

PROBLEM-BASED METHODS IN THE EDUCATIONAL PROCESS

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Abstract. In this article, the model of problem-based education in the educational process is designed for students' thinking, creating a problem situation in children's minds by posing problems in education; looking for ways to solve the problem, making assumptions; application of the chosen method to the execution of a hypothetical problem; drawing a conclusion on the completed problem, strengthening knowledge by applying the drawn conclusion to practice.

Key words: problem-based learning model, passive, active, differentiation, synthesis, comparison, detective, analysis and synthesis, comparison, generalization

Problem-Based Learning (PBL) is an educational approach that focuses on students learning through problem-solving and problem-solving rather than on the ready receipt of knowledge. This method helps students develop independent thinking, creativity, and practical skills.

As a result of the independence of the Republic of Uzbekistan, great changes and innovations took place in the field of education as well as in other fields. Among these innovations, modern teaching methods occupy a special place. In recent years, it has become more and more clear that the problem-based teaching implemented by advanced pedagogues is one of the most effective methods in the formation of characteristics such as sensitivity and resourcefulness in students during the educational process. Problem-based education and problem-based situations are of particular importance in the teaching system as an active method that directs students to creative thinking. Problem-based education should be understood as the current teaching process, which is structured taking into account the combination of the principles of problem-solving.

Problem-based education is a complex process that can be imagined from the teacher's point of view, from the student's point of view, and from the interaction between the teacher and the student. Educational models are taught according to the student's situation through imagination from the perspective of the participants of education. Types of education are determined according to educational models.

Education is imagined according to teaching activities. The teacher is the subject of the educational process, the student or group of students is considered as the subject of this group. Imagining education in this way and organizing, managing and controlling it according to this idea, the student's status as an active participant in the

educational process is denied to a certain extent. The teacher participates in the problem-based learning process in three cases:

- passive (passive) situation listening to the teacher's comments and explanations, carrying out his instructions, fulfilling requests and tasks. When the educational process is organized in this direction, educational work is aimed at children's memory;

- active (active) situation - a situation where children's independence and activity is ensured. In this case, problem-based education is organized for students' thinking.

- a situation where the student has equal rights with the teacher - in this case, the teacher builds and manages problem education with the student.

Depending on the student's participation in various situations in the educational process, several ways of mastering educational materials and related models are distinguished.

The first way is to learn knowledge ready. In this process, the teacher's speech becomes the main source of education. The teacher shares his knowledge. Students remember the definitions of the knowledge explained by the teacher. In the process of ready learning of knowledge lies information coming from the teacher and remembering them.

The next way of problem-based learning is independent work. This path is also intended for the memory of students, and the interaction between the student and the textbook is at the center of it. Children read this or that material according to the teacher's instructions, remember the basic rules, and apply the knowledge to the given educational conditions.

Another model of problem-based learning is the way to divide learning materials into elements and study each learning element separately.

The model of problem-based education is designed for students' thinking, and it has the following general appearance: creating a problematic situation in the minds of children by posing problems in education; looking for ways to solve the problem, making assumptions; application of the chosen method to the execution of a hypothetical problem; drawing a conclusion on the completed problem, strengthening knowledge by applying the drawn conclusion to practice.

Currently, in the experience of Uzbek schools, several options of problem-based education are used: conducting classes in the form of setting and completing problems, setting problems at the beginning of classes and explaining knowledge based on their solutions: studying part of the educational materials in the form of explanatory and demonstrative education, and the rest in the form of problem-based education.

Problem-based learning has several advantages. The purpose of education for children's thinking. A lot of opportunities to develop creative abilities in children is a

unique feature of education. At the same time, it has some disadvantages: first of all, choosing problems that correspond to the real abilities of children in all educational materials related to academic subjects requires a lot of mental work; problem-based education is related to the processes of acquiring new knowledge and new methods of learning only one part of the educational process.

This education is based on educational tasks. An educational assignment is a modified form of educational materials.

Assignment is the most convenient ancient form of education. In primitive society, when education was not yet separated, tasks were part of work.

The organization of education according to the personal characteristics of children is called differentiated education. This education is used from primary to higher educational institutions.

Differentiated education is divided into two types according to its essence: internal differentiation (separation): external differentiation (separation). Internal differentiation is teaching children by dividing them into groups within a class.

External differentiation is the grouping of children into separate classes and even schools based on their personal characteristics.

This type of education is based on a formula, based on the normal thinking of students. The teacher organizes educational materials, determines in advance the methods of analysis, synthesis, comparison, deductive and deductive conclusions, as well as alternative ways of performing the algorithm. And the student chooses one of the ways to perform the algorithm by analyzing the given facts.

In short, in the process of education, students increase the amount of their knowledge by acquiring the system of knowledge, learning skills and competencies, therefore, at the same time, the basic meaning of scientific concepts enters their minds. In order to carry out all these tasks in a consistent and consistent manner, students have acquired a certain level of skills, moreover, they have mastered the forms of thinking (concept, judgment, drawing conclusions) and the rules and methods of logical thinking. they should take. Problem-based education and problem-based situations are of particular importance in the teaching system as a method that directs students to active thinking. Problem-based education should be understood as the modern teaching process, which is structured taking into account the combination of the principles of problem-solving. Problem-based learning methods in the educational process develop students' independent thinking, analytical, creative and effective problem-solving skills. These methods encourage students to actively participate in the lesson, help connect theoretical knowledge with practice, and ensure deeper assimilation of knowledge. Therefore, problem-based learning methods are considered one of the effective pedagogical approaches in the modern education system.

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