

THE ROLE AND IMPORTANCE OF PEDAGOGICAL APPROACHES IN THE TEACHING OF PHYSICS

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ABSTRACT

One of the main requirements of modern society today is the recognition of the student as a subject in the education system. The teacher's role is mainly that of a facilitator. The education system is not limited to the transmission of knowledge; it also plays an important role in the development of many practical skills in students.

The correct selection and application of pedagogical approaches and strategies are of particular importance in the teaching of physics. Compared to other natural sciences, the teaching of physics has a more complex structure. For students to comprehend physical phenomena, teachers should employ various pedagogical approaches. First of all, motivation should be emphasized. Situations drawn from everyday life are of great importance. The use of research-oriented tasks and questions throughout the learning process is the second key element. The creation of problem situations leads to the development of logical and analytical thinking. The integration of physics with other subjects represents a type of integrative approach. Four types of pedagogical approaches are highlighted in the teaching of physics.

In the traditional pedagogical approach, the teacher is the main source, while the student is the recipient of knowledge. This method is mainly aimed at the transmission of knowledge. In the constructivist approach, students actively build their own knowledge, placing them at the center of the learning process. The discovery of physical laws through experiments serves as an example of this. In the interactive approach, teaching is carried out by creating a collaborative environment through group work, discussions, and projects. In the technology-based approach, the use of digital simulation programs, animations, and virtual laboratories exemplifies this type of teaching.

The importance of pedagogical approaches in the teaching of physics plays a crucial role in improving the quality of education. They contribute to the development of students' ways of thinking and the expansion of their scientific worldview. Alongside theoretical knowledge, they also help to develop practical skills. The teaching strategies mentioned increase students' interest in the subject, ensure independent learning, and create favorable conditions for their preparation for future scientific activities.