AI AND IMMERSIVE TECHNOLOGIES IN RUSSIAN LANGUAGE EDUCATION

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Abstract. The thesis examines the methodological potential of integrating artificial intelligence and immersive technologies into the teaching of Russian as a foreign language. Particular attention is paid to generative AI, conversational agents, voice assistants, virtual reality, augmented reality, and metaverse-based language environments. The study argues that these technologies should not be treated as independent innovations but as complementary components of a unified digital learning system. Artificial intelligence can support personalization, content generation, adaptive feedback, pronunciation practice, and autonomous learning, whereas immersive technologies create spatially and socially contextualized conditions for communication.

Keywords: Russian as a foreign language, artificial intelligence, immersive technologies, virtual reality, generative AI.

INTRODUCTION

The digital transformation of foreign-language education has gradually shifted from the simple use of electronic textbooks and multimedia presentations toward intelligent and immersive learning environments. This transformation is particularly significant in teaching Russian as a foreign language because many learners study Russian outside a natural Russian-speaking environment. Consequently, they may have limited opportunities to communicate spontaneously, hear authentic speech, experience sociocultural situations, and use linguistic knowledge for solving real communicative problems. Artificial intelligence and immersive technologies offer new possibilities for reducing this gap between classroom instruction and practical communication.

Recent studies in Russian as a Foreign Language (RFL) methodology demonstrate growing interest in artificial intelligence. P.V. Sysoyev and E.M. Filatov consider AI tools within the “learner – artificial intelligence – teacher” model and identify opportunities for developing language skills, speech activity, knowledge of Russian culture, learner autonomy, and communication outside the classroom [1]. Their approach is methodologically important because it does not conceptualize AI as a substitute for the teacher but as an additional component of the educational system.

MAIN PART

Artificial intelligence has several functions that are particularly relevant to foreign-language education. First, AI can support personalization. A generative system can adjust vocabulary, grammatical complexity, text length, and communicative tasks according to the learner’s proficiency level. Second, conversational AI can provide additional speaking and writing practice outside the classroom. Third, speech-recognition systems

can support pronunciation training and offer preliminary feedback. Fourth, AI can generate multiple variants of exercises and scenarios, reducing dependence on a limited set of textbook situations.

Sysoyev and Filatov identify chatbots, voice assistants, corpus technologies, and generative AI among the tools with significant potential for RFL learning [1]. Their analysis indicates that AI can contribute not only to practising linguistic forms but also to developing productive and receptive speech activities and learner independence. However, AI-generated feedback cannot automatically be treated as pedagogically or linguistically correct. Generative systems may produce unnatural expressions, factual inaccuracies, culturally inappropriate examples, or linguistic material that does not correspond to the learner's level. Therefore, teacher verification remains necessary.

This integration can be organized according to a three-stage model. At the preparatory stage, AI analyses the learner's level, selects relevant vocabulary, and generates linguistic support. The teacher checks the materials and defines the communicative objective. At the interaction stage, learners enter a virtual environment and complete a task through Russian. AI may control a virtual character, provide adaptive prompts, or introduce changes into the scenario. At the reflective stage, the interaction is analysed: lexical and grammatical errors, communication strategies, pronunciation difficulties, and sociocultural appropriateness are discussed.

This model is particularly useful for developing speaking competence. Traditional language exercises often contain predictable exchanges, while AI-supported immersive scenarios can produce variable responses. As a result, learners cannot rely entirely on memorized phrases and must construct language according to the situation. This strengthens spontaneous speech, compensatory strategies, and the ability to negotiate meaning.

Listening can also be developed through adaptive immersive interaction. Learners at elementary levels may receive slower speech, short sentences, repetition, and visual cues. Intermediate students can work with longer utterances and less predictable communication. At advanced levels, virtual environments can simulate academic or professional communication involving discussion, negotiation, argumentation, and problem solving.

CONCLUSION

Artificial intelligence and immersive technologies can significantly expand the methodological possibilities of teaching Russian as a foreign language. AI provides personalization, adaptive interaction, content generation, preliminary feedback, and opportunities for autonomous practice. Immersive technologies create contextualized environments in which learners can transform linguistic knowledge into communicative action. Their integration therefore offers a promising approach to developing speaking, listening, vocabulary, pronunciation, sociocultural competence, and strategic communication.

However, technological innovation cannot itself guarantee educational effectiveness. AI-generated content requires teacher verification, while immersive scenarios must

correspond to learners' linguistic level and cognitive capabilities. Excessive technological complexity, unreliable automated feedback, data protection concerns, and limited access to equipment should be taken into account when designing courses.

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