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Use of Artificial Intelligence in Teaching Foreign Languages

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ABSTRACT

The article is devoted to the study of the theoretical and practical foundations of the use of artificial intelligence in teaching English in higher education. The author argues for the relevance and practical significance of the research topic through the ideas of a nature-conforming (personalist) learning model. It turns out that one of the key issues at present is the reasoned selection and selection of the appropriate information and communication or digital technology, which can, in particular, ensure the formation and create the potential for the development of a strong foundation for the knowledge of a foreign (English) language.

KEYWORDS: *artificial intelligence, practical significance, nature-conforming (personalist), digital technology, facial recognition, programming drones, machine learning, computer power.*

Today, artificial intelligence is already quite successfully used to implement facial recognition, voice recognition, fingerprint recognition, in the implementation of services such as voice assistants, in robotics for programming drones, as well as for programming computer games.

There are a number of specialized platforms for creating applications based on artificial intelligence. They are based on the principles of artificial neural networks, which are capable of quite accurately recognizing speech and objects, as well as independently generating actions necessary for the functionality of the software.

Modern applications based on artificial intelligence work on the principles of machine learning and deep learning. The latter uses large amounts of data and requires high computer power.

Any thought in the form of concepts, judgments or conclusions is necessarily clothed in a material-linguistic shell and does not exist outside of language. It is possible to identify and explore logical structures only by analyzing linguistic expressions.

Language is a sign system that performs the function of forming, storing and transmitting information in the process of understanding reality and communication between people.

Language is a necessary condition for the existence of abstract thinking. Therefore, thinking is a distinctive feature of a person.

The original design of the tongue is the sign it uses. A sign is any object that can be perceived (by eye, ear or other) and act as a representative of the object and provides information about the following (photos of signs: document copy, fingerprint image; symbol of signs: musical notation, Morse code sign, icon alphabet).

According to their origin, languages are natural and artificial.

A programming language is a formal sign system designed to write programs. A program usually represents some algorithm in a form understandable to the implementer (for example, a computer).

A programming language defines a set of lexical, syntactic, and semantic rules used to compose a computer program.

It allows the programmer to determine exactly what events the computer will react to, how data will be stored and transmitted and what actions should be performed on this data under various circumstances.

From a certain point of view, the entire history of the computer industry and computer science can be represented as the history of the development of programming languages.

Times are changing, tasks are becoming more complicated, what previously required man-years is now done by enthusiasts on their knees in a few weeks; a huge mass of standard solutions, standard libraries and standard programmers has been accumulated.

In addition, the creation, development and change of programming languages is in full swing.

Components of the software interpretation of memorization algorithms.

Also, potential areas of application of artificial neural networks are areas in which human intelligence is ineffective or traditional calculations are labor-intensive or physically inadequate, since they do not reflect or poorly reflect real physical processes and objects.

The relevance of using neural networks increases many times when there is a need to solve poorly formalized problems.

Thus, the main goal of artificial intelligence is to create a program that is not only capable of learning, but also capable of teaching itself, that is, being self-learning.

Artificial intelligence (AI), as a branch of modern science, is persistently penetrating everyday life, becoming an integral part of e-commerce, marketing, manufacturing, medicine, the automotive industry, and also playing an increasingly significant role in education, including in the study of 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 offer both new opportunities and challenges that could fundamentally change the governance and internal architecture of higher education institutions. Research in AI begins in the 1950s. In 1956, renowned

computer scientist J. McCarthy proposed one of the first and most famous 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 as precisely as possible. that it is possible to create a machine to simulate it [1].

Experienced educators and researchers will share knowledge about how the use of artificial intelligence in education can effectively change the way foreign languages are taught. Listen to talks from linguists, educators and digital experts.

The role of digital technologies in higher education is to develop human thinking and expand the capabilities of the educational process, and not to reduce it to a set of procedures for transmitting information, monitoring and assessing its assimilation. With the advent of AI, it becomes increasingly important for educational institutions to remain vigilant to ensure that hidden algorithms in computer programs are not monopolizing power by the technical entities that created them. Professor F. Pascal in his famous book "The Black Box Society" notes that decisions that were previously based on human reflection are now made automatically, software encoding thousands of rules and instructions, calculated in a fraction of a second. The researcher shows that today there is not only a quasi-concentrated and powerful monopoly on these solutions, but also a deliberate concealment of the transparency of the algorithms, as well as the purposes for which they are used. This is veiledly presented as a normal state of facts, a natural structure of the Internet era, but such a situation can lead to a very dangerous concentration of undeniable power, since in an information society, power is determined by the possession of information.

Whoever controls the algorithms controls AI decisions, gaining unprecedented influence on people and every sector of modern society [3, p. 81]. If we touch upon the problem of using AI in the manufacturing sector, i.e., where university students usually undergo practical training, then as an example we can turn to the experience of the largest enterprises that have 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 are investing heavily in new applications and research. The internal architecture of megacorporation does not correspond to the democratic model, but is that of "benevolent dictators" who know what is best and make decisions without consulting their internal or external constituents. Monopoly and strict control of information sources, suppression of criticism and virtual silencing of facts that do not align with the interests of the technocratic leadership are in direct opposition to the ideas of free, individually oriented education. One of the most important functions of universities is precisely to develop originality of thinking, creative initiative, and the ability to criticize even established doctrines; this is the only way great scientists and inventors can appear within the walls of universities.

Higher education withers when freedom of thought and research is suppressed in any form, since manipulation and restrictions in the process of knowledge distort the worldview and creative impulse of a person.

According to a group of Mexican researchers, if we reach a point where the content of universities is determined by a handful of technocrats and they gain control over the research and ethos of universities, higher education will turn towards a bygone era.

This set of risks is too important to be overlooked and not explored when facing the challenges of modern technology with courage [4]. At the same time, artificial intelligence is already capable of replacing a large number of administrative employees and support teaching staff in higher educational institutions [5]. It is therefore important to examine 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 making its way into universities along with so-called assistive technologies, i.e. computer programs that enable text-to-speech and speech-to-text conversion, scaling, text prediction, spell checking and search engines.

The listed examples are just some of the technologies that were initially created with the goal of providing assistance to people with disabilities or freeing employees from routine activities [1]. The use of these technological solutions has since been expanded and we now attribute them to common characteristics in all personal computers and mobile devices. These technologies are now creating the conditions for educational interaction among students around the world, expanding the opportunities available for learning and designing educational experiences [3, p. 77]. In addition, artificial intelligence is currently improving the tools used every day: from Internet search engines, smartphone functions and applications to public transport and home appliances [2]. Therefore, an analysis of domestic and foreign scientific literature has shown that the most serious disadvantages of using AI in the educational process of a university include the following:

– 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 shortcomings, AI should be perceived in the educational system as an innovative technology. However, as with the use of any technical innovation, it should be remembered that the goal of "smart machines" is to help people, and not to reduce human, pedagogical communication to nothing, to destroy such a carefully constructed environment of personal maturation and education, which was created in universities.

As the famous researcher in the field of pedagogy A. Schleicher noted, 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 environment. global economy [3, p. 23–25]. In this regard, scientific interest in artificial intelligence as a potentially effective direction for the development of digital technologies in education is constantly increasing. However, until now in scientific research there is no clear definition of this phenomenon in terms of its use in the educational process of higher education. It is customary to describe it by listing the currently available technical solutions, technologies, training tools, as well as its functions for

modeling human intelligence and the type of problems being solved [1].

We believe that artificial intelligence in the higher education system is one of the digital learning technologies that strives to copy the work of the human brain, and therefore is capable of performing simple logical tasks, communicating with students, including in foreign languages, and simulating various professional situations , process large volumes of information and reproduce the requested data in the shortest possible time, which can significantly help subjects of the educational process in performing routine work. Speaking about artificial intelligence in education, I would like to dwell in more detail on the implementation of AI in the process of teaching foreign languages using the capabilities of a neural network. Despite the identified shortcomings, the advantages of AI in teaching foreign languages are undeniable:

- expanding opportunities for productive foreign language communication;
- taking into account the individual characteristics and interests of students, their level of foreign language proficiency;
- motivation of students to study foreign languages and linguistic phenomena, etc.

According to research data from large corporations such as Intellias, Alphary, Microsoft, working on the development and implementation of AI, artificial intelligence algorithms have great potential for the development of e-learning in all spheres of life. International corporations are already using AI to train their employees in foreign languages. At large, well-equipped universities, such as leading engineering colleges or transportation engineering programs, students can also use AI to learn foreign languages anytime, anywhere. Over time, traditional schools, colleges and universities will be able to incorporate artificial intelligence-assisted language learning into their programs to diversify and broaden the learning experience for students.

Thus, the further development of artificial intelligence functionality today is promising for the work and professional development of developers.

Modern AI applications in use are often limited in functionality, but the IT industry is quickly acquiring new tools and ideas to increase functionality.

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