

**THE ESSENCE OF PROBLEM TEACHING TECHNOLOGY IN THE EDUCATIONAL PROCESS**

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**Abstract:** the article reveals in detail the essence of problem-based learning technology in the educational process, and also presents the content of problem-based learning technology in the professional and pedagogical training of higher school students.

**Key words:** technology, knowledge, skills, problem-based learning, problem situation, management, function.

Problem-based learning is an improved learning technology. Effective teaching technology in current educational institutions is problem-based teaching. Its task is to encourage the process of active cognition and to form a scientific-research method in thinking. Problem teaching corresponds to the goals of creative, active personality education. In the process of problem-based teaching, the independence of the learner grows more and more compared to the reproductive forms of teaching.

There are different definitions and descriptions of problem-based teaching in the current pedagogic literature. In our opinion, a relatively complete and accurate definition is given by M.I. It is given by Makhmutov, in which problem teaching is explained as a system of rules of application of methods of teaching and learning, taking into account activities of logical thinking, analysis, generalization, and research activities of learners.

The essence of problem-based teaching is the teacher's management of students' cognitive activities to acquire new knowledge by creating a problem situation

in their educational work and solving educational tasks, problems and questions. This creates a scientific-research method of acquiring knowledge.

It is known that any teaching is based on certain laws of human activity, personality development and the principles and rules of pedagogical science formed on their basis. The process of cognitive activity of a person relies on the didactic principle - problematization, the objective laws of which resolve conflicts of logical cognition.

The analysis of the current teaching process shows that the conclusions of psychologists and pedagogues that thinking begins with a problematic situation, unexpected surprise and fascination are close to the truth. In the conditions of teaching, that mental and emotional state of a person acts as a special impetus for thinking and intellectual research. The problem situation arises in specific teaching conditions that are organized according to the purpose of certain pedagogical tools. It is also necessary to develop special methods of creating such situations based on the characteristics of the studied topics.

Thus, a problematic situation in teaching is not just a state of mental strain associated with an "unexpected obstacle on the path of thought." It is a state of mental tension specifically required by the goals of knowledge. At the basis of this situation are traces of previously acquired knowledge and methods of mental and practical action to solve the newly created task. It is worth noting that not all hardships are related to a problematic situation. Mental effort is not a problem if new knowledge is not connected to previous knowledge. Such toil does not warrant intellectual pursuit. The problematic situation is different from any thinking difficulties, in which the learner realizes the internal, hidden connections of the object (concept, fact) that required difficulty with the task, problem known to him before and at the same time.

Thus, the essence of the problem situation is that it is a conflict between the information that the learner is familiar with and new facts and events, which lack

previous knowledge to understand and explain them. This conflict is the driving force for creative assimilation of knowledge.

Symptoms of a problematic situation include:

- existence of a fact unfamiliar to the learner;
- instructions given to the learner to perform the tasks, their personal interest

in solving the cognitive difficulties that have arisen.

The ability to get out of a problematic situation is always connected with the understanding of the problem, that is, what is unknown, its verbal expression and solution. If we analyze the problem situation intellectually, it is primarily the independent mental activity of learners. It leads the learner to understand the reasons that caused intellectual difficulty, enter into it, express the problem in words, that is, define active thinking.

Consistency is evident here: first a problem situation arises, then a learning problem is formed.

In teaching practice, there is another option - an option where the problem seems to correspond to the occurrence of a problematic situation. The statement of the problem in the form of questions in the content of conflicts of facts, judgments, theoretical rules usually reflects the existence of a problematic situation, which is the answer to the question "why".

The problem consists of three components:

- on the basis of a known or assigned task;
- unknown or finding them leads to formation of new knowledge;
- previous knowledge or experience of learners.

They are necessary to carry out research aimed at finding the unknown. First of all, a learning problem task is set, which is unknown to the learner, and in which the methods of its execution and the result are also unknown, but the learners are expected to be based on their previously acquired knowledge and skills. comes down

to looking for a result or a solution. Thus, a task that learners know and how to solve it independently cannot be an educational problem, and secondly, even if they do not know the methods of solving a task and the means of searching for it, it cannot be an educational problem.

Important signs of a learning problem are:

- introduction of the unknown, which leads to the formation of new knowledge;
- students have a certain knowledge reserve necessary to carry out research in

order to find the unknown.

In the process of solving an educational problem, an important stage of the mental activity of students is to come up with a way to solve it or make a hypothesis and justify the hypothesis. The educational problem is developed consistently with problematic questions, and each question serves as a stage in its solution. The components of the problem, the character of the relationship between the known and the unknown, create a need for knowledge and encourage the search for active knowledge.

It should be noted that a necessary condition of problem-based teaching is to create a positive attitude of students towards the process of searching for the truth and its results. The creative and investigative cognitive activity of learners in problem-based learning consists in expressing the problem in the training when a problem situation arises, that is, the essence of the emergence of cognitive difficulties, that is, what is it at this moment if known, expresses it in words, then looks for ways to solve the problem and puts forward various assumptions, based on one of the assumptions that the learners find true as a hypothesis and proves it, the search is a problem or complete after the task is completed.

The search period of identity activity can be expressed in special schemes:

problem situation → educational problem → search for solving the educational problem → solution of the problem.

An important aspect of organizing and conducting problem-based training sessions is that the teacher must have a good understanding of both its educational and educational functions. A teacher should never give learners a ready-made truth or solution, but should motivate them to acquire knowledge, help them to process in their minds the information, events, facts and events that are necessary for training and life activities. A teacher should never give learners a ready-made truth or solution, but should motivate them to acquire knowledge, help them to process in their minds the information, events, facts and events that are necessary for training and life activities. Problem-based teaching has great potential for revitalizing the cognitive activity of students in conscious and solid assimilation of knowledge, determining their active attitude to the environment. In problem-based teaching, the teacher organizes the cognitive activity of students, so that students independently solve intellectual problems based on the analysis of subjects, draw conclusions and generalize, form laws, and apply the acquired knowledge to a new situation.

In some cases, the teacher should not only arouse interest in the students, but also not solve the educational problem by himself, and in other cases, it is necessary to guide the independent work of the students in solving the educational problem, as a result, education Learners develop the ability to independently acquire knowledge and find new ways of mental action by hypothesizing and proving it, develop the ability to transfer knowledge from one problem to another, and develop their attention and imagination. In the process of problem-based learning, students acquire knowledge and mental action methods by perceiving educational materials in a problem situation, independently analyze what they have learned, formulate educational problems by making hypotheses and proving them, and solving, intellectual activity of learners is ensured.

Thus, the task of problem-based teaching is cooperation in the effective mastering of the system of knowledge and methods of mental and practical activities

by learners, to create in them the ability to creatively apply the acquired knowledge in a new situation, to solve the problems of educational and educational independence of knowledge. is to do.

The problem of practical analysis of the educational process opens up the possibility of determining the uniqueness of teaching. The essence of problem-based teaching is the teacher's special organization of information to be mastered by the learner:

- the first condition for the organization of problem-based teaching is the system of improvement of educational information;

- in the second condition of problem-based teaching, problem-based teaching is carried out, and it provides for the possibility of choosing a method of solving it during the transfer of information to the educational task;

- the third condition of problem-based teaching is the subjective position of the learner, their ability to understand the goals of knowledge and make decisions, to be able to evaluate the means at their disposal to solve the problem and achieve the result.

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