



The Impact of ChatGPT on Chinese Postgraduates' English Learning Interest and Proficiency: An Experience of IELTS Speaking Project

Yu-die Rong^{1,a}, Wan-yang Xiao^{2,b}, Yun-feng Zhang^{3,c}, and Xiao-shu Xu^{4,d,*}

¹ School of Education, Wenzhou University, Wenzhou, China

² School of Life and Environmental Sciences, Wenzhou University, Wenzhou, China

³ Centre for Portuguese Studies, Macao Polytechnic University, Macao

⁴ School of Foreign Studies, Wenzhou University, Wenzhou, China

a 992825413@qq.com, b Xiaowy_20220224@163.com, c zhangyunfeng@mpu.edu.mo, d lisaxu@wzu.edu.cn

*corresponding author

Abstract. The study explores the potential applications of ChatGPT in language learning and evaluates its effectiveness specifically in the context of the IELTS speaking section. A carefully conducted questionnaire was administered to 48 postgraduates who incorporated ChatGPT into their IELTS speaking practice as part of their coursework. The findings unequivocally indicate that ChatGPT significantly enhances learners' grammar, sentence structure expression, and language organization abilities, thus directly contributing to an observable improvement in their IELTS speaking proficiency. Moreover, this AI-powered chatbot proves highly effective in igniting learners' enthusiasm for English learning, fostering a genuine interest in the language. Nonetheless, it is essential to acknowledge that sustaining this newfound interest in language learning hinges on the provision of appropriate guidance from educators. Through this research, we delve deeply into the vast potential and practical application value of ChatGPT in language learning contexts. It offers valuable insights and clear directions for the future development of English language education.

Keywords: ChatGPT, IELTS, Learning Interest, Speaking Proficiency, English Learning, Higher Education.

1 Introduction

Currently, the application of artificial intelligence (AI) is witnessing a remarkable surge across various domains, arousing heightened interest among academics in leveraging AI for educational purposes[1]. In the realm of education, the optimal utilization of AI to facilitate language learning has long been a subject of keen concern and discourse among educators. A particularly noteworthy trend gaining momentum is the integration of chatbots at all educational levels. These chatbots, computer applications that engage users through text or voice-based human-like conversations[2], have proven to be a promising approach. Before the advent of ChatGPT, numerous scholars explored the application of chatbots in English speaking and learning, garnering favorable outcomes. For instance, Ali et al. found that WhatsApp, as a language learning tool, not only improves learners' English skills but also enhances motivation and reduces language-related anxiety[3]. The educational AI chatbot AsasaraBot has effectively served as an auxiliary teaching tool, providing valuable support for the learning of foreign languages and cultural content[4]. Additionally, the implementation of the voice chatbot "Ellie" in EFL (English as a Foreign Language) classroom learning resulted in a high task completion rate of 88.3%, underscoring the positive potential of chatbots in the EFL environment[5]. Moreover, compared to human language partners, these chatbots boast a more diverse array of expressions, questions, and vocabulary, enhancing their utility[6]. The surge in online learning has further propelled the use of chatbots as invaluable aids. These intelligent tools facilitate personalized learning experiences by assisting students in setting individual learning objectives and providing immediate feedback to guide their progress.

However, while chatbots have shown great promise in practical applications, certain challenges still require attention and resolution. One notable limitation is their ability to effectively respond to a wide range of user requests, which remains an area for improvement. Furthermore, users might encounter difficulties in navigating chatbots without proper training, leading to potential hindrances in the overall user experience.

Another significant concern arises when chatbots are primarily configured in English, potentially leading to communication barriers for users who speak other languages[7]. It highlights the importance of multilingual support and the need for inclusive language options. Moreover, it is worth noting that chatbots primarily engage in passive dialogue and tend to focus solely on textual information, lacking the ability to comprehend users' emotions. This limitation can impact the user experience, as empathetic interactions and emotional understanding are crucial elements in fostering more meaningful and engaging conversations. Addressing these issues is essential to maximize the potential benefits of chatbots in various applications. By enhancing responsiveness, facilitating user-friendly interactions, and

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incorporating emotional intelligence, chatbots can evolve into even more effective and versatile tools in the realm of artificial intelligence and user engagement.

By the close of 2022, the emergence of ChatGPT triggered a remarkable surge of interest in generative artificial intelligence chatbots (AIGC), swiftly establishing itself as one of the most sought-after chatbot solutions today [8]. Notably, it has revolutionized the landscape of English teaching and learning, offering innovative and immersive experiences. Developed by OpenAI and launched in November 2022, ChatGPT harnesses the power of deep learning techniques to analyze and generate text through multi-turn dialogues, surpassing its predecessors in generating remarkably human-like responses[9]. In the realm of foreign language learning, ChatGPT, functioning as a conversational AI, brings forth interactive and collaborative advantages in communication. Its chat interface is both user-friendly and uncomplicated, ensuring ease of use. Moreover, as a chatbot, it effectively alleviates the uneasiness often associated with face-to-face communication for foreign language learners, thus bolstering their willingness to engage in language practice and interaction. The incorporation of multi-turn dialogues further ignites foreign language learners' passion for learning[10]. The advent of ChatGPT marks a significant leap in language learning technology, providing a valuable and enjoyable platform for learners to engage with the language in a conversational and immersive manner. As its influence continues to grow, its impact on the field of language education and learners' language proficiency is bound to be transformative.

The advent of ChatGPT, particularly with its transformative 4.0 version, has addressed the aforementioned issues in a remarkable manner, showcasing a heightened comprehension of context and the capacity to engage effectively with users of diverse languages. Consequently, this study aims to delve into the profound impact of ChatGPT on the English learning interest and proficiency of Chinese graduate students. Additionally, it seeks to explore the efficacy of ChatGPT as an invaluable tool for enhancing performance in the IELTS Speaking section.

We present the following research questions, underpinned by the hypothesis that language learners' interest and proficiency will be positively influenced through practice with ChatGPT:

Q1: Can ChatGPT increase postgraduates' IELTS speaking interest?

Q2: How effective is ChatGPT in improving postgraduates' IELTS speaking proficiency?

The paper encompasses a comprehensive literature review, centering on theoretical frameworks, the role of artificial intelligence/chatbots in (EFL) language learning, and their application in the context of the IELTS Speaking exam. Within the method section, the research approach and methodology are expounded upon in detail.

Moving on to the fourth section, the research findings are presented and thoroughly discussed, shedding light on the implications and significance of the results. This section engages in an in-depth exploration of the findings to extract valuable insights. Finally, the fifth section serves as the conclusion of the study, summarizing the key findings and their implications. Moreover, it outlines potential avenues for future research, offering exciting prospects for further exploration and development in this domain.

2 Literature Review

2.1 Theoretical Framework

Learning interest, defined as the extent of enjoyment or preference exhibited by individuals during specific learning activities[11], plays a crucial role in the educational process. Krapp[12]emphasizes that learning interest is a subjective matter, as individuals are more likely to invest additional effort and actively engage in learning tasks related to their interests. Furthermore, learning interest and learning motivation share a closely related connotation, leading to their frequent investigation in tandem. Krapp's work elucidates the intricate relationship between learning interest, learning motivation, and learning outcomes, highlighting how developing an interest in a learning task triggers intrinsic learning motivation, thereby influencing the final educational achievements. Consequently, many studies have explored learners' inclination toward the interest in learning tasks as a significant factor influencing the outcomes of the learning process.

In language learning research, scholars have emphasized that learners' affective states, such as learning motivation and learning interest, play a crucial role in determining the efficacy of language learning alongside oral and listening proficiency[13]. Recent advances in natural language processing and related technologies have led to the widespread integration of artificial intelligence (AI) in the educational landscape, particularly in language learning contexts [14][15][16]. Several researchers have recognized the potential of AI in fostering learners' learning interest in language acquisition. Primarily, AI's inquiry-based approach has been found to stimulate learners' curiosity effectively. Interactive inquiry facilitated by AI has been shown to positively influence learners' learning interest, thereby promoting problem-solving skills[17][18]. Secondly, AI's conversational process has proven to enhance learners' thirst for knowledge. For instance, Chen[19]investigated the use of Google Assistant in language learning and observed that learners had highly positive experiences during dialogues with AI tools, such as Google Assistant, leading to an increased desire for more interactions. This enhanced engagement further resulted in notable improvements in learners' listening and speaking abilities. Lastly, AI-integrated learning activities have demonstrated the ability to boost learners' willingness to communicate in the target language. In a study by Awada[20], where artificial intelligence was integrated

into an English course, the results revealed reduced learning anxiety among learners, coupled with heightened interest and greater enthusiasm for communication.

Learners' positive perception of artificial intelligence contributes to promoting learning development. As a revolutionary artificial intelligence tool at the current stage, it is worth exploring whether ChatGPT can further enhance learners' interest in English learning. Therefore, in this study, we will investigate whether ChatGPT can increase graduate students' learning interest in the IELTS Speaking section through an IELTS Speaking project.

2.2 Artificial Intelligence in EFL Language Learning

Artificial intelligence (AI) is a computational system capable of performing tasks, making decisions, and simulating human thinking and work processes through data execution. Before its application in language learning, traditional language teaching methods, while somewhat effective, encountered perplexing challenges and issues[21][22]. Firstly, a lack of authentic communicative experiences deprived learners of opportunities to engage in real-life conversations with native English speakers, hindering their ability to truly experience and respond to diverse communicative situations. Secondly, repetitive mechanical imitation practices featuring repeated sentence patterns and dialogues lacked genuine language contexts and emotional involvement, thereby making it difficult for students to apply learned language skills in practical communication. Thirdly, inadequate immediate feedback and assessment from teachers prevented the prompt identification of errors and areas for improvement in learners' spoken expression, hampering their progress and development. Nevertheless, with the continuous advancement of AI, its application in the education field has gained widespread acceptance as an effective and versatile teaching approach to support language learning, offering effective input, output, and interaction opportunities[23][24][25][26].

Many studies have extensively explored the efficacy of artificial intelligence in language learning. Concerning instructional support, Fadel[27] revealed that AI implementation can enhance teachers' classroom management, resulting in improved teaching efficiency and quality, thus providing students with superior instructional services. Regarding oral feedback, Hwang[28] highlighted AI's capability to comprehensively assess students' oral proficiency and offer personalized feedback and guidance based on their individual learning progress and characteristics, thereby facilitating language learning. Concerning skill enhancement, Loewen[29] reported that students who incorporated AI into their learning approach demonstrated greater progress in language skills compared to those using traditional methods. Consequently, the integration of artificial intelligence in language learning has garnered substantial attention from researchers.

Luckin[30] classified artificial intelligence software utilized in language learning into three categories: tutoring systems, collaborative learning support systems, and virtual reality systems. AI chatbots fall under the first category, serving as language learning assistants through interactive conversations. These chatbots, defined as computer applications capable of simulating natural conversations with humans using text or voice [2], represent a significant advancement over rule-based traditional chatbots[31]. Jeon[32] explored the value of chatbots in terms of instructional capability, technological capability, and social capability based on research data. In the realm of instructional capability, chatbots address the limited speaking practice opportunities within constrained curriculum time [33], offering learners ample daily conversation practice that sustains their interest and motivation in learning[6]. In terms of technological capability, chatbots enrich the learning experience by leveraging natural language processing and machine learning techniques to provide a more authentic language environment, thereby facilitating learners' language output in terms of quantity and complexity[26][34]. Moreover, their social capability enables two-way interactive communication, reducing learners' shyness during the language learning process, while the flexible and interactive approach fosters personalized learning experiences[35]. Overall, it is evident that AI chatbots effectively assist language learners in their language acquisition journey by offering a genuinely interactive learning environment.

With the robust development of AI chatbots, OpenAI introduced ChatGPT, the most advanced AI chatbot to date, in November 2022. ChatGPT is a conversational AI interface that utilizes natural language processing (NLP) to engage in realistic interactions, demonstrating the ability to "answer follow-up questions, acknowledge mistakes, challenge incorrect assumptions, and decline inappropriate requests"[36]. Due to its powerful NLP capabilities, ChatGPT has significantly impacted language learning, playing various enriching roles in the process. Firstly, ChatGPT serves as a virtual language companion, simulating authentic communication environments that actively engage learners in language learning[37]. It stimulates learners' critical thinking abilities through intelligent conversations[38]. Secondly, ChatGPT acts as a personalized learning assistant, dynamically adjusting conversation complexity during multi-turn dialogues to cater to individual learners' needs and learning styles[37]. Thirdly, ChatGPT functions as a real-time language evaluator, providing accurate analysis, feedback, and suggestions on learners' grammar, language style, and statement coherence in real-time text outputs, enabling targeted improvements in their conversations[39]. Lastly, ChatGPT serves as a learning resource provider, leveraging its powerful search engine capabilities to offer learners more effective and relevant information related to their questions, along with a wealth of learning materials and real-time references to expand vocabulary and enhance language comprehension and application abilities[39].

ChatGPT, built upon larger datasets, real-time fine-tuning, enhanced functionality, and human-like text generation [40], showcases its innovative potential in supporting language learning. Despite some studies highlighting the advantages of ChatGPT in language learning, there remains a lack of in-depth exploration regarding its impact on enhancing learners' speaking proficiency. Therefore, the purpose of this study is to investigate the effectiveness of

ChatGPT in improving the IELTS speaking proficiency of graduate students within an IELTS speaking class project, aiming to contribute to the existing research on ChatGPT's support for language learning.

2.3 IELTS Speaking Test

The IELTS Speaking test is a component of the IELTS examination designed to evaluate candidates' oral communication skills. The test comprises three parts, lasting a total of 11-14 minutes, with the following specific structure: In Part 1, candidates engage in self-introduction and an interview to assess their pronunciation, fluency, and ability to introduce themselves. Part 2 involves individual speaking, where candidates prepare for one minute and then express their opinions within two minutes, followed by further discussion with the examiner to test speaking fluency, comprehension, and expression skills. Part 3 involves a two-way discussion, where candidates and the examiner delve into the topic, assessing communication skills, logical thinking, and depth in addressing the questions. The IELTS Speaking test's assessment criteria include fluency, vocabulary, grammar, and pronunciation, enabling evaluation of candidates' fluency, vocabulary usage, grammar accuracy, and pronunciation proficiency. Therefore, the assessment of students' speaking proficiency in this study will refer to the evaluation criteria of IELTS speaking test, and the learners will be investigated in five dimensions: vocabulary, sentence patterns, grammar, language organization, and fluency. This will help ensure objectivity and consistency in the assessment to better understand students' speaking proficiency and study the effectiveness of ChatGPT's educational support.

Lezaraton[41] asserts that speaking demands the highest proficiency among the four language learning skills: listening, speaking, reading, and writing. However, according to a study by West [42], the majority of oral language learning still relies on traditional methods, leading to learners' inability to achieve the desired level of fluency in English communication. The IELTS Speaking test, which involves face-to-face communication between candidates and examiners, places even higher demands on learners' preparatory speaking skills [43]. In order to enhance speaking skills more effectively, researchers are exploring new approaches beyond traditional oral training methods for improved outcomes. Some studies have sought to transform the learning environment for IELTS Speaking training. Han & Niu [44] created virtual scenarios for learners, resulting in significant improvements in learners' spoken English expression. Santhanasamy[45] explored the use of a flipped classroom approach, inside and outside the classroom, which led to enhanced motivation and better results in speaking training. Other studies have integrated interactive tools in IELTS Speaking training. Akkara[46] utilized WhatsApp to create a highly interactive language learning atmosphere, leading to increased confidence and effective progress in speaking skills. The team of Iio[47] developed a language-learning assistant robot for oral dialogue practice, resulting in significant improvements in speaking accuracy, fluency, and pronunciation. The aforementioned studies demonstrate that integrating new technological means can yield better results in IELTS Speaking training. As an intelligent interactive tool, it is worth exploring whether ChatGPT is also applicable to IELTS Speaking training through a preliminary attempt in an IELTS speaking classroom project.

3 Method

This study employed a quantitative research design, employing a survey as the primary data collection technique. The survey, in the form of a questionnaire, was administered to 48 postgraduate students participating in the IELTS course, representing diverse majors, such as Chinese Language and Literature, Mechanical Engineering, Pharmacy, Design Studies, Law, and other disciplines. The questionnaire was adapted from previous studies conducted by Hong[48], Tsai [49], and Lin[50], with the aim of capturing valuable data concerning the impact of ChatGPT on learners' English-speaking proficiency and learning interests. To comprehensively assess the effects of ChatGPT usage, the questionnaire comprised four sections. The first part gathered basic information about the students, including gender, grade, and major. The second part delved into the students' usage patterns, investigating the number of days and average daily duration in which they engaged in oral training with ChatGPT during the IELTS course. The third part was dedicated to exploring the influence of ChatGPT on students' speaking proficiency, encompassing various aspects such as vocabulary, sentence patterns, grammar, language organization, and fluency. Meanwhile, the fourth part focused on uncovering the impact of ChatGPT on students' interest in spoken English learning, encompassing elements of liking, enjoyment, and engagement. In total, the questionnaire consisted of 19 items, with Likert scales featuring 5 response options utilized for the third and fourth sections, ranging from "Strongly Disagree" to "Strongly Agree." This comprehensive data collection approach enabled a thorough analysis of the influence of ChatGPT on both language proficiency and learner engagement, providing valuable insights for the study.

3.1 Participants

The study's participant cohort comprised 48 first-year graduate students, all majoring in fields other than English. Among them, 17 were male students, while 31 were female students. Throughout their IELTS course, each participant utilized ChatGPT as a valuable tool for practicing their IELTS speaking skills outside of class hours. Given the newfound popularity of ChatGPT version 3.0 (website: <https://chat.openai.com/auth/login>) - a recent addition to the chatbot landscape - the primary objective of this study was to delve into its impact on IELTS speaking learning. To achieve this, valuable feedback was collected from the 48 students, reflecting on their experiences and insights from using ChatGPT for refining their IELTS speaking abilities.

3.2 Research procedure

In the IELTS class, the teacher introduced ChatGPT to all the students, providing them with the corresponding website for access. Following this introduction, the students were given the opportunity to practice using ChatGPT for one class session, gaining familiarity with the tool. Subsequently, the teacher organized the speaking group students into teams of two, providing them with ChatGPT prompts to guide their IELTS speaking test practice. From September to December 2022-2023, the students were tasked with completing 1-2 sets of IELTS speaking test questions each week, utilizing one prompt per week. To encourage reflective learning and gather valuable insights, the students were further required to maintain a reflective journal, updating it every two weeks to document their experiences and progress with ChatGPT as an oral training aid.

During regular class sessions, the teacher would also spontaneously assign topics for students to complete oral exercises. This served a dual purpose: to assess the effectiveness of students' independent use of ChatGPT for oral training outside of class and to evaluate the role of ChatGPT in facilitating IELTS speaking learning. By adopting this comprehensive approach, the study aimed to gauge the impact of ChatGPT on students' language learning progress, both within and beyond the confines of traditional classroom settings.

3.3 Data Collection

The survey questionnaire was administered online via SurveyMonkey to the cohort of 48 students enrolled in the IELTS course. Subsequently, a quantitative analysis of the collected data was conducted, employing both descriptive and inferential statistical tests through SPSS (version 26), to comprehensively address the research questions.

Throughout the research process, strict adherence to the guidelines provided by the ethics committee was observed, ensuring ethical considerations were met. The study obtained the necessary ethical approval prior to data collection. As a crucial aspect of ethical research, participation in the questionnaire survey was entirely voluntary, and participants were explicitly informed of their right to respond or refrain from answering any questions without facing any adverse consequences. Furthermore, the survey data was treated with the utmost confidentiality and would solely be used for the purpose of research, safeguarding the privacy and trust of the participants.

4 Results

In the survey's quantitative data, descriptive analysis was performed to compare the means and standard deviations of all items related to oral proficiency and learning interest in the questionnaire. Subsequently, Spearman correlation analysis was employed to investigate the potential correlations between the number of days and average duration of oral practice with learners' oral proficiency and learning interest.

The questionnaire consisted of five questions regarding the impact of using ChatGPT on learners' oral proficiency and nine questions regarding its impact on learners' learning interests. Table 1 shows the means and standard deviations of the influence of ChatGPT on learners' oral proficiency and learning interest. From the table, it can be observed that the average values for oral proficiency items range from 4.10 to 4.23, while the average values for learning interest items range from 4.00 to 4.21. In terms of oral proficiency, learners believed that using ChatGPT could effectively enhance their grammar ($M=4.23, SD=0.778$), sentence structure ($M=4.15, SD=0.825$), and language organization ($M=4.15, SD=0.825$) abilities. However, there was relatively less improvement reported in vocabulary ($M=4.13, SD=0.789$) and fluency ($M=4.10, SD=0.805$). One possible reason for this could be that the version of ChatGPT used by the participants did not support voice communication, limiting the improvement in fluency of language expression. Additionally, ChatGPT's notable feature is generating dialogues suitable for the learners' current proficiency level, which may explain the limited progress in advanced vocabulary acquisition and expansion. In terms of learning interest, learners expressed a certain degree of liking ($M=12.48, SD=2.212$) and enjoyment ($M=12.25, SD=2.198$) in using ChatGPT for oral practice. However, learners' tendency for autonomous active participation was relatively low ($M=12.04, SD=2.202$). One possible reason for this could be that although the novelty effect of ChatGPT (Jon-Chao Hong et al., 2014) sparked learners' interest in learning, the lack of guidance from teachers in the use of ChatGPT during the process could be a contributing factor. Reham El Shazly (2021) mentioned that teachers have a positive impact on learners' attitudes and motivation towards language learning. Therefore, if learners are left to explore oral practice on their own and are unable to find suitable and effective methods, their willingness to actively participate may decrease.

Table 1. Means and Standard Deviations for the Individual Items (N=48).

| Variable | Mean | Standard Deviation |
|--|------|--------------------|
| Spoken English level Items | | |
| 1. ChatGPT helps improve my English vocabulary. | 4.13 | 0.789 |
| 2. ChatGPT helps to enrich my English sentence patterns. | 4.15 | 0.825 |
| 3. ChatGPT helps to improve my English grammar and thus improve the accuracy of my | 4.23 | 0.778 |

| | | |
|--|-------|-------|
| speech. | | |
| 4. ChatGPT helps improve my logic and language organization skills. | 4.15 | 0.825 |
| 5. ChatGPT helps improve my oral English skills and fluency (e.g. being able to provide multiple rounds of conversation feedback and assessment) | 4.10 | 0.805 |
| Average of the five items | 4.15 | 0.804 |
| Learning interest Items | | |
| Like | 12.48 | 2.212 |
| 1. After the last time I used ChatGPT, I still enjoy using it. | 4.21 | 0.743 |
| 2. After the last time I used ChatGPT, I was still eager to use it again. | 4.17 | 0.753 |
| 3. Although the last time I used ChatGPT I got a different answer than I expected, I still want to use it. | 4.10 | 0.831 |
| Enjoyment | 12.25 | 2.198 |
| 1. I was excited to use ChatGPT for IELTS speaking. | 4.02 | 0.838 |
| 2. When I use ChatGPT for IELTS speaking, I feel very focused. | 4.15 | 0.743 |
| 3. I really enjoyed using ChatGPT for IELTS speaking. | 4.08 | 0.710 |
| Engagement | 12.04 | 2.202 |
| 1. When I use ChatGPT for IELTS speaking, I feel that time passes very quickly. | 4.00 | 0.825 |
| 2. When using ChatGPT for IELTS speaking, I feel that I am focused on it. | 4.04 | 0.743 |
| 3. When I use ChatGPT for IELTS speaking, I am attracted to it. | 4.00 | 0.772 |
| Average of the nine items | 4.08 | 0.773 |

To explore the relationship between the number of days of oral practice, the daily duration of oral practice, and learners' oral proficiency and learning interest, we calculated the Spearman correlation among them. The results are shown in Table 2. We found that there is a correlation between the number of days of oral practice and learner engagement ($r=0.295, p=0.042<.05$). Learners who have more days of oral practice with ChatGPT exhibit higher levels of attention and engagement, indicating increased effort and involvement. Additionally, the daily duration of oral practice is correlated with grammar proficiency ($r=0.335, p=0.02<.05$). Learners who spend more time on daily oral practice with ChatGPT show higher improvements in grammar proficiency. This finding aligns with the viewpoint of Hall & Austin (2004) that grammar mastery is relatively challenging for students, and achieving a high level of proficiency requires consistent practice and effort (Li Qingyu, 2022).

Table 2. Spearman's correlation analysis results(N=48).

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| 1 | 1 | | | | | | | | | |
| 2 | .481** | 1 | | | | | | | | |
| 3 | .110 | .172 | 1 | | | | | | | |
| 4 | .093 | .279 | .880** | 1 | | | | | | |
| 5 | .154 | .335* | .712** | .807** | 1 | | | | | |
| 6 | .101 | .193 | .699** | .734** | .701** | 1 | | | | |
| 7 | .151 | .164 | .812** | .702** | .622** | .730** | 1 | | | |
| 8 | .119 | .099 | .860** | .868** | .706** | .691** | .751** | 1 | | |
| 9 | .213 | .181 | .801** | .743** | .780** | .774** | .768** | .775** | 1 | |
| 10 | .295* | .186 | .709** | .602** | .677** | .694** | .787** | .666** | .875** | 1 |

Note:1=Oral Practice Days, 2=Average Daily Length of Oral Practice, 3=Vocabulary, 4=Sentence Pattern Expression, 5=Grammar, 6=Language Organization, 7= fluency, 8=Like, 9=Enjoyment,10=Engagement.

*Correlation is significant at the 0.05 level (two-tailed).

**Correlation is significant at the 0.01 level (two-tailed).

5 Discussion

This study aims to investigate the effectiveness of using ChatGPT for IELTS speaking training in improving learners' oral proficiency and learning interest. Based on the collected survey questionnaires, the results demonstrate learners' positive attitudes and preferences toward using ChatGPT for oral training. This aligns with the findings of Šafranĵ[51], which indicate that learners exhibit higher levels of interest and motivation when utilizing artificial intelligence technology in language learning. Furthermore, learners acknowledged the improvement in their grammar, sentence structure, and language organization abilities with the use of ChatGPT. This corresponds to previous research findings where the experience of active interaction and immediate feedback in artificial intelligence platforms effectively promotes the development of learners' oral skills[50], and large-scale language models are recognized for their potential

in enhancing learners' second language proficiency[52]. Therefore, throughout the entire IELTS speaking training program, the dialogue interaction with ChatGPT can stimulate learners' interest and willingness to learn, thereby encouraging their active participation in oral practice and helping them achieve improvements in their oral proficiency.

The main findings of this study offer new insights and directions for the future development of English language learning. Firstly, ChatGPT can provide personalized learning experiences for students. Xia[53] also argued that ChatGPT promotes personalized learning for learners, but further research is needed to explore how this personalized support occurs in learning practices. This study found that ChatGPT created a relaxed learning atmosphere for learners' oral practice, stimulating their interest and initiative in language learning, and enhancing their engagement in learning tasks. Learners can use ChatGPT's real-time responses and multi-turn conversations to reflect on and evaluate their own progress in oral training, reflecting a learner-centered approach. Additionally, ChatGPT performs well in improving learners' grammar, sentence structure, and language organization. It intelligently detects learners' grammar errors, provides corresponding correction suggestions, and offers personalized assistance based on learners' current language proficiency to enrich their sentence expressions and enhance their language organization skills.

Secondly, ChatGPT can serve as an intelligent tool for teachers' instruction. As interest significantly impacts learners' persistence and completion of tasks, teachers can cleverly utilize ChatGPT for timely interventions to gain new insights into instructional design and activity organization. There have been teachers utilizing ChatGPT for lesson planning, demonstration or helping students with confusing questions, etc., thus accelerating learners' learning[54]. Then, by facilitating effective interaction between learners and ChatGPT, teachers can stimulate and maintain learners' enthusiasm for language learning, thereby enhancing classroom engagement and effectiveness. However, teachers need to consider guiding learners through the learning process instead of blindly relying on ChatGPT for oral training. This approach can help learners move away from mechanical imitation exercises and promote the development of their creative thinking and expression abilities, greatly enhancing the usability and effectiveness of ChatGPT.

Thirdly, ChatGPT can provide diversified options for curriculum design. In Susnjak's [55] study, the potential of ChatGPT to facilitate complex learning has been demonstrated. ChatGPT version 4.0 is more powerful and can provide multimodal teaching support, which enables teachers to design lessons with its diverse formats and use ChatGPT to help students' oral expression and listening comprehension, thus improving their speaking and language application skills. Additionally, teachers can utilize the intelligent diagnosis and analysis of student learning data collected by ChatGPT to understand learners' preferences, weaknesses, and progress, enabling them to develop more targeted teaching strategies based on individual learning situations.

6 Conclusion

In conclusion, this study makes a significant contribution by exploring the impact of ChatGPT on learners' speaking proficiency and interest within the context of an IELTS speaking learning program. The results show that, first, ChatGPT demonstrates the ability to effectively enhance learners' grammar, sentence pattern expression, and language organization, resulting in improved speaking proficiency; second, learners express a genuine liking and enjoyment in the process of learning spoken English with ChatGPT, indicating its effectiveness in stimulating their interest in language learning. These insightful findings hold tremendous potential in informing actual teaching practices. They offer valuable guidance to teachers in structuring speaking teaching activities within a ChatGPT technology-enhanced environment. Furthermore, the study serves as a valuable reference and resource for improving speaking teaching methodologies, providing practical lessons for educators to enhance language learning experiences.

Based on the experimental results and analysis, it is evident that ChatGPT plays a certain helpful role in English-speaking learning. However, it is essential to acknowledge the limitations of the study, which can be summarized into two aspects. Firstly, the sample size of participants in this experiment was relatively small, potentially limiting the generalizability of the results due to the influence of the sample size. A larger and more diverse sample could yield more robust and comprehensive insights into the impact of ChatGPT on language learning. Secondly, the duration of the experiment was relatively short, which prevented continuous monitoring of the students' learning progress using ChatGPT for speaking practice over an extended period. As a result, the evidence provided by the experiment may not fully encapsulate the long-term effects and benefits of incorporating ChatGPT into language learning curricula. Despite these limitations, the study still provides valuable insights and a promising foundation for further exploration and research in this area. Future studies with larger and more diverse samples, as well as longer durations, would contribute to a more comprehensive understanding of ChatGPT's efficacy as a language-learning tool.

In future research, to strengthen the persuasiveness of the experimental results, it is crucial to consider increasing the sample size appropriately and extending the duration of the experiment accordingly. A larger and more diverse participant pool, observed over a more extended period, would provide more robust and comprehensive findings. Furthermore, it is of utmost importance to encourage and facilitate the wider adoption of ChatGPT as an auxiliary teaching tool in language classrooms. By equipping teachers with the necessary knowledge and training on integrating ChatGPT effectively, its potential benefits can be harnessed to enhance language learning experiences. At the same time, we must maintain a cautious attitude towards the use of ChatGPT in order to prevent some potential negative impacts, for example, students need to be careful in verifying some inaccurate or inappropriate information brought by the model when they are training for speaking dialogues, and the over-reliance on ChatGPT may hinder the students' ability to learn independently, in which the teacher can give the correct guidance on the use of the model.

At present, research on the application of ChatGPT in English-speaking is still in its nascent stages. As such, there is a pressing need for further academic investigations to delve deeper into the substantive assistance and the more powerful role that ChatGPT can play in facilitating oral language learning. Expanding the scope of inquiry will help uncover untapped potentials and open up new avenues for leveraging AI technology in language education.

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