

THE ROLE OF AI IN THE MODERN EDUCATION PROCESS

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Abstract. The article discusses the essence of artificial intelligence (AI) and a brief history of its improvement. Examples of use are provided AI as a pedagogical technology in national and international practice of teaching foreign languages and forecasts regarding the use of artificial intelligence in education in the future. Discusses how students use AI when preparing for classes and monitoring disciplines, and answers the question of whether the use of AI should be considered academic fraud. Some ways to combat the misuse of AI capabilities in writing assignments are suggested, including number of exams. The limitations of using AI in teaching foreign languages are mentioned. It is concluded that It is too early to call this stage of AI development a pedagogical technology.

Keywords: artificial intelligence, educational technology, academic fraud, foreign languages

Аннотация. В статье рассматривается сущность искусственного интеллекта (ИИ) и краткая история его совершенствования. Приводятся примеры использования ИИ как педагогической технологии в отечественной и международной практике преподавания иностранных языков и прогнозы относительно использования искусственного интеллекта в образовании в будущем. Рассказывает своим студентам об использовании ИИ при подготовке к занятиям и контроле дисциплины, а также отвечает на вопрос о том, следует ли считать использование ИИ академическим мошенничеством. Предлагаются некоторые способы борьбы с неправомерным использованием возможностей ИИ при выполнении письменных заданий, включая количество экзаменов. Упоминаются ограничения использования ИИ в обучении иностранным языкам. Делается вывод, что пока рано называть этот этап развития ИИ педагогической технологией.

Ключевые слова: искусственный интеллект, образовательные технологии, академическое мошенничество, иностранные языки.

Currently, it is increasingly being said that the development of artificial intelligence poses a threat to the existence of a number of professions, among which are higher education teachers, including foreign language teachers. First, this concerns the English language, because the GPT-3 model, the third generation of the natural language processing algorithm from OpenAI, according to the developers, can be used to solve “any problems in English.”

Until recently, one of the main risks of losing a job for a foreign language teacher at a university was considered to be insufficient knowledge of digital technologies and the introduction of EMI (the use of English as a medium of instruction) - a tendency to introduce teaching of special disciplines in a foreign language at universities to the detriment of disciplines. "Foreign Language", "Business Foreign Language" and "Foreign Language for Special Purposes".

These fears are now being supplanted by the new threat from artificial intelligence. There are optimistic and pessimistic opinions on this matter. Few people argue that the teaching profession will completely disappear in the near future; most are inclined to believe that the profession will undergo significant changes due to the advent of “intellectual assistants”. However, undoubtedly, the education system is very receptive to the introduction of AI. This is confirmed by the opinion of OPEN AI CEO Sam Altman that chatbots are especially useful for workers in three industries, which include education.

Do not assume that the use of AI in education is a thing of the future. Digital assistants based on neural networks, focused on learning English, are already operating in the online educational space in Singapore and South Korea. For example, one of the assistants specializes in checking written work for grammatical errors (the teacher gives the grade, taking into account the content of the text). Starting from the next school year, it has been announced that robotic English teachers will appear in primary and secondary classes in 5 schools in Seoul. They will conduct dialogues with students at the level of native speakers and correct students’ pronunciation individually.

Despite such developments, in our opinion, now the greatest influence on teaching a foreign language at a university using traditional models and technologies is having the improved GPT (Generative Pretrained Transformer) models, i.e. natural language processing algorithms released by the American company OpenAI, and their analogues.

The purpose of the study is to analyze the current situation in the use of artificial intelligence in teaching and learning foreign languages and the possibilities of rapid adaptation of university teachers to the new reality. The objectives of the study included:

- study which AI-based platforms are currently used in the practice of teaching and learning a foreign language collect, analyze and summarize materials on best practices for using AI in foreign language teaching;
- assess the possibilities and limitations of using AI in teaching a foreign language for professional purposes;
- answer the question whether the use of AI by students in preparation for classes and control in the discipline “Foreign Language in the Professional Sphere” is academic fraud;
- propose ways to combat the unfair use of AI capabilities when performing tasks, including exams;
- give recommendations to foreign language teachers on how to adapt to the new reality and use the capabilities of AI to benefit themselves, students and teaching.

The scientific novelty of the study lies in the multi-dimensional consideration of the problem of using artificial intelligence in the practice of modern teaching of foreign languages.

The theoretical significance of the study lies in the fact that the work critically analyzes the best domestic and foreign practices of using artificial intelligence for effective teaching of a foreign language at a university and identifies prospects for their improvement.

The practical significance of the study is determined by the fact that the results of this work can be used by foreign language teachers when preparing assignments that require students to use the capabilities of AI and develop their skills in academically honest use of chatbots. In addition, the work contains practical recommendations for teachers to counter students’ unfair use of AI capabilities when preparing written work.

A large number of scientific articles are devoted to the use of AI in the work of universities in general and in teaching a foreign language in particular. Active publications began in 2017, and their number increases from year to year. At the same time, the emphasis in the articles changes from predicting the educational capabilities of AI in mastering foreign language competencies [1; 2] towards assessing their current implementation [2] in the educational process in universities. A significant number of publications in one way or another address ethical issues related to the use

of AI in an academic environment, and only a few articles contain recommendations for teachers on adapting to new conditions and possible changes in teaching methods [3, p.14-19].

As part of the implementation of the research objectives, we will consider some AI-based tools that are currently used in teaching and learning foreign languages. There are many such tools. In the work, Kovalchuk S.V. etc. the following platforms and types of speech activity with which they work are analyzed:

- Duolingo: all 4 types of speech activity with analysis of user errors;
- Grammarly (writing, reading, editing) VPN
- QuillBot (writing; reading, vocabulary, grammar checking, paraphrasing texts, quote generator);
- ChatGPT (speaking, writing, reading, generating text at the user's request);
- Multitran_bot (translator, dictionaries);
- AndyRobot (grammar);
- EnglishSimpleBot (grammar);
- ELEVENLABS.IO – text-to-speech translation; automatic audio/video dubbing [2]/

Most of the platforms mentioned have free functionality and a paid subscription with advanced features. Grammarly and ChatGPT require a VPN (Virtual Private Network) connection.

There are also more advanced platforms, such as the Intellias FeeBu (Feedback Butterfly) application, which was acquired by Oxford University Press for licensed distribution worldwide. It successfully imitates the feedback of a foreign language teacher and is able to assess the student's level according to a number of criteria. The application uses the Oxford set of dictionaries and a large number of texts for contextualized (which is very important) lexical practice, and has a component that automatically generates exercises with spaces and answer options when specifying a title and semantic context [1, p. 73-80].

An example of a platform more accessible to the users is ProgressMe, which contains examples of ready-made lessons created using AI and allows you to generate your own materials and lessons. In particular, the presence of three lessons on the topic "Personal Budget", which we study in the first year, aroused interest. Each lesson corresponds to a certain level of English proficiency (B1, B2, and C1 on the European scale), in which all types of speech activities are practiced with an emphasis on vocabulary development. Although the topic is stated to be financial, it is revealed from the perspective of everyday English (General English), i.e. in

situations of personal rather than professional communication. The material is presented in a rather monotonous manner, but the goal of memorizing the words listed in the active dictionary at the beginning of the lesson is achieved.

Among the digital applications that are popular among English teachers in Russia when preparing for classes are:

AnkiDroid, Quizlet, Multitran, Live Worksheets, twee.com, which allow you to prepare vocabulary cards, test vocabulary acquisition, perform automatic translation, create interactive materials of different levels of complexity based on existing text ones, etc.

Let us return to chatbots. Because chatbots use artificial intelligence (AI), they understand language, not just commands. Generative applications, such as ChatGPT, can generate text and various content similar to those created by humans. They can also answer questions in a manner that mimics human speech. They analyze natural language queries, called prompts, and predict the best possible answer based on their understanding of the language and the information at their disposal. The main competitors of Chat GPT are Gemini from Google, Shdevrium from Yandex and GigaChat from Sber. The last of the chatbots mentioned, GigaChat, is available to everyone, easily handles questions in Russian and English, and is gaining popularity.

In terms of their functionality, AI-based chatbots can effectively help a teacher prepare for a lesson, in particular when developing educational materials. You can “ask” the chatbot to create a lesson plan, select examples, historical facts or current news on a given topic, come up with multiple choice grammar or lexical tasks, generate a text containing given words or certain grammatical forms, write questions for text, paraphrase a given text, prepare a quiz, etc.

Very useful, for example, when preparing a large database of test tasks, is the ability of a chatbot to quickly generate a large number of different sentences with a given vocabulary or a certain grammatical rule.

Of course, any material generated by a neural network requires verification before use in the classroom, since the network may misinterpret your request or simply begin to “hallucinate.” It is necessary to check not only the text, but also the factual side, especially the examples.

One of the difficulties when working with generative neural networks is the need to correctly and clearly formulate the request. An effective request consists of simple short sentences, but it must be quite detailed and understandable, for example, instead of “a good student,” we write “3rd year student at a financial university, language proficiency at level B2.”

A good request should also include requirements for the answer, for example, the volume and/or number of words and paragraphs in the text, the presence of an introduction and conclusion, from whom to write, etc. The ideal option is to include in the request an example of completing the task, indicating that it example. The request can be individualized for a specific group or student, that is, it can include age, interests, specializations, language proficiency level and other parameters. The accuracy of the request improves the quality of the response. If you want to get several answers, you can use the “regenerate” function or slightly change the request to get several options for tasks of varying complexity on the same topic for group work, taking into account the level of individual students. The network can also help formulate the request correctly and, when running the generated. The answer given by her will perform the function of searching for her own errors.

Among the disadvantages of using AI, situations are usually called when a chatbot “hallucinates”, makes logical errors, or gives an answer that contradicts universal human values. The greatest concerns associated with the use of neural networks are primarily the collection of the user’s personal information with its subsequent unfair use. Teachers are also concerned about the decrease in the level of pedagogical interaction with students and the emotional impact on students [4, p.9-12].

At the moment, we are dealing with generative artificial intelligence, which analyzes data and makes predictions based on a built-in communication model. However, according to forecasts, in the near future it will give way to interactive intelligence, capable of working like a person in terms of multitasking, i.e., simultaneously communicating through voice commands with several users, as well as with other neural networks and adaptive programs. - Rations for assigned tasks. With this development, we can expect greater accuracy and better quality of work from AI [5, p.19-37].

As for the benefits of AI in teaching and educational management, they are well known. The use of artificial intelligence capabilities increases the accessibility of language education. AI contributes to the individualization of education, makes it possible to improve the assessment system by automating the calculation of points and the construction of ratings, and promotes immersion in the language environment through the use of chatbots and tools for text analysis. AI-based platforms can analyze data about students in order to adapt curricula to their needs, making language learning more effective and interesting [6, p.38-42].

The benefits of AI for foreign language learners, especially independently and remotely, there is no doubt. However, despite the fact that artificial intelligence is a promising, powerful and useful tool - As an assistant teacher of foreign languages both in the preparation and conduct of classes, he is unlikely to completely displace foreign language teachers from the classroom in the near future.

The usefulness of AI for the development of “hard” and "soft" skills.

As for professional “hard” skills, in a number of university subjects we can conditionally identify a part that can be algorithmized:

- is a specific set of facts, dates, grammatical rules, laws, formulas, etc. For mastering this specific knowledge, the capabilities of AI are significant. However, beyond the scope of information there is communication between the student and the teacher, the emotional impact of the teacher’s personality on the student, as well as the development of “narrow” competencies within a certain specialty and specialization, for example, creative professions, where the role of the teacher (master) is not to be completely replaced by artificial intelligence.

Now, the capabilities of AI for the formation of personal “soft” skills, primarily communication, are limited. However, the chatbot simulates communication, which is useful at the initial stage of communication to overcome the “stiffness” barrier. There are interview simulators in English (for example, AndroidHelp), useful in preparing for a job interview, and programs (for example, Maximum Power Point Tracking) that automatically evaluate the quality of your presentation based on a number of parameters (quality of slides, contact with the audience, etc.). The second “reproach” against chatbots is that they do not contribute to the development of critical thinking skills. However, depending on the request, the chatbot can generate several response options, so-called scenarios, including alternative ones that require critical thinking and final choice by the user, for example, when solving cases.

In this regard, it is worth addressing the topic of academic fraud when using the capabilities of AI. Indeed, excessive and dishonest use of AI weakens students’ skills in independently writing text and critically comprehending information, suppresses the originality and originality of creative thinking, especially since both the requested information and the “unique” written work of the required volume and structure on a given topic are generated by a chatbot almost instantly. Initial debates about the appropriateness of written homework and tests in the new environment have given way to the development of strategies on how to use AI when working with students, and the development of types of tasks that teach how to correctly compose queries and critically evaluate the results generated by chatbots.

Examples of such tasks are:

- use neural networks to prepare drafts of essays or other written works with the subsequent development of the idea proposed by the bot or its refutation;
- interview a famous person on the Character.AI website using pre-prepared questions [2];
- “ask” the chatbot to generate ideas for an entrepreneurial project, followed by students discussing the proposed options, mandatory cross-checking of the information proposed by the chatbot through other search engines, and indicating in the work submitted for defense what exactly was done using the chatbot [7, p.65-71].

Written translation as a form of homework has become obsolete. The quality of work of online translators is constantly improving, and even if the text itself turns out to be imperfect in some cases, its meaning is clear.

Nevertheless, our practice shows that when performing written work with the help of AI, certain factors appear that immediately “give out” that the student did not write the work himself. For example, in the assignment for writing a conference report, there was a question about who the speakers were. The AI answered prominent, most famous, influential, renowned, well-known speakers. The student would name names, positions and companies. If the task requires instructions to use examples from the course studied, this also causes difficulties for the AI. American universities have guidelines for teachers to create tasks that AI cannot complete.

In the work of Voevoda E.V. and Shpynova A.I. An analysis of the results of the AI’s execution of a business letter task (complaint letter) is provided and the conclusion is drawn that the bot was unable to generate a fully prepared response that satisfies all the requirements formulated in the task. To obtain a satisfactory answer, significant modification of the assignment by students was required at the stage of formulating the request. To increase the share of student participation in completing the task, the article recommends writing tasks in Russian with the least detail and limiting the number of words, so that students have to work on the request in English and on the final version of the letter [8, p.237-241].

The recommendation seems reasonable. In our current practice, the report-writing task looks like this:

In fact, this is a completely acceptable, almost ready-made request for a chatbot. If you follow the guidelines above, the request should be formulated as follows: “Write a response on behalf of a consulting firm to an electrical equipment

company's request for ways to overcome cash flow problems." However, given the capabilities of electronic translators, wording in English seems more appropriate.

In the area of interpreting and oral communication, advanced headsets and other gadgets for automatic simultaneous translation already exist, and students are trying to use them in oral foreign language exams. Such devices are difficult to detect. For example, the AI Pin device, powered by ChatGPT-4 (developed by Humane), is a small "pin" with a microphone, camera and projector for displaying information on the palm. Solos has released smart glasses that can translate conversations in real time using an integrated ChatGPT bot. They look like a stylish accessory, they weigh, and the lenses are custom-ordered. The glasses implement automatic playback from various platforms, including WhatsApp.

How, then, to combat the use of AI in written and oral control? Anti-plagiarism checking systems are ineffective: texts created by AI are recognized as original. Special programs have been developed to check texts for AI authorship, but they do not give 100% reliable results and require significant improvement.

One way to combat the use of AI is to Internet jammer. But developments of "autonomous" AI for mobile devices already exist and have been tested, and, according to forecasts, autonomous AI in the foreseeable future will not only go beyond the Internet, but will also create a new global network to suit its needs.

Another way is to return to exams and tests in oral form, relying on unprepared speech and dialogue with the teacher, i.e., the practice from which we moved away, replacing oral exams and tests with supposedly more objective and economical tests, which are now successfully creates, solves and tests artificial intelligence.

Without confidence in the capabilities of AI, university teachers have no future. Artificial intelligence is already having and will continue to have an impact on the labor market. Now, human labor is cheaper than high-quality models based on neural networks and in many areas retains its uniqueness. These factors explain why the process of replacing humans with artificial intelligence is not rapid, and therefore the labor market has the opportunity to adapt to these changes. Mastering the skills to use AI is one obvious way to make this adaptation. This process should be centralized, high quality, practice-oriented and mandatory for university teachers. Such steps are already being taken. For example, the European Commission offers an educational course Artificial

Intelligence in Language Teaching ("AI in teaching foreign languages") for teachers, teachers and staff of schools, colleges and universities. The stated objectives of the course are:

- familiarizing students with various types of AI and their capabilities in teaching foreign languages;
- studying the challenges associated with the use of AI and using the capabilities of AI when conducting classes;
- achieving an understanding of how AI works;
- a detailed study of what areas AI is currently useful in;
- training in creating educational materials using AI and using AI in the educational process.

ChatGPT has an Advanced Tutorial for Teachers resource that you can explore on your own. In Russia, individual universities and companies also offer a variety of AI courses with varying degrees of practice orientation. Special attention should be paid to humanization and rules for using the capabilities of artificial intelligence.

UNESCO and Buckingham Palace have already released official documents on the ethics of AI in academia. For the civilized use of AI, a course on the use of neural networks and AI should be included in the curriculum of Russian universities, covering both technical and ethical aspects. Emphasis should be placed on instilling in students an understanding of the need for critical analysis of the results generated by chatbots and academic integrity, which involves reflecting the percentage of the chatbot's contribution to student work. This is all the more relevant since some Russian universities have already declared the legality of using AI in writing final theses if the percentage of use does not exceed a threshold of approximately 40%.

For the successful implementation of AI in the educational process, high-quality methodological instructions are required for teachers on developing tasks in various disciplines, both excluding and involving the use of artificial intelligence.

Since pedagogical technology presupposes the standardization of the teaching system, it is too early to call AI a pedagogical technology. However, the use of AI in teaching is an innovative technology with potential for standardization. AI creates both opportunities and challenges, gives the teacher a new, not yet fully defined role in the educational process, and its successful implementation in the practice of higher education will certainly require the joint work of teachers, methodologists, students, university administrations, regulators and developers platforms based on artificial intelligence.

The results of the work can be used by teachers and university staff when working on the introduction of artificial intelligence into the practice of teaching foreign languages.

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METHODS OF TEACHING STUDENTS

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It is universally recognized that the teacher is the key person in an education system and whole system of education revolves around him/her. Educational practice