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INTEGRATION OF ARTIFICIAL INTELLIGENCE TOOLS IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

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Annotation: Significant developments in the field of education have also been brought about by the quick development of artificial intelligence (AI) technology. This article explores the integration of artificial intelligence (AI) tools in teaching English as a foreign language (EFL). It examines the benefits of personalized learning, automated assessment, language practice, and resource accessibility through AI. The challenges faced in implementation, such as technological infrastructure and teacher training, are also discussed. This research aims to provide insights into how AI can enhance EFL instruction while addressing potential obstacles to its effective use.

Keywords: Artificial Intelligence, English as a Foreign Language, Personalized Learning, Automated Assessment, Language Practice, Conversational skills, Pronunciation, Gamification, chatbots, Natural Language Processing (NLP) systems, virtual assistants.

Introduction

The rapid advancement of technology has transformed various sectors, including education. Among these innovations, artificial intelligence (AI) has emerged as a powerful tool capable of enhancing the teaching and learning experience. In the context of teaching English as a foreign language (EFL), AI tools offer unique opportunities to personalize learning, automate assessments, and facilitate language practice. As globalization continues to increase the demand for English proficiency, educators are seeking effective methods to enhance language acquisition.

The rapid development of artificial intelligence (AI) technologies has also brought about major changes in the field of education. In the modern world, the integration of technology into education is fundamentally changing not only teaching methods, but also the ways in which students acquire knowledge. These changes are especially noticeable in the field of English Language Teaching (ELT), where AI tools such as chatbots, Natural Language Processing (NLP) systems, virtual assistants and flexible learning platforms are increasingly being used. These innovative tools offer opportunities such as personalized learning, real-time assessment, increasing student engagement and adapting to their individual needs.

Through AI tools, students are able to independently improve their knowledge, receive real-time corrections and make the language learning process interesting and effective through

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interactive exercises. However, these innovations bring not only opportunities, but also a number of challenges and problems. For example, the implementation of artificial intelligence tools raises complex questions such as ethical issues, data protection, technological readiness of teachers, lack of resources, and equal opportunity issues.

Methods

Artificial Intelligence tools provide personalized learning that adapts to each student's needs, interests, and level of knowledge. For example, adaptive learning platforms analyze students' knowledge levels and offer customized exercises to address their weaknesses (Fitria, 2021) [1]. This approach makes the learning process more efficient, as students are able to progress at their own pace.

Artificial Intelligence (AI) tools, such as automated essay grading systems and chatbots, provide immediate feedback on students' writing and speaking skills. Gutiérrez (2023) highlights the role of NLP systems in assessing language knowledge, logical structure, and fluency, which reduces the workload for teachers and allows for timely intervention [2].

AI-based gamification and interactive chatbots make the learning process fun and interactive, increasing student engagement. Hwang and Chang (2021) highlight the role of AI chatbots in developing communication skills and motivating students through real-time communication [3]. AI tools help teachers to plan lessons, create resources, and manage the classroom. Uysal and Yüksel (2024) discuss how Artificial Intelligence platforms enhance teachers' professional skills by empowering them to make informed decisions [4].

The use of Artificial Intelligence in education raises ethical issues such as data privacy, algorithmic bias, and overreliance on technology. Rashed (2024) warns that misuse of student data and biased algorithms can exacerbate inequalities [5]. To successfully implement artificial intelligence tools, teachers must have sufficient digital competence. Ghomi and Redecker (2019) emphasize the importance of implementing professional development programs to equip teachers with the skills needed to effectively use AI technologies [6].

The use of artificial intelligence (AI) tools can exacerbate the digital divide for students with disabilities. Lampou (2023) calls for policies to ensure equal access to AI-based educational resources [7]. Integrating AI tools into existing curricula requires careful pedagogical adaptation. Owoc et al. (2021) argue that teachers need to balance traditional teaching methods with the use of AI tools [8].

Studies by Gokcearslan [9] et al. (2024) and Al-khreshehm (2024) [10] demonstrate the effectiveness of AI chatbots in improving EFL students' English language proficiency. These tools provide real-time feedback and replicate real-life communication scenarios, which improves students' speaking and writing skills. Normuminov (2024) highlights the role of AI-based technologies in enhancing the professional competence of future English language teachers [11]. By incorporating artificial intelligence tools into teacher training programs, teachers can develop their skills in using these technologies in the classroom.

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Kasimova (2024) discusses the use of IS in developing innovative teaching materials to meet diverse learning needs [12]. These materials can be adapted to cultural and linguistic contexts, making them engaging for students.

Results and discussion

The concept of Artificial Intelligence dates back to ancient civilizations, but the foundations of artificial intelligence as a scientific discipline, as most people know, emerged in the mid-20th century. The term "artificial intelligence" was first introduced by John McCarthy in 1956 during the Dartmouth Conference, which is considered the birth of AI as an autonomous field. Initially, artificial intelligence was used to program computers to follow rules and make decisions (as expert humans would). However, this approach had its limitations. Thus, in the 1980s, Artificial Intelligence turned its attention to machine learning algorithms. In simple terms, AI is the ability of computer systems to perform creativity and intellectual activities that were previously inherent to humans. It combines extremely complex new areas of science, such as neural networks, machine learning, natural language processing, cognitive computing, and computer vision.

For example, machine learning technology is a computer system that can learn deeply from knowledge to process data. These systems, starting from the algorithm written by the programmer who created it, independently analyze huge amounts of data and experiments, find commonalities and patterns, and on this basis "enrich their knowledge". For example, 570 GB of data was used to train ChatGPT, which has now gained popularity all over the world. This is an indicator that far exceeds the limits of human thinking. ChatGPT, in which Microsoft invested $ 10 billion at the beginning of the year, can freely chat with people in many languages, write articles or poems.

In particular, as a change to traditional teaching methods, it is possible to use artificial intelligence to obtain ideas for discussions from platforms powered by artificial intelligence (Chat GPT, Google AI, Bing AI, etc.), increase attention in the lesson process, stimulate interest by using new materials, and increase the level of student achievement by providing feedback based on the individual needs of each student.

Teaching English as a foreign language involves developing speaking, writing, listening, and reading skills from the elements of language and vocabulary. It also includes understanding text and composing texts in English. In the process of language learning, communication is considered the goal and process of language learning. Artificial intelligence-based chatbots are increasingly being used to facilitate language practice among university students. These chatbots engage students in conversational interactions and provide real-time feedback on language use, pronunciation, and grammar. In addition, chatbots offer students a convenient and accessible way to practice English outside of the traditional classroom, thereby facilitating continuous language learning. In this case, artificial intelligence can be used to generate ideas for real-time speech production, and to communicate in hypothetical situations based on imagination in language learning. One useful aspect of artificial intelligence is that it can show the language learner pronunciation errors in letters, words, and combinations and show them how to practice by explaining them in simple language [13].

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Artificial Intelligence technologies have accelerated the pace of assessment in language education. Automated assessment systems powered by AI algorithms can analyze students' written assignments and provide instant feedback on language proficiency, grammatical accuracy, and coherence (Jian et al., 2020). This has multiple benefits for language learners and teachers. First, by automating this process, teachers can spend more time on targeted instruction and student support, while students benefit from timely and personalized feedback that helps them continuously improve their language skills. As Radwan (2017) points out, the use of AI in English language teaching overcomes several challenges. Automated assessment systems powered by AI algorithms can analyze students' written assignments, essays, and language exercises and provide instant feedback on grammar, vocabulary use, and coherence. This not only saves teachers time, but also allows students to receive timely and personalized feedback, thereby helping them to continuously improve their language skills. For example, it involves translating text through information retrieval techniques, checking the accuracy of the translated text in the student's native language through translation programs, identifying pronunciation through automatic speech recognition, helping blind and visually impaired students by reading text, helping students learn vocabulary through online dictionaries, and organizing sentence and paragraph division for language learners when assessing essays [14]. In addition, interviews are conducted with teachers to gather in-depth insights into the challenges and opportunities of integrating AI into language teaching.

Some of the benefits of artificial intelligence in education include:

- Increased efficiency and accuracy of assessment and feedback;

- Individual training for each student;

- Accessibility and convenience for students;

- Increasing student engagement and motivation.

Artificial Intelligence plays a pivotal role in enhancing language skills by providing interactive and immersive language practice opportunities. Conversation simulators powered by Al are a prime example of this. These simulators use natural language processing to engage users in realistic dialogue scenarios, mimicking real-life conversations. This feature is particularly beneficial for learners who may not have access to native speakers or the opportunity to practice spoken English in everyday settings. By conversing with Al, students can improve their fluency, comprehension, and conversational skills in a stress-free environment that is available 24/7.

Pronunciation correction tools are another aspect where Al significantly aids in language learning. These tools use speech recognition technology to analyze a learner's pronunciation, offering immediate feedback and guidance on how to improve. They can pinpoint specific phonetic errors and provide drills for practice, helping learners to reduce their accent and speak more clearly. This immediate and personalized feedback is crucial for learners to make rapid improvements in their pronunciation, a key component of language proficiency.

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AI's impact extends to the teaching of complex grammar rules and vocabulary expansion as well. Al-powered language learning platforms can offer a contextual learning experience, presenting grammar and vocabulary in natural, real-life scenarios. This method of teaching grammar and vocabulary is highly effective because it is tailored to the individual needs of the learner, ensuring that the learning process is both efficient and relevant.

One of the most significant advantages of AI in EFL is its ability to provide personalized learning experiences. AI algorithms can analyze individual student performance data to identify strengths and weaknesses. Based on this analysis, AI systems can generate customized lesson plans and exercises tailored to each learner's needs. For instance, platforms like Duolingo employ adaptive learning techniques that adjust difficulty levels based on user performance, ensuring that students remain challenged yet capable.

AI tools can streamline the assessment process by providing immediate feedback on written and spoken assignments. Natural language processing (NLP) technologies enable AI systems to evaluate grammar, vocabulary usage, pronunciation, and coherence in real-time. For example, tools like Grammarly and Write Improve allow students to receive instant corrections and suggestions for improvement. This immediate feedback loop enhances the learning experience by enabling students to address mistakes promptly.

AI-driven chatbots and virtual conversation partners offer students opportunities to practice their speaking and listening skills in simulated environments. These conversational agents can engage learners in dialogue, providing a safe space for practicing language skills without the fear of judgment. Applications like Replika and ChatGPT serve as conversational partners that can help learners improve fluency and comprehension through interactive dialogue.

Additionally, many AI-based language learning tools incorporate gamification and interactive elements, making the learning process more engaging and enjoyable. This can significantly enhance motivation and retention, especially when learning complex aspects of a language like grammar and vocabulary. Gamification is another area where AI can significantly impact EFL instruction. Many AI applications incorporate game-like elements such as rewards, challenges, and interactive scenarios that motivate students to participate actively in their learning process. Platforms like Kahoot! and Quizlet utilize gamification strategies to create engaging quizzes and activities that foster a fun learning environment.

Conclusion

In conclusion, it can be said that artificial intelligence programs have the ability to take into account the individual abilities and achievements of the language learner, and to adapt based on the goals that students set for themselves. Artificial intelligence technologies allow you to customize English language curricula based on the level of proficiency of students and individual learning needs. Of course, we are far from saying that artificial intelligence programs do this perfectly. However, initial analyses indicate that the most advanced methods in language learning are used in AI programs as an alternative. Artificial intelligence programs offer unprecedented opportunities for personalizing learning, providing instant feedback, and creating immersive language experiences.

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The integration of artificial intelligence tools in teaching English as a foreign language presents significant opportunities for enhancing educational outcomes. By facilitating personalized learning experiences, providing immediate feedback, and offering engaging resources, AI can transform how students learn English.

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