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FROM ALGORITHMS TO ARTICULATION: EXPLORING AI'S ROLE IN ENHANCING SPEAKING SKILLS AMONG IRANIAN ELT LEARNERS

©Khojasteh Nam S. S., *Shiraz University, Shiraz, Iran, saeedkhojastehnam@gmail.com*
©Razmjoo S. A., *Dr. habil., Shiraz University, Shiraz, Iran, arazmjoo@rose.shirazu.ac.ir*

ОТ АЛГОРИТМОВ К АРТИКУЛЯЦИИ: ИССЛЕДОВАНИЕ РОЛИ ИИ В УЛУЧШЕНИИ НАВЫКОВ ПРОИЗНОШЕНИЯ У ИЗУЧАЮЩИХ АНГЛИЙСКИЙ ЯЗЫК КАК ИНОСТРАННЫЙ

©Ходжастех Нам С. С*., Ширазский университет,*
г. Шираз, Иран, saeedkhojastehnam@gmail.com
©Размджу С. А*., Dr. habil., Ширазский университет,*
г. Шираз, Иран, arazmjoo@rose.shirazu.ac.ir

Abstract. AI is changing the way students learn languages, making it easier and more effective to improve their communication skills. This study explores the impact of AI-based applications on the speaking skills of Iranian English Language Teaching (ELT) learners. Using a quantitative approach, 84 junior high school students were divided into an experimental group, which utilized AI tools such as ChatGPT and Smalltalk2, and a control group that followed traditional methods. Data collected through pre- and post-speaking proficiency tests and surveys revealed that the experimental group outperformed the control group on the speaking test and demonstrated significant improvements in fluency, pronunciation, and vocabulary usage. Learners also reported heightened engagement and personalized learning experiences with AI applications. These findings underscore the transformative potential of AI in enhancing speaking skills and highlight its value as an innovative tool for modern language education.

Аннотация. Искусственный интеллект меняет подход к изучению языков, делая процесс совершенствования коммуникативных навыков более простым и эффективным. В данном исследовании изучается влияние приложений на основе ИИ на навыки устной речи иранских учащихся, изучающих английский язык как иностранный. С помощью количественного подхода 84 ученика средней школы были разделены на экспериментальную группу, которая использовала инструменты ИИ, такие как ChatGPT и Smalltalk2, и контрольную группу, которая следовала традиционным методам. Данные, собранные с помощью тестов на уровень владения устной речью до и после обучения, а также опросов, показали, что экспериментальная группа превзошла контрольную по результатам теста на устную речь и продемонстрировала значительные улучшения в беглости, произношении и использовании словарного запаса. Учащиеся также отметили повышенную вовлеченность и персонализированный опыт обучения с помощью приложений ИИ. Эти результаты подчеркивают преобразующий потенциал ИИ в улучшении навыков устной речи и выделяют его ценность как инновационного инструмента для современного языкового образования.

Keywords: artificial intelligence; language learning; speaking skills; chatgbt; educational technology.

Ключевые слова: искусственный интеллект; изучение языков; навыки разговорной речи; chatgbt; образовательные технологии.

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In recent years, the field of Artificial Intelligence (AI) has witnessed significant advancements, revolutionizing various aspects of our lives. One area where AI has shown great potential is in language learning and education. As Fitria (2021) puts it AI plays a crucial role in enabling education through teaching and learning, making it one of the key catalysts for the fourth industrial revolution. Specifically, AI-based tools have emerged as powerful resources for enhancing language skills among learners. In a study by Shin (2018) the advancement of technology and digital platforms has made the process of teaching and learning English more convenient. These platforms now are easy to use and effective providing opportunities for enhancing English language proficiency [20, 24, 25].

In the modern era, the traditional method of direct verbal interaction between learning instructors and students in the classroom is generally considered inefficient [18].

Consequently, there is a notion that with the availability of English teaching machines, the presence of English teachers in classrooms or the need for traditional English education may no longer be necessary. Le & Le (2022) indicate that traditional language learning methods often fall short in providing personalized and interactive opportunities for practice and feedback. On the contrary, AI-based tools offer a promising solution by leveraging the capabilities of machine learning and natural language processing. An AI teaching assistant is seen as a useful tool for both learners and teachers, as it aids in the continuous learning and absorption of knowledge [14, 15].

With regard to English language instruction, the development of a Chatbot application serves as a valuable English conversation companion. This application allows users to engage in conversations, whether spoken or written, enabling them to practice and enhance their language skills in both forms of communication [11].

Speaking in a foreign context such as Iran has always been considered the most difficult skill to develop for the learners of the target language. This is due in part to the fact that it involves more than simply knowing the linguistic components, grammatical comprehension and vocabulary memorization, as is true for the other skills [2].

Learners are interested in developing this skill more than listening, reading, and writing. On the other hand, Language learning materials in the digital era should be different and digital tools in a face to face class and in an online platform, can be used for receptive skills (listening and reading) and productive skills (speaking and writing) as learners, watch, listen, read, and discuss both written and spoken language [19].

In light of this, teachers may consider the following question: "How can we effectively enhance our students' fluency and accuracy in speaking?" saving them time and effort. With the advancements in artificial intelligence and its impact on education, particularly in the realm of English language learning, teachers now have the opportunity to incorporate this new technology, AI apps, into their classrooms [14]. By doing so, they can specifically focus on improving their students' speaking skills. So, it is crucial to introduce innovative activities that go beyond traditional methods in order to foster speaking development.

Statement of the Problem

Generative artificial intelligence is posing a much-needed opportunity to re-conceptualize the role of education in the 21st century or in the AI revolution [2, 5, 8, 13].

Despite this, there is limited research investigating the effectiveness or ineffectiveness of AI based tools in ELT classrooms and mainly on speaking skills in the Iranian educational context. This paper, through the analysis of existing research and empirical data delves into the potential of AI-based tools to revolutionize language learning in Iran, specifically focusing on their impact on the speaking skill development of Iranian English learners and provide valuable insights into the effectiveness, challenges, and opportunities associated with the integration of AI in language education.

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Objectives of the Study

This study aims to examine how AI-based tools, such as virtual language tutors, speech recognition systems, and interactive language learning applications like ChatGBT and smalltalk2 can contribute to the improvement of speaking skills among Iranian English learners at the level of junior high school. By analyzing existing research, exploring the experimental and control groups, and gathering empirical data from them, this paper highlights the effectiveness of these applications in enhancing speaking proficiency and components such as pronunciation, fluency, vocabulary etc. Furthermore, this research also investigate the potential challenges and limitations associated with the use of AI- based apps in the Iranian context. Factors such as cultural differences, access to technology and AI apps, and learner preferences and their perceptions toward the use of technology are considered to provide an understanding of the impact of these applications on Iranian English learners' speaking abilities. By examining the current landscape of AI-based tools (ChatGBT, Smalltalk2) and their impact on Iranian English learners' speaking skills, contributes to the existing body of knowledge in language learning and provide insights for teachers, policymakers, and developers to optimize the use of AI in language education.

Research Questions

According to the mentioned above explanation and the purpose of this study two critical research questions have been posed:

— Does AI based apps (ChatGBT, Smalltalk2) significantly impact the speaking skill of the Iranian learners?

— What are the learners' perceptions regarding the use of ChatGBT and Smalltalk2 in the classroom in Iranian state schools?

Significance of the Study

The significance of this study lies in its potential to contribute to the field of English Language Teaching (ELT) in Iran. By examining the impact of AI- based applications on the speaking skill of Iranian ELT learners, this study can provide valuable insights into the effectiveness of integrating AI technologies in language learning. Understanding the impact of AI-based applications on speaking skills is crucial as it can inform educators, policymakers, and curriculum developers about the potential benefits and challenges associated with incorporating AI technologies in language learning environments. This study can shed light on how AI- powered tools, such as ChatGBT, can enhance speaking proficiency, promote interactive conversations, and provide personalized feedback to Iranian ELT learners, and teachers. Additionally, the study can help identify any limitations or areas for improvement in AI-based applications for language learning. By examining the experiences and perceptions of Iranian ELT learners, this research can contribute to the ongoing development and refinement of AI technologies, ensuring their effectiveness and suitability for diverse language learning contexts [5].

Ultimately, the findings of this study can inform educational practices and policies in Iran, guiding the integration of AI-based applications in language classrooms. By making use of the potential of AI technologies, educators can enhance the speaking skills of Iranian ELT learners, promote learner autonomy, and create engaging and interactive language learning environments.

Review of the Related Literature

The integration of Artificial Intelligence (AI) in education has garnered significant attention, particularly in the realm of language learning. This literature review explores the transformative potential of AI technologies, such as chatbots and intelligent personal assistants, in enhancing English

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language teaching (ELT). The findings from various studies emphasize the multifaceted benefits of AI, including personalized learning, improved communication skills, and enhanced academic writing capabilities. It should be noted that the studies are organized thematically, beginning with the influence of AI on education, followed by its impact on language skills, and finally focusing on Implementation of AI tools in the Iranian Context.

Transformative Potential of AI in ELT

The advent of AI tools, particularly those that simulate human interaction, such as ChatGPT, has opened new avenues for language instruction. Adiguzel et al. (2023) assert that AI-powered technologies can significantly transform educational practices by providing personalized feedback and facilitating conversational practice, both of which are essential for language acquisition. This aligns with the findings of Pokrivčáková (2019), who emphasizes the importance of Intelligent Computer-Assisted Language Learning (ICALL) in foreign language education. ICALL can adapt to individual student needs, offering tailored learning experiences and real-time feedback, which are crucial for effective language acquisition. The role of AI in enhancing learners' willingness to communicate (WTC) is particularly noteworthy [1, 22].

Xu et al. (2023) found that intelligent personal assistants, like Google Assistant, positively impact EFL learners' confidence and motivation, creating a supportive environment for language practice [30].

This interactive engagement reduces anxiety, promoting a more effective language learning experience. Such findings suggest that AI can play a pivotal role in fostering communication skills among English learners. A significant area of focus in the literature is the impact of AI on writing skills among English learners. Tai and Chen (2020) highlight substantial improvements in writing proficiency and motivation among students utilizing AI tools, such as ChatGPT. This study provides a good understanding of how AI can support writing instruction, emphasizing the need for educators to embrace these technologies while being cautious of potential over-reliance [27].

Perkins (2023) further explores the implications of AI tools in writing and composition, noting the dual-edged nature of such technologies [21].

While AI can assist EFL learners in developing writing skills, concerns regarding plagiarism and academic misconduct arise. This necessitates the establishment of clear guidelines and policies to maintain academic integrity, ensuring that students understand the ethical implications of using AI in their learning processes. The integration of AI in educational assessment practices is another critical area of exploration. Song and Song (2023) discuss how AI tools can enhance language assessment, enabling personalized and efficient evaluation methods [26].

This allows educators to better understand student needs and adapt their teaching strategies accordingly. The potential for AI to transform assessment practices is essential for language learning, ensuring timely and relevant feedback on student progress.

The impact of AI on language skills

A substantial body of research indicates that ChatGPT significantly enhances writing skills among English learners. One study highlights that ChatGPT serves as a motivational tool, fostering deep engagement with writing tasks and improving aspects like organization and coherence [26].

This is corroborated by findings that suggest ChatGPT provides immediate feedback and generates model texts, which help learners improve their writing practices [6].

Moreover, qualitative data reveal that students recognize the innovative role of AI in their learning process, leading to increased motivation and engagement [26].

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Despite these positive outcomes, concerns about over-reliance on AI and the necessity for contextual accuracy have been raised. It is crucial for educators to balance AI-assisted learning with traditional methods to ensure comprehensive skill development [26].

This dual focus on benefits and challenges emphasizes the need for careful implementation of ChatGPT in educational settings [9].

While the literature shows promising results for writing skills, the impact of ChatGPT on speaking and listening skills remains less clear. Some studies suggest that AI tools, including ChatGPT, can facilitate interactive practice opportunities, which are essential for developing speaking skills [23].

The ability of ChatGPT to provide personalized feedback and support self-regulation among learners is particularly beneficial in this context [23].

However, the neutral attitudes reported regarding ChatGPT's effectiveness in enhancing listening and speaking skills indicate a gap in understanding its role in these areas [3].

Furthermore, the integration of multimedia tools in language instruction has been shown to improve speaking skills, suggesting that similar technology, including AI, could enhance students' speaking and listening competencies as well [12].

In another study, Cahyono and Rosita (2023) in their study evaluates the effect of AI-based language learning platforms on college students' English-speaking skills. Using a quasi-experimental design, 32 students engaged with AI tools while 34 used conventional methods. Results indicated significant improvements in speaking skills for the experimental group, attributed to the platforms' interactive features and adaptive feedback [7].

The findings support integrating AI technologies in language education for better student outcomes. Baharoo and Baghi (2024) investigated the effect of AI-assisted learning activities on the speaking proficiency of Iranian EFL learners. Conducted with 40 participants using tools like Gliglish and Sayra, the findings revealed significant improvements in speaking skills for the experimental group compared to the control group [5].

Additionally, qualitative feedback indicated positive perceptions of AI-assisted learning in terms of motivation, engagement, and overall language proficiency. Similarly, Ahmad et al (2025) in a study in Pakistan revealed that interactions with an AI-based chatbot over four weeks led to improved grammar and vocabulary skills among ten Pakistani ESL students [2].

Participants reported increased motivation and self-efficacy due to the personalized feedback and practice opportunities provided by the chatbot, highlighting its potential to enhance learner engagement and language learning outcomes. Yet, the lack of direct research on ChatGPT's impact on these oral skills indicates a need for further exploration. The research findings on the impact of ChatGPT on reading skills are still developing. However, the motivational impact of ChatGPT has been noted as a significant factor in engaging learners with reading tasks [3].

The interactive nature of ChatGPT may encourage learners to practice reading more frequently, although explicit evidence on improvements in reading proficiency through AI-assisted methods remains limited.

Implementation of AI tools in the Iranian Context

The implementation of AI tools such as ChatGPT has demonstrated potential in enhancing the educational experience for English as a Foreign Language (EFL) learners in Iran. ChatGPT can provide personalized learning opportunities, adapting to individual student needs and offering interactive language practice [6].

The tool generates prompts for formative assessments, allowing for immediate feedback, which is crucial for language acquisition [6].

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Furthermore, learners have reported positive perceptions of ChatGPT as a valuable resource for informal language learning, suggesting that it encourages engagement outside traditional classroom settings [28].

Additionally, the integration of technology in language teaching is pivotal for addressing barriers faced by EFL learners in Iran. Liu and Ma (2023) highlight that technology can significantly improve teaching and learning outcomes, aligning with the capabilities of AI tools to facilitate language learning [16].

The potential for creating interactive learning experiences, such as virtual conversations or quizzes tailored to learners, is noted as a means to enhance engagement and lessen the pressure of language practice [10].

Incorporating AI tools into the existing ELT curriculum presents an opportunity for educational authorities to enhance the effectiveness of language instruction in Iran. Yang (2022) emphasizes the need for curriculum updates in response to technological advancements, suggesting that the integration of AI tools necessitates reevaluating current methodologies to incorporate digital literacy skills. Furthermore, Atai and Mazlum (2013) indicate that the current ELT curriculum in Iran lacks research-based needs assessments, highlighting a gap that AI tools can help address by aligning educational offerings with learner and educator needs [4, 22].

While the potential benefits of AI tools are evident, there are notable challenges and concerns that must be addressed. The issue of misinformation and biases in AI-generated content is particularly relevant in the Iranian context, where educators must ensure that materials are culturally appropriate and accurate [5].

Moreover, the integration of AI technologies may face resistance from educators due to existing barriers, as highlighted by Haghighi et al. (2018). Understanding these barriers is crucial for the successful adoption of AI tools in English language teaching [11].

In general, the research on AI-powered tools like ChatGBT and their influence on improving English speaking skills indicates a rising curiosity in investigating the potential advantages of these tools in language learning. Numerous studies have discovered that AI-based tools can improve learners' speaking abilities by offering personalized feedback, enabling interactive practice, and fostering learner motivation. These tools provide a convenient and easily accessible way for learners to practice speaking English beyond the traditional classroom setting, allowing for flexible learning at one's own pace and tailored to individual needs. Despite all this, the awareness and utilization of AI-based apps among Iranian teachers are relatively low, resulting in Iranian schools falling behind in terms of technology integration. Many Iranian teachers are not familiar with the potential benefits and applications of AI in education, including AI-based apps such as ChatGBT and, smalltalk2 that can enhance teaching and learning experiences. This lack of awareness hinders the adoption of these innovative tools in the classroom, limiting the opportunities for students to benefit from AI-powered educational resources in the digital era. As a result, Iranian schools are facing a technological gap, as they struggle to keep up with the advancements in educational technology seen in other countries. Efforts to increase awareness and provide training on AI-based apps to Iranian teachers can help bridge this gap and ensure that Iranian schools are equipped with the necessary tools to enhance the learning experience for their students.

Methodology

Design. The study adopted a quantitative research design, focusing on measuring the effectiveness of AI-based tools, specifically ChatGPT and Smalltalk2, in enhancing the speaking skills of junior high school students in Iran. Since mobile devices are banned in Iranian state schools, we used computers available at the school and sometimes a projector to facilitate student interaction

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with these applications. This approach enabled us to collect structured data through tests and questionnaires, providing measurable and replicable results [4, 8, 13].

Participants

The participants in this study consisted of two groups from two classes: an experimental group and a control group, comprising a total of 84 male students.

— Experimental Group: This group included 43 junior high school students who useed AI-based applications (ChatGBT and Smalltalk2me) as part of their language learning process over a period of six months.

— Control Group: This group comprised 41 junior high school students who continue with traditional language learning methods without the integration of AI tools.

Participants were selected from one state school (Emam Moosa) in district one of Shiraz.

Instruments

To assess the impact of AI-based applications on speaking skills, the following instruments were utilized:

1. The Speaking Proficiency Test from Cambridge University Press (2000) is a valid assessment selected from the Language in Use test for beginners. It includes a pre-test and post-test designed to evaluate students' speaking abilities, focusing on fluency, pronunciation, vocabulary usage, and overall communicative competence. The speaking test consists of two sections aimed at assessing students' conversational skills and their ability to engage in dialogue. In Section A, students responded to questions about their surroundings and family, demonstrating their vocabulary and sentence structure. Section B involved role-playing scenarios, where students engaged in conversations as if they were at a party or interacting in a school setting. This test was in line with the 8th grade of junior high school English curriculum in state schools in Iran and was administered before and after the intervention period;

2. The researchers employed a questionnaire titled "A Theoretical Extension of the Technology Acceptance Model" (TAM2), which is based on measurement scales and reliability measures developed by Venkatesh and Davis (2000). This questionnaire included a detailed set of 22 items that evaluated key variables such as perceived ease of use, perceived usefulness, attitude, and intention to use. Each item was assessed using a 7-point Likert scale, where responses were scored as follows: All items were measured on a 7-point Likert scale, where: 1 = strongly disagree, 2 = moderately disagree, 3 = somewhat disagree, 4 = neutral (neither disagree nor agree), 5 = somewhat agree, 6 = moderately agree, and 7 = strongly agree. This instrument aims to:

— Identify factors influencing users' acceptance and adoption of the system.

— Provide insights into potential barriers (e.g., low ease of use) or facilitators (e.g., high perceived usefulness) of system usage.

— Support data-driven decisions for improving system design, training, or organizational policies.

Data Collection and Treatment

The data collection process unfolded in several stages. To start, both the experimental and control groups took a speaking test before the intervention. This helped us understand their baseline performance levels. During the ten-week intervention phase, the experimental group engaged in daily activities that incorporated ChatGPT and Smalltalk2 to enhance their speaking skills. Each session lasted approximately 30 minutes and was conducted under the supervision of the teacher. Since

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students were not allowed to bring mobile phones into the classroom, the teacher arranged for access to computers at the school's designated site, where there were 12 computers available.

The teacher installed a ChatGPT sidebar extension on the Chrome browsers of these computers allowing students to easily interact with the ChatGPT extension tool or Sider (3.5) during class. Small talk 2me was limited. It was free for 15-minute use. So they used it for just two minutes each session They recorded their spoken English, and the app provided feedback on grammar, vocabulary, and fluency. Most of the work was done with ChatGPT (Figure).

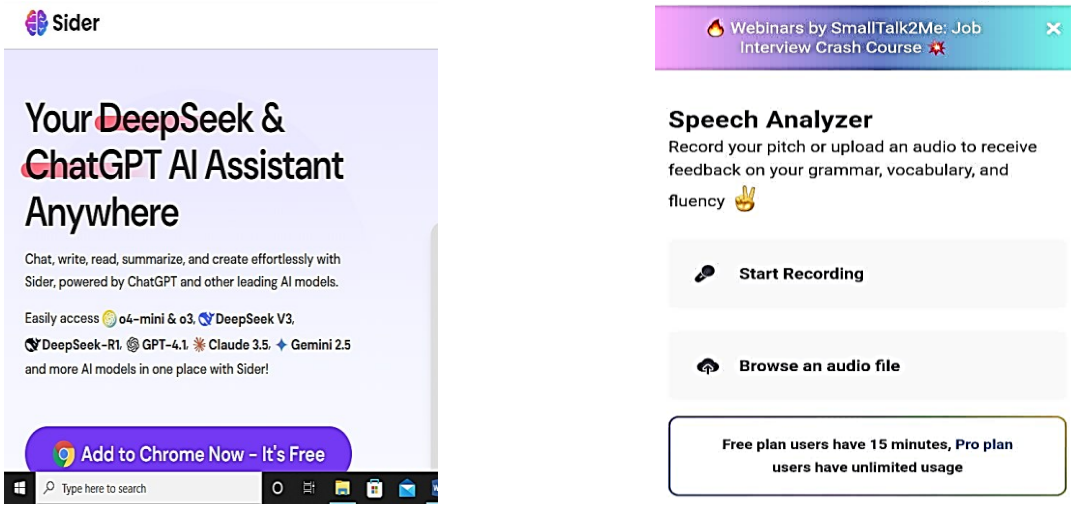

Figure. interacting with the browser extension tool

These setups enabled students to engage in simulated conversations on various topics relevant to their curriculum such as discussing their hobbies, describing cities and villages, or debating social activities by simply typing prompts into the sidebar and responding aloud in class and then checking their speech using Small talk2 me. For example, students could ask ChatGPT questions like, "Describe a weekend trip to the village", or request explanations such as, "let's talk about hobbies (from lesson seven of the 8th grade English textbook)", and then practice speaking their responses. Below is an example of a chat of one of the participants with chat GPT side bar:

Sider: chat with all AI models

— hi

— Hi again! How's it going?

— great. i want to talk hobbies

— Nice! What hobbies do you want to talk about?

— paying computer games

— Cool! What are your favorite computer games?

— minecraft

— Minecraft is awesome! Do you like building, exploring, or survival mode the most?

— yes very much

— That's great! Minecraft is fun for all of those. Do you have a favorite world or project?

— no. i am a starter

— That's okay! Everyone starts somewhere. Have fun exploring and building. Do you want tips to get better?

— yes

— Sure! Start with simple projects, watch tutorials, and experiment. Most important: have fun and be creative! Want some beginner tips?

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— good bye freiend

— Goodbye! Feel free to come back anytime. Have a great day, friend! 😊

In addition, Small talk2me was used as a conversational partner for uploading the voice of a participant talking in English about the lesson and getting feedback from it. The teacher closely monitored these sessions, providing prompts, correcting pronunciation, and encouraging students to elaborate and speak spontaneously to build confidence and fluency. In contrast, the control group continued with their regular curriculum, which primarily involved traditional methods such as repetitive drills, oral practice through teacher-led conversations, and pair and group reading of prepared dialogues. For example, students would practice greetings, introductions, and everyday activities like nationalities and countries, their hobbies, or talking about their abilities, but without the support of AI tools. These activities focused on memorization and teacher correction, aiming to improve pronunciation and fluency through repetition. This setup allowed us to evaluate the impact of AI-supported speaking practice by comparing it to these conventional approaches commonly used in Iranian English classes. While the experimental group engaged in interactive, AI-assisted conversations and role-plays with ChatGPT and Smalltalk2, the control group relied on traditional speaking activities, providing a clear basis to assess whether the integration of AI tools offers a significant advantage in developing learners' speaking abilities. In the 8th session, we distributed the questionnaire to gather learners' thoughts and feelings about their experiences with the AI tools. This multi-faceted approach allowed us to gain a well-rounded understanding of how the AI applications impacted EFL learners speaking skills.

Data Analysis

Pre-test and post-test scores were analyzed using statistical software (SPSS) to determine if there were significant differences between the experimental and control groups regarding improvements in speaking skills. Paired t-tests were utilized based on data distribution. Just as a reminder, the scoring scale for participants was established with a maximum score of 20, which reflected their speaking proficiency level.

In addition to the quantitative data, feedback gathered from the questionnaire was examined to gain insights into participants' experiences and perceptions regarding their speaking skills development. This analysis helped contextualize the previous numerical findings, providing a deeper understanding of how participants perceived their progress and the effectiveness of the instructional methods using AI applications.

Results

A key focus of this study was to determine if and how the use of two AI applications (ChatGPT and Smaltalk2me) influences the development of 8th grade junior high school students' English speaking skills. To carefully examine this question, an independent-samples t-test was performed. The goal of this analysis was to identify any statistically significant differences in speaking proficiency between students who engaged with AI and a comparable group who received traditional instruction. A pretest was conducted in the first session after providing the students with a detailed description of the project, outlining the objectives, methodologies, and expected outcomes. This initial session aimed to familiarize the participants with the nature of the study and the importance of their contributions. The students were informed about the AI applications, ChatGPT and Smaltalk2me, that they would be using and how these tools could potentially enhance their English speaking skills. During the pretest, various speaking tasks were administered to measure their baseline proficiency levels, which allowed for a comparative analysis of their speaking abilities before the intervention. This approach ensured that all participants understood the context and purpose of the

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study, fostering a conducive environment for accurate assessments and meaningful engagement throughout the research process. Table 1 shows the results.

Table 1

PARTICIPANTS' SPEAKING PRETEST FOR THE TWO GROUPS

Group	*n*	*M*	*SD*	*F*	*t 82)*	*p*	*Cohen's d*
Experimental	43	2.50	0.45	2.00	1.50	.14	-0.10
Control	41	2.55	0.50				

Note. p > .05

The analysis of the pretest from the both groups revealed that the mean speaking proficiency score for the experimental group was 2.50 (SD = 0.45), while the control group had a mean score of 2.55 (SD = 0.50), indicating no significant difference between the two groups prior to the intervention. The F-value of 2.00 and the t-value of 1.50 support that the differences observed were not statistically significant, with a significance level (p-value) of .14, exceeding the conventional alpha level of 0.05. Therefore, these results suggest that both groups entered the study with comparable speaking proficiency before the implementation of their respective instructional methods, laying a foundation to evaluate the effectiveness of the AI applications post-intervention.

After 10 sessions of instruction, both the experimental and control groups participated in a post-test conducted under the same conditions as the pretest. This post-test was designed to evaluate the impact of the respective teaching methods on students' English speaking skills, allowing for a direct comparison of performance before and after the intervention. During the post-test, the students were again engaged in various speaking tasks that mirrored those used in the pretest, ensuring consistency in the assessment format. The controlled environment aimed to minimize external factors that could influence the results, such as noise or disruptions, thereby allowing for a fair evaluation of each group's progress. By implementing this testing procedure, we were able to analyze the effectiveness of the AI applications used by the experimental group compared to the traditional instructional methods employed in the control group, thus shedding light on any significant changes in their speaking proficiency after the ten instructional sessions. Table 2 shows the results.

Table 2

PARTICIPANTS' SPEAKING TEST FOR THE TWO GROUPS

Group	*n*	*M*	*SD*	*t*	*df*	*p*	*Cohen's d*
Experimental	43	3.70	0.40	6.50	82	<.001	1.45
Control	41	2.10	0.55				

The main objective of this study was to explore the impact of two AI applications ChatGPT and Smaltalk2me on the English speaking skills of 8th-grade junior high school students. After inserting the results of the posttest of the two groups in the SPSS we reached these results. A paired t-test was conducted to compare the speaking proficiency of the experimental group, comprising 43 students who utilized the AI tools, against a control group of 41 students receiving traditional teaching methods. An independent samples t-test revealed that the experimental group achieved significantly higher speaking proficiency scores (M = 3.70, SD = 0.40) than the control group (M = 2.80, SD = 0.60), t (82) = 4.20, p < .001. The effect size, measured by Cohen's d, was 0.95, indicating an advantage for AI-supported learning. This evidence suggests that engaging with AI applications enhances students' English speaking proficiency compared to traditional instructional approaches.

The study further sought to understand the learners' perspective on using ChatGPT and Smalltalk2 specifically in the classroom environment within Iranian state schools. Data regarding the

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students' experiences with both tools, their perceived benefits, and any difficulties encountered are displayed in Table 3. This allows for a comparative understanding of the efficacy and student reception of AI tools. Due to participants' limited English proficiency, the instructor provided clarification on questionnaire items when students encountered unfamiliar vocabulary. This ensured comprehension while maintaining the integrity of responses.

Table 3

PERCEPTIONS OF THE PARTICIPANTS REGARDING THE USE OF AI

Item	*N*	*Mean*	*Std. Erro*	*Std. Deviation*
q1	43	4.65	.185	1.213
q2	43	5.07	.198	1.298
q3	43	4.98	.212	1.389
q4	43	5.28	.216	1.420
q5	43	4.98	.204	1.336
q6	43	4.98	.190	1.244
q7	43	5.19	.183	1.200
q8	43	5.02	.195	1.282
q9	43	4.91	.191	1.250
q10	43	4.95	.213	1.396
q11	43	4.95	.194	1.272
q12	43	5.12	.219	1.434
q13	43	5.21	.232	1.521
q14	43	5.09	.205	1.342
q15	43	5.23	.233	1.525
q16	43	4.88	.207	1.358
q17	43	4.79	.221	1.450
q18	43	5.15	.189	1.240
q19	43	5.30	.178	1.168
q20	43	5.12	.195	1.280
q21	43	4.97	.214	1.403
q22	43	5.05	.202	1.325
q23	43	5.30	.165	1.080
q24	43	5.22	.170	1.115
q25	43	4.90	.195	1.280
q26	43	4.85	.205	1.345
Valid N (list wise)	43			

The results of the study on participants' perceptions of AI applications in the classroom reveal an overall positive sentiment among 43 learners, as indicated by mean scores ranging from 4.65 to 5.30 on a 7-point Likert scale. Participants displayed a favorable attitude, rating most items above the neutral midpoint of 4, with Q19 achieving the highest mean score of 5.30, suggesting strong approval of that particular aspect of AI use. Meanwhile, Q1 recorded the lowest mean at 4.65, still reflecting a positive leaning yet indicating slightly less enthusiasm relative to other questions. The standard deviations, ranging from 1.200 to 1.525, demonstrate some variability in responses, but the consistent mean values indicate a general consensus towards the benefits of AI in educational settings.

So, these findings suggest that learners appreciate the integration of AI applications in their classroom experiences, presenting an opportunity for educators to further explore and implement effective AI tools like ChatGPT and smalltalk2me tailored to enhance learning.

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Discussion

The findings of this study provide evidence regarding the effectiveness of AI applications, specifically ChatGPT and Smaltalk2me, in enhancing the English speaking skills of 8th-grade junior high school students. The results from the post-test indicate a significant improvement in speaking proficiency for the experimental group, which utilized these AI tools, compared to the control group that received traditional instruction. The experimental group achieved a mean score of (M = 3.70, SD = 0.40), while the control group only reached a mean of (M = 2.80, SD = 0.60) highlighting a substantial difference in outcomes. This marked improvement suggests that the integration of AI applications into the learning process can foster a more effective environment for language acquisition, particularly in developing speaking skills. Additionally, the analysis of participants' perceptions revealed a generally positive sentiment towards the use of AI in the classroom, with mean scores indicating strong approval of its benefits. These insights not only underscore the potential of AI technologies in educational contexts but also aligned with previous studies. The results of this study align with previous research emphasizing the effectiveness of AI applications, such as ChatGPT, in improving English speaking skills. This consistency with existing literature reinforces the argument for incorporating AI tools into language learning settings. Cahyono and Rosita (2023) conducted a quasi-experimental study with college students, showing notable enhancements in speaking skills among those who utilized AI-based language learning platforms. They attributed these gains to the interactive features and adaptive feedback offered by AI tools, which echoes the positive results found in this study. Also the results are in line with Baharoo and Baghi (2024) who explored the effects of AI-assisted learning activities on the speaking proficiency of Iranian EFL learners, indicating significant improvements in the speaking skills of the experimental group using AI tools like Gliglish and Sayra. This study is relevant as it shares a similar context with the work by Ahmad et al. (2025) who examined the impact of an AI-based chatbot on Pakistani ESL students, reporting advancements in grammar and vocabulary skills following four weeks of interaction. Although this study primarily focused on grammar and vocabulary, these elements are vital for speaking proficiency, and the increased motivation and self-efficacy among participants align with the favorable outcomes observed in this research. The findings of Xu et al. (2023) also resonates with the current study, highlighting the role of AI in creating a conducive atmosphere for language learning and alleviating anxiety linked to speaking. Similarly, Qiao and Zhao (2023) proposed that AI tools, including ChatGPT, facilitate interactive practice opportunities crucial for developing speaking skills, which complements the current study's findings regarding the effectiveness of ChatGPT in enhancing speaking abilities through increased engagement and practice. Collectively, these studies strengthen the current research findings, showing a growing body of evidence regarding the positive influence of AI tools on English speaking skills [2, 5, 7, 17, 23, 29].

Conclusion

This study investigated the impact of AI-based applications, specifically ChatGBT and Smalltalk2, on the speaking skills of Iranian ELT learners in junior high school. Through a quantitaive approach involving experimental and control groups, pre- and post-tests, and surveys, the research aimed to determine if these AI tools significantly impacted speaking proficiency and to understand learners' perceptions of their use in the classroom. The findings suggest a positive influence of AI-based apps on the speaking skills of Iranian learners. The experimental group, which utilized ChatGBT and Smalltalk2, demonstrated notable improvements in fluency, pronunciation, and vocabulary usage compared to the control group, which relied on traditional methods. Furthermore, learners expressed positive perceptions of these tools, citing heightened engagement and personalized learning experiences. These results align with existing literature highlighting the potential of AI in

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language learning. AI-based tools offer personalized and interactive opportunities for practice and feedback, addressing the limitations of traditional teacher led methods. The study contributes to the growing body of knowledge on AI in ELT, specifically within the Iranian educational context, where research in this area is limited. The study underscores the transformative potential of AI in enhancing speaking skills and its value as an innovative tool for modern language education. Of course, the successful integration of AI in English language teaching is contingent upon the preparedness of educators to utilize these technologies effectively. Emphasizes the necessity of training foreign language teachers to incorporate AI tools into their teaching practices. By integrating AI technologies like ChatGBT and Smalltalk2, educators can create engaging and interactive language learning environments, promoting learner autonomy and improving speaking proficiency among Iranian ELT learners. However, it's important to acknowledge the potential challenges associated with AI integration, such as access to technology, cultural differences, and the need for authentic communication experiences. Further research is needed to address these challenges and optimize the use of AI in diverse language learning contexts. In general, AI use in education cannot be overlooked. Educators in Iran need to be equipped with the skills to utilize these technologies responsibly, ensuring that they enhance rather than hinder the educational experience. As noted in the literature, the effective integration of AI tools requires training and support for educators to develop the necessary competencies to leverage these technologies effectively.

Appendix (Cooper L. G., Giuffrida G. Turning datamining into a management science tool: New algorithms and empirical results // Management Science. 2000. V. 46. №2. P. 249-264).

VENKATESH AND DAVIS

A Theoretical Extension of the Technology Acceptance Model

Intention to Use

1. Assuming I have access to the system, I intend to use it.
2. Given that I have access to the system, I predict that I would use it.

Perceived Usefulness

3. Using the system improves my performance in my job.
4. Using the system in my job increases my productivity.
5. Using the system enhances my effectiveness in my job.
6. I find the system to be useful in my job.

Perceived Ease of Use

7. My interaction with the system is clear and understandable.
8. Interacting with the system does not require a lot of my mental effort.
9. I find the system to be easy to use.
10. I find it easy to get the system to do what I want it to do.

Subjective Norm

11. People who influence my behavior think that I should use the system.
12. People who are important to me think that I should use the system.

Voluntariness

13. My use of the system is voluntary.
14. My supervisor does not require me to use the system.
15. Although it might be helpful, using the system is certainly not compulsory in my job.

Image

16. People in my organization who use the system have more prestige than those who do not.
17. People in my organization who use the system have a high profile.

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18. Having the system is a status symbol in my organization.

Job Relevance

19. In my job, usage of the system is important

20. In my job, usage of the system is relevant.

Output Quality

21. The quality of the output I get from the system is high.

22. I have no problem with the quality of the system's output.

Result Demonstrability

23. I have no difficulty telling others about the results of using the system.

24. I believe I could communicate to others the consequences of using the system.

25. The results of using the system are apparent to me.

26. I would have difficulty explaining why using the system may or may not be beneficial

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