



## **TYPES OF POSITIVE COMMUNICATION IN THE PROBLEMATIC TEACHING OF PHYSICS IN SECONDARY SCHOOLS**

Makhmudov Yusup Ganievich

Professor of the Department of “Technological Education” of Termez State University,  
Doctor of Pedagogical Sciences

Boymirov Sherzod Tuxtaevich

Senior lecturer of the Department of “Physics” of Gulistan State University,  
Doctor of Philosophy in the field of pedagogical sciences (PhD)

### **Abstract**

This article describes the types of communication, target communication, functional communication, and instrumental communication in accordance with their content in problem-based physics teaching in secondary school.

**Keywords:** nature, society, problem, thinking, experience, activity, peculiarity, creativity, information, assimilation, productivity, goal, communication, development, education, training, purpose, knowledge, skills, qualification.

### **Introduction, Literature Review and Discussion**

The article presents the following types of positive relationships between a student and problem-based learning:

1. Content communication. In the problematic teaching of physics, information is given about the nature, society and the reader's thinking, classification by the properties of something – phenomena. Memorization of methods of cognitive and creative activity, recollection, application of various educational and living conditions are specific stages of learning in a certain sequence and sequence of one or more problematic readings in creative activity. It is necessary to study separately the theoretical knowledge of problem teaching of physics in an analytical way, which ends with synthesis. A small amount of information often leads to the control of learning by students, as well as to an increase in the effectiveness of learning [1,2,8].

2. Purposeful communication. This type of communication is determined by the content of problem-based learning. Why is didactics taught? If we start to think about the traditional question, we will witness that a purposeful connection is recognized as one of the ancient connections [5, 7, 10]. Objective, purposeful creative activity plays a positive role in the student's personal development. It is also one of the factors motivating the student's creative activity, the ability to set a goal, the pursuit of a goal. Therefore, the goal is to act according to the goal. “... being formed in the subject, he or she begins to act as the most fundamental moment of this activity” A.N. Leontiev wrote.

Understanding the goals of problem-based physics teaching is mainly achieved in two ways: to understand the goal through an independent interpretation of problem-based learning. Bunda said that



both the teacher and the student understand each other, and teaching will allow them to understand the goal. When faced with problem-based learning, setting problematic topshreaks for themselves, perceiving difficulties in the processes of solving them, the reader realizes his goal. The second way of understanding problem-based learning is an effective, but therefore also a biased way. Because, faced with a mental and practical difficulty, the reader may incorrectly determine the goal; in some cases even abandon the goal. This risk decreases with the improvement of problematic teaching skills, qualifications and competencies of the student and the development of thinking.

3. Functional communication. Any object is interesting for its existence, its place among the objects that surround us. This phenomenon corresponds to the purposefulness of the reader's creative activity. When we first encounter a new object, we begin to think about its function. Therefore, the problem or functional classification of the system should be in the first place. Understanding the need for thyme, determining its location, and assessing its relationship with other systems depend on functional analysis [9, 10].

Problem-based teaching of each subject from physics performs certain functions in the creative activity of the reader. For example, in the sixth grade, the following functional features of the formation of theoretical knowledge, practical skills, qualifications and competencies in problem-based physics teaching can be distinguished: the development of readers' consciousness by interpreting the mutual essence of useful work with common work, differences in content from each other; correct writing of formulas for common work and; to know the difference between the driving force ( $F = ma$ ) and gravity ( $P = mg$ ) by definition from each other; to know the difference in the content of the height over the distance traveled; to correctly understand and write down the values and formulas, units of work performed by gravity and the forces of motion.

To convey to the reader the functions of the studied objects of problem-based learning are two aspects important in the reader's creative activity; the resulting goal is to determine the relationship of problem-based learning with other previously studied or now analyzed objects in order to make sure that the relationship between the various objects is valid.

4. Indirect contact. The knowledge gained during the problematic teaching of physics in secondary schools embodies two things: information about the object; the method of activity corresponding to the object. For example:  $a = Fs$ ,  $A = Ph$  or  $F = ma$ ,  $P = mg$  we take the tariff in the formulas "does not change when multipliers are replaced". In this definition, information is given about one of the properties of multiplication, as well as about the method of creative activity of the reader – the substitution of multipliers ( $A = sF$ ,  $A = hP$  or  $F = am$ ,  $P = gm$ ). Since the study of knowledge on topics in traditional pedagogical activity is now in the first place, the reader does not attach sufficient importance to the methods of creative activity, or the methods of creative activity of the reader are completely ignored.

In terms of content and essence, links are divided into the following two groups:

- a) Negative feedback;
- b) Positive feedback.



Negative links are links that prevent the effective passage of reading classes in problem-based learning, which prevent students from understanding meaningful links. The material about the student's problem-based learning is touched upon from an informative point of view.

They do not understand the purpose of problem-based learning activities in physics, do not underestimate the connection between knowledge and real communication, do not distinguish between the method of reading and creative activity related to the material on problem-based learning; rule, law, law, some concept in theories, term, formula and physical dimension in it, do not understand the essence, do not by eliminating negative contacts, the effective conduct of educational creative activities is ensured.

By increasing the number of positive links to evazi, in order to minimize the number of negative links, the creative activity of the reader is transmitted by fax. In particular, the researcher and the teachers involved need knowledge of positive contacts, their classification, and pedagogical activity.

## **References**

1. Dorno I.V. Problem-based learning at school. – M.: Proeveschenie, 1984. - 51 p.
2. Ivanov A.A., Medvedsky P.I. Problem-based learning and student experiment. – M.: Proeveschenie, 1986. - 232 p.
3. Leontiev A.N. The problem of the development of the psyche. – Moscow: Znanie, 1965. – 572 p.
4. Malafeev R.I. Problematic teaching of physics in secondary school. – M.: Proeveschenie, 1980. – 127 p.
5. Matyushkin A.M. Problematic situations in thinking in learning. – M.: Pedagogy, 1972. – 208 p.
6. Makhmutov M.I. Organization of problem-based learning at school. – M.: Proeveschenie, 1977. - 240 p.
7. Boymirov Sh.T. Principles of Material Selection in Problem Teaching of Electrodynamics. Scientific Bulletin of Namangan State University, 2020. 362-368. – p.
8. Boymirov Sh, Ashirov Sh, Urozbokov A. The effect of using interactive methods in teaching physics. ACADEMICIA: An International Multidisciplinary Research Journal, 2021. 962-971. – p.
9. Boymirov Sh, Ashirov Sh. Increase the creativity of students by creating problem situations when teaching the physics mechanics section. Asian Journal of Multidimensional Research (AJMR), 2021. 247-253 – p.
10. Mahmudov Yusup G'anievich. History of Great Discoveries in Physics. The American Journal of Interdisciplinary Innovations Research. 2021. 64-69 – p.