

DOI: 10.12731/2658-4034-2024-15-5SE-642  
UDC 378.1



Original article

## THE CURRENT STATE AND FUTURE PROSPECTS OF THE INTEGRATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN FOREIGN LANGUAGE INSTRUCTION AT UNIVERSITIES

*I.A. Semyonkina, T.A. Pavlova*

**Background.** *Artificial intelligence (AI) technologies hold significant promise for revolutionizing foreign language teaching methods. Current AI tools enable teachers to customize learning experiences, adapting materials and techniques to meet each learner's specific needs. By incorporating dynamic assessment into learning management systems, student progress is continually monitored, allowing educators to promptly adjust their teaching strategies. Immersive technologies, like virtual and augmented reality, offer interactive language environments where students can engage in real-life scenarios to practice their language skills. Speech synthesis technologies allow teachers to convert written text into spoken language, which improves students' pronunciation and speaking skills.*

**The purpose** of the study is to examine the use of AI tools in teaching foreign languages at Russian universities and future trends in this area.

**Materials and methods.** *The authors analyzed current domestic and international scientific works on the integration of AI tools in foreign language education and conducted a study on the perception and evaluation of the aforementioned technology within the Russian teaching community.*

**Results.** *A survey of 104 teachers showed the staff interest in mastering new technologies and their readiness to develop professional skills for the successful use of AI in the educational process. The study analyzes the current state of the field, identifies potential risks and discusses*

*development prospects. The impact of AI on foreign language education tends to grow in the nearest future, opening up new opportunities for more effective and accessible learning.*

**Keywords:** *artificial intelligence technologies; foreign language education; university teacher; artificial intelligence tools; teacher professional development*

**For citation.** *Semyonkina I.A., Pavlova T.A. The Current State and Future Prospects of the Integration of Artificial Intelligence Technologies in Foreign Language Instruction at Universities. Russian Journal of Education and Psychology, 2024, vol. 15, no. 5SE, pp. 219-242. DOI: 10.12731/2658-4034-2024-15-5SE-642*

Научная статья

## **СОВРЕМЕННОЕ СОСТОЯНИЕ И ПЕРСПЕКТИВЫ ВНЕДРЕНИЯ ТЕХНОЛОГИЙ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ПРЕПОДАВАНИЕ ИНОСТРАННОГО ЯЗЫКА В ВУЗАХ**

*И.А. Семёнкина, Т.А. Павлова*

**Обоснование.** *Дидактический потенциал ИИ в сфере иноязычного преподавания остается недостаточно изученным и вызывает повышенный интерес в профессиональной среде в последние годы. Современные инструменты ИИ позволяют преподавателям настраивать учебный процесс, адаптируя материалы и методики под индивидуальные потребности каждого обучающегося. Динамическое оценивание, интегрированное в системы управления обучением, имеют возможность постоянно отслеживать прогресс обучающихся, что помогает преподавателям оперативно реагировать на изменения и корректировать стратегии обучения. Иммерсивные технологии, такие как виртуальная и дополненная реальность, создают живую и интерактивную языковую среду, в которую студенты могут погрузиться, чтобы практиковать язык*

*в реальных жизненных ситуациях. Технологии синтеза речи позволяют преподавателям преобразовывать письменный текст в устную речь, что улучшает произношение и разговорные навыки учащихся.*

**Цель исследования** – изучить использование инструментов искусственного интеллекта при преподавании иностранных языков в российских вузах и будущие тенденции в этой области.

**Материалы и методы.** Авторы проанализировали актуальные отечественные и зарубежные научные работы об интеграции инструментов ИИ в сферу иноязычного образования, провели исследование восприятия и оценок вышеуказанной технологии в российском преподавательском сообществе.

**Результаты.** Опрос 104 преподавателей российских вузов показал заинтересованность педагогов в освоении новых технологий и готовность развивать профессиональные навыки для успешного использования ИИ в образовательном процессе. В исследовании авторы анализируют текущее состояние данной сферы образовательных технологий, выявляют потенциальные риски и обсуждают перспективы развития. Наблюдается тенденция усиления влияния технологий ИИ на развитие инновационных подходов к обучению иностранным языкам в ближайшем будущем, которая может способствовать развитию более эффективного и доступного образования.

**Ключевые слова:** технологии искусственного интеллекта; иноязычное образование; преподаватель вуза; инструменты искусственного интеллекта; профессиональное развитие преподавателя

**Для цитирования.** Семёнкина И.А., Павлова Т.А. Современное состояние и перспективы внедрения технологий искусственного интеллекта в преподавание иностранного языка в вузах // *Russian Journal of Education and Psychology*. 2024. Т. 15, № 5SE. С. 219-242. DOI: 10.12731/2658-4034-2024-15-5SE-642

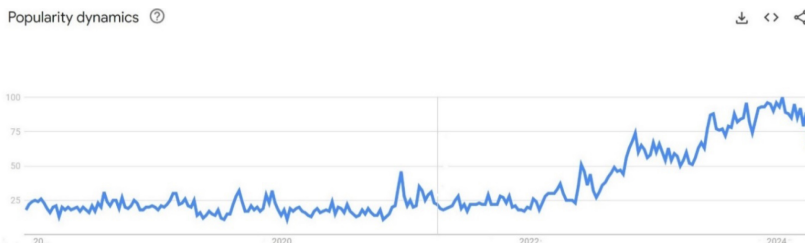
## **Introduction**

In recent decades, digital technologies have become a central subject of research in foreign language education and an essential component

of university teaching practices. The notorious COVID-19 pandemic has caused many to reconsider the value of information technology in the classroom. Approaches and solutions tested during the pandemic showed new prospects, opportunities and potential of distant (online) and blended formats, as well as their relevance in emergency situations [9]. Since the pandemic, university teachers have been faced with the need to actively develop various aspects of digital competence, including 1) information and media competence; 2) communicative competence 3) technical competence and 4) consumer competence [17; 5; 8]. Consequently, university teachers have gained confidence and proficiency in using digital technologies, continuously mastering and incorporating specific tools into teaching practices.

The breakthrough development of artificial intelligence (AI) technologies after the pandemic crisis, which unexpectedly spurred digitalization, created a new wave of upheaval in the educational sector. Today we witness the cumulative effect of these two powerful phenomena. The pandemic has forced educational institutions and teachers to seek innovative approaches to teaching, and the development of AI technologies has provided a wide range of tools to optimize and improve the learning process.

Figure 1 provides an analysis of the popularity of artificial intelligence-related queries in Russia within the scientific field over the past five years [3]. The graph illustrates the trend of interest in the topic, covering the period from May 2019 to May 2024. The values on the graph fluctuate, but the general trend indicates a stable increase in interest in artificial intelligence, especially noticeable from March 2023.



**Fig. 1.** Trends of interest in artificial intelligence (Google Trends)

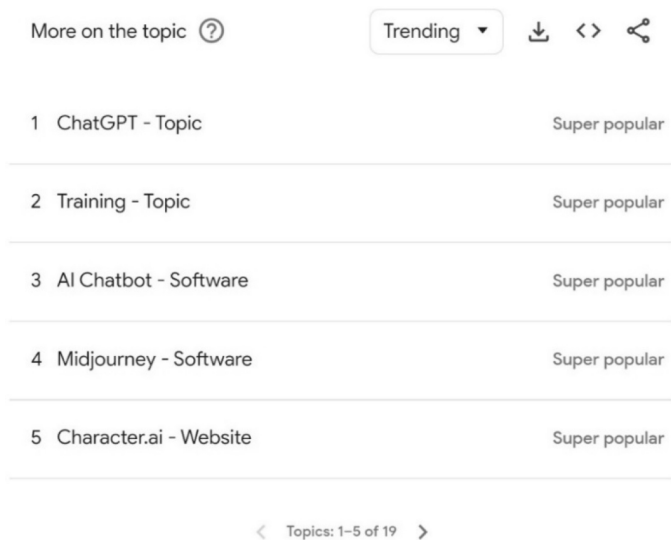


Fig. 2. Popularity by subtopics (Google Trends)

Figure 2 also contains information on the popularity by subtopics and related queries. The trends include topics such as ChatGPT, Education, Bing, Master, and artificial, as well as queries including gpt, chatgpt, chat gpt, chat gpt, and neural network photo, which are gaining super-popularity [2]. This indicates an increasing interest in artificial intelligence and related technologies in Russia, particularly in recent years. This trend is likely linked to the advancement of these technologies and their incorporation into various scientific and educational fields.

Artificial intelligence is defined as the technology that allows computers and digital devices to learn, read, write, create and analyze [14; 21].

Researchers and teachers express a wide range of opinions - from the euphoria of techno-optimists who view the integration of AI as a new era in foreign language education, to pessimists and skeptics who are concerned about various risks, including the expulsion of the teacher from the educational process [18; 16].

Thus, A. Bayzarov notes, “The reaction of the education system to AI - as well as to distance learning - has evolved from complete rejection

(and even attempts to create super anti-plagiarism) to the awareness of critical significance of skills in working with AI for future graduates and, it seems, a belief that AI can open up new opportunities in education [4].”

T.K.F. Chiu in his work emphasizes the importance of AI tools for the future of learners: “To stay competitive, learners need to acquire AI knowledge and skills to live and work in an AI-infused society [12].”

N.S. Garkusha, Yu.S. Gorodova highlight the role of AI tools in optimizing the educational process for all its participants: “The use of AI, in particular the ChatGPT neural network, can improve the quality of the educational process, solve the problem of variability of materials, and become an effective assistant for both students, and for teachers [2].

N.A. Shobonov et al. stress the potential of AI tools for personalizing learning: “AI or machine learning is currently actively used in education, from conducting and checking exams to automatically selecting material for students in areas where they experience difficulties in training, inviting the student to more consciously delve into the topic, increase the level of knowledge and abilities, analyzing the student’s progress and productivity, adjust his training plan under the constant and loyal control of the “senseless” machine [6].”

M.V. Avershina suggests that the role of the teacher in interaction with students will change with the integration of AI tools: “When AI takes on the task of automating template processes, the teacher has more time for creativity and social skills, which invariably leads to an increase in the quality of learning. Consequently, the teacher no longer just transfers knowledge to the student, but provides emotional support and guides him in the right direction [1].

Many researchers are more cautious with their statements regarding the success of AI for educational purposes. For instance, M. Yeo expresses concern about authorship and academic integrity, while noting that it will be difficult, even impossible, to put the genie back in the bottle [25; 26].

It is important to pay attention to the fact that in the last year the discussion about the role of AI in education has been shifting away from assessment issues, etc. on the prospects and trends of its application in the educational process [10; 11; 13; 14].

The fact remains, that by the summer of 2023, 35 of the world's 50 leading universities had introduced guidelines for working with AI - one of the first attempts not to ban, but to define formats and boundaries of using it [22; 20; 23].

### **Problem statement**

In the present study, the authors examine the functionality and key characteristics of AI tools that can be used today in the field of foreign languages instruction, along with the application of these tools in the arsenal of current foreign language teachers at Russian universities, and the teaching community's ideas and perceptions about the present and future of AI in education.

### **Research questions**

The following research questions guided our study:

What is the current state of application of AI tools in the field of teaching foreign languages in Russian universities?

What are the risks, trends and prospects for the use of AI in the field of teaching foreign languages in Russian universities?

### **Purpose of the study**

The article describes the artificial intelligence (AI) tools that are now being utilized in language instruction and how teachers at Russian institutions are using them to teach foreign languages. It also looks at the chances and difficulties brought forth by this technology's quick development.

### **Research methods**

A range of general scientific techniques were employed to address the research questions: a survey method for teachers to find out how they felt about AI in foreign language instruction; theoretical analysis aimed at examining the corpus of literature representing various characteristics of AI tools and services integrated into university education, as well as contemporary approaches to AI application for teaching foreign languages.

## Findings

In foreign language education, Artificial Intelligence (AI) technology stands out as the most recent complex of methodologies, garnering significant attention today. Artificial Intelligence (AI) technology in foreign language instruction implies implementation of computer systems and algorithms that approximate human intelligence to optimize the process of foreign languages acquisition.

The number of digital AI services for education currently amounts to hundreds. There exist various approaches to classifying AI services and analyzing their applicability. In the work “Artificial Intelligence and Education” (2023) a classification of services based on the stages of the teacher’s user path is proposed:

1. Data analysis and course development.
2. Preparation and conduct of classes.
3. Preparation and organization of extracurricular activities.
4. Assessment (ongoing and final for the course).
5. Course results analysis and reporting [2].

In the field of linguodidactics, the following AI tools can be highlighted, allowing for a qualitative transformation of the process of language education.

This table provides an overview of AI tools used in the educational sphere for teaching foreign languages. With the advancement of AI technologies, the approaches to foreign language education received a powerful impetus as teachers and learners started enthusiastically experimenting with an impressive range of innovative tools and resources.

This table presents some of the most promising and popular AI tools actively used to enhance the effectiveness and efficiency of language learning. Each tool is described with its main functions, capabilities, and applications in the educational context. This overview will assist educators and education professionals in selecting suitable tools for their instructional goals and needs, as well as better understanding the current landscape of AI technology usage in language education.



Table 1.

**AI Tools for Language Teaching**

Tool Type	Functionality	How to Apply	Examples, Comments
<b>Text-to-Speech (TTS) Tools</b>	Written texts are converted into natural-sounding audio, which teachers can use for developing original audio content for language learners of all levels	Various engaging listening materials are created (stories, dialogues news articles), which can help students improve their listening skills and pronunciation	Google Text-to-Speech, Resemble AI, Murf AI Synthesys
<b>Chatbots for Language Practice</b>	To engage in conversations with users, providing responses and feedback based on their input	Chatbots can provide immediate feedback and corrections, which can be valuable for learners' language development	ChatGPT, Duolingo, and Replika
<b>Video Captioning and Subtitling Tools</b>	NLP technologies that underly the tools allow to create visual support for learners (captions or subtitles) which is particularly conducive for students with hearing and/or vision disturbances	Teachers can use videos accompanied by visual support for practicing listening and vocabulary building	YouTube
<b>Speech Evaluation and Feedback Tools</b>	Students' pronunciation, including intonation, accuracy and fluency can be analyzed in detail to help teachers identify problem areas	Teachers can personalize their feedback, determine priorities and provide focused pronunciation practice for individual students	ELSA Speak, Pronunciation Power, and SpeechAce
<b>Grammar and vocabulary checkers,</b>	Written texts are analyzed in terms of grammar, punctuation, spelling, choice of lexical items and style; feedback is provided on various error types	Teachers can provide comprehensive feedback on written assignments, utilize the tools for grading and editing works	Grammarly, ProWritingAid, and Ginger
<b>Language Translation Tools</b>	The tools provide automatic translation from one language to other ones	The tools are essential to overcome language barriers; they are particularly valuable in multilingual classrooms to explain complicated, specialized vocabulary, nuances of meanings	Google Translate, DeepL, and Microsoft Translator

<b>Speech-to-Text (STT) Tools</b>	The tools use AI to convert spoken language into written text	Vocabulary and grammar exercises, listening comprehension tasks, and speaking practice	Google Cloud Speech-to-Text, Microsoft Azure Speech to Text, and IBM Watson Speech to Text
<b>Adaptive Learning Platforms</b>	The platforms use data-driven algorithms to analyze learners' performance and provide personalized feedback to meet their specific needs	The platforms provide individualized learning paths for students, considering their strong and weak sides, and enabling to achieve higher language level at their own speed. Teachers can track and monitor the students' progress and make informed decisions to adapt their strategies	Babbel, Rosetta Stone, and Duolingo
<b>Virtual Reality (VR) for Immersive Language Learning</b>	The tools offer unique language learning experience reproduced in virtual reality	Teachers can utilize the tools to simulate situations where students fully interact in the target language and simultaneously raise their cultural awareness	MondlyVR, VRChat, and ImmerseMe
<b>Content Creation Tools for Audio and Video</b>	High-quality, fresh, creative content can be produced for specific classes, levels etc.	Original video and audio content, with customized activities, exercises, materials to meet the students' needs can be produced using texts	Synthesia, Lumen5, and Content Samurai Podcastle, Descript, and Audiodburst

In Table 1, various types of tools used in the educational process for teaching foreign languages are presented:

1. Text-to-Speech (TTS) Conversion Tools include Google Text-to-Speech, Resemble AI, and Murf AI. They convert written text into spoken speech, assisting in creating audio content to enhance listening and pronunciation skills.

2. Language Practice Chatbots may be regarded as inexhaustible artificial conversational agents, which give students the opportunity to engage in close to reality conversations. For example, ChatGPT, Replica and

Duolingo provide responses and feedback based on user queries, offering immediate feedback and corrections, beneficial for speech development.

3. Video Subtitling and Captioning Tools provide the capability to understand foreign language content by displaying text on screen, which is critical for students relying on visual support.

4. Speech Assessment and Feedback Tools are designed to assess and analyze students' pronunciation skills, along with offering personalized feedback to improve their speaking skills, e.g. Speechace, ELSA Speak, Pronunciation Power.

5. A variety of paraphrasing tools, grammar and vocabulary checking programs have become irreplaceable assistants for both students and language teachers as their broad functionality covers self-editing, assessment, feedback on written assignments (e.g. Grammarly, ProWritingAid, Ginger).

6. Machine Translation Tools have revolutionized the process of translation and won recognition from a wide academic audience as an available resource for language teaching and learning. Google Translate, DeepL, Microsoft Translator and other tools, which automatically translate texts from one language to another, help teachers produce bilingual materials, present complicated vocabulary, etc.

7. Speech-to-Text (STT) Conversion tools can be used to record and subsequently analyze students' oral speech. IBM Watson Speech to Text, Google Cloud Speech-to-Text, Microsoft Azure Speech to Text offer a wide variety of educational tasks and activities, such as speaking practice, listening comprehension tasks, vocabulary building, grammar exercises.

8. Adaptive Learning Platforms (ALP) offer personalized courses (materials and tasks) that are customized to the requirements and proficiency levels of individual students. On the basis of data-driven algorithms, ALPs (e.g. Duolingo, Rosetta Stone, Babbel) analyze students' progress to deliver tailored recommendations or ultimately individual learning pathways and allow teachers to monitor the performance and modify their approaches.

9. Virtual Reality (VR) tools simulate authentic foreign language environments (e.g. ImmerseMe, VRChat, MondlyVR). Students, immersed

in the close to reality situations, improve their language skills and raise cultural awareness at the same time.

10. Language teachers and students use Content Creation Tools for Audio and Video to produce their own educational materials in the audio and video formats.

The present study conducted an investigation into the perceptions and evaluations of the teaching community (foreign language instructors from several Russian universities) regarding AI technologies in foreign language teaching, considering issues, positive and negative aspects for the educational process, preferences in AI tools, the prospects of their usage, etc.

A total of 104 foreign language respondents (17 males, 86 females) from universities in various regions of the Russian Federation participated in the survey: Moscow (RSUH and Moscow Polytech), Sevastopol (Sevastopol State University and the branch of Lomonosov Moscow State University), and Donetsk People’s Republic (Donetsk State Pedagogical University). The survey consisted of 19 questions, including closed-ended Likert’s scale questions, dichotomous questions, semi-closed, and open-ended questions, conducted anonymously using Google Forms.

Table 2.

**Survey Questions**

№	
1	How old are you?
2	How many years of teaching experience do you have?
3	What year of students do you teach?
4	How familiar are you with the technology of «Artificial intelligence in education»?
5	How often do you integrate technology in educational institutions?
6	Have you used tools in the educational process that include artificial intelligence?
7	Have you noticed that your students use artificial intelligence tools for learning?
8	Have you noticed that your students use artificial intelligence tools not only for university classes?
9	Are you aware of any potential risks arising from your students’ use of artificial intelligence tools in general (not necessarily in the educational process)?
10	Are artificial intelligence systems used for addressing administrative tasks (student registration, grading, attendance, etc.) by your university?
11	What do you believe will be the future impact of artificial intelligence on education?

12	Which of the following do you think will be the main advantages of artificial intelligence's future influence on education?
13	What negative consequences do you think artificial intelligence will have on education in the future?
14	What are the main concerns that artificial intelligence technologies used by students – not just those in the education sector – may bring up in the future?
15	Would you be interested in receiving further (methodological) recommendations to deepen your knowledge and enhance your skills in using artificial intelligence tools in education?
16	How can we train more effectively educators to work with artificial intelligence systems?
17	What artificial intelligence (AI) tools do you use in your work?
18	Which AI tools do you consider most promising for the future?
19	What advice would you give to developers of artificial intelligence tools to improve their effectiveness in teaching foreign languages?

The majority of survey participants had teaching experience ranging from 11 to 20 years (39.4%), with nearly a third consisting of individuals with experience ranging from 5 to 10 years (28.8%) and 1 to 4 years (approximately 21.2%). Experience exceeding 21 to 30 years was significantly less common among participants (approximately 6.7%), while experience exceeding 31 years was the least prevalent (approximately 3.8%).

The questions were divided into two blocks: about the current situation regarding AI usage in education and about its future.

**Questions about artificial intelligence in education:**

The survey revealed that most respondents (approximately 58.7%) consider themselves to be beginners in using artificial intelligence in education. Approximately 41.3% of participants are confident in their ability to handle basic tasks in this field.

Nearly a third of survey participants (28.2%) indicated that they use technology in the educational process to a minimal extent (rated 1).

An equal number of participants (22.3%) rated their activity in using technology as moderate (rated 2) or claimed to often use technology in the educational process (rated 3).

Nearly every fifth educator (19.4%) stated that they very often use technology in their professional activities (rated 4).

Only 7.8% of survey participants stated that they do not use technology in the educational process (rated 0).

A significant portion of teachers (approximately 43.3%) reported using tools incorporating artificial intelligence in the educational process.

Approximately 34.6% of survey participants stated that they had not used such tools.

Approximately 22.1% of participants responded that they were unsure whether they had used artificial intelligence tools in their educational practice.

The majority of respondents (approximately 54.8%) noted that their students use artificial intelligence tools for learning.

Approximately 12.5% of respondents stated that they had not noticed their students using such artificial intelligence tools.

Around 32.7% of respondents declared that they were unsure whether their students used artificial intelligence tools for learning.

The majority of survey participants (approximately 54%) are aware of the potential risks associated with students using artificial intelligence tools. Additionally, a significant portion of participants (approximately 32%) are unsure about the existence of such risks, and only a small fraction (approximately 14%) claim to be unaware of such risks.

More than a third of survey participants (approximately 43.3%) lack information about whether their university uses artificial intelligence systems to solve administrative tasks. Approximately 44.2% responded affirmatively, while 12.5% responded negatively. Thus, it can be said that the use of artificial intelligence in administrative tasks in universities is common but still not comprehensive.

### **Questions about the future of artificial intelligence in education:**

On average, survey participants rated the impact of artificial intelligence on the educational process as “strong” or “very strong.” The average rating of the impact of artificial intelligence was  $\approx 2.95$  ( $4 = \text{max}$ ). This result indicates that many teachers see the potential for significant changes in the educational process in the future due to artificial intelligence.

The survey analysis regarding the positive aspects of the AI impact on the educational process in the future has indicated several major trends:

1) Personalization of learning – the majority of respondents point out the capability for providing a personalized learning experience for students, i.e. artificial intelligence can adjust educational materials and methods to the individual needs of each learner.

2) Critical support to teachers – many participants also emphasize that artificial intelligence can assist teachers in various aspects of their work, including lesson development, student interaction, administrative tasks, etc.

3) Early diagnosis of learning difficulties – respondents highlight the potential use of artificial intelligence for early diagnosis of learning difficulties.

4) Facilitating learning for vulnerable student groups – some responses also note that artificial intelligence can facilitate learning for vulnerable student groups, likely by adapting educational materials and methods to their needs.

Thus, the main positive aspects of the AI impact on the educational process in the future include personalized learning, assistance to teachers, early diagnosis of learning difficulties, and facilitating learning for vulnerable student groups.

Analysis of responses regarding the most important negative aspects of the AI of impact on the educational process in the future revealed the following:

64.4% of respondents believe that AI tools could hinder the development of students' thinking, especially their critical thinking.

52.9% of surveyed educators believe that the use of AI tools could lead to an increase in the prevalence of plagiarism.

27.9% of respondents are concerned about the possibility of new forms of inequality or discrimination, or the exacerbation of existing forms.

22.1% of respondents express concerns about the potential undermining of the role of the educator.

Among the most significant potential issues associated with students' use of artificial intelligence technologies, educators selected the following: inability to develop critical thinking (44.2%); lack of social interactions and opportunities for emotional engagement of students (41.3%);

potential impact on students of unreliable or harmful content (31.7%); exploitation of personal content using AI tools (29.8%); risk of insufficient protection of students' personal data (27.9%).

Analysis of responses to the question about educators' desire to receive additional (methodological) recommendations for deepening their knowledge and improving skills in using artificial intelligence tools in education showed a significant interest among educators in self-improvement: approximately 70% of the total respondents gave an affirmative answer.

Among the most effective ways of organizing learning, respondents highlighted the following: specialized online courses (e.g., MOOCs): This option was chosen by the highest number of respondents (47.6%); training seminars/workshops (43.7%); relevant educational materials (textbooks and other instructional materials) (33%). Higher education was chosen by only 13% of respondents.

Among the artificial intelligence (AI) tools used in their work, the following most frequently mentioned tools can be distinguished:

- Language translation tools (41.2%)
- Grammar and vocabulary checking programs (40.2%)
- Speech-to-text (STT) conversion tools (31.4%)
- Content creation tools for audio, video, texts, and other materials (27.5%)
- Video captioning tools (27.5%)
- Text-to-speech (TTS) conversion tools (23.5%)
- Adaptive learning platforms (20.6%)
- Virtual reality (VR) for immersive language learning (19.6%)
- Chatbots for language practice (19.6%)
- Speech assessment and feedback tools (16.7%)

The analysis of responses regarding prospective AI tools for teaching foreign languages revealed the following:

- Grammar and vocabulary checking programs (39.8%)
- Chatbots for language practice (38.8%)
- Speech assessment and feedback tools (35.9%)
- Language translation tools (35%)
- Content creation tools for audio, video, texts, and other materials (33%)



- Adaptive learning platforms (32%)
- Virtual reality (VR) for immersive language learning (31.1%)
- Speech-to-text (STT) conversion tools (30.1%)
- Video captioning tools (29.1%)
- Text-to-speech (TTS) conversion tools (21.4%)

A survey question on the teachers' recommendations to of AI services developers for teaching was open and the answers could be described as extremely varied. Below are the most interesting pieces from the writers' perspective:

*Table 3.*

**Teachers' Recommendations to AI Developers**

1	Don't develop further, stop now
2	Don't waste your time. Foreign languages are not an area where AI is really needed. To successfully learn a foreign language, you need a partner- that is teacher with life experience, and your desire to learn
3	Interactivity and Engagement: Create interactive exercises, games, and activities that keep users interested and engaged in the learning process. This may include tasks using voice control or virtual reality
4	Progress Monitoring: Giving users the ability to track their progress and achievements can be very motivating. Develop a progress tracking system where users can see their results and improvements over time
5	Use adaptive learning: Using artificial intelligence technologies such as machine learning allows you to create adaptive learning systems. This means that the tool will automatically adapt to each user's level and progress and suggest the most appropriate tasks and materials
6	Train teachers to skillfully use AI to make teaching practices more efficient and transfer some of their functions to the computer, freeing up their time to perform more intellectual and creative tasks
7	Improve speech recognition. Provide accurate and reliable speech recognition in real time. This will help users pronounce words and phrases correctly and also evaluate their pronunciation skills
8	Opportunity to communicate with native speakers: Integrate the ability to communicate with native speakers through chatbots or video chats. This will help users put their knowledge into practice and improve their speaking skills

Teachers' concepts and ideas about AI services in education determine what approaches and methods teachers will choose to interact with learners in the modern classroom; and eventually shape the quality and level of higher education in our country.

## Conclusion

1. The integration of AI technology into the field of foreign language education is already profoundly transforming the landscape of university language education. A gradual transition from desperate attempts to prohibit or reject AI services to the careful analysis of the potential and understanding the need for their absorbing it by teachers has been noticed recently by the researchers.

2. University instructors of foreign languages master and, in many ways, intuitively try to implement a variety of AI tools, because they provide enormous opportunities and benefits for learners, while reducing the teachers workload (e.g. prompt, detailed feedback that helps students improve language skills; personalization of learning, the ability to apply acquired knowledge in a real-life context; immersiveness, addressing the problem of limited human resources (lack of qualified teachers), access to high-quality authentic materials, etc.).

3. Due to the risks involved in using AI, it is necessary to find the best possible balance between human and AI tools when teaching foreign languages. This balance must include addressing plagiarism concerns and making sure the security of personal information, impartial evaluation of students' performance, and academic integrity.

4. In the end, it's possible that teaching foreign languages via the combination of AI services and a qualified teacher will have a bright future.

5. More research using experimental studies need to be done to thoroughly analyze the teaching potential and clearly prove the effectiveness of AI tools in foreign language teaching.

## References

1. Avershina M.V. Artificial intelligence in modern education. *Akademicheskaja publitsistika* [Academic Journalism], 2021, no. 5. pp. 483-488.
2. Garkusha N.S., Gorodova Yu.S. Pedagogical opportunities of ChatGPT for the development of cognitive activity of students. *Professionalnoe obrazovanie i rynek truda* [Professional Education and Labor Market], 2023, vol. 11, no. 1. pp. 6-23. <https://doi.org/10.52944/PORT.2023.52.1.001>.

3. *Dynamics of popularity of the query “Artificial Intelligence”*. URL: <https://trends.google.com/trends/explore?cat=174&date=today%205-y&geo=RU&q=%2Fm%2F0mkz&hl=ru> (accessed July 12, 2024).
4. *Artificial intelligence in education*. URL: <https://method.gsom.spbu.ru/ai-in-education> (accessed May 27, 2024)
5. Semyonkina I.A., Pavlova T. A. The future of higher education formats from the perspective of the teaching community. *Nauchno-pedagogicheskoe obozrenie* [Scientific and Pedagogical Review], 2022, no. 4(44). pp. 91-106. <https://doi.org/10.23951/2307-6127-2022-4-91-106>. EDN INMIYM.
6. Shobonov N.A., Bulaeva M.N., Zinovyeva S.A. Artificial intelligence in education. *Problemy sovremennogo pedagogicheskogo obrazovaniya* [Problems of Modern Pedagogical Education], 2023, no. 79 (4). pp. 288-290.
7. *Artificial Intelligence and Education: A Brief Overview of Current Developments*. URL: <https://method.gsom.spbu.ru/white-book-ai#rec721568900> (accessed May 27, 2024)
8. Baum S. Online Education Live Up to Its Promise? A Look at The Evidence. *Urban Institute*. URL: <https://www.urban.org/research/publication/does-online-education-live-its-promise-look-evidence> (accessed May 27, 2024)
9. Beetham H., & Sharpe R. (eds.) *Rethinking pedagogy for a digital age: Principles and practices of design*. Routledge. New York, 2019, 316 p.
10. Blackwell C.K., Lauricella A.R., Wartella E., Robb M., & Schomburg R. Adoption and use of technology in early education: The interplay of extrinsic barriers and teacher attitudes. *Computers & Education*, 2013, vol. 69, pp. 310-319. <https://psycnet.apa.org/doi/10.1016/j.compedu.2013.07.024>
11. Cheung A.C.K., & Slavin R.E. The effectiveness of educational technology applications for enhancing mathematics achievement in K-12 classrooms: A meta-analysis. *Educational Research Review*, 2013, vol. 9, pp. 88-113. <https://doi.org/10.1016/j.edurev.2013.01.001>
12. Chiu T.K.F., Meng H., Chai C.S., King I., Wong S., & Yeung Y. Creation and evaluation of a pre-tertiary Artificial Intelligence (AI) curriculum.

- IEEE Transactions on Education*, 2022, vol. 65, no. 1, pp. 30-39. <https://doi.org/10.1109/TE.2021.3085878>
13. *European Digital Competence Framework for Educators*. URL: [https://joint-research-centre.ec.europa.eu/digcompedu\\_en](https://joint-research-centre.ec.europa.eu/digcompedu_en) (accessed July 07, 2024)
  14. Hockly N. Artificial Intelligence in English Language Teaching: The Good, the Bad and the Ugly. *RELC Journal*, 2023, vol. 54, no. 2, pp. 445-451. <https://doi.org/10.1177/00336882231168504>
  15. IBM (n.d.). What is artificial intelligence (AI)? URL: <https://www.ibm.com/topics/artificial-intelligence> (accessed July 07, 2024)
  16. Jones J. (n.d.). Online education. *Gallup News*. URL: <https://news.gallup.com/poll/165434/online-education.aspx> (accessed July 07, 2024)
  17. Gudmundsdottir G.B., & Hatlevik O.E. Newly qualified teachers' professional digital competence: Implications for teacher education. *European Journal of Teacher Education*, 2018, vol. 41, no. 2, pp. 214-231. <https://doi.org/10.1080/02619768.2017.1416085>
  18. Kaplan-Rakowski R., Grotewold K., Hartwick P., & Papin K. Generative AI and teachers' perspectives on its implementation in education. *Journal of Interactive Learning Research*, 2023, vol. 34, no. 2, pp. 313-338. <https://www.learntechlib.org/primary/p/222363/>
  19. King, M.R., chatGPT. A Conversation on artificial intelligence, chatbots, and plagiarism in higher education. *Cellular and Molecular Bioengineering*, 2023, vol. 16(1), pp. 1-2. <https://doi.org/10.1007/s12195-022-00754-8>
  20. Makeleni S., Mutongoza B.H., & Linake M.A. Language education and artificial intelligence: An exploration of challenges confronting academics in global South universities. *Journal of Culture and Values*, 2023, vol. 6, no. 2, pp. 158-171. <https://doi.org/10.46303/jcve.2023.14>
  21. Mishra P., & Koehler M.J. Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 2016, vol. 108, no. 6, pp. 1017-1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
  22. Moorhouse L.B., Yoe M., Wan Y. Generative AI tools and assessment: A guide for leading universities. *Computers and Education Open*, 2023, vol. 5(2). <https://doi.org/10.1016/j.caeo.2023.100151>

23. Smalley S. (n.d.). Rhetorical War Over Online Versus In-Person Instruction. *Inside Higher ED*. URL: <https://www.insidehighered.com/news/2022/01/06/northeastern-chancellor-person-ed-gold-standard> (accessed July 07, 2024).
24. Yalçın-Incik E., & Incik T. Generation Z students' views on technology in education: What they want what they get. Malaysian Online. *Journal of Educational Technology*, 2022, vol. 10, no. 2, pp. 109-124. <https://doi.org/10.52380/mojet.2022.10.2.275>
25. Yeo M. Academic integrity in the age of artificial intelligence (AI) authoring apps. *TESOL Journal*, 2023, vol. 14, no. 3, pp. 709-710. <https://doi.org/10.1002/tesj.716>
26. Huang H. L., Hwang G. J., Chang C. Y. Learning to be a writer: A spherical video-based virtual reality approach to supporting descriptive article writing in high school Chinese courses. *British Journal of Educational Technology*, 2020, vol. 51, no. 4, pp. 1386-1405. <https://doi.org/10.1111/bjet.12893>

### **Список литературы**

1. Авершина М.В. Искусственный интеллект в современном образовании // Академическая публицистика. 2021. № 5. С. 483-488.
2. Гаркуша Н.С., Городова Ю.С. Педагогические возможности ChatGPT для развития когнитивной активности студентов // Профессиональное образование и рынок труда. 2023. Т. 11. № 1. С. 6-23. <https://doi.org/10.52944/PORT.2023.52.1.001>
3. Динамика популярности запроса «Искусственный интеллект». URL: <https://trends.google.com/trends/explore?cat=174&date=today%205-y&geo=RU&q=%2Fm%2F0mkz&hl=ru> (дата обращения: 12.07.2024).
4. Искусственный интеллект в образовании. URL: <https://method.gsom.spbu.ru/ai-in-education> (дата обращения: 27.05.2024)
5. Семёнкина И.А., Павлова Т.А. Будущее форматов высшего образования с позиций преподавательского сообщества // Научно-педагогическое обозрение. 2022. № 4(44). С. 91-106. <https://doi.org/10.23951/2307-6127-2022-4-91-106>
6. Шобонов Н.А., Булаева М.Н., Зиновьева С.А. Искусственный интеллект в образовании // Проблемы современного педагогического образования. 2023. № 79(4). С. 288-290.

7. Artificial Intelligence and Education: A Brief Overview of Current Developments. URL: <https://method.gsom.spbu.ru/white-book-ai/#rec721568900> (дата обращения: 12.07.2024).
8. Baum S. Does Online Education Live Up to Its Promise? A Look at The Evidence. Urban Institute. URL: <https://www.urban.org/research/publication/does-online-education-live-its-promise-look-evidence> (дата обращения: 12.04.2024).
9. Beetham H., & Sharpe R. (eds.) Rethinking pedagogy for a digital age: Principles and practices of design. Routledge. New York. 2019, 316 p.
10. Blackwell C.K., Lauricella A.R., Wartella E., Robb M., & Schomburg R. Adoption and use of technology in early education: The interplay of extrinsic barriers and teacher attitudes // *Computers & Education*, 2013, vol. 69, pp. 310-319. <https://psycnet.apa.org/doi/10.1016/j.compedu.2013.07.024>
11. Cheung A.C.K., & Slavin R.E. The effectiveness of educational technology applications for enhancing mathematics achievement in K-12 classrooms: A meta-analysis // *Educational Research Review*, 2013, vol. 9, pp. 88-113. <https://doi.org/10.1016/j.edurev.2013.01.001>
12. Chiu T.K.F., Meng H., Chai C.S., King I., Wong S., & Yeung Y. Creation and evaluation of a pre-tertiary Artificial Intelligence (AI) curriculum // *IEEE Transactions on Education*, 2022, vol. 65, no. 1, pp. 30-39. <https://doi.org/10.1109/TE.2021.3085878>
13. European Digital Competence Framework for Educators. URL: [https://joint-research-centre.ec.europa.eu/digcompedu\\_en](https://joint-research-centre.ec.europa.eu/digcompedu_en) (дата обращения: 12.07.2024).
14. Hockly N. Artificial Intelligence in English Language Teaching: The Good, the Bad and the Ugly // *RELC Journal*, 2023, vol. 54, no. 2, pp. 445-451. <https://doi.org/10.1177/00336882231168504>
15. IBM (n.d.). What is artificial intelligence (AI)? URL: <https://www.ibm.com/topics/artificial-intelligence> (дата обращения: 12.07.2024).
16. Jones J. (n.d.). Online education // *Gallup News*. URL: <https://news.gallup.com/poll/165434/online-education.aspx> (дата обращения: 12.07.2024).
17. Gudmundsdottir G.B., & Hatlevik O.E. Newly qualified teachers' professional digital competence: Implications for teacher education. *European Journal of Teacher Education*, 2018, vol. 41, no. 2, pp. 214-231. <https://doi.org/10.1080/02619768.2017.1416085>

18. Kaplan-Rakowski R., Grotewold K., Hartwick P., & Papin K. Generative AI and teachers' perspectives on its implementation in education // *Journal of Interactive Learning Research*, 2023, vol. 34, no. 2, pp. 313-338. <https://www.learntechlib.org/primary/p/222363/>
19. King M.R., chatGPT. A Conversation on artificial intelligence, chatbots, and plagiarism in higher education // *Cellular and Molecular Bioengineering*, 2023, vol. 16(1), pp. 1-2. <https://doi.org/10.1007/s12195-022-00754-8>
20. Makeleni S., Mutongoza B.H. & Linake M.A. Language education and artificial intelligence: An exploration of challenges confronting academics in global South universities // *Journal of Culture and Values*, 2023, vol. 6, no. 2, pp. 158-171. <https://doi.org/10.46303/jcve.2023.14>
21. Mishra P., & Koehler M.J. Technological pedagogical content knowledge: A framework for teacher knowledge // *Teachers College Record*, 2016, vol. 108, no. 6, pp. 1017-1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
22. Moorhouse L.B., Yoe M., Wan Y. Generative AI tools and assessment: A guide for leading universities // *Computers and Education Open*, 2023, vol. 5(2). <https://doi.org/10.1016/j.caeo.2023.100151>
23. Smalley S. (n.d.). Rhetorical War Over Online Versus In-Person Instruction // *Inside Higher ED*. URL: <https://www.insidehighered.com/news/2022/01/06/northeastern-chancellor-person-ed-gold-standard> (дата обращения: 12.07.2024).
24. Yalçın-Incik E., & Incik T. Generation Z students' views on technology in education: What they want what they get. *Malaysian Online // Journal of Educational Technology*, 2022, vol. 10, no. 2, pp. 109-124. <https://doi.org/10.52380/mojet.2022.10.2.275>
25. Yeo M. Academic integrity in the age of artificial intelligence (AI) authoring apps // *TESOL Journal*, 2023, vol. 14, no. 3, pp. 709-710. <https://doi.org/10.1002/tesj.716>
26. Huang H. L., Hwang G. J., Chang C. Y. Learning to be a writer: A spherical video-based virtual reality approach to supporting descriptive article writing in high school Chinese courses // *British Journal of Educational Technology*, 2020, vol. 51, no. 4, pp. 1386-1405. <https://doi.org/10.1111/bjet.12893>

## DATA ABOUT THE AUTHORS

**Irina A. Semyonkina**, PhD in Psychology, Associate Professor of the Department of the English language and professional communication  
*Financial University*  
*49/2, Leningradsky Ave., Moscow, 125167, Russian Federation*  
*isemyonkina@mail.ru*  
ORCID: <https://orcid.org/0000-0002-7181-5923>  
Scopus Author ID: 57211905448

**Tatyana A. Pavlova**, Senior Lecturer at the Department of Foreign Languages  
*Sevastopol State University*  
*33, Universitetskaya Str., Sevastopol, 299053, Russian Federation*  
*tatyana\_bokhan@mail.ru*  
ORCID: <https://orcid.org/0000-0002-8033-3272>

## ДАННЫЕ ОБ АВТОРАХ

**Семёнкина Ирина Артуровна**, кандидат психологических наук, доцент, доцент Кафедры английского языка и профессиональной коммуникации  
*Финансовый университет*  
*пр-кт Ленинградский, 49/2, г. Москва, 125167, Российская Федерация*  
*isemyonkina@mail.ru*

**Павлова Татьяна Александровна**, старший преподаватель кафедры иностранных языков  
*Севастопольский государственный университет*  
*ул. Университетская, 33, г. Севастополь, 299053, Российская Федерация*  
*tatyana\_bokhan@mail.ru*

Поступила 26.06.2024  
После рецензирования 25.07.2024  
Принята 13.08.2024

Received 26.06.2024  
Revised 25.07.2024  
Accepted 13.08.2024