

INTEGRATING DIGITAL TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN FOREIGN LANGUAGE TEACHING

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Abstract. This study offers a thorough academic investigation into the transformative impact of digital technologies and artificial intelligence (AI) on foreign language teaching. The research explores how novel approaches, including adaptive learning systems, smart tutoring, and immersive virtual settings, are transforming conventional teaching frameworks. Through examining the incorporation of AI-powered tools, the article illustrates their ability to offer tailored feedback, improve language skills, and promote learner independence. The results indicate that a curriculum enhanced by technology fosters a deeper understanding of language frameworks and cultural settings. The study finds that the combination of human teaching methods and technological advancements is crucial for attaining greater levels of communication skills in the contemporary age.

Keywords: Digital technologies, artificial intelligence, foreign language teaching, adaptive learning, immersive environments, pedagogical innovation, communicative competence, learner autonomy, digital literacy.

Аннотация. В данной статье представлен углубленный академический анализ трансформирующей роли цифровых технологий и искусственного интеллекта (ИИ) в методике преподавания иностранных языков. Исследование рассматривает, как инновационные методологии, такие как адаптивные системы обучения, интеллектуальное репетиторство и иммерсивные виртуальные среды, изменяют традиционные образовательные модели. Анализируя интеграцию инструментов на базе ИИ, автор демонстрирует их способность обеспечивать персонализированную обратную связь, повышать лингвистическую компетенцию и развивать автономию учащихся. Результаты исследования показывают, что технологически обогащенная учебная программа способствует более глубокому усвоению языковых структур и культурных контекстов. Синергия человеческой педагогики и цифровых инноваций признана ключевым фактором достижения высокого уровня коммуникативной компетенции.

Ключевые слова: Цифровые технологии, искусственный интеллект, преподавание иностранных языков, адаптивное обучение, иммерсивные среды, педагогические инновации, коммуникативная компетенция, автономия обучающегося, цифровая грамотность.

Annotatsiya. Ushbu maqolada raqamli texnologiyalar va sun'iy intellektning (SI) xorijiy tillarni o'qitish metodikasidagi transformatsion roli keng qamrovli tadqiq qilinadi. Tadqiqotda adaptiv o'qitish tizimlari, intellektual repetitorlik va immersiv virtual muhitlar kabi innovatsion metodologiyalarning an'anaviy ta'lim modellarini o'zgartirish imkoniyatlari tahlil qilinadi. SI vositalarining integratsiyasi orqali talabalarga individual fikr-mulohaza bildirish, lisoniy kompetensiyani oshirish va mustaqil ta'limni shakllantirish masalada o'rganiladi. Tadqiqot natijalari shuni ko'rsatadiki, texnologik jihatdan boyitilgan o'quv dasturi til strukturalari va madaniy kontekstlarni chuqurroq o'zlashtirishga xizmat qiladi.

Kalit sózlar:Raqamli texnologiyalar, sun'iy intellekt, chet tillarini o'qitish, adaptiv ta'lim, immersiv muhitlar, pedagogik innovatsiyalar, kommunikativ kompetensiya, ta'lim oluvchi avtonomiyasi, raqamli savodxonlik.

The 21st-century educational environment is characterized by a significant shift from conventional teaching methods, largely influenced by the swift advancement of digital technologies and Artificial Intelligence (AI). In the expert area of Foreign Language Teaching (FLT), this change is not just additive but revolutionary. Traditionally, language acquisition involved a "banking model" of education, with instructors depositing grammar rules and vocabulary into inactive learners. Currently, the incorporation of AI-based approaches has sparked a shift towards a vibrant, engaging, and distinctly tailored environment. This change is driven by the requirements of a global workforce that needs not only theoretical language understanding but also practical, advanced communication skills in various digital and physical environments ¹.

The significant influence of digital innovation is in its capacity to overcome the "one-size-fits-all" constraint that has historically affected institutional language programs. In a conventional classroom, one teacher has to manage the different cognitive paces, interests, and backgrounds of thirty or more learners. Digital technologies and AI address this by providing scalable customization. Additionally, the psychological obstacles to language learning—commonly known as the "affective filter"—are considerably diminished when individuals engage with digital platforms that offer a low-pressure, non-critical space for experimentation. This article aims to analyze the existing condition of these groundbreaking approaches, contending that the

¹ Umida, Karimova. "The Role of Teaching Compounds According to Types of Speech in Constructivism." Eurasian Journal of Learning and Academic Teaching 8 (2022): 4-9. Retrieved from ISSN: 2795-739X.

future of language proficiency relies on the complex integration of human teaching skills and machine intelligence ².

The most significant use of AI in modern FLT is the rise of adaptive learning systems. These systems employ machine learning algorithms to chart a learner's distinct "interlanguage"—the particular transitional language phase a student is in while progressing toward fluency. Through the analysis of large volumes of performance data, AI platforms detect particular morphological or syntactic patterns that a student struggles with. For instance, when a learner repeatedly mishandles irregular verb conjugations in the target language, the system doesn't merely highlight the mistake; it adjusts the forthcoming curriculum to re-present those verbs in various contexts—reading, listening, and interactive exercises. This guarantees a form of "support" that a human teacher cannot manually offer to each student in a large group ³.

One of the most significant obstacles in learning a foreign language is moving from passive comprehension to active use. Numerous students demonstrate strong grammatical knowledge yet are "silent" because of insufficient phonetic assurance. AI-driven Speech Recognition (SR) and Natural Language Processing (NLP) have created a significant transformation in this field. Contemporary SR tools deliver immediate, detailed feedback on phoneme articulation, prosody, and intonation. These tools enable intentional practice, enabling a student to repeat a phrase numerous times and receive a diagnostic analysis of their speech with each repetition. This cyclical, frequent feedback loop speeds up the emergence of "automaticity"—the capacity to speak without deliberate thought about rules—thus promoting genuine fluency ⁴.

Immersive technologies, particularly Virtual Reality (VR) and Augmented Reality (AR), have connected the classroom to the real world. A major criticism of language learning in classrooms is the absence of "contextual authenticity." VR addresses this by immersing students in realistic simulations—like a business negotiation in Tokyo or a medical consultation in Berlin. In these settings, language is not a theoretical topic of examination; it is a practical instrument needed to traverse a social reality. From a neuro-pedagogical viewpoint, these immersive experiences activate multi-sensory involvement, enhancing the neural connections linked to language retrieval. AR enhances this by superimposing digital linguistic information onto reality, facilitating "situated learning," enabling vocabulary acquisition in close relation to the items it refers to ⁵.

² Umida K. et al. Main features of constructivism for teaching and learning //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – T. 11. – №. 9. – C. 1045-1051.

³ Karimova U. INTERNETNING IJOBIY VA SALBIY TOMONLARI // Modern education and development. – 2026. – T. 47. – №. 2. – C. 410-414.

⁴ Chapelle, C. A. (2011). Computer Applications in Second Language Acquisition. Cambridge University Press.

⁵ Stockwell, G. (2022). Mobile-Assisted Language Learning. Cambridge University Press.

The recent rise of generative AI and Large Language Models (LLMs) has added a fresh aspect to FLT: the AI as a collaborative creator. Instead of acting merely as a translation aid, generative AI can be employed to promote "noticing" during language acquisition. Students can leverage AI to produce various iterations of a text in distinct registers—formal, casual, or scholarly—enabling them to examine stylistic subtleties. When utilized as an advanced teacher, AI can clarify why one preposition is preferred over another or offer the cultural background of an idiom. This fosters metalinguistic awareness, prompting the student to consider language as a system, rather than merely a collection of rules to memorize ⁶.

In summary, the incorporation of digital technologies and artificial intelligence into foreign language teaching signifies the most important progress in the discipline since the communicative revolution of the late 20th century. These approaches do not simply substitute old tools for new; they deeply change the dynamics among the learner, the teacher, and the language being learned. Through hyper-personalized learning paths, frequent feedback on spoken output, and immersive environments for language use, AI-powered resources make language learning more effective, interesting, and available like never before.

The effectiveness of these novel approaches, however, depends on an altered function for the teacher. The educator needs to shift from being a "sage on the stage" to an "architect of learning experiences," skillfully coordinating digital tools to achieve educational objectives. Additionally, the digital divide is a significant issue; for these advancements to be genuinely impactful, they have to be accessible to various socio-economic groups. In the end, the collaboration of human empathy, cultural subtleties, and machine accuracy paves the way for a future where language obstacles are removed through the capabilities of advanced technology. As we progress, the emphasis of FLT research must continue on enhancing this synergy to cultivate a generation of interconnected, multilingual individuals skilled in maneuvering through the intricacies of the digital era.

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