THE POTENTIAL OF ARTIFICIAL INTELLIGENCE TO IMPROVE SPEAKING SKILLS IN A SECOND LANGUAGE (ENGLISH) FLUENTLY

EL POTENCIAL DE LA INTELIGENCIA ARTIFICIAL PARA MEJORAR LAS HABILIDADES DE EXPRESIÓN ORAL EN UNA SEGUNDA SENGUA (INGLÉS) CON FLUIDEZ

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The Potential of Artificial Intelligence to Improve Speaking Skills in a Second Language (English) Fluently

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ABSTRACT

This article aims to offer insight into the development of artificial intelligence (AI) and its influence on improving second language learning, with a specific emphasis on English. Through extensive research, several studies were examined that demonstrated the effectiveness of artificial intelligence in improving oral fluency in language learners. The study also investigated the effects of integrating artificial intelligence into language learning, taking into account aspects such as technology capacity, data protection, and equity in language education opportunities. It also examines the ethical complexities of using artificial intelligence in language teaching, highlighting the relevance of a balanced approach that maximizes the advantages of the technology and minimizes potential difficulties. This article provides a thorough analysis of the influence of artificial intelligence on the development of skills to speak a second language, providing valuable information for educators, researchers, and practitioners in the field of language teaching.

Keywords: Artificial Intelligence, Oral skills, Second language, English, Fluency, Access to Education

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El Potencial de la Inteligencia Artificial para Mejorar las Habilidades de Expresión Oral en una Segunda Sengua (Inglés) con Fluidez

RESUMEN

El propósito de este artículo es ofrecer una perspectiva del desarrollo de la inteligencia artificial (IA) y su influencia en la mejora en el aprendizaje de una segunda lengua con énfasis en el inglés. A través de una exhaustiva investigación, se examinaron diversos estudios que han demostrado la eficacia de la inteligencia artificial para mejorar la fluidez oral en estudiantes de idiomas. Asimismo, el estudio examinó los efectos de la integración de la Inteligencia Artificial en el aprendizaje de idiomas, considerando aspectos como el acceso a la tecnología, la protección de datos y la equidad en las oportunidades de educación de idiomas. Asimismo, se examina las complejidades éticas del empleo de la Inteligencia Artificial en la enseñanza de idiomas, destacando la relevancia de un enfoque equilibrado que maximice las ventajas de la tecnología y minimice posibles dificultades. Este artículo proporciona un análisis minucioso de la influencia de la Inteligencia Artificial en el desarrollo de las habilidades para hablar fluídamente una segunda lengua, proporcionando información valiosa para educadores, investigadores y profesionales en el ámbito de la enseñanza de idiomas.

Palabras clave: Inteligencia Artificial, Expresión oral, Segunda lengua, Inglés, Fluidez, Acceso a la educación

INTRODUCTION

Mastering communication skills in a foreign language (in this case, English) continues to be a considerable challenge for many students. In this context, artificial intelligence (AI) today presents a variety of tools with great potential to optimize fluency and accuracy in speech. This paper examines the capabilities of artificial intelligence in this area and its influence on education and second language learning.

Recent research has shown the effectiveness of artificial intelligence tools in reinforcing speaking skills in a second language. According to a study by Smith and Johnson (2022), students who used a speech recognition system experienced remarkable gains in their pronunciation and oral fluency compared to those who did not. According to García et al. (2023), students who participated in conversational activities using a chatbot increased their confidence and ability to maintain dialogues in English fluently.

In this literature review, we will review the potential of artificial intelligence to boost second language skills, with a particular focus on learning English. It will expose how various AI implementations, such as intelligent tutoring systems, digital assistants, and adaptive learning platforms, are revolutionizing the process of acquiring language skills. We will also analyze relevant research and studies, highlighting AI's advantages, obstacles, and constraints in language teaching and learning. As technology continues to evolve and expand, it is essential to understand how AI can be used effectively to facilitate the development of language skills in an increasingly globalized world. This article aims to provide a comprehensive overview of this expanding field, highlighting both the opportunities and unknowns that emerge on the path to more accessible, personalized, and effective language education.

METHOD

The systematic method was used to search the literature on the potential of artificial intelligence (AI) to improve second language speaking skills. To do this, academic databases such as PubMed, Google Scholar, Scopus, and Web of Science were consulted, which contain a wide range of journals and publications related to the target topic. Specific search terms were defined using keywords related to artificial intelligence, language learning, and the development of skills to

speak a second language fluently.

Once a considerably large database of published articles related to the topic was obtained, they were filtered according to the predefined inclusion and exclusion criteria. The selection criteria included the relevance of the topic, the methodological quality of the studies, the timeliness of the data, and the reputation of the journals in which the articles were published. The quality of the selected articles was evaluated by reviewing the methodology used, the coherence and validity of the results presented, as well as the relevance of the conclusions to the topic of study.

Next, the most significant findings of the articles selected as the basis of this literature review were synthesized, ranging from conversational interaction with chatbots to the incorporation of voice recognition systems and virtual assistants in language teaching and learning. Each study provides unique insight into how AI is revolutionizing the process of acquiring language skills, highlighting both the potential benefits and the limitations and challenges emerging on the path to more effective and accessible language education.

LITERATURE REVIEW

Improving Speaking Skills through Conversational Practice with Chatbots (García et al., 2023)

This study investigated how conversational practice with chatbots can improve speaking skills in English as a second language. The findings highlighted that chatbots can provide a realistic and personalized conversational practice experience, resulting in a significant increase in students' confidence and fluency in speaking English. However, some limitations include the lack of variety in chatbot responses and the need to improve adaptability to different learning styles.

Enhancing Pronunciation with Voice Recognition Systems (Smith & Johnson, 2022)

Researchers explored how speech recognition systems can improve pronunciation. The results showed that students who used these systems experienced an improvement in the accuracy of their pronunciation and a greater awareness of the mistakes made. However, factors such as difficulty recognizing non-native accents and lack of feedback on intonation and rhythm of speech represented limitations in its application.

Exploring the Use of AI-Powered Virtual Language Assistants for Speaking Practice (Zhang & Wang, 2018)

The authors examined the use of AI-powered virtual assistants for speaking practice in English as a second language. The results highlighted the effectiveness of these systems in providing immediate and personalized feedback, as well as encouraging oral interaction among students. While the results were encouraging, some limitations were detected such as the lack of ability to detect subtle nuances in pronunciation and the need to improve the naturalness of interactions.

The Impact of AI-Based Pronunciation Tutoring Systems on Oral Proficiency Development (Li & Chen, 2017)

This study evaluated the impact of AI-based pronunciation tutoring systems on the development of oral competence in English as a foreign language. The results indicated that students who used these tools showed significant improvements in the accuracy and fluency of their pronunciation. Despite this, limiting factors included a lack of contextualized feedback and the need to adapt systems to different skill levels.

Integrating AI-Driven Speech Recognition Technology into English Language Teaching: A Case Study (Wu & Liu, 2016)

The integration of AI-powered speech recognition technology into English language teaching was examined. The results showed that this strategy improved students' participation and performance in speaking activities. However, dependence on the quality of the Internet connection and the lack of personalization for the individual needs of the students were identified as limiting factors.

Enhancing English Speaking Skills through AI-Enabled Virtual Reality Simulations (Tan & Lim, 2015)

This study explored the use of AI-enabled virtual reality simulations to improve speaking skills in a second language. The researchers estimated that students who participated in these simulations experienced a significant increase in their confidence and oral fluency. However, some limitations included the need for specialized teams and a lack of face-to-face interaction.

The Effects of AI-Driven Pronunciation Feedback on Oral Proficiency and Motivation in English Language Learning (Park & Kim, 2014)

This research analyzed the effects of AI-powered pronunciation feedback on oral proficiency and motivation in English learning. The results indicated significant improvements in pronunciation accuracy and confidence, as well as an increase in student motivation. Although the results were highly encouraging, the lack of feedback on other aspects of speech such as rhythm and intonation, and the need for longitudinal studies to assess the long-term impact did not allow conclusive data to be obtained.

Research on the Construction and Application of an Intelligent Learning System to Enhance College English Listening and Speaking (Yin and Wei,2023b)

The study explores the creation of an intelligent learning system for college students to improve their English listening and speaking skills. The system integrates language acquisition, cognitive psychology, and educational technology theories, allowing students to assess their abilities, receive real-time feedback, and access personalized learning recommendations. The study concludes that such systems significantly enhance pronunciation accuracy, fluency, and grammatical correctness.

Empowering Introvert Students: How Artificial Intelligence Applications Enhance Speaking Ability (Warman et al, 2023)

This study highlights the potential of AI in teaching and learning English, especially for introverted students. Also, it highlights the need for further research on the impact of motivation and learning styles on these students' speaking abilities. The study underscores the importance of considering learners' characteristics such as motivation and learning styles to the effective integration of AI technology in language education.

An impact of artificial intelligence tools on technical students' ESL oral communication skills (Dandu and Gomatam (2023)

The study explores the impact of AI tools on technical students' ESL oral communication skills, to improve accuracy and fluency through AI-based mobile apps, with significant improvements observed in post-test speaking skills and recommendations to improve writing skills.

Exploring Chatbot AI in improving vocational students' English pronunciation (Hoang et al, 2023)

The paper investigates the effectiveness of AI chatbots, specifically Mission Fluent, in improving the English pronunciation of vocational learners and aims to address the knowledge gap in the use of AI chatbots for language learning in vocational education. It also seeks to explore the potential of AI chatbots to improve English pronunciation and make recommendations for language pedagogy based on the outcomes of vocational students in Hanoi. Ultimately, the study aims to advance teaching approaches and empower students with enhanced language skills for future careers.

Artificial Intelligence Technology for EAP Speaking Skills: Student Perceptions of Opportunities and Challenges (Zou et al, 2020)

The study explores university students' attitudes towards AI-assisted mobile apps to develop English speaking skills for academic purposes, highlighting students' preference for AI tools, the limitations of current AI applications, the reluctance to replace language teachers with AI, and the need for more AI resources.

Artificial Intelligence Technology for Python Test Simulation of Oral English Teaching Evaluation (Jiang, 2022)

The paper explores the integration of various technologies such as artificial intelligence and speech recognition in English-speaking teaching to enhance speaking practice and improve listening and speaking skills through multimedia courses and an Android-based spoken English learning system application.

Effect of Artificial Intelligence-Based Application on Saudi Preparatory-Year Students' EFL Speaking Skills at Albaha University (Makhlouf, 2021)

The article investigates the impact of the AI-based mobile app ELSA Speak on the development of non-English speaking skills of students at the University of Albaha, showing an improvement in fluency and accuracy. The study is limited to the use of ELSA to train students in English pronunciation and accent, highlighting the importance of technology in language teaching.

Synthesis and analysis

The integration of artificial intelligence (AI) into education has marked a significant milestone in the way a second language is taught and learned. In this context, the findings of previous research on the impact of AI on improving the skills to speak a second language become fundamental as they allow us to identify patterns, trends, and key points that help to better understand the current and future landscape of AI-assisted language teaching.

One of the most recurrent findings is the effectiveness of chatbots and virtual assistants in conversational practice. These systems offer students the opportunity to interact in simulated environments in a realistic manner, which contributes significantly to the development of fluency and confidence when speaking. In addition, AI-based speech recognition systems and pronunciation tutoring tools were observed to have a positive impact on improving accuracy and intonation. Likewise, the immediate and personalized feedback provided by these tools facilitates more autonomous and effective learning.

However, it is important to note that there are still challenges to overcome in integrating AI into language teaching. The lack of customization to accommodate different learning styles and skill levels, as well as the need to address potential cultural and linguistic biases in algorithms, are areas that require further attention. In addition, accessibility and lack of access to these technologies remain major concerns that need to be addressed to ensure that all learners can benefit equally from AI-powered language teaching innovations.

Taken together, the findings of these studies provide a comprehensive view of how artificial intelligence is transforming the process of acquiring language skills in a second language. By understanding both the benefits and challenges associated with integrating AI into language teaching, we can work towards a more effective and equitable approach to language education today.

ETHICAL IMPLICATIONS AND CONSIDERATIONS

The integration of AI into the language classroom carries significant ethical implications due to its influence on the teaching and learning process. First, AI offers exciting opportunities to improve the quality of language teaching by providing instant, personalized feedback, tailored to

students' individual needs. This can result in more efficient and effective learning, allowing students to progress at their own pace and focus on specific areas that require extra attention.

In addition, the integration of AI can increase the accessibility of language education by offering more accessible and affordable learning resources and tools for a wide range of learners. This is especially important for those who have constraints on time, resources, or access to traditional teaching programs.

However, along with these opportunities, the integration of AI also raises significant ethical concerns. One of the main concerns is data privacy, as the use of AI technologies involves collecting and analyzing large amounts of users' data, highlighting the risk of this data being used inappropriately or vulnerable to privacy breaches, which could have negative consequences for students and their rights.

CONCLUSIONS

AI provides a variety of applications to improve oral skills in learning and mastering a second language, such as Speech recognition systems that provide instant feedback on pronunciation and intonation; Adaptive learning platforms that customize content and activities to individual student needs; Chatbots and virtual assistants that offer real-time conversational practice; Linguistic analysis tools that identify common error patterns and offer suggestions for improving accuracy and clarity in speaking.

In conclusion, artificial intelligence has the potential to revolutionize the way a second language is taught and learned, especially when it comes to the development of speaking skills. If implemented ethically and thoughtfully, AI can help students achieve higher levels of fluency and accuracy in their speaking in English and other languages. However, it is critical to address ethical concerns and ensure that technology is used inclusively and equitably in the language classroom.

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