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THE USE OF PROBLEM-BASED LEARNING IN HIGHER EDUCATION

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Abstract. *The purpose of the study is to highlight the main provisions of problem-based learning. Results.* Problem-based learning is a teaching method in which complex real-world problems are used as a means of promoting student learning of concepts and principles, as opposed to the direct presentation of facts and concepts. This type of learning differs from the traditional one in that its purpose is not only to master the system of knowledge, but also the process of obtaining these results, the formation of cognitive activity, and the development of the learner's abilities. Problem-based learning can be incorporated into any learning situation; it can be used throughout the semester as the primary teaching method, can be used as an extension of laboratory and project-based learning, or can be used to create assessment tasks. **Conclusions.** Problem-based learning can help develop students' critical thinking, problem-solving, and communication skills, and can effectively engage not only different levels of students' cognitive and learning abilities, but also form their logical thinking.

Key words: *problem-based learning, teaching method, critical thinking, student.*

Introduction.

The methodology of problem-based learning in pedagogy has been developed since the middle of the twentieth century. Over time, it not only does not lose its relevance, but, on the contrary, is widely used and introduced into new fields of education. In medical education, problem-based learning began to be implemented at McMaster University in Canada in the mid-1960s. Shortly after that, three other medical schools - the University of Limburg in Maastricht, the University of Newcastle and the University of New Mexico - adapted the developed model and implemented it in their pedagogical practice [1].

The purpose of the study is to highlight the main provisions of problem-based learning.

Materials and methods of the study. An Internet search of published scientific works on the use of problem-based learning technology in pedagogy was conducted.

Results and discussion. Problem-based learning is a teaching method in which complex real-world problems are used as a means of promoting student learning of concepts and principles, as opposed to the direct presentation of facts and concepts.

Problem-based learning involves the use of active methods that best facilitate the convergence of the learning process with scientific knowledge and creative thinking, and consists in the fact that the teacher brings the student to the need to learn educational information by posing a problem to him/her, the solution of which requires the student to acquire new knowledge. The problem inherently activates the thinking of the learner, so problem situations and intellectual difficulties create an atmosphere of thinking development. Thus, the main category of problem-based learning is a problem situation. This type of learning differs from the traditional one in that its purpose is not only to master the system of knowledge, but also the process of obtaining these results, the formation of cognitive activity, and the development of the learner's abilities [2].

The purpose of applying problem-based learning technology in the educational process is to form and develop students' critical thinking - the ability to choose the best solution in critical situations. This technology is based on the creation of a special kind of motivation - problematic motivation, so it requires the selection of adequate content of educational material, which should be presented as a chain of problem situations [3].

Creating a true problem-based learning environment requires a high level of professionalism from the teacher, as well as the mastery of special methodological techniques and the ability to adapt to different teaching styles. A problematic situation can be created at any stage of learning: when explaining, consolidating or controlling material. In the educational process, built in accordance with the principles of problem-based learning, students' activities go through the following stages: formulating and discussing the problem; analyzing the problem, separating the known from the unknown; formulating hypotheses and choosing the optimal plan for solving the problem; implementing the optimal plan; searching for algorithms for checking the results [4].

Problem-based learning can be incorporated into any learning situation; it can be used throughout the semester as the primary teaching method, can be used as an extension of laboratory and project-based learning, or can be used to create

assessment tasks. The main feature that unites these uses is the presence of a problem that should motivate students to understand concepts more deeply, require students to make informed decisions and defend them. The problem should incorporate the learning content objectives in a way that connects it to previous courses or knowledge. If the problem is used for a group project, it should be of a level of complexity that allows students to work together to solve it; if it is used for a multi-stage project, the initial stages of the problem should be open and interesting to engage students in active work on the problem.

Conclusions.

Problem-based learning can help develop students' critical thinking, problem-solving, and communication skills, and can effectively engage not only different levels of students' cognitive and learning abilities, but also form their logical thinking. It can also provide opportunities for group work, research and evaluation of research materials, and lifelong learning.

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