



USE OF ARTIFICIAL INTELLIGENCE IN PERSONALIZED LANGUAGE LEARNING

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Abstract. *In recent years, Artificial Intelligence (AI) has begun to reshape language education by shifting the focus from standardized instruction to learner-centered experiences. Unlike traditional teaching methods that rely on uniform curricula, AI-based systems adjust content, feedback, and learning pace according to individual learner profiles. This article investigates how AI supports personalized language learning in higher education. It examines the role of adaptive technologies, their pedagogical value, and the challenges associated with their implementation. Particular attention is given to how AI enhances learner autonomy and supports continuous skill development in academic contexts.*

Keywords: *artificial intelligence, personalized learning, language acquisition, adaptive systems, higher education*

Аннотация. *В последние годы искусственный интеллект стал важным инструментом трансформации языкового образования. В отличие от традиционных методов обучения, основанных на единых программах, системы на базе ИИ позволяют адаптировать содержание, темп и формы обучения к индивидуальным особенностям обучающихся. В статье рассматривается влияние*

искусственного интеллекта на развитие персонализированного обучения иностранным языкам в системе высшего образования.

Ключевые слова: *искусственный интеллект, персонализированное обучение, изучение языков, адаптивные технологии*

Annotatsiya. *Soʻnggi yillarda sunʼiy intellekt til oʻrganish jarayoniga yangi yondashuvlarni olib kirdi. U anʼanaviy oʻqitish usullaridan farqli ravishda har bir oʻquvchining individual xususiyatlarini hisobga olib, shaxsiylashtirilgan taʼlim muhitini yaratadi. Ushbu maqolada sunʼiy intellektning oliy taʼlimda til oʻrganishga taʼsiri tahlil qilinadi.*

Kalit soʻzlar: *sunʼiy intellekt, shaxsiylashtirilgan taʼlim, til oʻrganish*

Introduction. Language learning has long been associated with standardized teaching approaches that assume similar progress among all learners. Such models typically rely on uniform curricula, fixed pacing, and generalized assessment methods, which often fail to address the diverse needs of individual students. However, learners differ significantly in their cognitive abilities, prior knowledge, motivation, and learning strategies. This mismatch between traditional instructional models and individual learner variability has led to growing interest in personalized education as a more effective and inclusive approach. Recent literature emphasizes that personalized learning supported by Artificial Intelligence improves learner motivation, autonomy, and academic performance. Holmes, Bialik, and Fadel (2019) state that AI-based educational systems provide adaptive instruction tailored to individual learner needs.[1] Similarly, Zawacki-Richter et al. (2019)

highlight that AI technologies in higher education increase learning efficiency through intelligent tutoring systems and automated assessment tools.[7]

In recent years, rapid technological advancements have created new opportunities to rethink how languages are taught and learned. Among these innovations, Artificial Intelligence has emerged as a particularly influential force, offering tools that allow learning environments to become more flexible, adaptive, and responsive. AI-driven systems can analyze learner behavior, identify strengths and weaknesses, and dynamically adjust content, feedback, and learning pathways.

As a result, personalized language learning is no longer a theoretical concept but a practical reality in many educational contexts. AI not only enhances the efficiency of learning processes but also supports learner autonomy by enabling students to take greater control over their progress. This shift reflects a broader transformation in education—from teacher-centered instruction toward learner-centered, data-informed environments that prioritize individual development.

AI as a Mediating Technology in Language Learning. AI does not simply replace traditional teaching but acts as a mediator between learners and educational content. It reorganizes information, adapts tasks, and provides feedback that corresponds to individual performance. This creates a hybrid model of learning where technology supports both independent study and teacher-guided instruction. According to Luckin (2018), AI should not replace teachers but function as a supportive educational tool that enhances interaction between students and learning materials.[2] Research also demonstrates that AI-mediated

environments encourage independent learning and improve accessibility for learners with different educational backgrounds.

Core Technologies Behind Personalization. Personalized language learning relies on several AI technologies. Natural Language Processing enables systems to analyze written and spoken input, while machine learning algorithms identify patterns in learner behavior. Speech recognition tools assist in pronunciation practice, and adaptive platforms modify tasks based on performance data. Together, these technologies create dynamic learning environments. Chen et al. (2021) explain that Natural Language Processing and machine learning algorithms are among the most important technologies used in adaptive language learning systems. These tools allow platforms to identify patterns in learner behavior and personalize educational content in real time.[3]

Impact on Learner Experience. One of the most significant advantages of AI is its ability to enhance learner engagement. By offering content that matches individual interests and skill levels, AI systems increase motivation. Immediate feedback also helps learners correct mistakes in real time, leading to more effective skill acquisition. Studies show that personalized AI-based feedback contributes to vocabulary expansion, grammatical accuracy, and speaking fluency. Xu and Warschauer (2020) found that automated writing evaluation systems significantly improve academic writing skills among foreign language learners.[8]

Challenges and Ethical Considerations. Despite its advantages, AI in education raises several concerns. Data privacy remains a major issue, as personalized systems require the collection of user information.

Additionally, over-reliance on AI may reduce opportunities for real communication. Therefore, it is essential to maintain a balance between technological and human elements in education. Researchers also discuss ethical concerns such as algorithmic bias, excessive dependence on technology, and the protection of personal data. OECD (2021) emphasizes that educational institutions must ensure transparency and responsible use of AI technologies in digital learning environments.[9]

Implications for Higher Education. For university students, especially at the master's level, language proficiency is essential for research and professional communication. AI tools support academic writing, presentation skills, and discipline-specific vocabulary. This makes them particularly valuable in higher education settings. In universities, AI-powered tools support research writing, presentation preparation, and discipline-specific terminology acquisition. Mobile-assisted language learning applications also provide flexible learning opportunities outside the classroom[5] (Heil et al., 2016).

Conclusion. Artificial Intelligence has the potential to transform language learning by making it more adaptive, efficient, and learner-centered. While challenges remain, its integration into education offers significant opportunities for improving learning outcomes and preparing students for global communication.

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