

The Impact of Artificial Intelligence-Assisted Learning Applications on Oral English Ability: A Literature Review

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Abstract

Artificial intelligence-assisted learning applications have shown significant potential in improving English speaking skills and promoted changes in traditional English teaching models. With the advancement of technology, more and more learners are relying on smart applications to improve their speaking skills. These applications can not only provide personalized learning plans, but also correct pronunciation and intonation through real-time feedback, thereby effectively improving learners' pronunciation accuracy. This study investigates the impact of artificial intelligence-assisted learning applications on English speaking ability through a literature review. The purpose of this study is to understand the existing research and literature on the use of artificial intelligence-assisted learning applications in English speaking learning environments. This article first provides an overview of artificial intelligence-assisted learning applications. Then the relationship between artificial intelligence-assisted learning applications and learners' English speaking improvement is discussed from the theoretical basis. Finally, the impact of artificial intelligence-assisted learning applications on English speaking ability is studied through a literature review. The results of this literature review show that artificial intelligence-assisted learning applications have an overall positive impact on English speaking ability. But longitudinal studies are still needed to examine the long-term effects on learners' language proficiency.

Keywords: Artificial Intelligence, Application, Learning English, Spoken English, Oral English Ability.

Introduction

In today's era of rapid globalization, English, as an international language, has become more and more important in speaking ability (Sari, 2023). Speaking ability is not only a basic tool for interpersonal communication, but also a key factor in academic communication and career development. Whether it is a business meeting, an academic seminar, or daily social interaction, fluent English speaking skills enable learners to more confidently participate in discussions, express opinions, and convey information effectively. In addition, good oral skills can also help learners reduce misunderstandings and establish good relationships in cross-

cultural communication (Burns & Hill, 2013). However, many non-native learners often face challenges in fluency, pronunciation, and confidence in speaking. These challenges may arise from a variety of factors, including native language interference, cultural differences, and learning environment (MacIntyre & Gardner, 1991). Specifically, many learners may feel anxious about non-standard pronunciation when speaking English, resulting in disfluent oral expression. This anxiety not only affects their ability to express themselves, but may also reduce their motivation to learn, which forms a vicious cycle. Therefore, it has become particularly important to find effective learning methods to improve speaking skills, and the emergence of artificial intelligence-assisted learning applications provides a new way to solve this problem (Mushthoza et al., 2023). Research shows that artificial intelligence is a means of embedding human intelligence into computer programs that can think, work, and make judgments like humans (Kok et al., 2009). In recent years, artificial intelligence has been increasingly used in the field of education (Hwang et al., 2019), among which the application of artificial intelligence in language learning has received considerable attention (Abad, 2013). Therefore, it is necessary to conduct a systematic literature review on the impact of artificial intelligence-assisted learning applications on English speaking ability. By synthesizing previous research results on the improvement of English speaking ability through artificial intelligence-assisted learning, further research in this field can be carried out.

Artificial Intelligence-Assisted Learning Applications

Research on artificial intelligence educational systems (ITS) can be traced back to early educational computer applications. These systems are designed to simulate human teachers and provide personalized feedback and support. One of the early pioneers of this type of research was Albert T. Corbett, who made significant contributions to intelligent tutoring systems. Corbett et al (1997), emphasized in their study how the intelligent tutoring system can improve students' learning results through personalized learning strategies, and it shows the potential to transform traditional learning into intelligent learning in the cultivation of English speaking ability (Woolf, 2010). This application uses artificial intelligence technology to provide learners with personalized learning experiences and instant feedback, helping them improve their oral expression skills more effectively (Xu & Wang, 2024). In the traditional learning model, students usually rely on teachers' guidance and the content of textbooks, and the learning process is relatively fixed. Artificial intelligence-assisted learning apps, however, can provide exercises and suggestions tailored to the specific needs and progress of each learner. Learning tools based on artificial intelligence technology can provide learners with pronunciation practice, interactive dialogue practice, and immersive language learning through functions such as speech recognition, smart chat, virtual reality (VR), augmented reality (AR), and adaptive learning. environment and adjust learning content according to students' progress, and analyze learners' pronunciation, intonation and fluency in real time through technologies such as speech recognition and natural language processing, thereby providing them with targeted improvement suggestions (Kartika et al., 2024). This interactivity not only increases learners' engagement but also boosts their self-confidence. Research shows that learners who use speech recognition technology have particularly significant improvements in pronunciation and fluency (Ghafar et al., 2023; Karim et al., 2023).

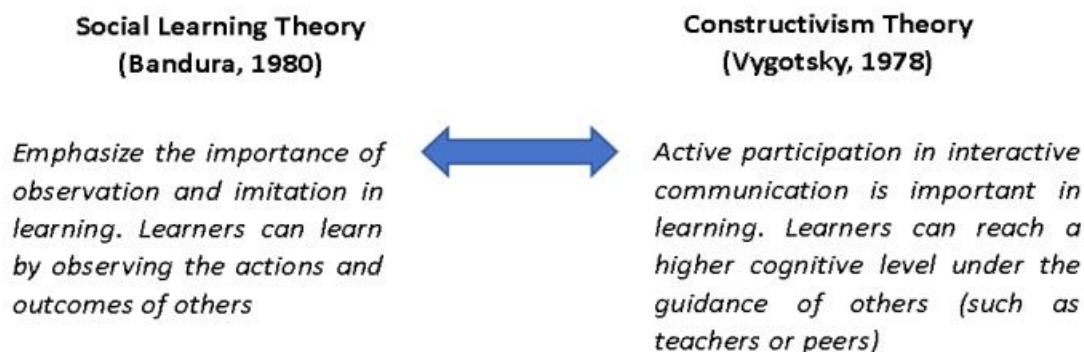
Artificial intelligence-assisted learning applications often combine rich multimedia resources such as videos, audios, and interactive exercises to make learning content more vivid and interesting. This form of learning captures learners' attention and stimulates their interest in

learning, thereby promoting deeper understanding and application. In fact, artificial intelligence-assisted learning applications have been widely shared among English speaking learners around the world through classroom teaching, learning APPs, and public video sharing websites (Kessler, 2018). This encourages many learners to focus on how to effectively improve their spoken English and no longer fear the expression of spoken English. Research shows that using artificial intelligence-assisted learning software in the process of English speaking learning can improve learners' oral expression skills and increase learners' satisfaction with English speaking learning (Lee et al., 2024; Mohammadzadeh & Sarkhosh, 2018). Therefore, the more frequently learners use artificial intelligence-assisted learning applications, the more interaction opportunities they have with others in spoken English (Elaish et al., 2019; Elfeky & Masadeh, 2016).

Theoretical Basis

According to Bandura (1980), and Vygotsky (1978), there is a connection between social learning theory and constructivism theory in this study. Qiao & Zhao (2023), and Derakhshan et al., (2016) pointed out that observation and imitation can promote the improvement of learners' English speaking ability. The social learning theory proposed by Albert Bandura emphasizes the importance of observation and imitation in learning. According to this theory, learners can learn new behaviors and skills by observing the behaviors and results of others. In artificial intelligence-assisted learning applications such as intelligent chat robots, artificial intelligence applications provide rich language input and imitation objects, allowing learners to practice speaking in a simulated environment. When learners interact with intelligent chatbots, they can imitate the voice, intonation, and expressions of the robot's simulated characters. Slavuj et al (2015), pointed out in their research that this kind of imitation can not only help learners improve their speaking skills, but also enhance their self-confidence in actual communication. The perspective of social learning theory helps us recognize that artificial intelligence-assisted learning applications are not merely technological tools but also products of interactions between learners and between learners and technology (Zimmerman, 2008).

In fact, in the process of improving English speaking skills, active participation in interactive communication is crucial. Learning is a process of actively constructing knowledge and interacting with the environment, others and one's own experience during the learning process. Constructivism emphasizes the active participation of learners in the construction of knowledge and points out the importance of social interaction in the learning process (Bruner, 1974; Vygotsky, 1978). Vygotsky (1978), pointed out that learners can achieve higher cognitive levels with guidance from others. Artificial intelligence-assisted learning applications can simulate this kind of guidance and help learners gradually improve their speaking skills in practice by providing real-time feedback and personalized learning tasks (Abu Seileek, 2012). Such tools not only provide learners with opportunities to practice, but also provide a space for them to "converse" with artificial intelligence-assisted learning applications, thereby promoting practical application of the language. Furthermore, research shows that participation in interactive learning activities can significantly improve learners' language fluency and self-confidence (Skehan, 1998; Swain, 2000). By having conversations with others provided by artificial intelligence-assisted learning applications, learners can practice what they have learned in a real language environment and receive timely feedback, thereby continuously adjusting and improving their expressions (Hattie & Timperley, 2007).



In artificial intelligence-assisted learning applications, learners can simulate real communication environments and choose different learning situations through dialogue robots and intelligent language learning platforms. Research shows that such tools can effectively promote students' speaking skills because learners are able to improve language skills through imitation and practice (Chapelle & Sauro, 2017). If learners want to hear standard pronunciation and imitate it, they can use the speech recognition and feedback functions in artificial intelligence-assisted learning applications to enhance learners' confidence in the process of promptly correcting pronunciation errors (Huang et al., 2023). Research shows that through conversations with artificial intelligence-assisted learning applications, learners can practice in a safe environment, which is beneficial to the protection of self-confidence (Karim et al., 2023). For example, Rusmiyanto (2020), noted that artificial intelligence can provide learners with a low-risk practice environment to improve their language skills without social pressure. It is worth noting that the application of artificial intelligence-assisted learning technology in online learning software can promote learners to actively participate in learning and continuously adjust and optimize their language abilities through practice and feedback. Learners will feel a higher sense of participation and motivation when interacting with intelligent dialogue systems, thus improving learning effects (Jeong, 2019). In situational learning, artificial intelligence-assisted learning applications provide real-world language usage situations, and learners can improve their speaking skills by simulating real conversation scenarios. Hwang and Fu (2019), emphasized that language learning applications using artificial intelligence technology can create situations similar to real communication and help learners better master the language in practice. This interaction not only improves learners' language skills, but also provides them with immediate feedback, promoting deeper understanding and application of the language. In his research, Nunan (1999), further proved that situational learning can enhance students' language application ability and help them better understand the cultural background of the language. In collaborative learning, artificial intelligence-assisted learning applications allow interaction between learners, such as completing tasks or discussions together. This collaborative learning method can promote knowledge sharing among learners and enhance their speaking skills (Johnson & Johnson, 2013). Research shows that artificial intelligence-assisted learning applications can provide continuous interaction and personalized learning experiences, further promoting the development of speaking skills (Ellis, 2005). In addition, a study by Chen and Hwang (2022), also confirmed this. The interactive communication section in artificial intelligence-assisted learning applications also provides a rich context to help learners understand and master different spoken English expressions and spoken English. Idioms. Through discussions, debates or simple everyday conversations, learners can be exposed to a variety of accents, speaking speeds and intonations and enhance their listening

comprehension skills. All the above statements point to the impact of artificial intelligence-assisted learning applications on English speaking ability.

Discussion

The application of artificial intelligence-assisted learning in the learning of English speaking skills has been studied internationally, domestically and regionally from different perspectives. However, this section only explores in depth the impact of artificial intelligence-assisted learning applications on English speaking ability, providing important insights for educators and researchers to promote the application of artificial intelligence technology in language learning. Research shows that artificial intelligence-assisted learning applications can improve learners' English speaking skills. The following is research related to the English speaking sector involved in artificial intelligence-assisted learning applications.

Authors/Article Title/Journal	Research Questions	Methodology	Key Findings & References
Authors: Zanyar Nathir Ghafar, Heshw Faiaq Salh, Marya Ali Abdulrahim, Sayran Sabah Farxha, Sima Faiaq Arf and Rubar Ismail Rahim Article Title: The role of artificial intelligence technology on English language learning: A literature review Journal: Canadian Journal of Language and Literature Studies Year: 2023 Page: 15 pages	1. What are the functions of artificial intelligence? 2. What are the applications of industrial intelligence technology in English language teaching (ELT)?	A library research study Qualitative method: - Content analysis	<ul style="list-style-type: none"> Studying English has always been challenging for pupils learning it as a second or foreign language (ESL/EFL) (Mehrotra, 2019). Using artificial intelligence, machine learning, intelligent search, and natural language processing may successfully advance reforms in English teaching and learning (Wang, 2019). With the rapid advancement of big data and natural language processing technology, artificial intelligence (AI) offers various improvements to foreign language instruction. The area of teaching English with artificial intelligence (AI) is demanding and innovative (Zhu,2017). Learning environments accessible to everyone, including those who speak different languages or may have hearing or vision impairments, may be

			<p>made possible through artificial intelligence technology (Marr, 2018).</p> <ul style="list-style-type: none"> ● AI will be a crucial component of the supplementary support system for English language learners and teachers (Gawate, 2019). ● English language instruction aims to increase students' ability to engage with people from other countries (Mukhallafi, 2020). ● Users may hear how specific English words are spoken or phrases, after which the algorithm analyzes and makes grammatical or structural corrections (Eka, 2020).
<p>Authors: Rusmiyanto, Nining Huriati, Nining Fitriani, Novita Kusumaning Tyas, Agus Rofi'i and Mike Nurmalia Sari</p> <p>Article Title: The Role of Artificial Intelligence (AI) In Developing English Language Learner's Communication Skills</p> <p>Journal: Journal on Education</p> <p>Year:2023</p> <p>Page:8 pages</p>	<p>1.What is the role of AI in the development of communication skills for English learners?</p>	<p>Literature review</p> <p>Content analysis</p>	<ul style="list-style-type: none"> ● The use of AI-based virtual tutors improved learners' speaking fluency and accuracy (Chen et al. , 2018). ● Learners used the application exhibited enhanced speaking skills and greater confidence in real-life communication situations (Wang & Liu, 2019). ● Adaptive assessments and personalized feedback in promoting learners' progress and engagement (Zheng &Xing ,2020). ● Explored and highlighted AI-based chatbots in language learning ability to provide immediate and interactive language practice opportunities

			(Zhang et al., 2019).
Authors: Bin Zou, Xin Guan, Yinghua Shao and Peng Chen Article Title: Supporting Speaking Practice by Social Network-Based Interaction in Artificial Intelligence (AI)-Assisted Language Learning Journal: Sustainability Year: 2023 Page: 19 pages	1. What are EFL learners' perceptions of social network- based interactive activities when practicing oral English with AI speaking apps? 2. How effectively can social network-based interactions help EFL learners to practice oral English with AI speaking apps?	A purposive sampling strategy 70 undergraduate students Experiment group (EG, N = 35) and control group (CG, N = 35) Questionnaires Semi-Structured Interviews The Pre-Test and Post-Test	<ul style="list-style-type: none"> ● Artificial intelligence voice applications can help improve speaking skills (Bashori et al., 2021; Chiu et al., 2007; Lai & Chen, 2024). ● Artificial intelligence has been defined as computational systems capable of using data to perform human-like processes, such as learning, self-correcting, and solving complex tasks (Popenici & Kerr, 2017). ● With the popularity of mobile-assisted language learning, many artificial intelligence-assisted learning applications have been developed for EFL speaking practice (Lehman et al., 2020). ● Two types of speaking tasks are commonly found in artificial intelligence applications with speech assessment systems, namely "reading" and "presenting" (Lehman et al., 2020; Li & Zou, 2022).
Authors: Julia Chen, Pauli Lai, Aulina Chan, Vicky Man and Chi- Ho Chan Article Title: AI-Assisted Enhancement of Student Presentation Skills: Challenges and Opportunities Journal: Sustainability Year: 2022 Page: 19 pages	1. Which quantifiers could be included in an AI-assisted presentation training platform? 2. What are the challenges and opportunities regarding the development and use of an AI-assisted presentation training platform?	Participate in an online survey Five students to participate in a follow-up focus group interview Conducted a needs analysis via an online survey	<ul style="list-style-type: none"> ● On top of a fear of public speaking, students also found it difficult to express themselves effectively in oral presentations (Bhandari et al., 2020). ● Students worry about grammar, vocabulary, and pronunciation, and lack the confidence to speak in English in public (Al Harun, 2016). ● Online learning platforms can motivate students to

			<p>learn English (Akobirov,2017).</p> <ul style="list-style-type: none"> ● Rapid advances in speech recognition enable AI exploration of speech training, and have been found to improve students' speech skills (Junaidi et al.,2022). ● Rapid advances in speech recognition have enabled the exploration of artificial intelligence in speech training and have been found to improve students' speech skills (Junaidi, 2020). ● Artificial intelligence-assisted learning applications are considered important tools to encourage real-time feedback and interactive speaking practice in self-paced learning (Chen et al., 2022).
<p>Authors: Reham El Shazly</p> <p>Article Title: Effects of artificial intelligence on English speaking anxiety and speaking performance: A case study</p> <p>Journal: Expert Systems</p> <p>Year:2020</p> <p>Page:16 pages</p>	<p>1. To what extent is FLA manifested in Egyptian learners of EFL?</p> <p>2. What is the role of AI-driven chatbots in FLA management?</p> <p>3. What is the role of AI-driven chatbots in FL speaking?</p>	<p>A quasi-experimental mixed model design</p> <p>A 33-item self-report questionnaire (FLCAS)</p> <p>Pretest–posttest speaking test</p>	<ul style="list-style-type: none"> ● Chatbots provide opportunities for learners to communicate twice, allowing them to practice their spoken language output without limiting their time and place (Dizon, 2017,2020; Golonka et al., 2014). ● AI application had a significant and encouraging impact on FL speaking skills (Dizon,2020). ● AI programs communicate with users through text or voice enhancement (Nordrum, 2017).

			<ul style="list-style-type: none"> ● Intervention may result in higher speaking scores, which may encourage learners to speed up their foreign language output and practice meaningful social interactions (Ellis, 2005; Krashen, 1982). ● Artificial intelligence applications may improve learners' language efficiency in public communication (Tafazoli & Gómez-Parra, 2017).
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In recent decades, artificial intelligence has been defined as computational systems capable of using data to perform human-like processes, such as learning, self-correcting, and solving complex tasks (Popenici & Kerr, 2017). It has been widely used in the field of education, especially in language learning (Bahi & Necibi, 2020; Slavujet al., 2017). The rapid development of artificial intelligence technology has led to the increasing use of artificial intelligence-assisted learning applications in spoken English learning. With the support of artificial intelligence technology and automatic speech recognition (ASR) technology, there are various language learning tools for English speaking practice, such as ASR-based websites (Bashori et al., 2021; Chen, 2011), intelligent personal assistants (IPA) (Tai & Chen, 2024) and artificial intelligence chatbots (Sha, 2009; Wang et al., 2023). With the popularity of mobile-assisted language learning (Lehman et al., 2020), many artificial intelligence-assisted learning applications have been developed for EFL speaking practice. These artificial intelligence-assisted learning applications all use speech assessment technology and natural language processing. Two types of speaking tasks are commonly found in artificial intelligence applications with speech assessment systems, namely "reading" and "presenting" (Lehman et al., 2020; Li & Zou, 2022). As artificial intelligence-assisted learning applications become more popular, their impact on learners' English speaking skills is becoming increasingly significant.

According to the discussion section, with the rapid development of big data and natural language processing technology, artificial intelligence has brought various improvements to foreign language teaching. The field of English teaching using artificial intelligence is highly demanding and innovative (Zhu, 2017). Through artificial intelligence technology, it is possible to make learning environments accessible to everyone, including those who speak different languages or may have hearing or vision impairments (Marr, 2018). Gawate (2019), believes that artificial intelligence will become an important part of the supplementary support system for English learners and teachers. According to Mukhallafi (2020), artificial intelligence in the current study is defined as the application of artificial intelligence systems for English teaching to enhance the ability to organize, arrange, and select content. It further diversifies teaching methods and educational streams according to the proficiency level of students. It also develops teaching strategies and assessment methods by personalizing the self-learning process and modeling intelligent and expert systems. For example, the English Learning Voice

Assistant (ELSA), created by Vu Van in 2015, uses artificial intelligence and speech recognition to improve English pronunciation. It uses artificial intelligence and speech recognition to help students become more fluent in spoken English. The technology allows for a two-way learning process, where the user may hear the pronunciation of a specific English word or phrase, which is then analyzed by the algorithm and made grammatical or structural corrections (Eka, 2020). In addition, the user's speech can be adjusted through speech recognition and artificial intelligence. The learning-progressed NEO Study app lets learners use their powerful speech recognition technology to help them pronounce each word until the learner can speak English fluently and correctly. The purpose of "The Role of Artificial Intelligence Technology on English Language Learning: A Literature Review" is to understand the functions of artificial intelligence and to study the application of artificial intelligence technology in English Language Teaching (ELT). A qualitative research design was used to collect data through library research. The findings indicate that English teachers and students have positive attitudes toward the use of artificial intelligence-assisted learning applications as a component in improving English speaking skills. Based on the content analysis of the literature review, it can be concluded that the usefulness of artificial intelligence-based methods in helping college students improve their language skills. The study also provides recommendations for examining English teacher training requirements in academic settings in the context of artificial intelligence applications.

Based on the research "The Role of Artificial Intelligence in Developing English Language Learner's Communication Skills", a literature review is used to investigate the role of artificial intelligence in the development of English learners' communication skills. The aim is to provide an overview of the current state of knowledge and identify key findings, trends and gaps in the field by surveying and analyzing existing research, research and academic literature. Content analysis was used as a method to investigate methods, research areas, technological tools or online platforms, most commonly used keywords and cited references, impact on students' oral language learning, and artificial intelligence-assisted applications. The results of the analysis were interpreted using descriptive analysis. The analysis found that artificial intelligence is effective in developing communication skills for English learners and explored in detail from speaking and pronunciation skills, English speaking engagement and fluency, personalized learning experiences and learners' specific needs. Some teaching analyzes that integrate artificial intelligence into language learning have shown that the integration of artificial intelligence in language learning environments has a positive impact on students' autonomous oral learning activities, such as autonomy, timeliness, feedback, participation, and interaction. The results of this study indicate that artificial intelligence has the potential to significantly improve the communication skills of English language learners by providing a personalized and interactive learning experience. The transformative role of artificial intelligence in English language education and its potential to meet the diverse needs of language learners are highlighted. Beyond this, several issues in this discussion emerge as issues that could be considered for future research. Future researchers need to address some of the challenges identified in the impact of artificial intelligence-assisted learning applications on English speaking proficiency, such as the need for longitudinal studies to examine the long-term effects of artificial intelligence on learners' language proficiency. Further research is needed to determine the best integration strategies and teaching methods to combine artificial intelligence with effective teaching methods. The results of this study indicate that

artificial intelligence has the potential to significantly improve the communication skills of English language learners by providing a personalized and interactive learning experience.

Many studies have shown that artificial intelligence voice applications can help improve speaking skills (Bashori et al., 2021; Chiu et al., 2007; Lai & Chen, 2024). However, the role of web-based interaction in speaking practice has not been fully studied in the context of artificial intelligence-assisted language learning. "Supporting Speaking Practice by Social Network-Based Interaction in Artificial Intelligence (AI)-Assisted Language Learning" aims to explore learners' perceptions of interactive activities when using artificial intelligence applications to practice speaking skills and the effectiveness of interaction in improving speaking skills. These efforts become even more important as the success of learners' speaking skills falls short of expectations. For learners, social network-based interaction is a learner-centered method to promote English speaking participation and is considered a positive channel for English speaking success. This exploratory study investigates the effectiveness of social network-based interactions in improving speaking skills within an artificial intelligence environment. This study adopted a purposive sampling strategy, and 70 undergraduate students from various majors and universities in China who were committed to practicing English speaking through artificial intelligence applications participated in the study. They were recruited through convenience and snowball sampling and divided equally into experimental (EG, N = 35) and control groups (CG, N = 35). Questionnaire and semi-structured interview research methods were used. In addition, quantitative data from pretest and posttest were collected to examine the improvement of students' speaking skills. Research shows that social network-based interactions effectively improve their speaking skills in artificial intelligence environments. Quantitative data showed that participants with EG achieved significantly higher scores on the posttest. They strongly believe that artificial intelligence applications can help them develop various speaking skills, including oral fluency, grammatical range and accuracy, pronunciation, speaking rhythm, thought organization skills, reading aloud skills, and presentation skills. The survey results show that learners have a positive attitude towards using artificial intelligence applications for interactive English speaking learning. In addition, the results show that effective interaction can help English learners practice their speaking skills in an artificial intelligence environment. In turn, these insights may contribute to enhancing the effectiveness and long-term improvement of English speaking proficiency through artificial intelligence-assisted learning applications.

Rapid advances in speech recognition have enabled the exploration of artificial intelligence in speech training and have been found to improve students' speech skills (Junaidi, 2020). In a study of presentation skills in spoken English, "AI-Assisted Enhancement of Student Presentation Skills: Challenges and Opportunities" seeks to integrate off-the-shelf artificial intelligence tools into a one-stop platform where higher education students can access autonomous study materials and automated feedback to improve their presentation skills. Julia Chen, Pauli Lai, Aulina Chan, Vicky Man and Chi-Ho Chan (2022), have jointly formed a team of academics from the engineering departments, English Language Center and Educational Development Center of the two universities to explore the development of artificial intelligence for EAL university students provides a platform to learn and practice English speech. The platform will provide learning modules targeting the competencies required for delivering impactful presentations, with artificial intelligence enabled evaluation of oral presentations. The experimental results of an online English learning platform

integrating artificial intelligence technology on improving students' English speaking skills were studied. Staff from the English Language Center identified the oral expression training needs of EAL students and made the observation that EAL students needed more practice giving oral presentations in English. Finally, the platform was customized to create learning units that addressed specific issues related to these needs. Afterwards, the researchers invited undergraduates from different years of study and different first languages to participate in an online survey among engineering students at polytechnic universities and humanities students mainly at liberal arts universities, and subsequently conducted focus group interviews to collect information. Their views on the impact of artificial intelligence-assisted learning applications on English speaking. This study explored aspects such as the content and structure delivery and pronunciation learning units of the platform pilot; artificial intelligence tools for speech, facial expressions and expressions; artificial intelligence scoring samples, etc., and found that automated scoring of fluency, accuracy and eye contact It can help learners improve their oral English expression skills. The comment data collected in the experiment revealed significant differences in the emotional reactions between students with high English speaking proficiency and students with low English speaking proficiency when giving speeches. This polarization of emotions manifests as tension versus self-confidence, reflecting the different psychological states they experience during speech preparation and implementation. The study also found a clear correlation between speaking confidence and speaking performance. Students with high self-confidence are usually able to demonstrate stronger language fluency and content organization skills in their speeches, and are able to respond to questions and feedback from the audience with ease. Students with low self-confidence often have problems such as pauses, slow speech, and unclear expression of content during their speeches, which further aggravates their nervousness. In the study, it was proposed that advances in artificial intelligence technology have increased the potential for artificial intelligence scoring as a means of providing feedback to students on certain aspects of their oral presentations. Artificial intelligence-assisted learning applications are considered important tools to encourage real-time feedback and interactive speaking practice in self-paced learning (Chen et al., 2022).

In addition, based on the research "Effects of artificial intelligence on English speaking anxiety and speaking performance: A case study", the role of artificial intelligence application in FLA management of speaking practice for 48 undergraduate students in Egyptian EFL courses was explored. The study adopted an eight-week quasi-experimental pre-test and post-test design. The pre- and post-test oral test scores represented the participants' speaking skills before and after classroom intervention, and a 33-item FLA questionnaire was used to investigate learners' anxiety levels. The first week learners received an orientation tutorial on the study and pre-intervention FLCAS and verbal pre-test, and the final week they received a post-test. Lessons were held once a week for 100 minutes and are taught by the author and researcher as part of the English Listening and Speaking EFL course (course content has not changed). From the second to the seventh week, the intervention sessions were conducted simultaneously with the regular sessions. Activate learners' schemas through questions on 20 vocabulary expressions. Thereafter, the input phase provided them with authentic videos in various domains to expand their vocabulary and structural abilities and improve their phonological awareness. The last 40 minutes provided the opportunity for oral and written practice with the online chatbot. The output involved focuses on the balance between meaning and form. The focus of the output is on the accuracy, coherence and appropriateness

of the information conveyed. These conversations in turn generate interactive output as a response to the learner's conversation with the artificial intelligence chatbot. Conversations involved interactive modification through verbal cues that participants use to guide conversations as well as interactive strategies focused on improving language proficiency in spoken language functions. The results showed that there was a significant difference between the total scores of the speaking pretest and posttest. Intervention may result in higher speaking scores, which may encourage learners to speed up their foreign language output and practice meaningful social interactions (Ellis, 2005; Krashen, 1982). The results also support that the use of artificial intelligence applications enhances a student-centered learning approach rather than a teacher-centered one, providing full personalization. These applications may improve learners' language efficiency in public communication (Tafazoli & Gómez-Parra, 2017). This study points out that FL environments should utilize controllable anxiety levels to motivate learners to exert the required effort, thereby stimulating problem-solving skills and activating strategic abilities, rather than inducing inhibitory anxiety. Provides favorable support for the potential beneficial impact of artificial intelligence applications on FL learning outcomes.

Research Gap

This research has made breakthroughs in improving English speaking ability, focusing on using artificial intelligence-assisted learning applications to improve English speaking skills. Based on past relevant research, three gaps were identified. First, learners' oral fluency in English is insufficiently developed (Segalowitz & Freed, 2004). Secondly, learners improve less in pronunciation and accent in spoken English (Derwing & Munro, 2005). The final gap is that many students learning English as an additional language may be afraid of oral presentations in English due to a lack of confidence (Marinho et al., 2017), which poses a great challenge to traditional English speaking courses. Based on the five journal articles under discussion, the above gaps are filled and contribute to this study.

Artificial intelligence has been shown to bring significant improvements to foreign language teaching. Teaching English with artificial intelligence-assisted learning applications is a demanding and innovative practice (Zhu, 2017). In English speaking teaching, utilizing student-instructor time for live English speaking skills practice may be an unwise use of time that now needs to be worked smarter. Lecturers should focus on leveraging student and lecturer time to further learning through interactive activities and allow artificial intelligence-assisted learning applications to handle activities that can be automated (Mukhallafi, 2020).

In a world saturated with intelligent information, where answers to all questions are readily accessible, learning is more than a straightforward transfer of information. For effective spoken English acquisition, learners should focus on critical thinking and leverage artificial intelligence-assisted learning software. Artificial intelligence-assisted learning applications help learners practice more targeted English speaking during the learning process, and are a good choice. With the integration of artificial intelligence-assisted learning applications and English teaching, artificial intelligence-assisted learning applications may become the answer for learners to improve their English speaking skills. They have ample opportunity to communicate verbally in applications as they indulge in discussions and presentations. By combining various learning blocks, this approach will provide learners with exciting and colorful English speaking practice sessions. Learning will definitely benefit from artificial

intelligence-assisted learning applications as it will fill the research gap in 21st century English speaking teaching technology.

Conclusion

In recent years, artificial intelligence technology has been increasingly used in education, especially in language learning. With the acceleration of globalization, the importance of English as an international language has become increasingly prominent. Therefore, improving English speaking skills has become an important goal for many learners. Artificial intelligence-assisted learning applications have emerged. Through intelligent algorithms, speech recognition, natural language processing and other technologies, they aim to provide personalized learning experiences to help learners improve their speaking skills more efficiently. The above research shows that artificial intelligence-assisted learning applications can use speech recognition and natural language processing technology. Artificial intelligence can evaluate learners' spoken pronunciation, grammar and word usage in real time, provide instant feedback, help learners correct mistakes in time, and improve spoken English. Fluency as well as pronunciation and spoken English can be positively affected. In addition, artificial intelligence-assisted learning applications allow learners to practice speaking in a stress-free environment and improve their self-confidence by simulating real conversation scenarios.

It can be judged from the research that the positive impact of artificial intelligence-assisted learning applications on English speaking ability is mainly reflected in three aspects. First, enhance practice opportunities. Traditional English learning usually relies on classroom teaching and extracurricular practice, and learners have limited opportunities for oral practice. Artificial intelligence-assisted learning applications can provide opportunities for oral practice anytime and anywhere, and learners can use fragmented time to practice. This flexibility allows learners to have more exposure to spoken language and accumulate experience in language use. Second, provide immediate feedback. In traditional learning, it is often difficult for learners to get timely feedback from teachers. Artificial intelligence-assisted learning applications use speech recognition technology to identify learners' pronunciation, intonation and grammatical errors in real time and provide timely feedback. This instant feedback mechanism can help learners quickly correct mistakes, strengthen memory, and improve learning efficiency. Third, Simulate real scenarios. Artificial intelligence-assisted learning applications can simulate real conversation scenarios and allow learners to practice speaking in a safe environment. This kind of situational simulation can not only improve learners' oral expression skills, but also enhance their language application ability, adaptability and self-confidence.

Although existing research on the role of artificial intelligence-assisted learning applications in developing English speaking skills among English learners has provided valuable insights, there are still some gaps and areas for future research. For example, while many studies have examined the short-term effects of artificial intelligence on language learning, longitudinal research is needed to examine the long-term effects on learners' language proficiency. In addition, over-reliance on artificial intelligence-assisted learning applications may result in learners lacking autonomy in spoken language expression. Artificial intelligence applications may make learners dependent on their thinking and expression while providing instant feedback and correcting errors. This dependence may limit learners' creativity and critical thinking skills, making them less flexible in real communication. This study systematically

reviewed the existing literature and revealed the positive impact of artificial intelligence-assisted learning applications in improving English speaking ability, providing important insights for educators and researchers. The results provide a reference for future educational practice and policy making, and promote the application of artificial intelligence technology in language learning. At the same time, it points out the necessity of long-term research and lays the foundation for further exploration of the lasting impact of artificial intelligence-assisted learning applications on learners' language ability development.

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