EXCELLENCIA
INTERNATIONAL MULTI-DISCIPLINARY JOURNAL OF EDUCATION
Volume 02, Issue 05, 2024 ISSN (E): 2994-9521

Types of Problem Situations and their Didactic Purpose

Namazova Nodira Dzhumaevna [1]

[1] Associate Professor at Bukhara State Medical Institute

Abstract:

This article analyzes the problematic situation as a pattern of thinking processes. Particular attention is paid to defining a problem situation, classifying problem situations, and ways to create problem situations. Each method of creating problem situations has its own characteristics and introduces additional aspects that stimulate interest in finding something new and contribute to understanding and solving problems that arise in the educational process.

Keywords: Problem-based learning, problem situation, pattern, thinking, cognitive need, didactic structures.

The problem situation as a pattern of thinking processes, its initial moment, as noted earlier, was first considered by psychologists. The concept of a problem situation has also been interpreted in pedagogical research, where there is no single, generally accepted definition of a problem situation. However, this concept is used quite often, especially in connection with issues of encouraging students to engage in mental activity. Most scientists considered the problematic situation primarily as a situation of intellectual difficulty (Yu.K. Babansky, T.V. Kudryavtsev, I.Ya.Lerner, A.M. Matyushkin, M.I. Makhmutov, etc.). Many scientists, when defining the concept of a problem situation, pay attention not only to the difficulty, but also to highlight a contradiction as the main link in the problem situation.

Problem-based learning is learning in which the teacher systematically creates problem situations, aimed at developing students' cognitive independence, creative thinking and cognitive abilities, so it would be logical to consider the problem situation from a psychological and pedagogical aspect.

In this regard, the authors considered the following range of issues: defining a problem situation; classification of problem situations; ways to create problematic situations. Foreign scientists have achieved certain results in the development of the theory of problem-based learning. Thus, the

Polish researcher V. Okon studied the conditions for the emergence of problem situations using the material of various educational subjects and proved the advantage of learning through problem solving for the development of students' mental abilities.

According to V. Okon, "problem-based learning is a set of actions such as organizing problem situations, formulating problems, providing students with the necessary assistance in solving problems, checking these solutions and, finally, leading the process of systematizing and consolidating acquired knowledge."

Defining a problem situation, A.V. Brushlinsky emphasizes that "thinking originates in a problem situation." Interpreting a problematic situation as something "unexpected, unclear, unknown, disturbing," A.V. Brushlinsky writes that the emergence of a problematic situation "means that in the course of his activities a person begins to experience some incomprehensible difficulties that impede successful movement forward."

A.V. Brushlinsky notes: "...at different levels of cognitive activity, the problematic nature of a mental task, which arises in various problem situations, manifests itself in different ways . To one degree or another, this problematic nature persists and then changes throughout the entire process of solving the problem.

This is explained, first of all, by the fact that all the initial conditions and requirements of the problem, no matter how detailed and detailed they may be, outline only the most initial and therefore minimally defined, very preliminary path of searching for a future solution. It can become fully known only at the final stage of thinking. And by the time the thinking process arises, there is still no final situation or final state of thinking, since they are predicted and formed during the entire thinking process . " Problem-based learning, according to A.M. Matyushkin , involves the inclusion of the student's personality as the main core of the problem situation itself.

A.M. Matyushkin calls those situations problematic "... when a person is faced with new conditions in which he cannot perform actions known to him in the same way, when he must find a new way of action."

The problem situation is objectively subjective in nature, it is a logical and psychological situation. It follows from the logic of studying the academic subject and reflects objective contradictions in its content. But outside the subject of thinking - the student - the emergence of a problem situation is impossible. In this regard, the author believes that "...there is no problem situation outside the individual... A problem situation includes, as one of the necessary components, the motives and needs of a person.

In conditions of problem-based learning, the process of assimilation ceases to be only an intellectual process, it becomes a personal process. That is why it allows us to merge together the process of learning and the process of upbringing, the process of assimilation of knowledge and the process of forming a worldview."

Formulating the definition of a problem situation, A.M. Matyushkin also emphasizes that this is "a specific type of interaction between subject and object." It characterizes a certain state of the student, which requires the discovery (assimilation) of new knowledge about the subject, method or conditions of performing the task." The assimilation and discovery of something new coincides in this case with such a change in the mental state of the subject, which constitutes a microstage in its development. The discovery of something new and unknown in a problem situation will coincide with the process of formation of elementary mental formations. These new formations relate to a variety of elements of the acquired action or personality traits of a person. The condition for the emergence of a problem situation is the need for a new relationship, property or method of action to be revealed.

A.M. Matyushkin identified the components of the problem situation:

- ✓ unknown, attainable knowledge or method of action;
- ✓ cognitive need that encourages a person to engage in intellectual activity;
- ✓ a person's intellectual capabilities, including his creative abilities and experience.

The most important characteristic of the unknown in a problem situation is the degree of generalization. Therefore, the degree of difficulty of a problem situation is characterized by the degree of generalization of the unknown that should be discovered in it. It is this feature of the unknown in a problem situation that explains the fact that the search for the unknown gives students qualitatively different knowledge, more enriched than in conventional learning. The main characteristic of a student's capabilities is that they must be sufficient to independently understand the assigned task and the conditions for completion. According to the author, "...the success of solving a control problem task will depend not only on the level of development of the actions being measured, but also on the general creative capabilities of the subject. The higher these possibilities are, the more difficult the problem task presented for measurement should be."

T.V. Kudryavtsev, defining a problem situation, notes that "... a problem situation reflects the subjective uncertainty of goals, conditions, means (or methods) of activity and is manifested in a person's cognitive difficulty."

Continuing the ideas of T.V. Kudryavtsev, V.T. Kudryavtsev writes: "The content of problem-based learning uniquely refracts the logic of activity-based mastery of the mechanism of emergence and formation of fundamental contradictions related to certain areas of objective activity. A problematic situation in the student's mind is created by a central contradiction in the subject of mastery, from which the entire specific system of knowledge to be mastered and applied is derived. The educational process is structured as the development and concretization of the initial contradiction."

The definition of a problem situation is given by I.Ya. Lerner. According to I.Ya. Lerner , "a problem is a problem situation accepted by a subject for a solution based on the existing fund of knowledge, skills and search experience. A problematic situation is a difficulty clearly or vaguely realized by the subject, the overcoming of which requires a creative search for new knowledge, new ways of action."

M.N.Skatkin wrote about the emergence of a problematic situation: "Dissatisfaction with the existing situation and awareness of the difficulties standing in the way of achieving goals gives rise to active work of thought. A problematic situation arises, based on the contradiction between knowledge and ignorance. In a person's head, this contradiction is reflected in the form of a problem that needs to be solved, and he looks for ways to solve it. To do this, he needs to understand objective connections."

"A situation of cognitive difficulty that involves students in independent knowledge of the elements of a new topic is called a problem situation," says Yu.K. Babansky .

Defining a problem situation, M.I. Makhmutov notes that "... a problem situation is the initial moment of thinking, causing the student's cognitive need and creating internal conditions for the active assimilation of new knowledge and methods of activity."

M.I. Makhmutov writes: "By problem situations we mean such learning situations as difficulties that arise at moments when a student accepts a task, tries to solve it, but feels the insufficiency of previous knowledge. These situations cause active mental activity of the student, aimed at overcoming the difficulty, i.e. to acquire new knowledge, skills and abilities." Solving issues related to the definition of problem situations made it possible to consider the classification of problem situations. A psychological approach was implemented to the classification of problem situations developed by A.M. Matyushkin . This classification is based on three most general grounds. One of

them is the basis of action, which is the main element of human behavior, his activity, as well as one of the common elements acquired by a person in the learning process.

There are three components in the structure of action:

1. goal (subject),
2. method and condition of action, determined by the characteristics of the subject of action.

Depending on which of the structural components of the action will be presented as the unknown in a problem situation, three general classes of problem situations are possible. The second basis for the classification is the genetic basis or the basis for the development of an action, which includes three types correlated with the level of development of the action achieved by students, at which a new task is set, requiring the assimilation of a new law, method or condition for performing the action. And finally, the third general basis for the classification of problem situations is the basis of creative possibilities - the level of intellectual, creative capabilities, since in each specific case the teacher deals with students who have different abilities to assimilate educational material, different learning abilities. The above classification allows us to create a system of sequential problem situations.

All types of problem situations have different didactic purposes. Thus, situations of the first class (theoretical) are used when acquiring new knowledge. Problem situations of the second class (genetic) are used if the method of performing the action is unknown. The functional basis in this classification is very important, as it helps to identify the characteristics and types of problem situations depending on the specifics of the educational subject. Fundamentally new in this classification is the identification as the basis of the level of development achieved by students and the intellectual capabilities of the student: this makes it possible to take into account the age and individual abilities of students and promote their development.

The classification of problem situations, according to A.V. Brushlinsky, includes two main types of problem situations. The first type, according to A.V. Brushlinsky, is characterized by the fact that a person cannot help but notice a problem situation arising in the course of his activities. The author writes: “This obvious problematic situation (let’s call it obvious) contains a pronounced contradiction between the desire and the inability to continue previous actions. Thus, it constitutes the necessary, initial conditions for thinking: it naturally encourages the resolution of the contradiction that has arisen, i.e. First of all, comprehend the reasons for the failures that have begun in the implementation of certain activities. The strongest motivation for thinking is formed precisely in a problem situation of this type.” The second type, according to A.V. Brushlinsky , includes obvious problem situations, i.e. those that, arising in the course of a certain activity (primarily cognitive), cannot go unnoticed.

T.V. Kudryavtsev based the classification of problem situations on the “principle of inconsistency or contradiction in the structure of students’ knowledge, skills, and abilities.” According to the author, problematic situations can be created when a discrepancy is discovered between the knowledge systems students already have and the requirements that are placed on them when solving new problems. A discrepancy that reaches the point of contradiction arises:

- between old, already acquired knowledge and new facts discovered in the course of solving these problems;
- between knowledge of the same nature, but of a lower and higher level;
- between scientific knowledge and pre-scientific, everyday, practical knowledge.

These types of problem situations have become widespread in teaching practice. The classification (typology) of problem situations developed by M.I. Makhmutov, common to all academic subjects, has received the greatest application in teaching practice:

1. A problematic situation arises if students do not know how to solve a given problem, cannot answer a problematic question, or give an explanation for a new fact in a learning or life situation, i.e. in case of students realizing the insufficiency of previous knowledge to explain a new fact.
2. Problem situations arise when students are faced with the need to use previously acquired knowledge in new practical conditions. As a rule, teachers organize these conditions not only so that students are able to apply their knowledge in practice, but also to confront them with the fact of their insufficiency. Awareness of this fact by students arouses cognitive interest and stimulates the search for new knowledge.
3. A problematic situation easily arises if there is a contradiction between a theoretically possible way to solve a problem and the practical impracticability of the chosen method.
4. A problematic situation arises when there is a contradiction between the practically achieved result of completing an educational task and the students' lack of knowledge for its theoretical justification.

Expanding the concept of a problem situation, V.T. Kudryavtsev , following T.V. Kudryavtsev , distinguishes two types of situations according to the degree of awareness of the problem and contradictions in them: primary (non-obvious) and secondary (obvious). Speaking about ways to resolve a problem situation, V.T. Kudryavtsev believes that when solving a problem situation, it is necessary to give students guidelines in the form of problematic questions, which are gradually removed when moving to higher levels of problematic learning.

The issue of classifying problem situations is closely related to the issue of ways to create problem situations. Having based the classification of problem situations on techniques determined by the logic of mental activity in which students are involved in the lesson, Yu.K. Babansky identifies the following techniques for creating problem situations: analytical, synthetic, the use of comparison, classification and systematization. This approach focuses the teacher on teaching students certain techniques and methods of mental activity that correspond to the methods of the science being studied. M.I. Makhmutov, based on the described typology of problem situations, outlines several ways to create them.

1. Encouraging students to provide a theoretical explanation of phenomena, facts, and external inconsistencies between them. This causes students to search and leads to the active acquisition of new knowledge.
2. The use of educational and life situations that arise when students perform practical tasks at school, at home or at work, during observations of nature. Problematic situations in this case arise when students try to independently achieve the practical goal set for them. Usually, as a result of the analysis, students formulate the problem themselves.
3. Setting educational practical tasks to explain the phenomenon or search for ways of its practical application. An example would be any research work done by students at a training and experimental site, workshop, laboratory, etc.
4. Encouraging students to analyze facts and phenomena of reality, which generate contradictions between everyday ideas and scientific concepts about these facts.
5. Making assumptions (hypotheses), formulating conclusions and testing them experimentally.
6. Encouraging students to compare, contrast and contrast facts, phenomena, rules, actions, as a result of which a problematic situation arises.
7. Encouraging students to preliminary generalize new facts. In this case, a problematic situation arises, since the comparison reveals the properties of new facts, their inexplicable signs.

8. Familiarize students with facts that seem to be of an inexplicable nature and have led to the formulation of a scientific problem in the history of science. Usually these facts and phenomena seem to contradict the ideas and concepts that students have developed, which is explained by the incompleteness and insufficiency of their previous knowledge.
9. Organization of interdisciplinary connections.
10. Varied tasks, reformulation of the question.

The didactic value of this classification is that it helps the teacher choose specific ways to create problem situations. I.A. Ilnitskaya, speaking about the creation of problem situations, notes: "The creation of problem situations that determine the initial moment of thinking is a necessary condition for organizing the learning process that contributes to the development of truly productive thinking in children and their creative abilities."

Some techniques for creating problem situations of a generalized nature are suggested by V.N. Maksimova.

1. Preliminary homework. They allow you to pose learning problems in the lesson that students have already approached on their own, having encountered real cognitive difficulties in the process of doing homework. The nature of such tasks can be different: analyzing works, performing practical actions, observation, etc.
2. Setting preliminary tasks for the lesson. Such tasks are given to students before learning new material. They activate the attention and mental activity of students during the perception of new things, make perception more focused and increase students' interest in learning.
3. The use of experiments and life observations of students (awareness of the inaccuracy of their ideas creates a need for new knowledge).
4. Solving experimental and theoretical cognitive problems. A problem-cognitive task allows the student to gain new knowledge and new ways of knowing. But the conditions of the tasks can be drawn up with the expectation of primary mastery of: - the basic concepts and laws of science and ways of operating with them; — mental operations and techniques of mental activity; - skills in solving creative problems, including experimental ones.
5. Tasks with elements of research. They contribute to the mastery of certain skills and abilities necessary for independently solving problematic issues, cause problematic situations related to more specific issues of content, but allow them to practice individual stages of the search and introduce students to the methods of scientific research.
6. Creating a situation of choice. This situation arises as a result of a clash of different points of view, the use of tasks with redundant data, or the choice of the most rational from several methods.
7. Proposal to perform practical actions. Problematic situations of a practical nature arise when students are asked to perform actions that, at first glance, do not cause difficulties.
8. Raising problematic issues and organizing discussions. A problematic situation arises when the teacher puts forward a problematic issue to students and organizes a discussion around it. A question is problematic if for schoolchildren it is new, interesting, contains any contradictions and can be resolved with a certain amount of mental effort. Various, sometimes opposing, statements from students strengthen the problematic situation and intensify the search.
9. Use of interdisciplinary connections. Thus, various ways of creating problem situations are possible, all of them stimulate cognitive interest, causing cognitive need and cognitive activity of students.

Each method of creating problem situations has its own characteristics and introduces additional aspects that stimulate interest in finding something new and contribute to understanding and solving problems that arise in the educational process. From all of the above, the following conclusions can be drawn: First, the problem situation characterizes, first of all, a certain psychological state of the subject (student) that arises in the process of performing a task that requires the discovery (assimilation) of new knowledge about the subject, methods or conditions for performing the task.

In the psychological aspect, a problem situation is a mental state manifested in cognitive difficulty, and in the pedagogical aspect, a problem situation is an educational situation of difficulty.

Secondly, today there are many classifications of problem situations, but the classification of A.M. Matyushkin, based on a psychological approach, is most widespread in teaching a foreign language.

Thirdly, the main way to create a problem situation is to present students with a special kind of didactic structures (tasks, questions, exercises, assignments), which are called problematic.

LITERATURES

1. Theory of learning. / Zakirova IN. G., Grigorieva WITH. G., Kayumova L. R. Kazan: Kazan University , 2018. – 165 With.
2. Learning Theory and Pedagogical Technologies: Brief Summary lectures / R.G. Gabdrakhmanova , I.F. Yarullin , Kazansky (Volga) Federal University. - Kazan, 2013. – 92 p.
3. Mizherikov V.A. Introduction to teaching. – M.: Rospedagentstvo , 2009. – 215 p.
4. Pedagogical technologies: Textbook for students of pedagogical specialties - M.: ICC “Mart”; Rostov n/d: ICC “Mart”, 2008. – 278 p.
5. Namazova Nodira Dzhumaevna. (2023). PROPORTIONALITY OF THE RELEVANCE OF KNOWLEDGE AND SKILLS OF UNIVERSITY GRADUATES WITH THE REQUIREMENTS OF THE LABOR MARKET OF SMALL AND MEDIUM ENTERPRISE. International Journal Of Management And Economics Fundamental, 3(09), 21–30.
6. Namazova Nodira Dzhumaevna. (2023). CHALLENGES OF THE MARKET IN THE TRANSFORMATION OF INNOVATIVE AND EDUCATIONAL METHODS FOR THE FORMATION OF THE LABOR AREA OF YOUTH. Journal of Social Sciences and Humanities Research Fundamentals, 3(05), 82–86.
7. Намазова, Н. Д. (2022). ИНДИКАТОРЫ В РЕГИОНАЛЬНОМ ПЛАНИРОВАНИИ КАК ВОЗМОЖНОСТЬ СОЧЕТАНИЯ ГОСУДАРСТВЕННОГО РЕГУЛИРОВАНИЯ С РЫНОЧНЫМ САМОРЕГУЛИРОВАНИЕМ. *Herald pedagogiki. Nauka i Praktyka*, *2*(4).
8. Намазова, Н. Д. (2022). МЕСТО СОВРЕМЕННОГО ВУЗА В РАЗВИТИИ РЕГИОНАЛЬНОЙ ИННОВАЦИОННОЙ СИСТЕМЫ. *Gospodarka i Innowacje.*, *24*, 916-925.
9. Namazova, N. D. (2022). WAYS TO SATISFY THE NEEDS OF SMALL BUSINESS IN THE TERRITORIES IN INNOVATIVE AND COMPETITIVE CHARACTERISTICS OF THE LABOR POTENTIAL OF YOUTH. *European International Journal of Multidisciplinary Research and Management Studies*, *2*(08), 66-72.
10. Nizamov, A. B., & Namazova, N. D. (2016). Towards modernization of market competence of graduates of secondary specialized, vocational education. In *55th Science Conference of Ruse University, Bulgaria* (pp. 261-266).
11. Namazova, N. D. (2022). Indicative Planning As A Model For Creating Conditions For Increasing Interaction Of Economic Subjects In Regional Management. *Journal of Positive School Psychology*, *6*(8), 7814-7818.

12. Намазова, Н. Д. (2022). МЕСТО СОВРЕМЕННОГО ВУЗА В РАЗВИТИИ РЕГИОНАЛЬНОЙ ИННОВАЦИОННОЙ СИСТЕМЫ. *Gospodarka i Innowacje.*, *24*, 916-925.

13. Namazova, N. (2016). THE ROLE OF THE MODERN UNIVERSITY IN THE KNOWLEDGE TRANSFER РОЛЬ СОВРЕМЕННОГО ВУЗА В ТРАНСФЕРЕ ЗНАНИЙ. *Proceedings of university of ruse*, *55*.

14. Namazova, N. D. (2022). The place of a modern university in the development of a regional innovation system. Gospodarka i Innowacje., 24, 916-925.

15. Dzhumaevna, N. N. (2023). The Role of Medical Culture in the Development of Society. *Information Horizons: American Journal of Library and Information Science Innovation (2993-2777)*, *1*(10), 20-24.

16. Dzhumaevna, N. N. (2023). Principles of Sustainable Development and Education. *Excellencia: International Multi-Disciplinary Journal of Education (2994-9521)*, *1*(6), 66-72.

17. Djumaevna, N. N. (2023). Main Directions of Using Innovative Technologies in the Education System. *Best Journal of Innovation in Science, Research and Development*, *2*(10), 622-627.

18. Dzhumaevna, N. N. (2024). THEORETICAL ISSUES OF ENSURING GENDER EQUALITY. *JOURNAL OF SCIENCE, RESEARCH AND TEACHING*, *3*(4), 41-46.

19. Намазова, Н. Д. (2024). Маънавий-Маърифий Ишлар Самарадорлигини Ошириш Омиллари. *Journal of Innovation in Education and Social Research*, *2*(2), 80-85.

20. Namazova, N. D. (2023). MARKETING IN DENTISTRY. *Builders Of The Future*, *3*(06), 8-12.

21. Dzhumaevna, N. N. (2023). PUBLIC-PRIVATE PARTNERSHIP IN REGIONAL TOURISM INFRASTRUCTURE. *Gospodarka i Innowacje.*, *42*, 55-60.

22. Djumaevna, N. N. (2023). The Relevance of a Healthy Lifestyle in the Education of a Developed Generation. *American Journal of Science on Integration and Human Development (2993-2750)*, *1*(9), 197-203.