Stages of Development of Educational Activities in Students Through Problem Situations

Z. Mamazova
Teacher of the International Islamic Academy of Uzbekistan, Uzbekistan

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Abstract

The article presents the content of problem-based teaching, the teacher's ability to create problem situations in the course of the lesson, and psychological-pedagogical ways of organizing education that develops the student's intellectual power. The main stages of teaching and didactic goals are indicated on the basis of problem-based education.

Keywords: Problem Situation; Intellectual Activity; Psychological-Pedagogical Methods; Ability; Active Survey Approach Method Technology

Introduction

Effective teaching technology in today's high schools is problem-based learning. Its task is to encourage the process of active cognition and to form a scientific-research method in thinking. Problem-based education corresponds to the goals of creative and active personality education. Problem-based education is education aimed at forming students' skills and abilities, such as creative research, conducting small research, putting forward specific hypotheses, justifying results, and coming to certain conclusions. Problem-based learning technologies are based on the activation and acceleration of student activity.

The main idea of these technologies is to encourage a person to think, understand the nature of the problem, solve the problem, feel (see) the problem, conduct research, and solve the problem.

The principles of socio-economic development of our republic in the present period require a further increase of our spiritual potential and economic power, and their reconstruction in a way that meets the requirements of scientific and technical development of the 21st century, in order to take a worthy place among the developed countries of the world. For this, it is necessary to change the outlook of our youth, to raise their knowledge and spirituality to the level of world standards.
Methods

Today, society has set a task for educational institutions: to develop their special ability and independent knowledge in accordance with the purpose.

Problem-based learning technology takes a leading place in solving these tasks. In essence, the problem is solved on the basis of studying the reasons that caused it, searching for significant and effective ways, methods, and tools to solve it, collecting evidence justifying their effectiveness, and interpreting the evidence in a new, new way. In the field of pedagogy, the concept of "problem" is often used to solve organizational-pedagogical, psychological, educational, and educational issues. From the point of view of the field, the following problems are addressed in the pedagogical process:

- didactic problem;
- practical problem;
- a scientific-methodological problem;
- a purely scientific problem Known knowledge, unknown knowledge and existing experience appear as components of the problem. A pedagogical problem is a problem of a pedagogical nature that needs to be solved, but the method of solving it is not yet known.

Problem-based education is a previously known form of education and training that takes into account the process of logical thinking (analysis, generalization, etc.) and is a new system of rules for applying methods. That is why problem-based education ensures the development of the student's thinking ability and the formation of his general development and belief. Problem-based education, not excluding all achievements of didactics, but using them, remains an education that develops scientific knowledge and concepts, formation of worldview, and comprehensive development of a person and his intellectual activity. The theory of problem-based education explains the psychological-pedagogical methods of organizing education that develops the student's intellectual power.

Determining the role and importance of problematic situations led to the idea of restructuring the educational process based on the consistent consideration of the psychological and pedagogical laws of the student's active thinking. Based on the theoretical consideration of new pedagogical facts, the main idea of problem-based education is determined: in problem-based education, almost a large part of knowledge is not given to student ready-made but is acquired by students in the process of independent cognitive activity under the conditions of a problem situation. It is known that an important indicator of the comprehensive and harmonious development of a person is the presence of the ability to think at a high level. If education leads to the development of creative abilities, then it can be considered developmental education in the modern sense of the word. In essence, interactivity means that students have the ability to organize action based on mutual cooperation in order to acquire knowledge, skills, competencies and certain moral qualities. From a logical point of view, interactivity, first of all, represents the conduct of conversation (dialogue), actions and activities based on mutual cooperation. Every specialist working in the field of education knows well that traditional education is also based on conversation (dialogue) and this conversation is organized in the following forms of interaction. Conversation based on traditional education. Interactive education is organized on the basis of the opportunity for cooperation, intense debate, and exchange of ideas between the main participants of the teaching process - teacher, student and student group. Free-thinking, unhesitating expression of personal views, joint search for solutions in problematic situations, creation of mutual closeness of students in mastering educational materials, "teacher-student-student group" interaction characterized by respect, understanding, and support, sincere relationship, achieving spiritual unity. It is possible to consider developmental education, that is, education that leads to general and special development, in which the teacher, relying on the knowledge of the legal development of thinking, with the help of special pedagogical tools, helps his students to think in the process of learning the basics of science. conducts
goal-oriented work related to the formation of ability and need for knowledge. The educational process based on the problem-based learning method is carried out in the following four stages:

- creating a problematic situation;
- formulation of problems and general analysis for problem solving;
- check the predicted solution;
- application in practical and theoretical issues, their regulation and politicization.

It is necessary to consider problem-based education not as something exactly with the research method, but as a type of education that ensures the development of the student's thinking and his memory, helps to creatively acquire knowledge, summarize scientific facts, and builds faith. However, the level of difficulty and the level of independent knowledge differ depending on the age and individual characteristics of students, the level of their training with problem-based educational technology. Creating problem situations during the lesson, searching for and identifying ways to solve them, the process of solving the problem itself, and checking the correctness of the conclusions in practice remain important elements of the educational process.

Creating problem situations during the lesson is a necessary condition for active mental activity of students. A certain task is set before the student, this task arouses his interest, and the student tries to solve this task, but he notices that his knowledge and experience are not full and deep enough, that is, he faces a clear difficulty. The student has an internal urge to find a way out of the situation, the feeling of difficulty prompts him to analyze the situation and find ways to solve the problem. Thus, there are conflicts between the level of students' knowledge and the necessary and practical tasks, these conflicts stimulate intensive thinking activities aimed at overcoming the difficulty.

The level of difficulty of the task is evaluated by two main indicators: the level of novelty of the learning material to be compared and the level of its generalization.

Usually, the problem task should be given before the learning material to be mastered. But if the students do not have enough knowledge and training to solve the problem, it is necessary to give them the necessary information or to teach them certain actions. In such cases, the teacher tells the characteristics of the processes, specific information, and the like, and the students, based on this information, creatively master the general conditions, methods and conditions of the studied actions.

The teacher should always direct the process of students' acquisition of new knowledge by solving problems. It is necessary to follow a certain system when creating problem situations in order to ensure problem-based mastering of a certain complex system of knowledge and actions. Therefore, the ways in which the problem can be solved in advance and the solutions provided by the student should be roughly foreseen.

It should be emphasized that creating problem situations in the lesson ultimately helps to know much more than the conscious acquisition of specific educational material, because students solve them, think, reason, draw conclusions. they learn to release. This method of teaching helps to educate a person to be active and creative. It closely helps him to solve all kinds of situations in a positive way.

We will focus on the use of FSMU technology from problematic technologies in the course of the lesson [2, 18]. This technology can be used to solve controversial issues, debates, or at the end of practical sessions (to find out what the audience thinks about the sessions), or after learning a section based on the curriculum, because this technology allows the listeners to defend their opinion, to think freely and to transfer their opinion to others, to debate openly, as well as to analyze the knowledge acquired by the students during the educational process, to evaluate the level of their acquisition and teaches listeners the culture of debate.
**Results**

Purpose: This technology helps the audience to clearly and concisely express their thoughts on a simple piece of paper that is distributed, and to state their supporting or counter-arguments. Transfer technology. This technology is carried out in several stages.

1- Stage

- The trainer together with the listeners determines the topic of the debate or the problem to be discussed, or the studied section;
- The trainer informs the trainees that first each trainee will work individually, then work in small groups, and finally, at the end of the lesson, they will work as a team;
- During the training, it is mentioned that each listener can fully express his opinion freely [4, 13].

2 - Stage

Papers with the 4th stage of FSMU technology were distributed to each audience:

- F - Express your opinion.
- S - Give reasons for your statement.
- M - Give an example (evidence) to prove your reason.
- U - Summarize your opinion.

Each trainee individually completes step 4 of the FSMU on paper with a written statement of their thoughts.

3- Stage

After each trainee has completed their papers, the trainer asks them to divide into small groups, or he himself divides the trainees into small groups using different grouping methods; the trainer distributes large-format papers with the 4th stage of FSMU technology to each group; the trainer offers the small groups to write according to Step 4, summarizing the ideas and arguments in the papers written by each of them in a large format.

- In small groups, each listener first introduces the group members with his/her thoughts on each stage. After studying all the opinions of the group members, the members of the small group begin to summarize them;
- Group members summarize the 4th stage of FSMU for each and prepare to defend it;
- During the summarization of opinions, each listener can defend and prove his opinions.

5 – Stage

- Small groups defend their generalized opinions: the representative of the group reads each step separately without commenting as much as possible. He can prove some sections, that is, he can tell why the groups came to this opinion.

6 - Stage

- The trainer concludes the training, expresses his reaction to the expressed opinions;
- Addresses the audience with the following questions:

1. What did you learn and learn from this training?
2. How effective was the use of this technology in the educational process?
3. What qualities does the use of this technology educate the student, what does it form, what qualities does it develop?

4. At what stage of the educational process should this technology be used and why?

5. What does the use of this technology in the classroom give and teach students?

6. In what other order or form can this technology be transferred? What is the main purpose of this training?

**Explanation:** the above questions can be asked by the trainer to the listeners or students based on the content and purpose of each training. A rough copy of the handout.

**FSMU Technology**

(F) - Express your opinion  
(S) - Give a reason for your opinion statement  
(M) - Give an example that explains (proves) the stated reason  
(U) - summarize your opinion. When using this technology, the teacher first gives a task to format the opinion of each student on the topic. After the students have expressed their ideas, the teacher divides them into two small groups and instructs the group members to prove their ideas. After each student proves his opinion, all the opinions of the group are summarized and the members of the group exchange opinions with each other and learn each other's opinions.

As a result, each student will have a number of new ideas about the topic and will deeply understand the essence of the topic. At the end, the teacher proves that all the ideas of both groups are correct or incorrect. There will be at least 15 such ideas, and each student will master these 15 ideas. Therefore, the advantage of the methods technology is that each participant will not only dwell on his own thoughts on the topic, but will also have a number of new ideas. It develops students' thinking, teaches them to think independently, not only teachers, but also students become more active in the use of this technology. Problem-based education requires the teacher to act clearly, to take into account every minute of the lesson, to use all his abilities and skills to achieve the desired effect at this time. An important condition for solving this problem is the teacher's preparation for the upcoming training session. In the preparation process, it is necessary to take into account all aspects of problem-based education and develop its method.

Teachers face a number of difficulties in preparing for problem-based education [3, 25]. In overcoming these difficulties, the teacher's innovative creative laboratory is of great importance. One of these difficulties is in choosing the problem-based organization of the lesson and the methods of studying the problem. Because the chosen method should not only ensure mastery of educational material, but also ensure independence in students' activities. The second difficulty arises when determining the appearance of problem-based learning, that is, does the teacher involve all students in the audience in solving the problem, or does the task perform the task on some groups of students? This difficulty arises from the teacher's lack of ideas about the problem situation and the description of the problem. The third challenge is to arouse students' interest in the lesson and continuously develop it. Because the experience and skills of the teacher may not be enough to regularly focus students' attention on one point.

Based on the collected information about problem-based education, it should be noted that this type of education has 3 scientific and methodological aspects.

Ways to create a problematic situation:

- The teacher explains to the students a conflicting situation related to the subject of the lesson and offers to find a way to solve it;
- Expresses different points of view on the same issue;
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- Offers to solve the problems that are not sufficient for solution, there is excess information or the Question is posed incorrectly.

Levels of problem solving:

- The teacher sets a problem and solves it himself;
- The teacher sets a problem and finds its solution together with the students;
- Students themselves set a problem and find its solution. Methods used to solve the problem
  Situation:
  - Study and analyze the problem from different points of view;
  - Comparison, generalization;
  - Identification and comparison of facts;
  - Drawing conclusions depending on the situation;
  - Students themselves ask specific questions, etc.

Conclusion

Creating problem situation requires a special skill from the teacher and it cannot be done without any preparation. Creating a problem situation, ensuring the active participation of students to solve this problem, involving them in independent thinking requires creativity from the teacher. In the process of solving a problem situation, students learn to think independently and think independently through the effective use of resources. The ability to solve a problem situation is realized as a result of the teacher's innovative activity.

References

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