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ARTIFICIAL INTELLIGENCE IN LANGUAGE TEACHING: ADVANTAGES AND CHALLENGES

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Abstract: This article will discuss the role of AI in education along with its challenges and advantages to apply it. The technologies related to AI and helping to teach languages will also be discussed.

Key words: artificial intelligence, cognition, AI-driven systems personalized instruction

Introduction

The rapid advancement of artificial intelligence (AI) technologies in recent years has brought significant changes to educational systems worldwide. In particular, the growing integration of digital technologies into language learning and language teaching has prompted educators and researchers to reconsider traditional pedagogical approaches. These developments represent not only a technological transformation but also the emergence of new educational models that reshape the organization and delivery of instruction.

Modern intelligent systems capable of simulating certain aspects of human cognition are increasingly being applied in foreign language education. Natural language processing technologies, virtual conversational agents, and interactive learning platforms contribute to the creation of learning environments tailored to individual learners' needs. As a result, educational processes are becoming more flexible, efficient, and responsive to diverse learning styles.

Researchers have interpreted the role of these technologies from different perspectives. Some regard them as objects of study, while others consider them instructional tools that support learning and teaching. In both cases, technological innovations expand educational opportunities by promoting learner autonomy and facilitating personalized instruction.

Against this background, examining the potential, benefits, and future prospects of emerging technological tools in language education has become an increasingly important area of research. Studies in this field contribute to improving the effectiveness of language teaching and enhancing the quality of contemporary educational environments.

In recent years, particular attention has been given to the use of intelligent conversational systems in educational contexts. Such systems provide learners with immediate responses and interaction that closely resemble authentic communication in the target language. Consequently, they have been recognized as valuable tools for supporting both language learning and language teaching.

Main Body

Early conversational systems were primarily based on simple question-and-answer mechanisms. In contrast, contemporary AI-driven systems are considerably more sophisticated and adaptive. Drawing upon natural language processing, machine learning, and deep learning technologies, these systems are capable of engaging users in more meaningful and dynamic interactions. Moreover, they continuously improve their performance through ongoing interactions with users.

Numerous studies on language acquisition indicate that consistent and meaningful language practice is one of the key factors contributing to successful language learning. From this perspective, modern conversational systems provide learners with valuable opportunities to

develop everyday communication skills. In addition, they help sustain learners' interest and motivation, thereby contributing positively to the development of language proficiency.

These technologies enable learners to practice language skills anytime and anywhere. Continuous interaction, regular practice, and personalized recommendations help reinforce acquired knowledge and strengthen language competence. Furthermore, they highlight important linguistic features and make them more noticeable to learners, thereby enhancing the overall effectiveness of language learning.

One of the most significant advantages of contemporary conversational systems is their ability to adapt to learners' proficiency levels. Such adaptability makes it possible to create individualized learning environments for both beginners and advanced language users. Consequently, the language learning experience becomes more diverse, interactive, and effective.

The rapid development of digital technologies has transformed education in profound ways. Language learning and language use, in particular, are being reshaped through the integration of advanced technological tools into educational practice. This transformation extends beyond simple technological innovation and contributes to the emergence of new instructional strategies and pedagogical paradigms.

Intelligent systems capable of performing tasks traditionally associated with human cognition have demonstrated considerable value in second and foreign language education. Natural language processing technologies, virtual conversational agents, and other interactive tools provide educators with new opportunities to enhance learning outcomes. These technologies facilitate the creation of personalized, adaptive, and dynamic learning environments that respond to individual learner needs.

The application of modern technologies in education encompasses several dimensions. On the one hand, they serve as objects of study; on the other hand, they function as instructional tools and mechanisms that support teaching and learning. As a result, they play an increasingly important role across different educational contexts and levels.

This study examines the existing body of research on contemporary technologies used in language teaching and language learning. It also explores technological developments that have emerged beyond traditional computer-assisted language learning approaches and considers their future implications for educational practice. The primary objective is to identify the role, capabilities, and future directions of modern digital technologies in language education.

Contemporary digital technologies introduce new possibilities for language learning and significantly reshape approaches to language acquisition. Their capacity to process and analyze large amounts of information rapidly makes them valuable tools for both learners and educators. Virtual conversational systems can simulate real-life communication, adaptive learning programs can accommodate individual learning needs, and speech-recognition technologies can identify subtle pronunciation errors. Together, these innovations contribute to greater effectiveness in language learning.

One of the most important advantages of these technologies is their ability to provide immediate and continuous feedback. In traditional educational settings, learners' progress is often assessed through periodic examinations and assignments. In contrast, modern digital tools enable learners to receive instant information about their errors and recommendations for improvement. Such an approach not only accelerates learning but also enhances learner motivation, as students can observe their progress in real time.

Another important benefit is the opportunity for personalized learning. Assignments and learning materials can be adapted to learners' proficiency levels, learning pace, and individual needs. Consequently, learners are able to follow educational pathways that correspond to their specific goals and abilities, thereby increasing the effectiveness of the learning process.

Despite these advantages, the widespread adoption of AI technologies also presents certain challenges. Excessive reliance on technological tools for communication and interaction may

reduce opportunities for direct human communication. This may negatively affect the development of skills that are typically cultivated through face-to-face interaction, including empathy, emotional awareness, and communicative adaptability.

Nevertheless, the benefits of these technologies can be maximized through thoughtful and balanced integration into educational practice. When implemented appropriately, modern digital tools can make language learning more accessible, interactive, and effective.

Conclusion

In conclusion, contemporary digital technologies are fundamentally transforming language learning by providing learners with educational experiences tailored to their individual needs and interests. Through the integration of intelligent systems, language education is becoming more flexible, interactive, and efficient. As technological innovation continues to advance, even more sophisticated solutions are expected to emerge in the field of language education.

The ongoing development of natural language processing technologies, automated assessment systems, and adaptive learning algorithms is making it possible to organize language instruction according to learners' individual characteristics. Virtual conversational agents, digital learning assistants, and speech-analysis tools have become valuable resources for developing language skills. As a result, language learning is becoming more engaging, active, and practice-oriented than ever before.

Contemporary technologies are also expanding access to high-quality language education. In the past, geographical distance, financial limitations, and restricted access to qualified instructors often created barriers to learning. Today, online platforms and internet-based educational resources have significantly reduced these obstacles. Because many digital learning resources are available at little or no cost, learners from diverse regions and backgrounds are increasingly able to access quality language education.

As a result, modern technologies are not only improving language teaching methodologies but also increasing the accessibility and inclusiveness of education. These developments create a solid foundation for the continued evolution of language education, making it more efficient, accessible, and globally connected in the future.

References:

1. Ai, H. (2017). Providing graduated corrective feedback in an intelligent computer-assisted language learning environment. ReCALL, 29(3), 313-334.
2. Amaral, L., Meurers, D., & Ziai, R. (2011). Analyzing learner language: Towards a flexible natural language processing architecture for intelligent language tutors. Computer Assisted Language Learning, 24(1), 1-16.
3. Ashfaque, M. W., Tharewal, S., Iqhbal, S., et al. (2020, October). A review on techniques, characteristics and approaches to an intelligent tutoring chatbot system. In 2020 International Conference on Smart Innovations in Design, Environment, Management, Planning and Computing (ICSIDEMPC) (pp. 258-262). IEEE.
4. Ayedoun, E., Hayashi, Y., & Seta, K. (2019). Adding communicative and affective strategies to an embodied conversational agent to enhance second language learners' willingness to communicate. International Journal of Artificial Intelligence in Education, 29, 29-57.
5. Bajaj, N., Carrión, J. R., Bellotti, F., Berta, R., & Gloria, A. D. (2021). Analysis of factors affecting the auditory attention of non-native speakers in e-Learning environments. Electronic Journal of e-Learning, 19, 159-169.
6. Bashori, M., van Hout, R., Strik, H., & Cucchiarini, C. (2022). "Look, I can speak correctly": Learning vocabulary and pronunciation through websites equipped with automatic speech recognition technology. Computer Assisted Language Learning.

7. Bibauw, S., François, T., & Desmet, P. (2019). Discussing with a computer to practice a foreign language: Research synthesis and conceptual framework of dialogue-based CALL. Computer Assisted Language Learning, 32(8), 1–51.
8. Bowman, E. (2022, December 19). A new AI chatbot might do your homework for you. But it's still not an A+ student. NPR. Retrieved from https://www.npr.org/
9. Casaponsa, A., Antón, E., Pérez, A., & Duñabeitia, J. A. (2015). Foreign language comprehension achievement: insights from the cognate facilitation effect. Frontiers in Psychology, 6, Article 1403.
10. Cassidy, C. (2023). Australian universities to return to 'pen and paper' exams after students caught using AI to write essays. The Guardian Online. Retrieved from https://www.theguardian.com/australia-news/2023/jan/10/universities-to-return-to-pen-andpaper-exams-after-students-caught-using-ai-to-write-essays
11. Chen, H. H.-J., Yang, C. T. Y., & Lai, K. K. W. (2023). Investigating college EFL learners' perceptions toward the use of Google Assistant for foreign language learning. Interactive Learning Environments, 31(3), 1335–1350.
12. Chiu, T. K. F., Moorhouse, L. M., Chai, C. S., et al. (2023). Teacher support and student motivation to learn with Artificial Intelligence (AI) based chatbot. Interactive Learning Environment. Epub ahead of print.