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*Ляхова Елена Георгиевна***ПРЕПОДАВАНИЕ ИНОСТРАННОГО ЯЗЫКА В НЕЯЗЫКОВОМ ВУЗЕ  
В ЭПОХУ ЦИФРОВИЗАЦИИ ОБРАЗОВАНИЯ**

***Аннотация:** данное исследование посвящено изучению проблемы когнитивных рисков, возникающих в результате цифровизации образования, в целом, и преподавания иностранного языка в неязыковом вузе, в частности. В качестве метода исследования используется сравнительный анализ подходов к обучению иностранного языка с применением искусственного интеллекта и традиционных методов преподавания иностранного языка в неязыковом вузе. В результате проведенного исследования автор приходит к выводу о необходимости сочетать традиционные методы обучения иностранному языку с инновационными методами с использованием нейросетей.*

***Ключевые слова:** преподавание иностранного языка, неязыковой вуз, нейросети, искусственный интеллект, когнитивные риски.*

***Abstract:** this research is devoted to the study of the problem of cognitive risks arising as a result of the digitalization of education, in general, and teaching a foreign language in a non-linguistic university, in particular. The research method used is a comparative analysis of approaches to teaching a foreign language using artificial intelligence and traditional methods of teaching a foreign language in a non-linguistic university. As a result of the study, the author comes to the conclusion about the need to combine traditional methods of teaching a foreign language with innovative methods using neural networks.*

***Keywords:** teaching foreign languages, non-linguistic university, neural networks, artificial intelligence, cognitive risks.*

Along with the benefits and potential of artificial intelligence (AI), there are also certain risks and threats associated with its development and use. These risks can be divided into several categories, including cognitive risks [1; 6; 7; 11].

Cognitive risks of AI may arise due to the lack of comprehensibility and predictability of its work. Artificial intelligence can make decisions based on complex algorithms and neural networks, and in some cases, even its creators cannot explain exactly how it came to a certain conclusion. This can lead to misunderstanding and distrust on the part of users and contribute to the spread of false myths and fears about AI [3].

In addition, cognitive risks may arise due to the potential replacement of human work and decision-making by AI. This can lead to job losses and negative social consequences, such as increased unemployment and inequality. There is also a danger of losing human skills and abilities due to increased dependence on AI [12].

To minimize the cognitive risks of artificial intelligence, it is necessary to develop transparent and understandable AI algorithms, as well as promote ethics and responsibility in the development and use of AI technologies [12].

The following cognitive risks may arise when using artificial intelligence to teach foreign languages in a non-linguistic university.

1. Limited context and insufficient understanding of cultural features: AI may not always take into account contextual and cultural differences, which may lead to incorrect understanding and use of language.

2. Lack of deep understanding: AI may be limited in its ability to understand the nuances and complexities of language, which may lead to incorrect learning and perception of material.

3. Errors and inefficiencies: Using AI for language teaching may be accompanied by failures in recognizing and correcting students' errors, which may hinder the learning process [8; 11; 12].

To minimize cognitive risks, it is necessary to carefully train and calibrate the artificial intelligence system to take into account contextual and cultural features, as well as provide sound methods for error correction and quality control of learning. It is also important to ensure deep interaction between AI and teachers to improve the effectiveness of foreign language teaching [8; 11; 12].

To analyze how cognitive risks arise in the process of teaching a foreign language in a non-linguistic university and how they can be mitigated, we will consider the process of assimilation of foreign language material, consisting of the stages of presentation of new material, comprehension and rethinking of the studied material and the stage of applying the studied material in practice.

*Organizing the process of presenting new foreign language material when teaching a foreign language at a non-linguistic university using neural networks*

When teaching a foreign language, it is important to present new foreign language material in a variety of ways to improve students' understanding and memorization. According to research in this area, there are several effective methods that can be used.

1. Listening: Have students listen to audio recordings in the target language, such as audio books, speeches, or music. This will help them get used to the sound and pronunciation of the language.

2. Reading: Provide students with texts in the target language to read and understand. You can use articles from the Internet, books, or newspapers.

3. Communication: organize communication in the target language between students and the teacher, as well as between students. This will help them improve their speaking skills.

4. Video lessons: Use video lessons in the target language for visual learning. Watching movies, TV series or educational videos will help students improve their understanding of the language.

5. Games and exercises: Conduct various games and exercises that will help students remember new material. For example, use flashcards with new words or conduct role-playing games in the target language.

It is important to adjust teaching methods to the individual needs and level of each student to facilitate their acquisition of a foreign language [2; 9].

You can introduce students to new lexical and grammatical phenomena when learning a foreign language by using contextual explanation, in which examples of the use of new words and grammatical constructions are given to students in context so that they can understand and remember their meanings.

Although contextual explanation is an effective method for introducing new lexical and grammatical phenomena of a foreign language, it also has some disadvantages, among which are:

– firstly, the limited context. Sometimes the context in which new material is presented may be limited and not convey the full variety of meanings and uses of a word or grammatical construction. This may lead to misunderstandings for students;

– secondly, the possibility of misinterpretation. Students may misinterpret the context and erroneously understand the meaning or use of a new lexical and grammatical phenomenon, which may lead to misunderstandings;

– thirdly, ineffectiveness for abstract concepts. Some more abstract or complex concepts are difficult to explain with the help of context alone. In such cases, students may lack additional explanation or illustration;

– fourthly, time costs. Preparing a suitable context for each new lexical and grammatical phenomenon may require a significant investment of time on the part of the teacher;

– fifthly, limited options. When using contextual explanation alone, students may not see a wide range of possible meanings and uses of the new material. For a more effective and comprehensive introduction of new lexical and grammatical foreign language phenomena, it is recommended to combine contextual explanation with other methods, such as analytical analysis, additional exercises and examples, to ensure a deeper and more complete understanding of the new material by students;

– sixthly, the distortion of new foreign language phenomena under the influence of the native language and culture of students. Students of higher educational institutions are individuals with already formed competence in their native language. The native language is the only way for them to obtain knowledge, and the native culture determines the categorization grid into which their consciousness enters all incoming information [9]. In such conditions, any foreign language phenomenon will be assessed according to the categories of the students' native language and either perceived with identification with the features of the native language, which will distort this phenomenon, or rejected as incomprehensible, and, therefore, unnecessary in the absence of a

similar category in the students' native language and culture. In order to avoid the above-mentioned shortcomings and cognitive distortions, scientists recommend a categorical presentation of new foreign language phenomena, in which all phenomena of a foreign language are introduced categorically based on the students' native language and in comparison with similar phenomena of their native language and culture [9; 10]. This type of comparative analysis helps students understand the differences and features of the target language. This helps them avoid mistakes in translation and language usage. Comparison of two languages reveals the features and unique characteristics of the target language that distinguish it from the native language. This helps students better learn and understand new material. In addition, comparative analysis of the native and target languages leads to students becoming more conscious and analytical about the language structure and functions of grammar and vocabulary of the foreign language, which, in general, contributes to their linguistic development. With this approach, translation skills are improved, since comparison helps students develop the skills of translating and adapting texts from one language to another, due to the understanding of interlingual differences. Thus, comparing new lexical and grammatical phenomena with similar ones in the students' native language is an effective way to help them better learn a foreign language and develop their language skills.

When teaching a foreign language using neural network learning platforms, categorical representation of foreign language phenomena is difficult. Artificial intelligence can be trained to recognize and analyze linguistic phenomena in different languages, including foreign ones. However, existing artificial intelligence models may face certain difficulties in categorically representing new foreign-language phenomena in the grammar of a foreign language due to the diversity of language structures, syntax and semantics [11; 12].

To successfully represent foreign-language phenomena in foreign-language grammar, artificial intelligence must have a sufficient amount of training data in various languages to correctly assess the structure and significance of language elements. It is also important to conduct a thorough analysis of the context and use of language units for accurate categorical representation.

Thus, artificial intelligence can be used to analyze foreign-language phenomena in foreign-language grammar, but to achieve high accuracy and reliability of results, it is necessary to conduct additional training and testing of models in various languages and language structures and combine training using artificial intelligence with traditional teaching.

Numerous studies in the field of linguodidactics recommend using a tabular representation of categorical grammatical phenomena, which has a number of advantages [2; 9].

1. Structured representation. The table allows you to present information about foreign-language phenomena in a convenient and structured form, which simplifies their analysis and comparison.

2. Visual comparison. The table makes it easy to compare foreign-language phenomena with Russian-language grammatical constructions, which helps to identify similarities and differences between them.

3. More accurate description. Categorical representation allows you to describe in detail the structure and features of foreign-language phenomena, which will help to better understand and use them in the context of learning and translation.

4. Ease of learning and perception. Presenting information in tables makes it more accessible and convenient for students to learn, since they can easily navigate and quickly absorb new knowledge.

5. Interactivity and ease of updating. The use of technology and interactive tools makes it easy to update and supplement tables with new data and phenomena, which makes them more relevant and useful for users.

Thus, the presentation of foreign-language phenomena categorically and in the form of a table has a number of advantages that help to better understand, analyze and use various language structures and constructions in learning and practice, but is difficult and not always possible when teaching a foreign language using neural network platforms.

*Organization of the processes of understanding and rethinking new foreign-language information when teaching a foreign language at a non-linguistic university with the help of neural networks*

Understanding new information when learning a foreign language plays an important role in the acquisition and memorization of language knowledge [4, 9].

One of the ways to understand new information is to associate it with existing knowledge. New words, phrases, or grammar rules can be remembered and understood better if they are associated with something already known.

Understanding new information becomes easier if it is applied in a real context. For example, learning a language through role-playing games, situational dialogues, or watching films in the target language helps to better remember and understand new words and expressions.

Practice and use of new information in various contexts helps to consolidate and understand knowledge. Written exercises, dialogues, communication with native speakers – all these are ways of actively applying knowledge.

Repetition is an important aspect of understanding information when learning a language. Regular repetition of new words and grammar rules helps to consolidate knowledge in memory and improve understanding of the language as a whole. Receiving feedback from a teacher, classmates or native speakers helps to understand mistakes, correct them and further improve in learning the language.

In general, according to research, understanding new information when learning a foreign language requires active participation, application in various contexts, and regular repetition for deeper and longer-term acquisition of knowledge.

Rethinking new foreign language material is an important stage in the process of learning a foreign language, since it allows for a deeper understanding and memorization of language elements. Let's consider the approaches proposed by researchers in the field of linguodidactics [9].

When learning new words, expressions, or grammatical constructions, it is important to analyze the context in which they were used. To do this, you need to understand how exactly the word or phrase fits into the sentence, what associations they evoke, and what shades of meaning they carry.

It is advisable to compare new language elements with similar ones in the students' native language. This will help to better understand the meaning and use of new words and expressions and identify differences in grammar and vocabulary.

It is useful to use the studied material in an active dialogue. This can be a conversation with a language exchange partner, solving oral tasks or simply repeating phrases out loud to consolidate and understand them better.

Writing an essay, review, commentary or other text in a foreign language using the studied material is an important exercise for understanding and rethinking the material covered. Written expression helps to understand and remember vocabulary and grammar more deeply.

In the learning process, it is necessary to create connections and associations between new language elements and the student's personal language experience, emotions or visual images. This helps to remember and understand the material better.

Rethinking new foreign language material is an important step towards deep assimilation of knowledge and development of communication skills in a foreign language. This is a process that helps to better understand and master the language, making students more confident and flexible in its use.

*Peculiarities of understanding and rethinking new information in the native language and in a foreign language*

The difference between understanding in the native language and in a foreign language can be associated with differences in culture, mentality, education and life experience of a person. Understanding in the native language is often deeper and more intuitive, since a person is more accustomed to this language and can better express his thoughts and feelings in it. Understanding in a foreign language can be more superficial and limited, since a person cannot always fully understand the meanings and shades of



words in another language. In addition, a foreign language can have a different logic and structure, which can also affect the process of understanding.

When learning a foreign language, there is a clash of two pictures of the world, two worldviews. One picture of the world is the psychological content of the student's consciousness. It was formed under the influence of his native culture and is based on the system of his native language. The second picture of the world is reflected in the foreign language that the student begins to study. This picture of the world reflects the peculiarities of world perception, characteristic of the people for whom this foreign language is native. These two pictures of the world differ both at the linguistic and conceptual levels. Teaching a foreign language is intended to coordinate the contents of the two pictures of the world so that the elements of the picture of the world reflected in the foreign language are learned by the student without distortion under the influence of his native language and national culture [5].

For this, it is necessary to properly organize the work of such psychological mechanisms as reflection and the mechanisms of internal speech.

Reflection plays an important role in comprehension, since it allows a person to consider his thoughts, feelings, actions and experience, as well as to take into account his beliefs, values and ideas about the world. Reflection includes awareness of one's own thinking and analysis of one's own beliefs and assumptions.

When comprehension in the native and foreign languages, reflection can manifest itself in different ways. For example, when using one's native language, reflection can be more intimate and emotional, since the person is more accustomed to this language and can express their thoughts and feelings more freely. When using a foreign language, reflection can be more analytical and meaningful, since the person is forced to choose words and formulations more carefully in order to convey their ideas and feelings in an unfamiliar language.

Thus, reflection in understanding in different languages can manifest itself differently, but in both cases it helps a person to understand himself and the world around him more deeply and consciously.

If we direct the students' reflection to the similarities and differences between the systems of their native and foreign languages and to the concepts and categories that make up the conceptual level of their native culture and the culture of the people of the target foreign language, then it is possible to achieve the assimilation of new concepts and categories and ways of expressing them by means of the studied foreign language.

At the same time, the mechanisms of internal speech in the native language and in a foreign language also work differently, depending on the level of knowledge of the foreign language, the degree of proficiency in it, as well as on the individual characteristics of the person.

In the native language, the mechanisms of internal speech usually work more automatically and intuitively, since a person has become accustomed to this language since childhood and uses it daily to communicate and express thoughts. He can easily formulate his thoughts, feelings and actions in his native language, since he more consciously perceives and understands its structure and significance. In a foreign language, the internal speech mechanisms may work less efficiently and require more effort and concentration, especially if a person does not know or understand the language very well. They may face problems with translation, choosing appropriate words and expressions, and the need to adapt their internal dialogue to the new language. However, with sufficient practice and effort, the internal speech mechanisms in a foreign language can become easier and more natural.

Before learning a foreign language, the task arises of adjusting the internal speech mechanisms to work with foreign-language phenomena. It is especially important to use the internal translation mechanism, which operates automatically in the native language. If you do not specifically organize the formation of this mechanism in a foreign language, all foreign words and sentences will be subject to the process of tracing, when translating from the native language to a foreign language and vice versa, the student is guided by the rules of the native language, distorting foreign-language meanings.

For such training, it is necessary to rely on the categorization process, taking into account its features.

The process of categorizing new information is a cognitive process in which a person structures and organizes newly acquired knowledge based on existing categories, schemes, and patterns in his or her mind. This process allows us to classify, analyze, and organize information for more effective assimilation, memorization, and use in the future [11; 12].

Let us consider the main stages of the process of categorizing new information.

1. Perception of information: a person receives new information through various channels (reading, listening, observing, etc.).

2. Analysis of information: a person analyzes the received data, identifies its important elements and main concepts.

3. Definition of categories: based on existing knowledge and schemes in a person's mind, he or she determines the appropriate categories into which the new information can be classified.

4. Organization of information: a person structures and organizes new information, dividing it into categories, subcategories, related concepts, etc.

5. Linking with the already known: a person tries to link new information with existing knowledge in order to deepen understanding and strengthen memorization.

6. Putting knowledge into practice: the acquired and categorized knowledge can be used for problem solving, decision making, learning and other purposes.

Categorizing new information helps us process and assimilate large amounts of data, makes knowledge more accessible and understandable, and also helps us better remember and use information in the future.

When learning a foreign language, categorization continues to occur according to the categories of the native language, which significantly distorts both the linguistic and semantic components of foreign-language phenomena. As a result, the student develops a set of pseudo-foreign distorted units that he tries to use in his speech. Needless to say, such speech is so rich in errors that it is difficult to achieve understanding during communication.

When teaching using the traditional method, the teacher always remembers this possibility and directs the process of understanding and rethinking students in the right direction [11].

When teaching a foreign language using neural networks, due to the uncontrolled interference of new foreign-language information, some cognitive difficulties arise in its assimilation [12].

1. Neural networks may encounter difficulties in understanding the features of grammar, vocabulary, phonetics and syntax of a foreign language, which can lead to incorrect interpretation of information.

2. Interpretation of foreign-language information is often associated with cultural contexts and nuances that neural networks may not take into account or interpret incorrectly due to the lack of relevant knowledge.

3. Translation of content from one language to another can cause ambiguities and discrepancies, which creates difficulties in the correct understanding of foreign-language information by neural networks.

4. Neural networks may face the problem of insufficient context for adequate understanding of foreign-language information, which leads to erroneous conclusions or incorrect interpretations.

5. Insufficient training data in a particular foreign language may hinder the effective training of neural networks to understand and interpret this language.

In this study, the author proposes to pay special attention to the method of semantic translation as a leading strategy for organizing the comprehension and rethinking of new foreign-language material. The method of semantic translation is convenient to use not only in traditional foreign language teaching, but also in teaching using neural network platforms. This method activates the work of reflection, internal speech mechanisms, restructures the work of these mechanisms taking into account the peculiarities of perception and assimilation of foreign-language information and allows to completely neutralize the cognitive risks inherent in learning using artificial intelligence [8].

### *Semantic translation*

Semantic translation (or semantic reinterpretation) is the process of translating a text or expression that focuses not on the literal translation of words and phrases, but on conveying the meaning, idea, or context of the source material. It is important not only to convey the words in another language, but also to recreate the same meaning and content in the translation as in the original [5]. Here are some principles and approaches that are used when performing meaningful translation.

1. Understanding the context. It is important to understand the context in which words or phrases are used and how they relate to other elements of the text. This will help to convey the meaning more accurately in the translation.

2. Taking into account cultural features. When translating meaning, it is necessary to take into account cultural differences and nuances in order to correctly convey ideas and images that are appropriate for the cultural context.

3. Conveying the author's intent. It is important to try to understand the intentions and desires of the original author and convey them in the translation in order to preserve the integrity and meaning of the text.

4. Creativity. Meaningful translation requires the student to be creative in conveying meaning. Sometimes it is necessary to use paraphrasing or other techniques to accurately convey the ideas and impressions of the original.

5. Checking the quality of the translation. After completing the semantic translation, it is important to analyze it in terms of the accuracy of the meaning, adequacy and linguistic literacy [5].

Semantic translation is an important tool in teaching a foreign language, since it allows you to convey not only the literal meaning of words, but also the meaning, ideas and emotions, which are key to understanding the text in another language.

### *Conclusions*

Having analyzed the cognitive risks that arise when teaching a foreign language using artificial intelligence, we can draw the following conclusions.

Among the most serious risks are: information oversaturation of the cognitive sphere of students, devaluation of students' memory capabilities, the Google effect, and a decrease in the level of critical thinking of students. These risks arise at all stages of

learning new foreign language material, and they are especially evident at the stages of forming educational motivation, presenting new foreign language material, understanding and rethinking foreign language material.

In modern conditions, a foreign language teacher is called upon to organize the learning process using artificial intelligence in such a way as to mitigate possible cognitive risks for students.

For this purpose, when teaching a foreign language using AI, it is recommended to:

1. Carefully define the learning goals and specific tasks that must be solved using artificial intelligence. For example, this could be improving grammar skills, understanding authentic speech, or expanding vocabulary.

2. Choose technologies and platforms wisely. This may include the use of chatbots, online courses with interactive exercises, or mobile apps. It is necessary to combine such training with traditional teaching methods and ensure interaction between students and the teacher.

3. Develop content taking into account the stages of assimilation of foreign language material and organize all stages of assimilation taking into account the characteristics of the native language and culture of students. At the presentation stage, use tables and algorithms for analyzing foreign language phenomena, and at the stage of comprehension and rethinking, use an exercise in semantic translation.

4. Integration and testing. After developing the content, it is necessary to integrate it into the selected platform and test the performance and effectiveness of training using artificial intelligence, comparing the results of the control and experimental groups, identify possible problems and improve the learning process in the future.

5. Use various techniques for improving memory and activating students' cognitive abilities in the process of teaching a foreign language using AI.

Thus, organizing the process of teaching a foreign language using AI in a non-linguistic university requires a systematic approach, including defining goals, choosing technologies, developing content, integrating and testing, as well as analyzing and improving the learning process. At the current stage of AI development, it is necessary to

combine AI-based teaching with traditional teaching methods, giving special attention to the development of students' cognitive abilities.

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