pre-test scores for the control group (p = .017) and the post-test scores for the same group (p = .024) are far from normal distribution, given their p-values are less than .05. The experimental group's pre-test (p = .076) and post-test (p = .171) scores are not very far from a normal distribution, which means that their data are basically normally distributed. Thus, to measure the performance of participants within their groups, a Wilcoxon Signed-Rank test was conducted, and the results are presented in Table 2.

Table 2. The performance of both groups from pre- to post-test

Groups		Post-Test – Pre-Test
Control	Z	–4.894
	Asymp. Sig. (2-tailed)	.000
Experimental	Z	–4.886
	Asymp. Sig. (2-tailed)	.000

Table 2 shows that the control group had a Z-value of –4.894 and a p-value of less than 0.001, which indicates that the scores improved in a statistically significant manner from the pre-test to the post-test. Similarly, the experimental group had a Z-value of –4.886 and a p-value of less than 0.001, which shows their significant performance in the post-test. While both groups showed substantial improvement in their post-tests, a Mann-Whitney U test was conducted to compare the groups together, and the results are presented in Table 3.

Table 3. The comparison of students` speaking performance in both groups from pre- to post-test

	Pre-Test	Post-Test
Mann-Whitney U	415.000	151.000
Wilcoxon W	911.000	647.000
Z	–.957	–4.671
Asymp. Sig. (2-tailed)	.339	.000
Effect Size (r)	0.122	0.593

The findings of Table 3 reveal that there were no statistically significant differences between the two groups in the pre-test ($p = .339$), indicating that both groups had similar levels of speaking abilities. The difference was statistically significant at the post-test ($p < .001$), indicating that the experimental group performed significantly better than the control group after the intervention. Additionally, the post-test effect size increased significantly to $r = 0.593$, indicating a substantial and essential difference in favor of the experimental group. This improvement provides strong evidence that the treatment had a measurable and positive impact on students' academic performance.

To gain a deeper understanding of the experimental group's detailed performance on each speaking criterion, further analysis was conducted. Table 4 shows the related findings.

Table 4. The results of the criterion analysis of the pre- and post-test of the experimental group

		N	Mean Rank	Sum of Ranks
PostTR – PreTR	Negative Ranks	0	.00	.00
	Positive Ranks	31	16.00	496.00
	Ties	0		
PostGr – PreGr	Negative Ranks	0	.00	.00
	Positive Ranks	31	16.00	496.00
	Ties	0		
PostVoc – PreVoc	Negative Ranks	0	.00	.00
	Positive Ranks	30	15.50	465.00
	Ties	1		
PostPro – PrePro	Negative Ranks	0	.00	.00
	Positive Ranks	29	15.00	435.00
	Ties	2		

Table 4 shows that the experimental group made significant improvements in all four speaking criteria: task response, grammar, vocabulary, and pronunciation. All 31 students did better on the post-test than the pre-test in both task response and grammar (Mean Rank = 16.00; Sum of Ranks = 496.00). Thirty students did better in vocabulary (Mean Rank = 15.50; Sum = 465.00), and 29 students did better in pronunciation (Mean Rank = 15.00; Sum = 435.00). In terms of contribution to overall improvement, grammar (26.2%) and task response (26.2%) had the most outstanding

average score on the post-test, followed by vocabulary (24.6%) and pronunciation (23%). These results show that ChatGPT-4o has a significant and consistent effect on enhancing several aspects of spoken English. Complementing the findings, the descriptive analysis of the pre- and post-test was measured, and the results can be seen in Table 5.

Table 5. The descriptive analysis of all criteria in pre- and post-test

	N	Mean	Std. Deviation	Minimum	Maximum
PreTR	31	2.6129	.71542	1.00	4.00
PreGr	31	2.6452	.55066	2.00	4.00
PreVoc	31	2.9677	.75206	1.00	4.00
PrePro	31	2.6129	.66720	1.00	4.00
PostTR	31	3.8065	.74919	3.00	5.00
PostGr	31	4.0323	.70635	3.00	5.00
PostVoc	31	4.0968	.70023	3.00	5.00
PostPro	31	3.6129	.66720	3.00	5.00

Table 5 shows that the mean score for task response went up from 2.61 (SD = 0.72) in the pre-test to 3.81 (SD = 0.75) in the post-test, gaining +1.19 points. Grammar improved from a mean of 2.65 (SD = 0.55) on the pre-test to a mean of 4.03 (SD = 0.71) on the post-test, gaining +1.39 points. Vocabulary improved with a mean score of 2.97 (SD = 0.75) to 4.10 (SD = 0.70), gaining +1.13. Finally, pronunciation went up from 2.61 (SD = 0.67) on the pre-test to 3.61 (SD = 0.67), gaining +1.00 points. Figure 1 shows the visual presentation of these data.

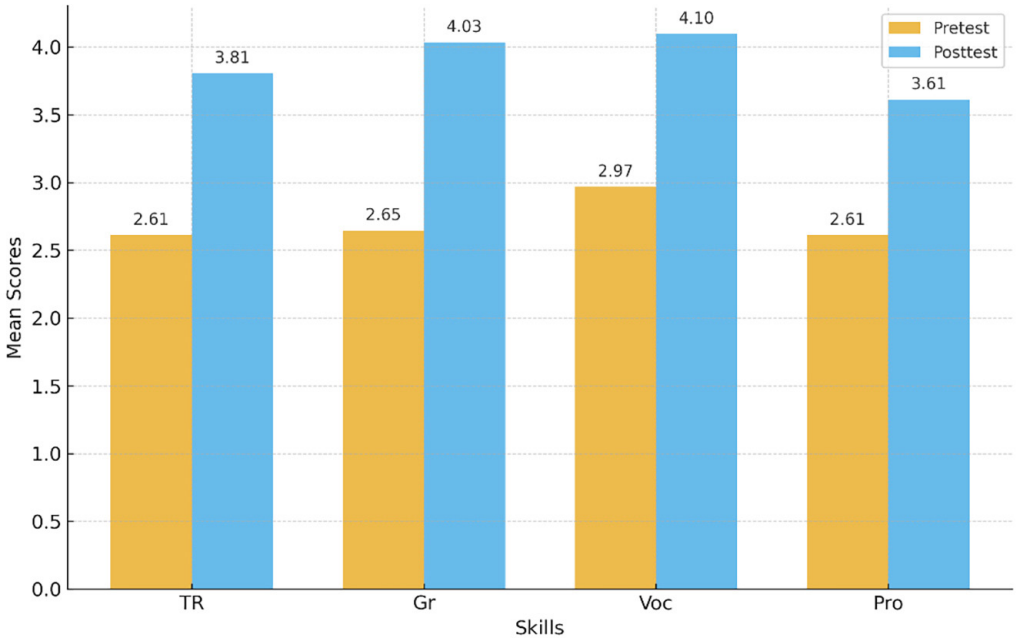

Fig. 1. The criterion-based comparison of scores of students in the pre-test and post-test

4 DISCUSSION

The current study investigated the effectiveness of using an interactive model of ChatGPT-4o on the speaking skills of Omani intermediate EFL learners. Sixty-two students participated in the study with speaking pre- and post-tests as the points of comparison, and after a month of treatment period, the comparison of students' performance in both tests revealed that although initially both groups progressed from pre-test to post-test, which could be the result of in-class training, the experimental group significantly outperformed the control group in the post-test. This could be associated with the use of ChatGPT-4o outside of classroom settings as an extra facilitator of language learning. Additionally, the detailed analysis of the post-test in the experimental group revealed that the grammar and task response criteria showed the highest improvement, followed by vocabulary and pronunciation.

The experimental group, on the other hand, made better progress since they interacted with ChatGPT-4o more outside of class. The AI model assigned students unique speaking tasks, engaged them immediately, and provided feedback tailored to their individual needs. This helped them practice and improve their language output in low-stress settings. This extensive exercise helped students to recall what they had learned in class and encouraged them to correct and become more attentive to language. The criterion-based study showed that grammar and task response improved the most. This is likely because ChatGPT-4o often rephrased what learners said using correct structures, which provided students with consistent and contextualized examples. The control group performed better on the post-test, which was likely due to their regular classroom lessons that allowed them to practice speaking in a structured manner.

The results show that it is possible to use AI-driven interaction models in language training to improve and personalize the learning of practical language skills, notably speaking. The results support the use of Vygotsky's sociocultural theory [56] in digital settings, where ChatGPT-4o acted as a dynamic scaffold, making it easier for learners to communicate, give feedback, and negotiate in a dialogic way that helped them grow within their zone of proximal development. Additionally, significant increases in grammar indicate that form-focused input from the model may aid learners in improving their structural correctness, which aligns with Long's [57] ideas on focus-on-form training. This study contributes to the growing body of research demonstrating that large language models are effective for learning a second language (L2), particularly in enhancing spoken accuracy and fluency in settings where face-to-face communication is limited or where intelligent systems are employed.

The study's findings align with several investigations that have demonstrated the beneficial impacts of AI assistance tools on students' speaking abilities. [49] examined the effectiveness of artificial intelligence-based instruction in enhancing L2 speaking skills in a practical setting and found that AI-driven instruction enhances L2 speaking skills among language learners. A study conducted by [58] investigated the impact of AI on the speaking proficiency of EFL students, and the results indicated that AI significantly improved the learners' speaking skills. [59] investigated the influence of AI-driven instruction on the oral proficiency of female English students and highlighted the substantial advantages of AI-based training in enhancing the speaking skills of female English language learners. Similarly, [60] examined the impact of AI software on the speaking proficiency of ELL learners, underscoring the significant role of AI-based training in enhancing the speaking abilities of EFL learners.

5 CONCLUSION

This study investigated the impact of using ChatGPT-4o as an extra facilitator of language learning on the speaking performance of Omani EFL learners. The results of the students in the experimental group showed a significant difference in performance compared to the control group. In addition, a thorough investigation of the scores in the control group, based on various criteria including task response, grammar, vocabulary, and pronunciation, revealed that the students' task response and grammatical knowledge improved significantly, followed by improvements in vocabulary and pronunciation. These results could be associated with the use of ChatGPT-4o as an interactive application.

The findings of this study provide some positive insights for teachers, students, and institutions. The results indicate that AI technology may help teachers reach more students outside the classroom, providing them with additional opportunities to practice and receive real-time feedback. This might help address some of the issues that arise when individuals practice speaking independently, particularly in large classes, allowing teachers to focus on specific concerns during face-to-face instruction. ChatGPT-4o gives students an easy-to-use and flexible way to improve their speaking skills at their own pace. It builds confidence via personalized, low-pressure conversations using a responsive language model. The improvements in grammar, task response, vocabulary, and pronunciation demonstrate even more that the system can work on several aspects of communicative competence simultaneously. From an institutional perspective, these results highlight the importance of utilising new educational technologies that align with contemporary learning styles and promote self-directed learning. Schools seeking to enhance their language programs may benefit from incorporating AI-powered technology into their blended or hybrid learning models, thereby making language training more individualized and scalable.

Although the study revealed positive results for implementing ChatGPT-4o in the language learning context, it has several limitations that should be clearly stated. The sample consisted of 62 Omani EFL learners, all from the same college and ranging in age from 19 to 21. This homogeneity may make it more challenging to apply the results in other EFL settings, particularly those that include students from diverse cultural or linguistic backgrounds. The study employed a brief intervention period. After using ChatGPT-4o for a month, there were clear improvements in speaking skills. However, longer treatment may provide us with additional information on how to achieve and maintain linguistic progress. Third, just one version of the ChatGPT application (-4o, premium, voice-enabled) was used. This ensured that the delivery was always the same; however, the results may not apply to other versions or free-access editions of ChatGPT, which may have limited features or slower response times. In the end, things such as students' motivation, anxiety levels, and exposure to English outside of the intervention were not controlled. When examining the statistics, variables that can't be controlled should be taken into consideration, as they may have influenced the different outcomes for different individuals.

There are various ways that future research might expand the results of this study and improve the field of AI-mediated language learning. Further study should investigate how well ChatGPT-4o-based treatments work for learners at all levels of English proficiency, including beginners and advanced learners, to determine if the benefits observed are consistent across all stages of language acquisition. Second, researchers might use different AI tools, such as Google Bard, Microsoft Copilot, or voice-activated assistants like Amazon Alexa, to determine if these technologies

improve speaking skills in the same way or different ways. Third, long-term research is recommended to investigate the long-term effects of AI-assisted speaking practice, such as how well students maintain their fluency, grammatical accuracy, and pronunciation over time, beyond the immediate post-test period. Fourth, qualitative approaches such as learner diaries, interviews, or stimulated recall processes can be employed to gain a deeper understanding of how learners perceive, think, and engage with AI. This information can reveal cognitive and emotional processes that performance measures alone may not reveal. Fifth, future studies may investigate how ChatGPT-4o can be utilized in blended or traditional classrooms. It could examine how teacher-led tasks and AI-assisted speaking activities can work together to enhance students' communication skills across a wide range of educational settings. In the future, researchers may examine sociolinguistic issues, such as how ChatGPT-4o impacts learners' pragmatic skills, their ability to communicate across cultures, and their understanding of formal and informal language registers. These parts haven't been studied enough, although they are essential for using language in real life.

6 REFERENCES

[1] N. Van Huy, N. T. Nam, and B. N. Bon, "The importance of speaking in English as a foreign language between skillful and thoughtful competencies: Studying sociolinguistics perspectives," *International Journal of English Language Studies*, vol. 6, no. 2, pp. 153–159, 2024. https://doi.org/10.32996/ijels.2024.6.2.22

[2] M. Aldosari, "Another world with artificial intelligence in speaking classes: To delve into the influences on willingness to communicate, personal best goals, and academic enjoyment," *Computer-Assisted Language Learning Electronic Journal*, vol. 25, no. 4, 2024.

[3] S. Akhter, R. Haidov, A. M. Rana, and D. A. H. Qureshi, "Exploring the significance of speaking skill for EFL learners," *PalArch's Journal of Archaeology of Egypt/Egyptology*, vol. 17, no. 9, 2020.

[4] S. Nazara, "Students' perception on EFL speaking skill development," *Journal of English Teaching*, vol. 1, no. 1, p. 28, 2011. https://doi.org/10.33541/jet.v1i1.50

[5] H. D. Brown and H. Lee, *Teaching by Principles: An Interactive Approach to Language Pedagogy*, 4th ed. White Plains, NY: Pearson, 2015.

[6] H. Dao, "Identify factors that negatively influence: Non-English major students' speaking skills," *Higher Education Research*, vol. 2, no. 2, pp. 35–43, 2017. http://doi.org/10.11648/j.her.20170202.12

[7] K. Manurung, "Improving the speaking skill using reading contextual internet-based instructional materials in an EFL class in Indonesia," *Procedia – Social and Behavioral Sciences*, vol. 176, pp. 44–51, 2015. https://doi.org/10.1016/j.sbspro.2015.01.442

[8] M. Rahimi and J. Fathi, "Employing e-tandem language learning method to enhance speaking skills and willingness to communicate: The case of EFL learners," *Computer Assisted Language Learning*, vol. 37, no. 4, pp. 924–960, 2022. https://doi.org/10.1080/09588221.2022.2064512

[9] P. Paudel, "Navigating linguistic diversity: Implementing English medium instruction in Nepal's community schools," *Issues in Educational Research*, vol. 34, no. 4, pp. 1526–1547, 2024.

[10] S. Thornbury and D. Slade, *Conversation: From Description to Pedagogy*. Cambridge, U.K.: Cambridge University Press, 2006. https://doi.org/10.1017/CBO9780511733123

[11] K. Shumin, "Factors to consider: Developing adult EFL students' speaking abilities," in *Methodology in Language Teaching: An Anthology of Current Practice*, Jack C. Richards and Willy A. Renandya, Eds., Cambridge University Press, 2002, pp. 204–211. https://doi.org/10.1017/CBO9780511667190.028

[12] A. Bueno, D. Madrid, and N. McLaren, *TEFL in Secondary Education*. Granada, Spain: Editorial Universidad de Granada, 2006, pp. 4–7.

[13] J. Baek and C. H. Lee, "University students' perceptions and engagement in mobile-assisted blended learning in English speaking classes," *Multimedia-Assisted Language Learning*, vol. 21, no. 4, 2018. http://doi.org/10.15702/mall.2018.21.4.11

[14] M. A. Chen and G. Hwang, "Effects of a concept mapping-based flipped learning approach on EFL students' English speaking performance, critical thinking awareness and speaking anxiety," *British Journal of Educational Technology*, vol. 51, no. 3, pp. 817–834, 2019. https://doi.org/10.1111/bjet.12887

[15] R. Zhussupova and R. Shadiev, "Digital storytelling to facilitate academic public speaking skills: Case study in culturally diverse multilingual classroom," *Journal of Computers in Education*, vol. 10, no. 3, pp. 499–526, 2023. https://doi.org/10.1007/s40692-023-00259-x

[16] D. M. F. Badawi, D. N. M. El Gabas, and N. E. A. Mohamed, "The effect of using a strategy based on digital storytelling on developing primary school pupils' English speaking skills," *Journal of Research in Curricula, Instruction and Educational Technology*, vol. 8, no. 1, pp. 121–147, 2022. https://doi.org/10.21608/jrciet.2022.213132

[17] Y.-T. C. Yang, Y.-C. Chen, and H.-T. Hung, "Digital storytelling as an interdisciplinary project to improve students' English speaking and creative thinking," *Computer Assisted Language Learning*, vol. 35, no. 4, pp. 840–862, 2022. https://doi.org/10.1080/09588221.2020.1750431

[18] E. Kallinikou and I. Nicolaidou, "Digital storytelling to enhance adults' speaking skills in learning foreign languages: A case study," *Multimodal Technologies and Interaction*, vol. 3, no. 3, p. 59, 2019. https://doi.org/10.3390/mti3030059

[19] B. Behforouz and A. D. Frumuselu, "The reflection of vocabulary implementation through educational texting on EFL learner's reading skill," *International Journal of Interactive Mobile Technologies*, vol. 15, no. 1, pp. 88–104, 2021. https://doi.org/10.3991/ijim.v15i01.18309

[20] Y. Lai, N. Saab, and W. Admiraal, "University students' use of mobile technology in self-directed language learning: Using the integrative model of behavior prediction," *Computers & Education*, vol. 179, p. 104413, 2022. https://doi.org/10.1016/j.compedu.2021.104413

[21] X. Lei, J. Fathi, S. Noorbakhsh, and M. Rahimi, "The impact of mobile-assisted language learning on English as a foreign language learners' vocabulary learning attitudes and self-regulatory capacity," *Frontiers in Psychology*, vol. 13, p. 872922, 2022. https://doi.org/10.3389/fpsyg.2022.872922

[22] R. Shadiev, Y. Wen, N. Uosaki, and Y. Song, "Future language learning with emerging technologies," *Journal of Computers in Education*, vol. 10, no. 3, pp. 463–467, 2023. https://doi.org/10.1007/s40692-023-00285-9

[23] H. Soleimani, F. Mohammaddokht, and J. Fathi, "Exploring the effect of assisted repeated reading on incidental vocabulary learning and vocabulary learning self-efficacy in an EFL context," *Frontiers in Psychology*, vol. 13, p. 851812, 2022. https://doi.org/10.3389/fpsyg.2022.851812

[24] Z. G. Shatri, "Advantages and disadvantages of using information technology in learning process of students," *Journal of Turkish Science Education*, vol. 17, no. 3, pp. 420–428, 2020. https://doi.org/10.1007/s10639-023-11673-0

[25] L. Q. Nguyen and H. V. Le, "Enhancing L2 learners' lexical gains via Quizlet learning tool: The role of individual differences," *Education and Information Technologies*, vol. 28, no. 9, pp. 12143–12167, 2023. https://doi.org/10.1007/s10639-023-11673-0

[26] J. Bower and S. Kawaguchi, "Negotiation of meaning and corrective feedback in Japanese/English eTandem," *Language Learning & Technology*, vol. 15, no. 1, pp. 41–71, 2011. https://doi.org/10.64152/10125/44237

[27] M. J. Reiss, "The use of AI in education: Practicalities and ethical considerations," *London Review of Education*, vol. 19, no. 1, pp. 1–14, 2021. https://doi.org/10.14324/LRE.19.1.05

[28] A. P. Arbi, "Optimizing the use of artificial intelligence in English language learning: A literature review," *Repository of Multidisciplinary Science Journal*, vol. 2, no. 2, 2024. http://doi.org/10.59435/gjmi.v2i2.278

[29] B. Behforouz and A. Al Ghaithi, "The effectiveness of an interactive WhatsApp bot on listening skills," *International Journal of Interactive Mobile Technologies*, vol. 18, no. 2, pp. 82–95, 2024. https://doi.org/10.3991/ijim.v18i02.44327

[30] S. Ronsumbre, T. Rukmawati, A. Sumarsono, and R. S. Waremra, "Digital learning with artificial intelligence (AI): Correlation of AI to student learning motivation," *FKIP Unma Education Journal*, vol. 9, no. 3, pp. 1464–1474, 2023. https://doi.org/10.31949/educatio.v9i3.5761

[31] A. Al Ghaithi, B. Behforouz, and H. Isyaku, "Enhancing learners' spelling skills with an interactive chatbot facilitator," *International Journal of Interactive Mobile Technologies*, vol. 19, no. 2, pp. 79–93, 2025. https://doi.org/10.3991/ijim.v19i02.50531

[32] R. El Shazly, "Effects of artificial intelligence on English speaking anxiety and speaking performance: A case study," *Expert Systems*, vol. 38, no. 3, p. e12667, 2021. https://doi.org/10.1111/exsy.12667

[33] I. S. Wekke, A. Yandra, and B. Hamuddin, "Learning strategy in class management: A reflection from Manado case," *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, p. 012053, 2017. https://doi.org/10.1088/1755-1315/97/1/012053

[34] F. Colace, M. De Santo, M. Lombardi, F. Pascale, A. Pietrosanto, and S. Lemma, "Chatbot for e-learning: A case of study," *International Journal of Mechanical Engineering and Robotics Research*, vol. 7, no. 5, pp. 528–533, 2018. https://doi.org/10.18178/ijmerr.7.5.528-533

[35] J. Kaplan, *Artificial Intelligence: What Everyone Needs to Know*. Oxford, U.K.: Oxford University Press, 2016. [Online]. Available: https://doi.org/10.1093/wentk/9780190602383.001.0001

[36] T. Duong and S. Suppasetseree, "The effects of an artificial intelligence voice chatbot on improving Vietnamese undergraduate students' English speaking skills," *International Journal of Learning, Teaching and Educational Research*, vol. 23, no. 3, pp. 293–321, 2024. https://doi.org/10.26803/ijlter.23.3.15

[37] R. Baskara, "Exploring the implications of ChatGPT for language learning in higher education," *Indonesian Journal of English Language Teaching and Applied Linguistics*, vol. 7, no. 2, pp. 343–358, 2023. https://doi.org/10.21093/ijeltal.v7i2.1387

[38] W. C. H. Hong, "The impact of ChatGPT on foreign language teaching and learning: Opportunities in education and research," *Journal of Educational Technology Innovation*, vol. 5, no. 1, 2023. https://doi.org/10.61414/jeti.v5i1.103

[39] L. Kohnke, B. L. Moorhouse, and D. Zou, "ChatGPT for language teaching and learning," *RELC Journal*, vol. 54, no. 2, pp. 537–550, 2023. https://doi.org/10.1177/00336882231162868

[40] C. K. Lo, "What is the impact of ChatGPT on education? A rapid review of the literature," *Education Sciences*, vol. 13, no. 4, p. 410, 2023. https://doi.org/10.3390/educsci13040410

[41] K. Malinka, M. Peresíni, A. Firc, O. Hujnák, and F. Janus, "On the educational impact of ChatGPT: Is artificial intelligence ready to obtain a university degree?" in *Proceedings of the 2023 Conference on Innovation and Technology in Computer Science Education*, Turku, Finland: ACM, 2023, pp. 47–53. https://doi.org/10.1145/3587102.3588827

[42] M. M. Rahman and Y. Watanobe, "ChatGPT for education and research: Opportunities, threats, and strategies," *Applied Sciences*, vol. 13, no. 9, p. 5783, 2023. https://doi.org/10.3390/app13095783

[43] C. K. Y. Chan and K. K. W. Lee, "The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers?" *Smart Learning Environments*, vol. 10, no. 1, p. 60, 2023. https://doi.org/10.1186/s40561-023-00269-3

[44] H. Gimpel *et al*., "Unlocking the power of generative AI models and systems such as GPT-4 and ChatGPT for higher education: A guide for students and lecturers," *Hohenheim Discussion Papers in Business, Economics and Social Sciences*, 2023. [Online]. Available: https://www.econstor.eu/handle/10419/270970

[45] L. Chen, P. Chen, and Z. Lin, "Artificial intelligence in education: A review," *IEEE Access*, vol. 8, pp. 75264–75278, 2020. https://doi.org/10.1109/ACCESS.2020.2988510

[46] H. Qiao and A. Zhao, "Artificial intelligence-based language learning: Illuminating the impact on speaking skills and self-regulation in Chinese EFL context," *Frontiers in Psychology*, vol. 14, p. 1255594, 2023. https://doi.org/10.3389/fpsyg.2023.1255594

[47] T.-C. Hsu, C. Chang, and T.-H. Jen, "Artificial Intelligence image recognition using self-regulation learning strategies: Effects on vocabulary acquisition, learning anxiety, and learning behaviours of English language learners," *Interactive Learning Environments*, pp. 1–19, 2023. https://doi.org/10.1080/10494820.2023.2165508

[48] J. Junaidi, "Artificial intelligence in EFL context: Rising students' speaking performance with Lyra virtual assistance," *International Journal of Advanced Science and Technology Rehabilitation*, vol. 29, no. 5, pp. 6735–6741, 2020.

[49] X. Xu, D. M. Dugdale, X. Wei, and W. Mi, "Leveraging artificial intelligence to predict young learner online learning engagement," *American Journal of Distance Education*, vol. 37, no. 3, pp. 185–198, 2023. https://doi.org/10.1080/08923647.2022.2044663

[50] J. Zhang, "Integrating chatbot technology into English language learning to enhance student engagement and interactive communication skills," *Journal of Computational Methods in Sciences and Engineering*, vol. 25, no. 3, pp. 2288–2299, 2025. https://doi.org/10.1177/14727978241312992

[51] J. Taeza, "The role of AI-powered chatbots in enhancing second language acquisition: An empirical investigation of conversational AI assistants," *Edelweiss Applied Science and Technology*, vol. 9, no. 3, pp. 2616–2629, 2025. https://doi.org/10.55214/25768484.v9i3.5853

[52] B. Celik, Y. Yildiz, and S. Kara, "Using ChatGPT as a virtual speaking tutor to boost EFL learners' speaking self-efficacy," *Australian Journal of Applied Linguistics*, vol. 8, no. 1, p. 102418, 2025. https://doi.org/10.29140/ajal.v8n1.102418

[53] N. N. Vu, T. T. Vo, and V. D. T. Tran, "AI-driven pronunciation assessment: The impact of SpeechAce on EFL learners' pronunciation competency," *Computer-Assisted Language Learning Electronic Journal (CALL-EJ)*, vol. 26, no. 3, pp. 84–106, 2025. https://doi.org/10.54855/callej.252635

[54] R. T. Almutairi and A. A. Alghammas, "The effectiveness of using ELSA app on improving Saudi students' English-speaking skills," *International Journal of English Linguistics*, vol. 15, 2025. https://doi.org/10.5539/ijel.v15n1p140

[55] N. Pratiwi, A. G. Efendy, H. C. Rini, and N. A. Ahmed, "Speaking practice using ChatGPT's voice conversation: A review on potentials and concerns," *Journal of Language Intelligence and Culture*, vol. 6, no. 1, 2024. https://doi.org/10.35719/jlic.v6i1.149

[56] L. S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press, 1978.

[57] M. H. Long, "Focus on form: A design feature in language teaching methodology," in *Foreign Language Research in Cross-Cultural Perspective*, J. de Bot, R. B. Ginsberg, and C. Kramsch, Eds., Amsterdam: John Benjamins, 1991, pp. 39–52. https://doi.org/10.1075/sibil.2.07lon

[58] M. Pikhart, "Intelligent information processing for language education: The use of artificial intelligence in language learning apps," *Procedia Computer Science*, vol. 176, pp. 1412–1419, 2020. https://doi.org/10.1016/j.procs.2020.09.151

[59] H. A. Safadi, M. S. A. Shgair, and K. S. Qatawnih, "The effectiveness of designing an e-learning environment based on mastery learning and artificial intelligence on developing English speaking skills among tenth graders in Palestine," *Journal of Educational and Psychological Sciences*, vol. 31, pp. 475–507, 2022. https://doi.org/10.33976/IUGJEPS.31.1/2023/22

[60] L. L. Maknun, "The implementation of Orai as artificial intelligence for digital native students in English speaking learning," *Indonesian Technology-Enhanced Language Learning*, vol. 1, pp. 131–138, 2020.

7 AUTHORS

Dr. Behnam Behforouz is an English Lecturer in the Preparatory Studies Center at University of Technology and Applied Sciences, Shinas, Oman. His research focus is on Educational Technologies (E-mail: Behnam.Behforouz@utas.edu.om).

Dr. Abdullah Al Maqbali, Ph.D. from IIUM Malaysia in 2022, is currently an Assistant Professor at the Faculty of Language Studies at Sohar University, Oman. His research interests include communication willingness and active learning in higher education (E-mail: AMmaqbali@su.edu.om).

Ali Al Ghaithi is an English Lecturer at the Foundation Department of Sohar University, Oman. He is currently a Ph.D. candidate focusing on Applied Linguistics. Ali is interested in using Artificial Intelligence in Language Education (E-mail: AGhaithi@su.edu.om).

Afrooz Poorghorban is an English educator with several years of teaching experience in both offline and online modes. Afrooz is currently a Ph.D. candidate at Islamic Azad University, Central Tehran Branch, Iran.Her main areas of interest include TEFL and Applied Linguistics (E-mail: Afroozpoorghorban96@gmail.com).