

IMPROVING ENGLISH TEACHING METHODOLOGY BASED ON ARTIFICIAL INTELLIGENCE TECHNOLOGIES

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Abstract. This article analyzes the theoretical and practical aspects of improving the methodology of teaching English based on artificial intelligence technologies. The study scientifically highlights the possibilities of artificial intelligence-based educational platforms, adaptive learning systems, generative artificial intelligence tools, automated assessment mechanisms, and digital educational technologies in the process of teaching English. It also analyzes the mechanisms for developing students' listening comprehension, reading, writing, and speaking competencies, individualizing the learning process, providing instant feedback, and increasing educational efficiency through the use of artificial intelligence tools. As a result of the study, an innovative methodological approach based on the integration of artificial intelligence technologies into the methodology of teaching English is proposed. This approach serves to improve the quality of education, support independent learning activities of students, develop communicative competencies, and form a modern digital educational environment. The results of the study are of great importance in developing scientific and methodological recommendations for the effective use of artificial intelligence technologies in higher education institutions and foreign language teaching practice.

Keywords: artificial intelligence, English language teaching, English language methodology, generative artificial intelligence, ChatGPT, adaptive learning, digital educational technologies, personalized learning, automated assessment, communicative competence, language teaching, innovative pedagogical technologies, e-learning, learning platforms, educational effectiveness.

Introduction. Today, the rapid development of artificial intelligence technologies is creating new opportunities in the education system, in particular, in the methodology of teaching foreign languages. The expansion of the digital learning environment, the popularization of generative artificial intelligence tools, and the need for individualization of education require the combination of traditional methods of teaching English with modern technologies. In this regard, the effective use of artificial intelligence technologies is one of the important factors in developing students' language competencies, increasing the efficiency of the learning process, and supporting independent learning. Artificial intelligence-based adaptive learning platforms, virtual assistants, speech recognition systems, automated assessment tools, and generative artificial intelligence technologies create broad opportunities for developing English listening, reading, writing, and speaking skills. These technologies

allow providing educational materials that are tailored to the individual needs and knowledge level of students, providing instant feedback, and making the learning process more interactive.

Although scientific research on the topic confirms the effectiveness of artificial intelligence in the educational process, the issues of comprehensively improving the methodology of teaching English based on these technologies still remain relevant. In particular, there is a need for research on combining artificial intelligence tools with pedagogical methods, scientifically substantiating their methodological capabilities, and applying them in practice. The purpose of this article is to analyze the capabilities of artificial intelligence technologies in teaching English and to substantiate effective approaches to improving teaching methodologies by integrating them into the educational process.

Analysis and results. During the study, the impact of artificial intelligence technologies on the methodology of teaching English was analyzed theoretically and practically. Studies have shown that the introduction of artificial intelligence tools into the educational process is an important factor in developing students' language competencies, individualizing the learning process, and increasing the effectiveness of teaching. As a result of traditional teaching methods, all students are given the same content of tasks, which does not take into account their individual abilities and level of mastery. Artificial intelligence technologies, on the other hand, analyze the level of knowledge, interest, and learning pace of each student and offer customized educational resources. The results of the analysis revealed the effectiveness of artificial intelligence technologies in developing four main competencies of the English language. In developing listening comprehension competence, artificial intelligence-based audio platforms and speech recognition technologies allow students to listen to different accents and pronunciations, analyze the information heard, and quickly identify their own mistakes. This approach brings listening comprehension skills closer to real communicative situations.

Virtual interlocutors, artificial intelligence chatbots and voice communication systems are of particular importance in the development of speaking competence. These tools allow students to communicate unlimitedly, practice pronunciation and receive instant recommendations on grammatical and phonetic errors. As a result, students' oral fluency, vocabulary and communicative activity increase significantly.

In the development of reading competence, artificial intelligence allows automatic selection of texts of varying complexity, interpretation of the meaning of new words, creation of interactive questions on the content of the text and analysis of the student's level of understanding. This develops students' independent work skills and increases the efficiency of working with text.

The role of generative artificial intelligence tools is especially important in the development of writing competence. These tools allow students to identify grammatical and stylistic errors, improve the structure of the text, receive recommendations that meet the requirements of academic style, and gradually improve written work. However, the analysis has shown that high efficiency is achieved only when the use of artificial intelligence is organized not as a means of copying ready-made text, but as an auxiliary technology that develops writing competence. Therefore, strict adherence to the principles of teacher control and academic honesty is an important methodological requirement.

Based on theoretical analysis, a conceptual model of the methodology of teaching English based on artificial intelligence technologies was developed. This model consists of five interrelated structural components that ensure the continuity of the educational process. The first component is a target component, which is aimed at developing communicative competence, supporting independent learning, and forming students' digital competencies. The second component is a methodological component, in which communicative approach, competency-based education, project-based learning, problem-based learning and blended learning technologies are integrated with artificial intelligence tools.

The third component is a technological component. It includes generative artificial intelligence tools, virtual assistants, automated assessment systems, speech recognition programs, adaptive learning platforms and electronic learning resources. These tools allow analyzing the level of student mastery, formulating individual tasks and providing instant feedback.

The fourth component is the assessment component. At this stage, formative and summative assessment methods, electronic portfolios, self-assessment and peer assessment are combined with artificial intelligence tools. As a result, the dynamics of student development are regularly monitored and an individual development strategy is developed.

The fifth component is the outcome component, which involves the comprehensive development of listening, reading, writing and speaking competencies in students, the formation of digital literacy, the development of independent learning skills and the formation of communicative competence in accordance with international standards.

The analysis showed that the integration of artificial intelligence technologies into the educational process provides a number of pedagogical advantages. In particular, the possibilities of personalizing educational materials, adapting tasks to the student's level of knowledge, rapid and objective assessment, providing regular feedback, increasing learning motivation and supporting independent learning activities expand. At the same time, artificial intelligence tools save teachers' time, automate the assessment process, and organize lessons interactively.

However, some problems were also identified during the study. In particular, excessive use of artificial intelligence tools can negatively affect students' independent thinking, lead to excessive reliance on ready-made answers, and violate the principles of academic honesty. In addition, the uneven development of modern digital infrastructure in all educational institutions also creates certain limitations in the widespread introduction of these technologies. Therefore, when using artificial intelligence technologies, it is necessary to strictly adhere to the principles of pedagogical expediency, information security, personal data protection, and academic honesty.

In general, the analysis conducted showed that artificial intelligence technologies have the potential to bring the methodology of teaching English to a qualitatively new level. These technologies, as innovative tools that complement traditional pedagogical approaches, are of significant scientific and practical importance in the comprehensive development of students' language competencies, improving the quality of education, and forming a modern digital learning environment. Therefore, the systematic and scientifically based integration of artificial intelligence technologies into English language teaching methodologies can be considered one of the important directions of future educational reforms.

Table 1

A model of English language teaching methodology based on artificial intelligence technologies

<i>Methodical stage</i>	Purpose	Artificial intelligence technologies	Teacher's activities	Student activity	Expected result
1. Diagnostic stage	Determining the student's initial language level	Adaptive testing systems, AI diagnostic platforms	Conducts initial assessment and analyzes results	Performs diagnostic tests	The student's CEFR level and individual needs are determined
2. Planning the learning process	Developing an individual learning path	AI Learning Management Systems (LMS), adaptive platforms	Develops curriculum and adapts AI recommendations	Works according to a personal learning plan	A personalized learning environment is created

3. Developing language competencies	Develop listening, speaking, reading, and writing skills	ChatGPT, Grammarly, DeepL, Speech Recognition, AI chatbots	Provides interactive tasks and methodological guidance	Performs exercises using AI tools	Communicative competencies develop
4. Organization of independent learning	Developing students' independent learning skills	Generative AI, virtual tutors, mobile apps	Supervises and advises on independent assignments	Works independently with AI tools	Independent learning competence is formed
5. Formative assessment	Regular monitoring of the learning process	AI Feedback systems, automatic assessment platforms	Provides feedback and analyzes results	Analyzes and corrects his mistakes	Knowledge gaps are identified and filled.
6. Summative assessment	Final competency assessment	AI testing systems, electronic portfolio	Performs final evaluation	Completes final assignments	Language competence is assessed based on CEFR requirements
7. Reflection and improvement	Analyzing learning outcomes and defining development strategies	Learning Analytics, AI Dashboard, elektron portfolio	Develops a future development strategy	Analyzes their performance and sets new goals	Continuous professional and language competence development

The table describes the methodology of teaching English based on artificial intelligence technologies step by step. The model begins with the diagnostic stage, which involves determining the student's language level and individual needs. In the following stages, a personalized learning environment is created using artificial intelligence tools and the listening, speaking, reading and writing competencies are comprehensively developed. While the teacher acts as a methodological guide and facilitator, artificial intelligence tools provide individual recommendations, instant

feedback and automated assessment. At the final stage of the model, the dynamics of the student's development are analyzed based on reflection and learning analytics tools, and a further educational strategy is developed. The scientific novelty of this table is that it integrates artificial intelligence tools, teacher and student activities into a single methodological system. This allows increasing the effectiveness of English teaching, personalizing the learning process and implementing a modern competency-based approach into practice.

Conclusions and suggestions. The results of this study showed that artificial intelligence technologies are an important pedagogical tool in improving the methodology of teaching English. The theoretical analysis conducted confirmed that educational technologies based on artificial intelligence create broad opportunities for personalizing the learning process, adapting the educational content to the individual needs of students, comprehensively developing language competencies, and increasing the effectiveness of teaching. In particular, generative artificial intelligence tools, adaptive learning platforms, automated assessment systems, and virtual communication environments are proving to be effective methodological tools in developing students' listening comprehension, reading, writing, and speaking skills.

During the study, a conceptual model of integrating artificial intelligence technologies into the methodology of teaching English was developed. This model includes the stages of diagnostics, planning, competency development, organization of independent learning, evaluation, and reflection as a single methodological system. The main advantage of the model is that the teacher acts as a manager and methodological guide of the pedagogical process, while artificial intelligence acts as an innovative technology that supports the learning process, provides quick feedback and shapes an individual learning trajectory. This approach increases the flexibility of the educational process, stimulates independent learning activities of students, and serves to form modern communicative competencies.

At the same time, the study also showed the need to pay special attention to some methodological and organizational aspects in the use of artificial intelligence technologies. In particular, the use of artificial intelligence tools should not limit students' independent thinking and creativity, but rather support them. Compliance with the principles of academic honesty, critical and responsible use of the results created by artificial intelligence, and maintaining the teacher's methodological control are important conditions for the effective use of these technologies.

Based on the results of the study, it is appropriate to put forward the following scientific and practical proposals. First of all, it is necessary to include special modules focused on the use of artificial intelligence technologies in the curricula of English language subjects of higher education institutions. Such modules will serve to develop modern digital competencies of students, individualize the language learning process

and improve the quality of education. It is also advisable to regularly organize advanced training courses and practical seminars for professors and teachers on the effective use of artificial intelligence tools for pedagogical purposes.

In addition, it is recommended to develop methodological recommendations and ethical standards for the use of generative artificial intelligence tools in the educational process, combine automated assessment systems with traditional assessment methods, and increase the share of tasks that stimulate independent creative activity of students. Integration of e-learning platforms with artificial intelligence technologies, regular monitoring of the dynamics of student development through learning analytics tools will also serve to increase the effectiveness of education.

In future studies, it is advisable to evaluate the long-term impact of artificial intelligence technologies on English language competencies based on experimental studies, conduct a comparative analysis of the effectiveness of these technologies at different ages and educational stages, and study in depth the issues of adapting adaptive educational systems based on artificial intelligence to national educational conditions. In general, the scientifically based integration of artificial intelligence technologies into English language teaching methodologies is one of the important factors in improving the quality of education, developing students' language competencies at the level of international requirements, and forming a modern digital educational environment.

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