

METHODS OF IMPROVING AND IMPLEMENTING EDUCATIONAL GOALS IN PHYSICS CLASSES

Qudratov Elmurod Abduxalimovich

Senior teacher of the "Physics and Astronomy" department, Navoi State Pedagogical Institute

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Abstract. *This article describes the possibilities of improving the goals of pedagogical education and using them in the improvement of the level of knowledge of pupils in the process of teaching physics.*

Keywords: *pedagogical practice, educational goal, main goal, intermediate goal, goal equivalent to action, educational development, physics education.*

In the theory of pedagogy and pedagogical practice, comprehensive development of the student's personality is the general goal of education. Today, dividing educational goals into types (educational, upbringing and developmental) and organizing educational activities based on them has become so traditional that it is impossible to get out of this shell.

There are two reasons for this. The first reason is that in the pedagogical heritage of the German classical pedagogue I.F. Herbart, he distinguished upbringing as a science and thought that "the subject of education is a person" as its characteristics are education, upbringing and development [1].

The second reason: the idea of seeing the student as a subject of education consists in educating the student and developing his knowledge in solving educational problems, conducting research, investigating, and most importantly, in the process of teaching.

As a result of the attention paid to education in our country and the introduction of modern pedagogical and educational technologies into the field of education, "the goal is a premeditated result of human activity, so real goals are created, wrong understanding causes the birth of unrealistic, imaginary goals" [3]. Therefore, in today's pedagogic theory and practice, there is a need to improve and develop the goals of education.

Both of the above-mentioned reasons have something in common, and in them, the characteristic of the goal is inextricably linked with its result, and the result is the set of knowledge that the student receives.

Goal - *is a product of an important direction in the form of an expected result model. This is the knowledge that the subjects of education can acquire at the end of the activity.*

Result - *moving forward by the learner in the development, finding its reflection in one or another activity, demonstrating the effective progress of the educational process, determining the degree of achievement of the goal.*

Improving the student's knowledge – is manifested in knowing the content of science, let's take physics as an example, understanding natural phenomena, analyzing physical processes, physical laws and rules, and using these laws for the development of society and economy while

understanding the areas of practical application. This activity of education is the product of the *educational goal*.

Educational goal — is a mental image of the result achieved in the educational activity.

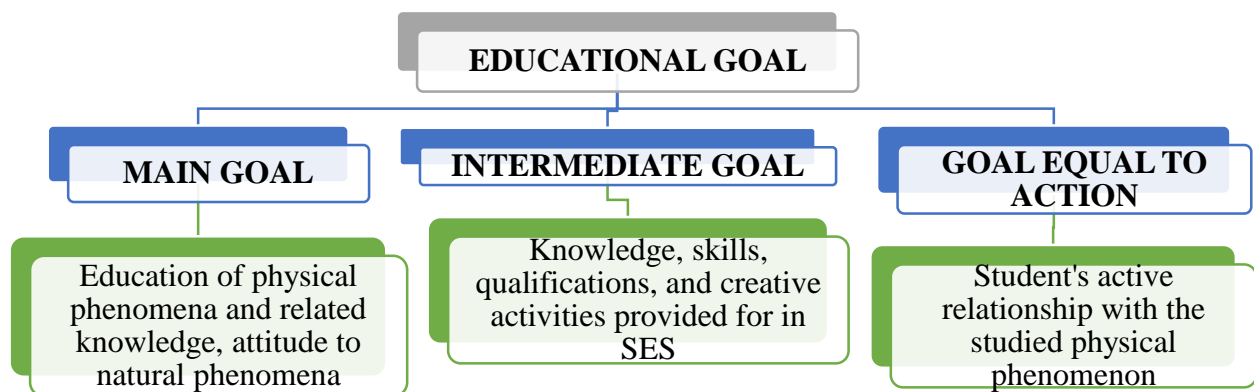
Let's take the term "teaching new learning material". Adhering to this term, a teacher who has mastered the skill of organizing the educational process realizes the pedagogical goals:

- to prepare the student to learn a new subject,
- to ensure the student's understanding of knowledge on a new topic,
- to strengthen the learned knowledge.

For example, in the 6th grade physics lesson, the following educational goals can be set in order to prepare the student to study the "diffusion" phenomenon: to recognize professions by the smell that settles on their clothes, to determine the ripeness of a melon without going into the field, and readiness of an apple for consumption without going into the grocery store, to explain that it is dangerous to strike a match in a room with gas, to drop perfume on a piece of glass and watch it spread throughout the room, to check that sugar dissolves quickly in hot water and slowly in cold water, etc.

In the process of teaching each subject, the educational goal can be organized in the system of "*main goal - intermediate goal - goal equal to action*" [1].

In this case, the student is the subject of the educational process, and his knowledge dynamically improves as he moves from goal to goal.



The main goal is to teach students the scientific concepts of the subject, determined according to the requirements of SES, science program and textbook. For example, in the section "Motion and body interaction" in the 6th grade physics textbook, it is necessary to teach mechanical movement, trajectory, time and the path traveled during this time interval, smooth and uneven motion, formulas for them.

In **the intermediate goal** - the content of SES, specific features of the measured phenomenon are recorded. For example, in the section "Motion and interaction of bodies" above, a number of intermediate goals are achieved: to know the definition of mechanical movement; understand the movement trajectory of objects; understand the definition of the path traveled over a period of time; learn the definition of straight motion; distinguish uneven motion from smooth motion. In addition, it is planned to solve problems on the basis of studied physical law, physical formulas, conduct laboratory and experiments. It ensures the acceleration of students' activities and enables the realization of the next goal in terms of quantity and quality. Performs the function of learning and mastering in the educational process.

Goals equal to action - are many, and they are determined according to the content of the subject being studied. The learner completes a series of action-equal goals until reaching one

intermediate goal. Action-equal goals in the educational process have a number of functional features, including enriching student activity with scientific evidence, ensuring active participation of students in education, teaching them to draw conclusions from scientific evidence, creating opportunities for students to educate the ability to work independently and, most importantly, providing a basis for continuing education. These goals can be realized in the process of teaching physics in two ways:

Deductive method: Along with teaching the subject, the teacher must first explain and emphasize his educational goals to the student. In doing so, the goal equal to action may be overlooked. The student moves from the intermediate goal (mechanical movement and its types and their meaning) to the main goal (understanding the physical quantities representing mechanical movement and their significance in nature, technology, and life). This education is an active form of learning.

Inductive method: In this case, the activity of the student begins with a goal equal to the action. For example, the quantities representing mechanical motion are checked in laboratory classes and proved in experimental sessions, and the student's knowledge is strengthened by drawing conclusions.

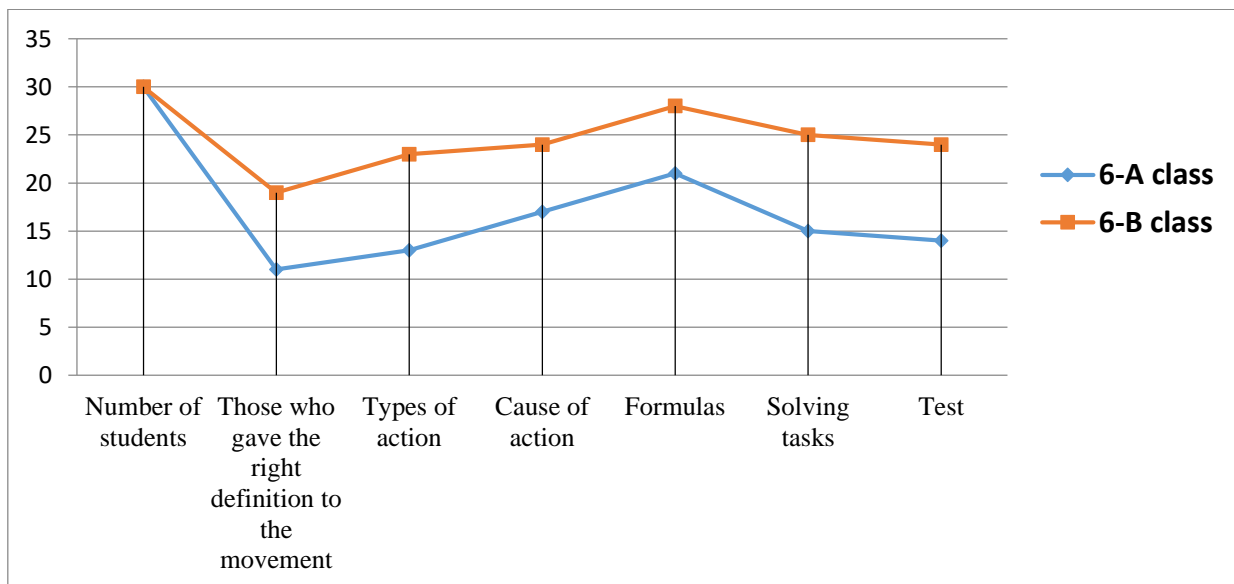
Thus, there are several forms of educational goals in pedagogical practice. We will give details of the methods of implementation of these goals in physics education:

№	The content of the goal	Implementation	In physics education
1.	Equalization to the work carried out in education	The goal is determined depending on the types of lesson.	Lectures, problem solving, physical laboratory, conducting physical experiments
2.	Identifying through the content of the subject being studied	Setting pedagogical goals and forming educational goals for students through the content of the topic in the lesson	For example, understanding mechanical movement and its types, physical quantities representing movement and their importance in nature, technology, and life
3.	Identifying according to learning activity	The teacher shows his professional characteristics and forms the educational goal, depending on the student's mastery of the subject.	Studies the cause of physical phenomena, analyzes physical laws, solves tasks using formulas, tests them in experiments.
4.	Explanation through educational methods	Non-limiting the differences between educational goals and educational methods, equalizing them, increasing the interest of the subject of education	Using visual aids, graphs, tables, presentations, ICT, making students confident and interested in natural phenomena through conducting experiments

5.	Formation through personal characteristics of the student	Forming independence in students, summarizing educational goals, teaching them as a specific scientific-methodical information topic	Taking into account the student's memory, the qualities of his activity - independence, initiative, internal effects - emotion, motive, feelings, pedagogical technologies "Brainstorming", "Break the ice" are used, problem solving, test are held.
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According to the results of the analysis of the conducted small studies (in 6-A and B classes of the 2nd general education school in Navoi) in the trial lesson conducted on the section "Motion and interaction of bodies" let's pay attention to the level of the quality indicator of the students' knowledge on: giving the correct definition of the concept of motion, differentiating types of motion, understanding the causes of motion, explaining the physical formulas on the subject, solving problems and answers to test questions:

Class	Number of students	Those who gave the right definition to the movement	On types of action	On the cause of action	On formulas	Solving tasks	Test
6-A	30	11	13	17	21	15	14
6-B (Experimental group)	30	19	23	24	28	25	24



It can be seen from the table that the average quality indicator level of students' knowledge was 46.8% based on the tests conducted as a result of the traditional educational goal (6-A class). According to the results of the examination of the students' knowledge in the final part of the educational process, which was carried out using the improved methods of the educational goal, in the experimental class (6-B class), the quality indicator of the students' knowledge was 77.5%.

Of course, in order to improve the educational goal in the educational process, the teacher is required dedication, constant search and action.

Thus, the process of pedagogical education, as well as school physics education and its content, is formed in the system of "subject and subject teaching methodology". In doing so, the collected experiences are analyzed, the foundations, methodical aspects and pedagogical goals of the subject are developed and improved. Therefore, in the pedagogical practice, the improvement of the goals of physics education and the use of the possibilities of application to the educational process are determined by the results of the students' knowledge..

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