

## Methods for Improving the Quality of Teaching Physics in Academic Lyceums and Specialized Schools

Ismanova Odina Tulkinbaevna PhD in Physics-mathematics sciences

Mukhitdinova Shakhlo Qodirjonqizi Teacher of physics

Tel.972542215 e-mail: [ismanova.79@inbox.ru](mailto:ismanova.79@inbox.ru)

**Annotation:** The article shows the existing problems of teaching physics in academic lyceums and specialized schools of the country. Several methods for solving these problems have also been proposed.

**Keywords:** Practical lesson, physical value, specialized school, academic lyceum, creative thinking, intellectual competence, energy, textbook, study guide.

Today, the main task of the rapidly developing period is to develop the intellectual abilities of the country's youth, to train them as competitive specialists in the world market. The priority task is to improve the teaching of exact and natural sciences and the creation of textbooks for the new generation in order to increase the interest of the younger generation in science, further strengthen their intellectual and creative potential. On measures to improve the quality of education in physics and the development of scientific research, special attention is paid to teaching physics in general education schools, while emphasizing the following:

Today, much attention is paid to the quality of improving the teaching of physics in educational institutions, the introduction of modern teaching methods in the educational process, the improvement of textbooks and teaching aids, the development of a system of advanced training for retraining physics teachers, especially in rural areas, rapid development identifying talented students and ensuring their successful participation in local and international scientific Olympiads and winning prizes, introducing integrative principles of teaching physics in higher educational institutions, training new and highly qualified specialists for whom there is a high demand in the world market. Strengthening the relationship of scientific research in the field of physics with production, expanding the volume of scientific work aimed at solving problems in the economy, increasing the efficiency and practical value of scientific research and innovation.

At the same time, a number of unresolved issues in this area emphasize the need to implement measures aimed at improving the quality of education and the effectiveness of scientific research in the field of physics. In addition, the decree notes the shortcomings in the field of physical education over the past years.

In particular, "insufficient attention is paid to increasing the interest of young people in physics. Curricula do not help to form and develop students' independent creative thinking, create modern physics textbooks, a collection of problems, create laboratory work. "

A comprehensive program aimed at overcoming these shortcomings is aimed at improving the quality of teaching physics in secondary schools, and improving the content of textbooks and teaching aids.

This means that a new generation of textbooks, problem books and practice books should teach students to think creatively and connect this information with the processes taking place in technology and the environment. When creating such textbooks and teaching aids, the experience of countries with advanced education and technology should be used.

An analysis of physics education and textbooks in developed countries shows that theoretical topics taught in physics in countries such as the United States, Japan and Korea, and the information that should be taught in them, are almost the same as those used in textbooks in our schools. countries. The main difference lies in the variety of purposes for carrying out practical and laboratory work.

In our country, in the tasks that are solved in practical exercises, it is required to find one solution to the problem or one physical quantity.

In laboratory exercises, it is shown which physical quantities must be measured in order to determine the physical quantities, and which physical quantities should be measured using the following working formula.

Exercises such an approach does not lead to the development of creative thinking and intellectual abilities of students of specialized schools and academic lyceums, striving to become specialists in specific disciplines.

The reason for organizing classes in academic lyceums, specialized schools and training centers is as follows.

- The "set of tasks" used in the practical exercises has not changed for several years.
- The fact is that universities do not pay sufficient attention to the methods of teaching physics when preparing bachelors in physics.
- Low attractiveness of physics textbooks in grades 6-8, lack of questions and tasks in the textbook to consolidate students' knowledge, lack of interesting demonstrations in the classroom.

To solve the above problems, you need to complete the following tasks.

To solve the first problem, it is necessary to prepare two sets of problems (level A and level B) for each lesson, creatively approaching the set of problems used in practical classes abroad. This is due to the fact that the problems included in the textbooks for grades 6-8,

"Collection of problems in physics" by A.P. Rimkevich, used in grades 9-11, or a set of tests systematized by different authors, are based on the problems used in the former Soviet Union in the 70-80s.

Yu.L. Bashkatov, who works in specialized schools in the Republic of Korea, also stressed that such an approach to compiling a set of questions is not required today. [5]. In his article, he analyzes the current state of physics in both countries and concludes: "In Russia, the USA, Korea, the curricula and textbooks used are almost the same. Mastering these programs depends on the skill of the teacher. But we are lagging far behind in the materials used for grades 5-9".

In addition, he recognizes that in grades 6-9, students need to shape their worldview. To do this, the questions proposed to the students should cover each physical process. As a result, we all know that the physical imagination of grades 6-9 is expanding.

Since our goal is to improve the quality of education in physics, and for this, of course, we need to develop a Workbook for grades 5-6-7 schools in Uzbekistan

This approach to the development of the questions that are posed to the students is reflected in the textbooks used again in the presidential schools of the Republic.

For example, the tasks and problems presented in the lower grades are mainly solved by discussion on several points, and the problems in the senior grades are aimed at discussion by defining and comparing several physical quantities.

Currently, a group of professors and teachers of the Faculty of Physics of Namangan State University studied textbooks and additional literature used in physics lessons in schools abroad, and on this basis began to compile collections of problems. In addition, it is planned to hold rehearsals in academic lyceums and specialized schools.

As a result, I can say that in the textbook "New Generation" students need to explain physics topics in a simple and understandable language with examples from real life.

Therefore, in order to take a fresh look at the problem, it is necessary to revise the physics textbooks and collections of problems that are used in our specialized schools and academic lyceums. In other words, in the lessons it is necessary to explain not the conditions of the problem, but the number of physical quantities that must be found, and the explanation of the expressions used.

When solving the second problem, taking into account the interests of students in the selected optional subjects of the curriculum, select a group of 3-4 year students and organize additional classes for them in the course "Methods of teaching physics". In this activity, it is necessary to develop new approaches to teaching based on the new generation of textbooks that have been created or will be created. For this, it is necessary to prepare a new educational and methodological complex and curriculum.

To increase the attractiveness of the quality of teaching physics in the lower grades of specialized schools and academic lyceums, it is necessary to use more interesting and vivid pictures in textbooks and teaching aids. In addition, we suggest creating an additional electronic textbook or manual in which more attention should be paid to animation.

As an example, we can be sure that the 6th grade Cambridge Lower Secondary Science STUDENTS BOOK explains the topic “Energy” in detail with real-life examples, depending on the age and competence of the students. ...

#### List of used literature

1. Sadriddinov N., Rakhimov A., Mamadaliev A., Zhamalova Z. "Physics Basics of learning style "Tashkent. Uzbekistan. 2006 year
2. Antsulevich V.I., Dorofeychik V.V., Zhilko V.V., Markovich L.G., Penyaz V.A. 9-11 grades. Teacher's Guide. 2nd ed. - Minsk: Aversev, 2012.
3. Belolipetskiy S.N. -Physics Olympiad assignments for tenth grade students- 2013.
4. Babakhodzhaev Yu.S., Ismanova O.T., Saipov Zh.Zh. "Formation of students' in-depth analysis of physical processes by assessing the boundary values of physical quantities"... NamSU, Scientific Bulletin.
5. Bashkatov Yu.L., Batkin V.I., Lezhnin S.I., Savchenko O.Yu., Physics in Problems, 2013.