



## THE USE OF ARTIFICIAL INTELLIGENCE IN TEACHING A FOREIGN LANGUAGE

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**Tayanch so'zlar:** sun'iy intellekt, chet tillari, chet tillarini o'qitish, o'quv jarayonini avtomatlashtirish, kiberstorm, megakorporatsiyalar, xayrixoh diktatorlar, universitetlarga kirish.

**Ключевые слова:** искусственный интеллект, иностранные языки, преподавание иностранных языков, автоматизация образовательного процесса, кибершторм, мегакорпорации, доброжелательные диктаторы, проникающие в университеты.

**Key words:** artificial intelligence, foreign languages, teaching foreign languages, automation of the educational process, cyber storm, mega-corporations, benevolent dictators, infiltrating universities.

Introduction. In the context of rapid technological progress, education requires modernization, especially with regard to learning foreign languages in light of their increasing importance and demand in recent years. The use of artificial intelligence in this field is becoming more and more relevant. For example, Google has released a Semanticist game that helps in learning English, where users compete with AI in word associations. In this article, we would like to determine the role of AI in learning foreign languages and find out how it can replace the human factor in language learning. Artificial intelligence is at the stage of intensive development. Artificial intelligence systems can now create high-quality texts, audio and images. In the context of this article, it is important to assess how well systems understand natural languages. However, at the moment there is no clear answer to the question of how successfully the systems cope with this task. Semanticist uses a fully trainable algorithm, which is usually used to work with different languages. The neural network independently creates models for working with vocabulary based on training data from natural languages.

The largest and most advanced language model currently is GPT-3. It was presented by the American research company Open AI in July 2020. GPT-3 has 175 billion parameters and has been trained on 570 gigabytes of text. For comparison, its predecessor, GPT-2, had more than 100 times fewer parameters, only 1.5 billion. This increase in scale leads to unexpected behavior: GPT-3 is capable of performing tasks for which it has not been explicitly trained. However, despite such significant achievements, artificial intelligence skills in creating meaningful dialogue are still significantly inferior to human ones. Although artificial intelligence can understand the meaning of simple language constructions and even answer them, it is limited by the liberality of its own interpretation of the questions. A computer may know the definitions of words, but it does not understand their meaning in a broader context. In other words, artificial intelligence lacks what is called a creative attitude to words, an ability inherent in humans. A creative attitude to words is one of the most important qualities of a person, allowing him to conduct a dialogue with precision and wit, surprising his interlocutors with vivid thoughts. This leads to the development of spelling models, stylistic codes and rhetorical algorithms. All this makes up the «sense of the word», which makes a person the creator of his own language, which accumulates knowledge and skills gained through interaction with literary (journalistic) texts.

At the same time, artificial intelligence has a number of advantages over a real interlocutor, one of which is the speed of response. It promotes a virtual brainstorming or «cyber storm» based on the spontaneity of interaction and the reverse dynamics of effective collection of common thoughts, while various delays may occur when communicating with a person. However, it is worth remembering that artificial intelligence and bots created on its basis are able to maintain only a simple conversation and conduct a discussion only within the framework of correctly selected keywords. Modern bots as a whole are still difficult to call intelligent. Despite the fact that advanced machine learning and NLP technologies are used to create them, all of them are able to cope only with highly specialized tasks for which they were created. That is why in the application that our team is developing, artificial intelligence will not try to replace a real interlocutor. The Speak Lab application, which will be available to users in March 2022, was created specifically for conversational language exchange clubs. In this application, artificial intelligence will only be used to provide recommendations regarding our activities, which will be based on the user's language level and interests.



Main part: Artificial intelligence (AI) as a branch of modern science is persistently penetrating into everyday life, becoming an integral part of e-commerce, marketing, manufacturing, medicine, and the automotive industry, and also plays an increasingly important role in education, including in learning foreign languages.

The future of higher education is inextricably linked with the development of new technologies and the computing power of intelligent machines. In this area, advances in AI open up both new opportunities and create a number of problems that can radically change the management and internal architecture of higher education institutions.

Research in the field of AI began in the 1950s. In 1956, a well-known specialist in the field of computer science, J. McCarthy proposed one of the first and most well-known definitions of AI, according to which its study should be based on the assumption that every aspect of learning or any other feature of intelligence can in principle be described so accurately that it is possible to create a machine to simulate it [1]. The ability to communicate and control computers through thinking and the prospects for wider use of AI in teaching and learning are considered today as a real technological revolution that will radically change the structure of higher education worldwide [2].

We are currently witnessing how supercomputers affect a wide variety of aspects of our daily lives. Higher education is at the center of these profound changes, which bring with them both huge opportunities and risks. We believe that the relevance of a thorough study and analysis of these important processes is due to the fact that it is possible to detect not only the positive impact of AI on the education system, but also some negative trends that consider technological progress as a solution or replacement of sound pedagogical solutions filled with human values with elementary computer algorithms.

Based on this, as a research task, we define the identification of such conditions for the use of AI in the educational process of universities, in which its real potential will be aimed at expanding human capabilities, as well as improving the effectiveness of teaching, learning and research. Another task is to predict the possible negative consequences of the introduction of AI into the educational process, which may affect the quality of pedagogical communication and interaction with students.

To achieve these goals, we conducted a study and analysis of a number of modern foreign and domestic studies on the use of AI in education. As we expected, the authors, including not only university professors, but also well-known computer science experts, recognizing the enormous possibilities of AI

to facilitate routine work in any sphere of life, do not cease to warn about the possible negative consequences of the penetration of this technology into the learning process of the younger generation.

Research methodology . The role of digital technologies in higher education is to develop human thinking and expand the possibilities of the educational process, and not to reduce it to a set of procedures for transmitting information, monitoring and evaluating its assimilation. With the advent of AI, it is becoming increasingly important for educational institutions to remain vigilant and monitor whether power is monopolized by hidden algorithms in computer programs by those technical structures that created them.

Professor F. Pascal, in his famous book *The Black Box Society*, notes that decisions that used to be based on human reflection are now made automatically, software encodes thousands of rules and instructions calculated in fractions of a second. The researcher shows that today there is not only a quasi-centralized and powerful monopoly on these solutions, but also a deliberate concealment of the transparency of algorithms, as well as for what purposes they are used. This is veiled as a normal state of facts, a natural device of the Internet era, but such a situation can lead to a very dangerous concentration of undeniable power, because in an information society, power is determined by the possession of information. Whoever controls algorithms controls AI solutions, gaining unprecedented influence on people and every sector of modern society [3, p. 81].

If we touch on the problem of using AI in the production sector, i.e. where university students usually undergo industrial practice, then as an example we can refer to the experience of the largest enterprises with all the resources to implement AI. Tech giants such as Apple, Google, Microsoft and Facebook are currently competing in the field of artificial intelligence and investing heavily in new applications and research. The internal architecture of mega-corporations does not correspond to the democratic model, it is a model of «benevolent dictators» who know what is best and make decisions without consulting their internal or external actors. Monopoly and strict control of information sources, suppression of criticism and actual concealment of facts that are not consistent with the interests of the technocratic leadership are in direct opposition to the ideas of free personality-oriented education. One of the main functions of universities is precisely the development of innovative thinking, creative initiative, and the ability to criticize even established doctrines, the only way great scientists and inventors can appear within the walls of universities.

Higher education withers away when freedom of thought and research is suppressed in any form, as manipulations and limitations in the process of



cognition distort a person's worldview and creative impulse. According to a group of Mexican researchers, if we reach a point where the content of university activities is determined by a handful of technocrats and they gain control over research and the ethos of universities, higher education will turn towards a bygone era. This set of risks is too important to overlook and not explore, bravely meeting the challenges of modern technology [4].

At the same time, artificial intelligence is already able to replace a large number of administrative staff and auxiliary teaching staff in higher educational institutions [5]. Therefore, it is important to study the impact of these factors on the learning process, especially in the context of the growing demand for initiative, creativity and the «entrepreneurial spirit» of graduates.

AI is infiltrating universities along with so-called assistive technologies, i.e. computer programs that allow you to convert text to speech and speech to text, scale, predict text, spell check and run search engines. These examples are just some of the technologies that were originally created with the goal of helping people with disabilities or freeing employees from routine activities [6]. Then the use of these technological solutions was expanded, and now we attribute them to common characteristics in all personal computers and mobile devices. These technologies are currently creating conditions for educational interaction between students all over the world, expanding the opportunities for learning and designing educational experiences [7, p. 77]. In addition, artificial intelligence is currently improving the tools used day by day: from Internet search engines, smartphone functions and applications to public transport and household appliances [8].

So, the analysis of domestic and foreign scientific literature has shown that the following can be attributed to the most serious disadvantages of using AI in the educational process of a university:

- AI does not possess purely human qualities – morality, the ability to sympathize, empathize, provide friendly support, etc.;
- lack of intuitively correct reactions to different life situations;
- there is a potential opportunity to use AI to collect personal information that can be used against a person's will, etc.

Despite the presence of a number of disadvantages, AI should be perceived in the learning system as an innovative technology. However, as with the use of any technical innovations, it should be remembered that the purpose of «smart machines» is to help people, and not to nullify human, pedagogical communication, to destroy such a carefully constructed environment of personal maturation and upbringing, which is created at universities. As noted by a well-known researcher in the field of pedagogy A. Schleicher, innovation in education



is not just a matter of introducing new technologies into the learning process, it is about changing approaches to learning so that students acquire the competencies and skills they need to develop in a competitive global economy [9, pp. 23-25].

Conclusion. Summing up, we can say that the role of artificial intelligence in learning foreign languages is quite significant today and continues to grow. Artificial intelligence has great potential in the field of education and teaching of foreign languages. However, at the moment its functionality in this area is limited. Therefore, it is advisable to use artificial intelligence only in those tasks where it is most effective, and not try to completely replace the human resource in teaching foreign languages with it.

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#### РЕЗЮМЕ

Texnologiyaning jadal rivojlanishini hisobga olgan holda, ta'lim sohasi, ayniqsa, chet tillarini o'qitish bilan bog'liq holda, so'nggi paytlarda ularning ahamiyati va talabining oshishi sababli yangilanishni talab qilmoqda. Sun'iy intellektning ushbu sohaga integratsiyasi tobora dolzarb bo'lib bormoqda. Masalan, Google ingliz tilini o'zlashtirishga yordam beradigan Semanticist o'yinini taqdim etdi, unda odamlar sun'iy intellektga ega raqiblar bilan so'zlarni bog'lashda raqobatlashadilar. Ushbu maqolaning maqsadi chet tillarini o'rganishda sun'iy intellektning rolini aniqlash va uning tilni o'zlashtirish jarayonlarida inson ishtirokini yo'q qilish potentsialini o'rganishdir. Hozirgi vaqtda sun'iy intellekt muhim rivojlanish bosqichida, u yuqori sifatli matn, audio va vizual tarkibni yaratishga qodir. Sun'iy intellekt tizimlarini tabiiy tillarda tushunish darajasini baholash juda muhimdir. Shunga qaramay, ushbu tizimlarning samaradorligi bu borada noaniq bo'lib qolmoqda. Semanticist odatda ko'p tili vazifalar uchun ishlatiladigan to'liq moslashuvchan algoritmdan foydalanadi. Turli tillardan olingan o'quv ma'lumotlaridan foydalangan holda, neyron tarmoq avtonom ravishda so'z boyligini o'zlashtirishni yaxshilash uchun modellarni ishlab chiqadi. Ushbu maqolada chet tillarini o'rganishda sun'iy intellektning haqiqiy roli, uning ahamiyati va uning inson resurslarini almashtirish imkoniyati ko'rib chiqiladi.

#### РЕЗЮМЕ

Учитывая стремительный прогресс технологий, сфера образования требует обновления, особенно в том, что касается обучения иностранным языкам, в связи с их возросшим значением и спросом в последнее время. Интеграция искусственного интеллекта в эту область становится все более актуальной. Например, Google представила Semanticist, игру, помогающую в овладении английским языком, в которой люди соревнуются в ассоциации слов с противниками с искусственным интеллектом. Цель этой статьи - установить роль искусственного интеллекта в изучении



иностранных языков и исследовать его потенциал для вытеснения участия человека в процессах овладения языком. В настоящее время искусственный интеллект находится в стадии существенного развития, он способен генерировать высококачественный текстовый, аудио- и визуальный контент. Крайне важно оценить уровень понимания систем искусственного интеллекта на естественных языках. Несмотря на это, эффективность этих систем в этом отношении остается неопределенной. Semanticist использует полностью адаптируемый алгоритм, обычно используемый для многоязычных задач. Используя обучающие данные из различных языков, нейронная сеть автономно разрабатывает модели для улучшения усвоения словарного запаса. В данной статье рассматривается актуальная роль искусственного интеллекта в изучении иностранных языков, его важность и возможность замены им человеческих ресурсов.

#### SUMMARY

Given the rapid advancement of technology, the realm of education necessitates updating, particularly concerning foreign language instruction due to their heightened significance and demand in recent times. The integration of artificial intelligence in this domain is increasingly pertinent. For instance, Google has introduced Semanticist, a game aiding in English language acquisition, where individuals engage in word association challenges against AI opponents. This piece aims to establish the role of AI in foreign language learning and explore its potential to supplant human involvement in language acquisition processes. Artificial intelligence is currently undergoing substantial development, capable of generating premium texts, audio, and visual content. Crucially, it is essential to evaluate the comprehension level of AI systems in natural languages. Despite this, the effectiveness of these systems in this regard remains uncertain. Semanticist employs a fully adaptable algorithm typically employed for multilingual tasks. Through training data from various languages, the neural network autonomously devises models for enhancing vocabulary acquisition. This article examines the actual role of artificial intelligence in learning foreign languages, its importance and the possibility of replacing human resources with it.