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Marxamat tuman 31 DIMI

THE USE OF ARTIFICIAL INTELLIGENCE IN FOREIGN LANGUAGE TEACHING AND ITS IMPACT ON THE EDUCATIONAL PROCESS

Annotatsiya: Zamonaviy o'qitish va o'rganish jarayonida, ayniqsa xorijiy tillarni o'rganish sohasida ta'lim sifatini oshirish uchun sun'iy intellektdan (SI) foydalanishga jiddiy e'tibor qaratilmoqda. Maqolada xorijiy tillarni o'qitishda sun'iy intellektning tobora keng qo'llanilishi va uning ta'lim jarayoniga chuqur ta'siri o'rganilgan. Sun'iy intellekt orqali shaxsiylashtirilgan ta'limning afzalliklari, ya'ni darslarni har bir o'quvchining ehtiyojlariga moslashtirish hamda chat-botlar va virtual yordamchilar kabi interaktiv vositalardan foydalanib, o'quvchilarning ishtirokini oshirish haqida to'xtalib o'tilgan. Maqolada, shuningdek, sun'iy intellekt yordamida xorijiy tillarni o'rganish imkoniyatlarini, xususan, kompyuterlar va smartfonlar orqali mavjud bo'lgan dasturlarni ta'kidlagan turli tadqiqotlarning tanqidiy tahlili keltirilgan. Maqolada sun'iy intellektning darhol fikr-mulohaza berish, xatolarni tuzatish va dinamik baholash usullarini taqdim etishdagi roli ham muhokama qilingan.

Kalit so'zlar: Sun'iy intellekt (SI), shaxsiylashtirilgan ta'lim, fikr-mulohaza mexanizmlari, chat-botlar, virtual yordamchilar, tabiiy tilni qayta ishlash, gamifikatsiya, dinamik baholash.

Abstract: Serious attention is being paid to the use of artificial intelligence (AI) in improving the quality of education in modern teaching and learning processes, especially in the field of foreign language learning. The article explores the increasing use of artificial intelligence (AI) in foreign language education and its profound impact on the teaching and learning process. It highlights the benefits of AI-driven personalized learning, which adapts lessons to individual student needs, as well as the use of interactive tools like chatbots and virtual assistants to enhance engagement. The article provides a critical analysis of various studies highlighting the opportunities for learning foreign languages through artificial intelligence, particularly the programs available via computers and smartphones. The article also discusses the role of AI in providing instant feedback, improving error correction, and offering dynamic assessment methods.

Key words: Artificial intelligence (AI), personalized learning, feedback mechanisms, chatbots, virtual assistants, natural language processing, gamification, dynamic evaluation.

Аннотация: Серьезное внимание уделяется использованию искусственного интеллекта (ИИ) для повышения качества образования в современных процессах обучения и преподавания, особенно в области изучения иностранных языков. В статье исследуется возрастающее использование искусственного интеллекта (ИИ) в обучении иностранным языкам и его глубокое влияние на процесс преподавания и обучения. В статье подчеркиваются преимущества персонализированного обучения с использованием ИИ, которое адаптирует уроки под индивидуальные потребности учащихся, а также использование интерактивных инструментов, таких как чат-боты и виртуальные ассистенты, для повышения вовлеченности учащихся. В статье представлен критический анализ различных исследований, освещающих возможности изучения иностранных языков с помощью искусственного интеллекта, особенно программ, доступных через компьютеры и смартфоны. Также обсуждается роль ИИ в предоставлении мгновенной обратной связи, исправлении ошибок и предложении динамических методов оценки.

Ключевые слова: Искусственный интеллект (ИИ), персонализированное обучение, механизмы обратной связи, чат-боты, виртуальные помощники, обработка естественного языка, геймификация, динамическая оценка.

Introduction

The advent of artificial intelligence (AI) has brought transformative changes to numerous fields, and education is no exception. Among the various educational domains, foreign language teaching has seen particularly profound advancements due to the integration of AI technologies. The application of AI in language education is revolutionizing traditional teaching methodologies by offering personalized learning experiences, enhancing interaction, and providing instantaneous feedback. This shift is not merely a trend but represents a significant evolution in how languages are taught and learned. The concept of artificial intelligence (AI) has roots that extend back to ancient civilizations, but its foundations as a scientific discipline began to take shape in the mid-20th century. The term "artificial intelligence" was first introduced by John McCarthy during the Dartmouth Conference in 1956, which is considered the birth of AI as an autonomous field. Initially, AI was applied to programming computers to follow rules and make decisions in a manner similar to human experts. However, this approach had limitations

In the 1980s, AI shifted its focus towards machine learning algorithms, which marked a significant advancement. Simply put, AI refers to the capability of computer systems to perform tasks that have traditionally required human creativity and intellectual activity. It encompasses a range of complex and emerging fields such as neural networks, machine learning, natural language processing, cognitive computing, and computer vision. These advancements have enabled AI to transform various domains, including education, where it is reshaping how foreign languages are taught and learned.

The integration of artificial intelligence (AI) in various sectors has been further bolstered by the strategic initiatives of the Republic of Uzbekistan. On October 5, 2020, President Sh. M. Mirziyoyev approved the "Digital Uzbekistan — 2030" strategy and its effective implementation measures through Decree No. 6079. This strategy aims to enhance the digital infrastructure of the country, laying the groundwork for technological advancements. Additionally, on February 17, 2021, Decree No. 4996 was issued to create conditions for the rapid implementation of AI technologies. This decree plays a crucial role in organizing and systematizing efforts in the AI domain. The program, titled "Action Plan for Improving Uzbekistan's Position in the AI Readiness Index," was also approved. This program emphasizes the development and application of AI technologies across various sectors, including the economy, social sphere, and state management. Special attention is given to implementing AI in agriculture, energy, healthcare, and e-government. These initiatives reflect the government's commitment to advancing AI technology and its integration into key areas of national development.

The journey of AI in foreign language education began in the early 1960s, with the development of early computer-assisted language learning (CALL) systems. Initial attempts focused on providing basic grammar and vocabulary drills through computer programs. However, these early systems lacked the sophistication needed to create a truly interactive learning experience. By the 1990s, advancements in computing power and the advent of the internet led to more interactive and multimedia-rich CALL programs. These systems could incorporate audio, video, and interactive exercises, allowing for a more engaging language learning experience. The 2000s marked a significant turning point with the rise of machine learning and natural language processing (NLP) technologies. These advancements enabled the development of more sophisticated language learning platforms capable of providing personalized feedback and

adapting to individual learning needs. AI-driven tools began to emerge, offering learners the ability to practice conversational skills with virtual agents and receive real-time corrections. In recent years, the integration of AI has continued to evolve, with innovations such as AI-powered chatbots, virtual assistants, and gamified learning platforms becoming increasingly prevalent. These technologies leverage NLP and machine learning algorithms to offer personalized, dynamic learning experiences that were previously unattainable. As AI technology advances, its role in language education is expected to expand further, promising even more immersive and effective learning environments. This ongoing evolution reflects the growing recognition of AI's potential to enhance educational outcomes and transform the way languages are taught and learned.

Although this field is rather new, numerous professors have been doing researches in it. G. Absalamova, G. Ergashova, and O. Boboqulova emphasize the significance of digital technologies in foreign language education, advocating for the integration of these technologies into the teaching process to enhance lesson effectiveness. They highlight the substantial role of digital tools in making language learning more dynamic and interactive, as well as in increasing students' interest and cognitive engagement. O. Eshbayev has written about the development of intelligent systems to enhance language learning, focusing on the integration of natural language processing (NLP) and data analysis. The article emphasizes the importance of incorporating both linguistic and computational perspectives in the design of these systems (1, 612). The article discusses how AI can address barriers to active participation and effective language acquisition, suggesting that AI plays a crucial role in modernizing and improving the language teaching process. G. Musayeva discusses the contemporary trends in the computerization of higher education, focusing on the role of IT technologies in teaching foreign languages and their impact on developing written communication skills (2, 320). She highlights computer technology as a crucial tool for improving language teaching methods. R. Ayupov(3) and Sh. Maksimkulova(4) analyze various modern methods of applying digital technologies in foreign language education, examining their didactic, methodological, and educational characteristics.

Main part

The integration of artificial intelligence (AI) in foreign language education is revolutionizing the traditional learning environment. By enhancing engagement, personalization, and feedback mechanisms, AI is reshaping how learners acquire and practice new languages. This article explores the growing use of AI in foreign language teaching and its far-reaching effects on the educational process.

1. AI-Driven Personalized Learning.

One of the most significant advantages of AI in education is its ability to tailor the learning experience. Traditional classrooms often face challenges when it comes to addressing the individual needs of students. AI, however, can evaluate each student's progress, strengths, and weaknesses in real-time. Based on this data, AI can create personalized lesson plans, recommend resources, and suggest specific exercises that suit the learner's needs (5). For instance, language learning platforms such as Duolingo and Babbel use AI to assess users' skill levels and adapt lessons accordingly. This tailored approach helps learners focus on areas where they need improvement and allows them to progress at their own pace. It also encourages self-directed learning, where students are empowered to take control of their own language development.

2. Enhancing Interaction and Engagement with AI

AI technologies such as chatGpt, virtual assistants, and interactive simulations have introduced new methods for practicing foreign languages. These tools offer learners a low-pressure environment to practice conversational skills, respond to prompts, and receive instant feedback. AI-driven conversational agents simulate real-life interactions, allowing learners to engage in dialogues and practice pronunciation, sentence structure, and context-based responses (8).

Natural Language Processing (NLP), a branch of AI, plays a crucial role in these tools. NLP allows machines to understand and respond to human language in a way that mimics natural communication. This makes chatbots more effective for practicing conversations in foreign languages. For example, platform like HelloTalk provide learners with virtual conversation partners who can communicate fluently in various languages.

Gamification, another innovative technique, is also heavily influenced by AI. AI enhances language learning apps by incorporating game elements—such as rewards, badges, and challenges—into the curriculum. This encourages learners to stay engaged, motivates them to continue learning, and provides a sense of accomplishment as they achieve milestones in their language acquisition journey (5).

AI and chatbots offer a novel approach to increasing engagement and motivation in language learning through the use of various games (gamification) in the classroom. Gamification, which involves using game design elements in non-game contexts, is recognized for its effectiveness in enhancing student engagement (5, 1). When combined with AI, these strategies can be further refined, providing teachers with easy and convenient opportunities for personalized instruction. I. N. Chebotareva and A. V. Lyaskovets have explored the role of games in education more broadly. They highlight both the positive and negative aspects of gamification and propose a balanced perspective to improve traditional teaching methodologies (6, 775).

3. Immediate Feedback and Error Correction

Feedback is a crucial aspect of language learning, yet traditional classrooms often cannot provide personalized and immediate feedback to each student. AI bridges this gap by offering instant corrections and suggestions. Whether it is grammar, pronunciation, or word choice, AI tools provide learners with real-time evaluations and corrective feedback, enabling them to learn from their mistakes immediately (7).

Applications such as Grammarly and LanguageTool, for example, analyze users' writing, offering corrections on grammar, syntax, and even tone. Similarly, speech recognition software within AI platforms can identify pronunciation errors and suggest improvements. This ensures that learners receive constant guidance, leading to faster progress and improved language proficiency.

4. AI-Powered Assessment and Evaluation

AI is also revolutionizing the way language proficiency is assessed. Traditional testing methods are often standardized and may not accurately reflect a learner's true capabilities or individual progress. AI-powered assessment tools, however, can evaluate language skills more dynamically and comprehensively (9). AI assessments use machine learning algorithms to track and measure students' progress over time, offering detailed reports that highlight specific areas for improvement. These tools analyze various aspects of language use—such as vocabulary, fluency, and comprehension—ensuring that learners receive a holistic evaluation of their skills. This allows both learners and educators to gain deeper insights into their progress, leading to more targeted learning strategies.

5. Bridging Language Barriers with AI

AI tools are also breaking down language barriers by making language learning more accessible to people across the globe. Translation apps, such as Google Translate, are becoming increasingly accurate due to advancements in AI and machine learning. While these tools are not replacements for language proficiency, they serve as valuable resources for learners seeking to understand foreign texts or communicate in another language (10). Moreover, AI is democratizing language education by offering low-cost, high-quality learning opportunities. With platforms like Rosetta Stone and Memrise, users can access a wide range of language courses from the comfort of their homes, without the need for expensive private tutoring or formal education.

6. The Future of AI in Language Education

As AI continues to evolve, its role in language education is expected to expand even further. The development of AI tutors, virtual reality (VR) environments, and augmented reality (AR) applications will create even more immersive and interactive learning experiences. AI-powered virtual classrooms could simulate real-life situations, allowing learners to practice languages in contextually rich environments—whether it's ordering food at a restaurant or negotiating a business deal (10). Furthermore, AI research in the field of education is increasingly focusing on emotional intelligence (EI). Future AI systems may be able to detect students' emotional states and adjust lessons to suit their motivation levels, engagement, and confidence, providing a truly holistic learning experience.

From a psychological perspective, the TYTO (Tailored Your Teaching Outcome) system allows students to better control their learning process, which can enhance their self-confidence and lead to an increase in their effectiveness and self-assessment. This can be very beneficial for self-evaluation and motivation.

From a pedagogical perspective, TYTO helps create a more interactive and engaging learning environment. For example, tools like SI ChatGPT can be used to create multimedia materials tailored to various learning styles and interests. This can further engage students and make the learning process more interesting, which in turn can make language learning more effective.

Conclusion

The integration of artificial intelligence (AI) into foreign language teaching represents a transformative advancement with far-reaching implications for the educational process. AI's ability to deliver personalized learning experiences, enhance interaction and engagement, and provide immediate feedback is reshaping the way languages are taught and learned. By tailoring educational content to individual needs, AI enables learners to focus on areas requiring improvement and progress at their own pace, thereby fostering a more effective learning environment.

The deployment of AI technologies, such as chatbots, virtual assistants, and interactive simulations, offers new opportunities for practicing language skills in a low-pressure setting. These tools not only facilitate conversational practice but also leverage natural language processing to simulate real-life interactions, enhancing language acquisition and retention.

Moreover, AI's role in providing instant feedback and error correction ensures that learners receive timely guidance, accelerating their progress and improving language proficiency. AI-powered assessment tools further contribute to this by offering dynamic and comprehensive evaluations that go beyond traditional testing methods.

As AI continues to evolve, its potential to create immersive, emotionally intelligent learning environments is promising. The ongoing advancements in AI technologies will likely lead to even more sophisticated and accessible language learning solutions, further revolutionizing the field of foreign language education. Embracing these innovations will enable educators and learners alike to harness the full potential of AI, making language learning more engaging, efficient, and effective.

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