

FACTORS AIMED AT DEVELOPING COMPETENCIES IN PHYSICS EDUCATION

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Abstract: intensive work on improving physics education, the goals and objectives of physics teaching are presented.

Keywords: modernization, competence, information system, intellectual potential, student, automation.

Physics occupies a special place in the scientific worldview, logical thinking, professional preparation and personal growth of students of general secondary schools. In the 21st century, one of the main directions of modernization of educational content in developed countries of the world is the introduction of a competency-based approach to education. Competency-based education is education aimed at forming students' abilities to practically apply the acquired knowledge, skills and qualifications in their personal, professional and social activities. On this issue, the Council of Europe organized a Symposium on "Key Competences for Europe" in 1996, which defined initial key competences for the lifelong learning systems of the European Union member states. State educational standards based on a systematic and active approach used in practice do not fully meet the requirements of the socio-spiritual and cultural development of society and the Strategy for Sustainable Development of Uzbekistan until 20304. In order to comprehensively address this issue, it is necessary to develop and implement state educational standards and curricula based on a competency-based approach in general education subjects that are taught integrally in general secondary, secondary specialized, and vocational education. The word competence is derived from the Latin words "compete", "competentia", and means "to achieve, to be suitable, to be worthy". The essence of this term is characterized by concepts such as success, effectiveness, and achievement. Most users can get news and other educational materials not only in the traditional way from books, textbooks, newspapers, magazines, but also much more quickly and conveniently find and get acquainted with them on the global network. At the same time, the flow of information is increasing, and there is a need to sort it and select only the necessary information. In addition, a number of scientific research works are being conducted on the automation of many production and other processes, the performance of tasks performed by humans that do not require intellectual capacity or that may pose a danger during their performance by robotics. . Many sources on the Internet publish studies on the future development of the labor market, predicting that some professions will disappear or their demand will

decrease sharply in the next 15-20 years, and vice versa, some professions and types of activity will increase in demand or become in demand. Undoubtedly, the fact that in the future most processes and services will be implemented through the Internet, information systems and related solutions will require our youth and current schoolchildren to acquire knowledge and skills for the 21st century. In this regard, in a number of countries, solutions are being implemented to form the knowledge and skills that will be needed in the near future in educational processes. Currently, intensive work is being carried out to improve physics education around the world: the goals of physics education, the principles of selecting the content of educational material are being clarified, work is being carried out to modernize textbooks and other educational tools, and effective forms and methods of teaching are being developed. This process encompasses the results of the scientific and technical revolution, which is based on the development of modern science, the interaction between science and technology, and the widespread introduction of new information technologies into all spheres of society. January 32, 2021 Part 17 Tashkent. In this regard, the goals of teaching physics at school are also changing. The increased acquisition of relevant information requires improving the structure of educational materials. This affects the level of students' mastery of the general principles and laws of physics and their acquisition based on theoretical thinking methods. In many countries, the goals set for teaching physics are almost the same: to form the foundations of scientific and technical literacy in the subject; to ensure the development of creative abilities, the formation of scientific thinking, the development of skills for independent acquisition of knowledge using various sources (literature, experiments, etc.). In almost all countries, there are clearly visible attempts to change the nature of teachers' activities: from simply imparting knowledge to teaching how to manage the process of knowledge. The main attention is paid to changing the content of textbooks that provide students with cognitive activities (increasing the number of experiments, various independent tasks, etc.), to the forms, methods and techniques of organizing the educational process. Conscious and extensive use of models, the study of scientific research methods, historical knowledge, etc. are of great importance as methodological knowledge. As a structure of the physics course, which is typical for many countries of the world, we can consider the following education system: primary school, first stage of secondary school, second stage of secondary school, upper secondary school, incomplete secondary school (first, second and third stages of education; each stage consists of three grades), gymnasium (humanities, natural science departments, etc.; usually 2-3 years of education). 50% of the time is allocated to teaching basic subjects (language, literature, mathematics, etc.). The use of integrated courses is widespread, and in higher grades - special courses are taught more often. In primary school, physics is often studied within the framework of natural sciences. For example, in Sweden, at the first stage, elements of physics are

considered within the framework of local history, manual labor, at the second stage - natural science, and at the third stage - a separate course or natural science. In the gymnasium, physics is taught at a fairly high level for three years in the natural science department. Mechanics, electricity, atomic physics and other physics departments are taught. So, if education is carried out in an interdisciplinary manner in order to increase the effectiveness of physics education, the student's worldview and thinking will be broad. In addition, high results can be achieved by encouraging students to think freely and strengthening independent learning.

References

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