



THE POSSIBILITIES OF USING ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN STUDYING A FOREIGN LANGUAGE

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Abstract. In the article is given the problem of using artificial intelligence (AI) technologies for teaching a foreign language at university. A review of scientific and methodological literature on the use of AI in education is given. AI services designed for teaching foreign languages, as well as AI tools that act as teacher assistants are considered. The linguodidactic capabilities of chatbots are analyzed. Options for AI-based tasks for organizing the educational process are presented. In the course of their study, the author came to the conclusion that the use of AI can facilitate the preparation of a foreign language teacher for classes and checking homework, reducing the time spent on routine tasks. Students can turn to AI tools to practice various language aspects. However, a complete replacement of an AI teacher is not possible, since AI lacks the ability to navigate the learning context, empathize with students, motivate them to personal development and encourage critical thinking. Work in the field of using AI in teaching foreign languages, in addition to creating new AI tools, should be carried out in relation to the development of systems of corresponding tasks, as well as algorithms for interaction between teachers and students with AI.

Key words: artificial intelligence; teaching foreign languages; educational technology; virtual educational; chatbot, chat GPT, virtual educational platform, electronic educational resource.

CHET TILINI O'RGANISHDA SUN'IY INTELEKT TEXNOLOGIYALARIDAN FOYDALANISH IMKONIYATLARI

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Annotatsiya. Ushbu maqolada universitetlarda chet tilini o'qitishda sun'iy intellekt (AI) texnologiyalaridan foydalanish muammosi muhokama qilinadi. Ta'limda AI dan foydalanish bo'yicha ilmiy-metodik adabiyotlarga sharh berilgan. Biz chet tillarini o'rgatish uchun mo'ljallangan sun'iy intellekt xizmatlarini, shuningdek, o'qituvchi yordamchisi sifatida xizmat qiluvchi sun'iy intellekt vositalarini ko'rib chiqqanmiz. Chatbotlarning lingvodidaktik imkoniyatlari tahlil qilingan. Ta'lim jarayonini tashkil etishda sun'iy intellektga asoslangan vazifalar yo'nalishlari keltirilgan. Tadqiqotda muallif AI dan foydalanish chet tili o'qituvchisiga darslarga tayyorgarlik ko'rish va uy vazifalarini tekshirishni osonlashtirib, oddiy vazifalarga sarflanadigan vaqtni qisqartirishi mumkin degan xulosaga kelgan. Talabalar turli ko'nikmalarni mashq qilish uchun AI vositalariga murojaat qilishlari mumkin. Biroq, sun'iy intellektga asoslangan o'qituvchilarni to'liq almashtirish mumkin emas, chunki AI o'quv kontekstida harakat qilish, talabalar bilan empatiya qilish, ularni shaxsiy rivojlanishga undash va tanqidiy fikrlashni rag'batlantirish qobiliyatiga ega emas. Chet tillarini o'rgatishda sun'iy intellekt dan foydalanish sohasidagi ishlar yangi AI vositalarini yaratishdan tashqari, tegishli vazifalar tizimini, shuningdek, o'qituvchilar va talabalarning sun'iy intellekt bilan o'zaro hamkorligi algoritmlarini ishlab chiqish bilan bog'liq holda amalga oshirilishi kerak.

Kalit so'zlar: sun'iy intellekt; chet tillarini o'rgatish; ta'lim texnologiyalari; virtual ta'lim; chatbot, GPT chat, virtual ta'lim platformasi, elektron ta'lim resursi.

ВОЗМОЖНОСТИ ИСПОЛЬЗОВАНИЯ ТЕХНОЛОГИЙ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА ПРИ ИЗУЧЕНИИ ИНОСТРАННОГО ЯЗЫКА

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Аннотация. В статье рассматривается проблема использования технологий искусственного интеллекта (ИИ) для преподавания иностранного языка в вузе. Дан обзор научной и методической литературы по использованию ИИ в образовании. Рассматриваются сервисы ИИ, предназначенные для обучения иностранным языкам, а также инструменты ИИ, выполняющие функцию помощников учителя. Проанализированы лингводидактические возможности чат-ботов. Представлены направления задач на основе искусственного интеллекта по организации образовательного процесса. В ходе исследования авторы пришли к выводу, что использование ИИ может облегчить подготовку учителя иностранного языка к занятиям и проверку домашних заданий, сократив время, затрачиваемое на выполнение рутинных задач. Студенты могут обратиться к инструментам ИИ для отработки различных навыков. языковые аспекты. Однако полная замена преподавателя на основе ИИ невозможна, поскольку у ИИ нет возможности ориентироваться в контексте обучения, сопереживать ученикам, мотивировать их к личностному развитию и поощрять критическое мышление. Работа в области использования ИИ в обучении иностранным языкам, помимо создания новых инструментов ИИ, должна вестись в связи с разработкой систем соответствующих задач, а также горитмы для взаимодействия преподавателей и учеников с ИИ.

Ключевые слова: искусственный интеллект; преподавание иностранных языков; образовательные технологии; виртуальный образовательный; чат-бот, чат GPT, виртуальная образовательная платформа, электронный образовательный ресурс.

Introduction.

Currently, there is a boom in the development of neural networks and chatbots in many areas of life, including education. Every day, these forms of artificial intelligence are becoming more and more numerous. Artificial intelligence (AI) tools generate lesson plans, presentations, images, texts, questions, mind maps and other educational materials in a few seconds upon user request. Chatbots are able to maintain a conversation, answer a question, comment on the work done, and also give recommendations on how it can be improved. In this regard, many teachers have quite justified concerns: since students can write essays and complete other tasks designed to practice language skills with the help of AI, there is no point in assigning homework. In addition, it is suggested that in the future, AI will be able to replace teachers, and they, in turn, will be left without work. As a result, the question arises: can a foreign language teacher not only resist the risks and threats of digitalization, but also make artificial intelligence an assistant and friend, and the educational process, thanks to the achievements of science and technology, more qualitative, effective and interesting? Recently, modern linguodidactics has been shifting its interests towards the use of artificial intelligence technologies, which are applicable both in solving basic didactic and linguistic applied problems. First of all, this concerns the automation of various processes, for example, computer processing of big data, as a result of which it becomes possible to use machine translators, text corpora, electronic dictionaries, etc. in language teaching. Artificial intelligence (AI) is a field of computer science that deals with the development of intelligent computer systems, that is, systems that have capabilities that we traditionally associate with the human mind – understanding language, learning, the ability to reason, and solve problems. In other words, AI is a set of technological solutions that make it possible to imitate human cognitive functions (Bukovey, Zavodchikov,

Zeer, 2019). In this article, we will try to understand this problem, and also give examples of working with students studying a foreign language in the context of AI development.

The purpose of the study is to analyze the possibilities of AI in teaching a foreign language to students of different areas of professional training.

Materials and Methods.

Theoretical and empirical research methods were used in writing the article. An analysis of scientific and methodological literature devoted to the study of the use of artificial intelligence in education was conducted from the point of view of prospects and possible risks. Artificial intelligence services were analyzed for functionality and potential for implementation in the process of teaching a foreign language. To create tasks based on AI, empirical experience of working with AI services in practical foreign language classes for students of different areas of professional training was used.

Results.

The introduction of AI into the educational process is an inevitable consequence of the digitalization of education. Scientific and methodological literature states that many professions are being transformed as a result of such digitalization, including the profession of a foreign language teacher. The directions of such transformation are named as “the development of online educational platforms, the replacement of “live” specialists with virtual reality and artificial intelligence” (Bukovey, Zavodchikov, Zeer, 2019). The teacher as a “talking head” or a transmitter of knowledge, not being the only possible means and channel of learning, is losing its demand and relevance. New roles and functions appear - tutor, moderator, developer of educational trajectories, organizer of project-based learning, coordinator of online educational platforms, game teacher (Varlamova, Vinogradov, Dyachkova, Kulin, 2020).

The ability to interact with AI and use it for the purposes of teaching a foreign language is a component of the digital competence of a foreign language teacher, which is understood as the level of proficiency in digital competencies (knowledge, skills, abilities, readiness to conduct the educational process in a digital environment) (Taranenko, 2021). A foreign language teacher must be able to use digital tools, programs and online resources for teaching a foreign language, create their own digital teaching materials and digital environments, organize the learning process in a digital environment and manage it. A teacher who does not have a high level of digital competence will not be able to use AI technologies in the educational process to the fullest extent.

So what function can AI perform in the work of a foreign language teacher? The authors of the book "Artificial Intelligence in Education" claim that by 2030, AI will learn to help teachers, collaborate with them and act as an intermediary between them and students (Bialik, Holmes, Feidel, 2022). Already now, many platforms (Edvibe, Miro, Notion, Trello, Canva, etc.), which foreign language teachers use in the educational process, install AI assistants that can generate the texts and assignments for them, images, diagrams, cards and other didactic materials necessary for teachers in one click. Foreign language courses are introducing chatbots that answer questions from course participants, thereby reducing the time teachers spend on routine actions. GPT chat can check written work, point out errors and demonstrate ways to correct them. Thus, teachers have the opportunity to access the algorithms with which AI works and do their job even better. In this regard, the literature speaks of the concept of “extended intelligence” or “human-computer tandem”, which allows for the compensation of each person’s errors and increases the efficiency of the educational process (Bialik, Holmes, Feidel, 2022).

According to a policy brief from the UNESCO Institute for Information Technologies in Education, AI will play a key role in implementing the idea of personalized learning, namely

adapting the content of learning and the pace of the learning process to the specific needs of each student (Duggan, 2020).

Ivakhnenko and Nikolsky (2023), who studied the issue of using GPT chat in education, are convinced that neural networks will become an integral part of education at all levels - just as computing functions of a computer once firmly entered our lives. The authors note that text generation, analysis and evaluation systems successfully work as catalysts for search solutions, "integrators and optimizers" of mental operations, and help in solving complex cognitive and innovative problems. GPT chat facilitates faster entry into a new field of knowledge - a dialogue with it allows you to identify current issues and formulate hypotheses (Ivakhnenko., Nikolsky, 2023).

Thus, from all that has been said above, we can conclude that with skillful handling of AI, a teacher can make the learning process more effective, and also transfer some of their functions to the computer, freeing up their time to perform more intellectual and creative tasks. Let's move on to an overview of AI technologies that can be used in the process of teaching a foreign language. First, let's look at programs designed specifically for these purposes. These are, for example, the Duolingo and Babbel applications.

The Duolingo educational platform offers courses in over 30 languages. Duolingo's BirdBrain AI tool studies each user's profile and makes predictions about their learning path, thus providing a personalized approach to learning. The system tracks tasks that cause difficulties for the course participant, and also remembers the mistakes made in these tasks, based on which it creates a further learning plan. The platform's Explain My Answer function allows language learners to communicate with the Duo bot. The bot can rate and comment on the answer, as well as offer additional examples that will help the learner better understand and assimilate the material. Thanks to the Roleplay function, you can earn points for practicing in real-life situations of communication with virtual characters from different countries (linguo-bots).

Babbel is an interactive online course for learning foreign languages. Using AI technologies, the Babbel system is able to recognize speech and correct pronunciation by comparing words spoken by the learner with speech samples in the database recorded by course editors who are native speakers of the language. Currently, there are several fairly effective online resources for editing texts in a foreign language that use AI technologies. One such resource is Grammarly, which corrects more than 150 types of errors, such as errors in grammar, spelling, punctuation, writing style, and sentence structure. If there are errors, Grammarly provides recommendations for their correction, offering various options. Working with this service allows students to analyze their texts, developing critical thinking skills, which can be useful in the future when writing term papers, master's theses, research articles, abstracts, and other written works.

Chatbots in the Telegram channel, which are a mobile learning tool, can also help you master a foreign language. These are bots such as @multitran_bot, @AndyRobot, @eddy_en_bot, @EnglishSimpleBot. The chatbot @multitran_bot provides the ability to automatically work with online dictionaries. The bot provides all possible translation options and meanings, duplicating the main functionality of Multitran (an online system of bilingual dictionaries). @AndyRobot focuses on practicing spoken English, and therefore the bot offers the student to choose one of the everyday topics (Weather, Hobbies, Work, etc.). The virtual teacher provides the opportunity to take daily grammar lessons with explanations and a test for learning the material. @eddy_en_bot helps to master new vocabulary, the free version allows you to learn five words a day. With @EnglishSimpleBot, you can read texts in English and mark unfamiliar words for further study in a special mode, take tests on specific topics, and improve grammar skills. There are also reference materials on grammar and language levels, including Upper-Intermediate.

There are also AI tools that were not created for language teaching but can be used for this purpose. One such tool is the GPT chat, which was mentioned above. Since one of the important features of the GPT chat is its ability to understand and generate text in a context-sensitive manner, the platform takes into account previous messages and responds in a context-sensitive manner, creating natural and appropriate communication situations. This feature of the GPT chat allows teachers and students to interact with the “virtual interlocutor”: conduct dialogues, discuss various topics, ask and answer questions.

With the help of GPT chat, students can get additional practice and support outside the classroom, improve their reading, writing and speaking skills, expand their vocabulary, and improve their communication style. In the classroom, the key organizer of the educational process, as P.V. Sysoyev and E.M. Filatov rightly note, should still be the teacher, acting as an “assistant and expert in the field of a foreign language, helping and creating conditions for learning, education and development” (Ivakhnenko, Nikolsky, 2023).

Discussion.

In addition to programs that can be used for teaching foreign languages, there are also tools - assistants for teachers based on AI. One of these assistants is the Twee website. This platform was developed specifically to facilitate the process of preparing assignments on various aspects of a foreign language (vocabulary, grammar, reading, listening, speaking, writing). With its help, you can create texts and questions for them (open, with a choice of the correct answer, true / false). In addition, the platform generates lexical and grammar exercises for filling in gaps, matching words with definitions, opening brackets, arranging words in the correct order, etc. Twee transcribes videos, formulates questions for these videos, finds interesting facts and quotes from famous people on the chosen topic, makes questions for discussion, lists of advantages and disadvantages, lists of topics for essays, etc. The tasks generated by the platform, however, must be carefully checked. Not all of them are ready for use without proper correction. And yet, this system helps to significantly reduce the teacher’s time to prepare for classes, and also stimulates the creative process, offering a large selection of ideas and tasks.

For clarity, we present a table of some AI tools (services) used in the process of learning a foreign language.

Below are examples of assignments for students studying in different areas of professional training (the assignments are approximate, the content may vary for different areas, and in practice they should be formulated in a foreign language).

Assignment for students of the 70310101 Economics course (for work on the CHARACTER.AI website):

1. Choose a famous businessman with whom you would like to talk (Elon Musk, Mark Zuckerberg, Bill Gates, Tim Cook or Jeff Bezos). Write 10 questions that you would like to ask him, including questions on the following topics: facts from his biography, business, success, professionalism, money, charity, corporate responsibility, etc.

2. Find the chosen person on the Character.AI website. Ask him your questions. Try to maintain a coherent conversation, responding to the character's lines.

3. Take a screenshot of the conversation and attach it in the comments. Tell the rest of the group what you found most interesting in the conversation with the character.

Assignment for students of the 71010401 Tourism program (to work on the ELEVENLABS.IO website):

1. Write a presentation about a well-known travel company or hotel chain according to the suggested plan, using speech cliches for each stage of the presentation.

2. Enter the text in the designated window on the ELEVENLABS.IO website. Select the voice you like from the list (with British or American pronunciation). Generate audio of the written text.

5. Read the text after the speaker using the shadowing technique.
6. Give a presentation to your classmates.

AI tools for learning a foreign language

No	AI tool	Types of speech activity that are being worked on	Functionality	Availability for use by teachers and students
1	Duolingo	- speaking; - writing; - reading; - listening	- building an individual learning path; - user error analysis	There is a free app and 2 paid subscription options
2	Grammarly	- writing; - reading	- checking writing; - editing texts; - measuring active vocabulary	There is a free functionality and a paid subscription. You need to connect a VPN
3	Quill Bot	- writing; - reading; - vocabulary	- changing the structure of a sentence (grammar check); - paraphrasing texts; - quote generator	There is free functionality and a paid subscription. You need to install the extension
4	ChatGPT	- speaking; - writing; - reading	- generating text on user request	VPN connection is required
5	Multitran_bot	- writing; - reading; - vocabulary	- translator bot; - online system of bilingual dictionaries	It is a free chat bot
6	Andy Robot	- speaking; - pronunciation	- thematic lessons; - communication practice; - grammar exercises	It is a free chatbot
7	English Simple Bot	- reading; - grammar	- individual selection of words and grammar tasks	It is a free chat bot
8	ELEVENLABS. IO	- speaking; - writing; - listening	- text to speech translation; - automatic audio/video dubbing	There is free functionality and a paid subscription

Assignment for students of the 70540101 Applied Mathematics and Computer Science track (to work with the GPT chat):

1. Make a request in the GPT chat to compile a list of arguments in favor of the development and use of AI in different areas and spheres of human activity in the future.
2. Ask the GPT chat what arguments it can give against the development and use of AI in the future.
3. Choose one of the points of view (for or against). Debate with the group expressing the opposite opinion.
4. Come to a common conclusion.

Assignment for students of the 70720701 Mechanical Engineering track (to be used with GPT chat) – 'I love challenge' essay:

1. Write an essay on the challenges that may arise in the engineering profession. Include your thoughts on how these challenges can contribute to personal growth and career development. Provide examples to illustrate your point.
2. Copy the essay text into the GPT chat. Challenge the GPT chat to check your errors.
3. Analyze the GPT chat corrections. Do you understand why you made these errors? What type of errors do you make most often? What else do you need to work on?

4. Take screenshots of the original version of the essay and the version with corrections. Post an analysis of your errors in the comments to the assignment.

The presented task options focus on developing different language skills. The first task is aimed at language practice in communication situations close to real ones. The goal of the second task is to improve pronunciation and articulation of words (students with low levels of foreign language proficiency often pronounce words incorrectly in oral presentations, which negatively affects the perception of the presentation itself). The third task can be given to facilitate dialogue speech. The fourth task serves to develop writing skills.

Of course, to achieve significant results in teaching a foreign language, such tasks should be structured into a certain system, and not be one-time. In addition, the teacher can act as a facilitator of students' independent work, providing them with links to various websites and AI applications, explaining what this or that tool can be used for. We also note that it is too early to judge the degree of effectiveness of using artificial intelligence for teaching a foreign language, since the work is at an early stage and experiments need to be conducted to obtain statistical data. However, one can already notice an interest in AI on the part of students and an increase in their motivation to study a foreign language, as well as a decrease in the number of mistakes made by students using AI to prepare for classes.

Conclusion.

Thus, having considered the problem of introducing AI into education in general and into foreign language teaching in particular, the authors came to the conclusion that the use of AI can facilitate the professional work of a foreign language teacher by reducing the time spent on preparing for classes, developing and checking assignments. Students can turn to AI tools for help in mastering a foreign language without resorting to the services of tutors. On the issue of replacing a foreign language teacher with artificial intelligence, the GPT chat itself commented on this problem as follows: "Artificial intelligence has the potential to complement and improve the educational process, but a direct replacement of teachers is unlikely. Unlike AI, teachers have the skills of empathy, motivation and social interaction. Teachers are better able to understand the context and explain the material taking into account different points of view and nuances, encouraging critical thinking and the formation of their own opinions

Work in the direction of using AI for teaching foreign languages is very promising and should be continued not only in terms of developing new AI tools, but also in terms of creating algorithms and mechanisms for interaction between teachers and students with AI, as well as systems of corresponding tasks.

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