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DIDACTIC ASPECTS OF TEACHING PHYSICS

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Abstract: This article provides information about didactic aspects of teaching Physics.

Key words: Physics, teaching methodology, laboratory, education, pedagogy.

In the first steps towards independence, the Republic of Uzbekistan planned to carry out great work on restoring our spirituality, improving it, improving the national education system, strengthening its foundations, and bringing it to the level of world standards based on harmonization. with the demands of the times. First of all, providing pedagogues with modern knowledge, improving their knowledge and skills, equipping them with modern methods of education is one of the important and urgent issues. [1] Along with learning the basics of science, the teacher should be armed with modern pedagogical technology and ways to convey them to students. From this point of view, one of the necessary factors is the development of methods of teaching various subjects and equipping teachers with them. In addition to learning the basics of physics, a physics teacher must also master the methods of teaching in different educational institutions. Therefore, first of all, we should take into account that the teaching method is a science of pedagogy and its goals and tasks.

The growing importance of physics has raised the methodology of teaching physics to a higher level in the system of pedagogical sciences.

The process of teaching physics consists of the theory and practice of teaching physics.

In the process of teaching physics, three main functions are performed:

1) education; 2) education; 3) development.[3]

The educational task is the main and defining function, and in the process of its implementation, students learn the basics of physics, develop the skills and abilities to apply the knowledge they have acquired in practice. The educational function is a component of a comprehensive approach to teaching. , in physics education, its basis is the unity of political-ideological, labor and moral education. The developmental function is to teach the student to develop cognitive abilities and to acquire independent knowledge.

The physics teaching process is characterized by the following interacting components.

1. The content of teaching, that is, the basics of physics.[2]
2. Teaching is the activity of the teacher to explain his subject on the basis of experience and technical means, to manage students' independent work, to test their knowledge and skills.
3. Reading is a multifaceted mental and physical cognitive activity of students.
4. Teaching tools: textbooks, tools, equipment.

In teaching physics, the following main issues of the educational process are considered and resolved:

- justifying the goals of teaching physics in an educational institution; reveal educational issues that need to be solved in physics;
- clarification of the content and structure of the physics course in the educational institution and its regular improvement;
- production of effective methods of teaching, training and development of students in physics education and testing them in practice, production of educational tools intended for use in teaching practice.

In addition to physics and pedagogy, teaching physics is closely related to pedagogical psychology, human physiology, logic, and technical sciences.[4]

Basically, creating the content of physics teaching methodology: the basis of general issues, issues of teaching separate topics (special method) of the course in the physics course at the educational institution, techniques and methods of experimental countries. The purpose and means of general issues of physics in an educational institution, the content and structure of the course, methodological and technical foundations of teaching physics, connecting knowledge with life, implementation of technical education, experience in the physics course, development of students' thinking, information-materialistic exchange of worldviews, observation, development of physics objects, organization and methods

of physics classes are considered. 'l, the development of physical experiences in a unique way, skills and appearance. , the polytechnic importance of the material and others are considered. These are personal practices. First of all, the experiences of advanced teachers, relevant literature, and students' learning activities are studied. In addition, the class journal, students' diaries, control written works and notebooks are studied. A hypothesis is created based on what has been learned. The teaching method is created by making significant changes to the previous teaching methods (material content, construction, teaching sequence, presentation methods, experience and technique production). The production method is checked in the pedagogical experiment. The effectiveness of the new methods and tools developed during the pedagogical experiment, the compatibility of the selected material with the age characteristics of the students, and the appropriateness of the amount of material in the allotted time are determined. The pedagogical experiment can be conducted for several years. Its most common form is to compare the results obtained in experimental and control classes. The experimental class will be taught in the newly developed style, and the control class will be taught in the previously existing style. If the developed new method has a good result, it will become popular. Like any science, the science of physics teaching methodology has gone through certain stages of development and formation.

Conclusion:

There are many scientists who have contributed to the development of physics and its teaching methodology in Uzbekistan. In addition to contributing to the development of physics, they have also done great work in the field of improving teaching methods. . directing to scientific works. Currently, B. Mirzaahmedov, doctors of pedagogy such as D. Shodiyev, E. Turdikulov and many candidates of sciences are working on the method of teaching physics.

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