Cognitive technologies in language learning and teaching: types of cognitive tasks for learning englisH

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Abstract: *The article describes the idea of cognitive learning technology, some types of these technologies, the structure. Three leading ideas are identified: cognitive visualization of didactic objects and processes; polymodality of perception and recoding of information; visual schematization and logical structuring of learning content.*

Keywords*: cognitive educational technology, method, mind maps, method maps of concepts, the distortion of information, cognitive schemas*

Introduction

In modern conditions, within the framework of global innovation processes taking place in all spheres of society, the issue of improving the effectiveness of teaching foreign languages is more relevant than ever. First of all, we are talking about a high level of requirements for the level of proficiency in the language of professional communication in various fields of activity as one of the indispensable conditions for the competitiveness of a future specialist in the labor market. In this regard, new educational technologies and innovations that significantly contribute to the intensification of the process of teaching foreign languages in general and languages of professional communication in particular. Such progressive methods are rightfully considered cognitive technologies, which will become the basis of education in the XXI century. This is primarily due to the fact that cognitive sciences (cognitive psychology and linguistics, philosophy, psycholinguistics, anthropology, neuroscience, logic, etc.) - as interdisciplinary sciences — determine their main goal from- the teaching of "the most complex phenomenon of nature — human consciousness and reason". Secondly, the cognitive sciences focus on mental (thinking/cognitive) processes and certain states that are associated with them. It is cognitive research that is associated with the problems of representation of knowledge in all aspects of its acquisition, storage, processing. And, finally, thirdly, cognitive science explores mainly "ultra-deep semantics", and the content aspects of language forms are at the center of its scientific research.

The era of cognitive technologies began with pedagogical research. Cognitive abilities (new name) this is the same as cognitive abilities and the psychology of cognition, which developed rapidly in the twentieth century. The essence of cognitive technologies is to unravel how a person perceives and processes the information received, which patterns (cognitive schemes) form [3].

Innovative and cognitive technologies are most often used in modern methods of teaching a foreign language.

Innovative technologies are new ways and methods of interaction between teachers and students, ensuring effective achievement of the result of pedagogical activity.

Cognitive technologies are information technologies specifically focused on the development of human intellectual abilities. Cognitive technologies develop a person's imagination and associative thinking [4].

Main research: Cognitive technologies in education.

Cognitive technologies have emerged at the intersection of research in the field of cognitive psychology, artificial intelligence, neurophysiology, knowledge engineering, psycholinguistics and psychosemantics. As a result of the synthesis of these studies, an interdisciplinary scientific direction called cognitive science has emerged.

Cognitive educational technologies are based on the theory that each person perceives information according to the cognitive schemes available to him, many of which may be due to innate features. Thus, such technologies in education assume an individual approach to each student.

Perceiving information from the teacher or from additional sources, the student is able to normally assimilate only that information that correspond to his cognitive schemes, all other information is either simply forgotten or undergoes severe distortion, which negatively affects learning. Moreover, in most cases, the teacher does not have cognitive schemas responsible for determining the deformation or complete absence of cognitive schemas in the student, which only increases the problems with academic performance.

The main goal of cognitive science technologies in education is to increase the intellectual abilities of students, to assist in the formation of cognitive schemes in students responsible for adequate independent decision-making based on incoming information, as well as the assimilation of a certain layer of knowledge during training. That is, the main goal of cognitive educational technologies is to create optimal conditions for the assimilation of educational material by each student. [1]

Cognitive learning technology is a process with continuous feedback and has a scheme characteristic of all algorithmic technologies. Such a learning principle is based on a certain algorithm, the first part of which is the diagnosis of the initial level of the student. After making a diagnosis, the teacher identifies gaps in the knowledge of his ward, designating criteria for designing an individual training program. Creating an individual plan is the next step in the cognitive learning process.

The essence of cognitive technology in teaching is to provide students with an understanding of educational information. To do this, the teacher creates a complete system of tasks. In the process of preparing tasks, it is necessary to take into account the different level of cognitive development of students and create tasks of different levels of complexity. It is preferable to create such tasks to stimulate students' interest in learning a foreign language. The process of learning a language should become a process of discovering a language, a research and experimental process.

That is, the teacher, using a cognitive approach in teaching, is obliged to create problematic situations for students so that they discover new knowledge on their own. He uses cognitive techniques, teaches students to apply certain strategies adequately to the task facing him. Also, the task of the teacher is not only to set control questions and evaluate the results of students' work, but also to form students' ability to self-esteem, self-control.

E. A. Bershadskaya, M. E. Bershadskij have developed three cognitive educational technologies:

* cognitive learning technology;
* technology of visualization of associative connections based on the method of mind maps);
* semantic relations visualization technology based on the concept maps method

These technologies are subject-independent, i.e., they can be used to study any content at any level of education, starting from kindergarten and ending with adult education.

Let's consider visualization technologies based on the methods of intelligence maps and maps of concepts.
Both technologies allow the teacher to observe in real time the processes of extracting information from the studied texts by students. This allows you to immediately determine the presence of cognitive distortions and correct them, offering students additional tasks. Thus, the teacher receives continuous feedback necessary for the management of the cognitive process. Intelligence cards and maps concepts are built using special computer programs, which makes them a convenient tool for implementing electronic and mobile learning. Both methods make it possible to improve the cognitive competence of students, which is a priority in modern conditions of the information society.
The intellect-maps method is a powerful cognitive tool, the use of which makes it possible to dramatically increase the efficiency of intellectual activity of each learner:
* improve the skills of systematization and structuring of information;
* learn how to quickly process large amounts of information;
* to increase the clarity, depth and accuracy of thinking by mastering generalized cognitive schemes for the presentation of various information;
* improve some types of operational and long-term memory (verbal, figurative, emotional);
* develop creative abilities;
* improve the skills associated with generating information (preparing documents, writing articles, planning work, executing projects, etc.).[2]

Conclusion

The use of cognitive learning technology in the educational process (first of all, we are talking about its use in the classroom) allows the teacher to carry out activities for the development of students of the systematic scientific content of the subject. Cognitive educational technology is based on the assumption that a prerequisite for successful learning is the student's understanding of the information that is presented to him as the content of learning.
Thus, cognitive technologies ensure the unmistakable assimilation of the learning content and the improvement of cognitive, informational, communicative and professional competence of students. Cognitive learning technologies can be applied to the organization of distance, electronic and mobile learning.

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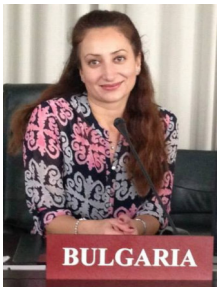
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