

IMPORTANT ASPECTS OF THE USE OF MODERN METHODS IN THE PROCESS OF TEACHING PHYSICS

Jizzakh State Pedagogical University

Student of the Faculty of Physics and Astronomy

Begmuradov Shokhzod Dilmurodovich

***Abstract;** This article discusses important aspects of the use of modern methods in the process of teaching physics.*

***Keywords:** physics, process, lesson, teacher, student, pedagogy, theory, experience, modernity.*

Currently, modern teaching methods are widely used in the educational process. The use of modern teaching methods leads to the achievement of high efficiency in the learning process. It is advisable to choose this method based on the didactic task of each lesson. Enriching it with various methods that activate the activity of students while maintaining the traditional form of the lesson leads to an increase in the level of assimilation by students.

Today, in a number of developed countries, the methods that form the basis of extensive experience in the use of modern pedagogical technologies that guarantee the effectiveness of the educational process are called interactive methods. Interactive teaching methods are currently the most common and widely used in all types of educational institutions. At the same time, there are many types of interactive teaching methods, and currently there are suitable for the implementation of almost all tasks of the educational process. In practice, they can be applied accordingly, highlighting suitable for certain purposes. This circumstance has now given rise to the problem of choosing the right interactive teaching methods to achieve certain goals.

The methodology arose as a result of the need to solve various private issues of education and develops on the basis of the methodology of education based on the best practices of creative teachers. Not all teachers can accurately apply the best practices of the pedagogical work of one author, while the results will be different for everyone. Each teacher achieves a pre-set goal to varying degrees in accordance with their capabilities. For this reason, the result at the demand level is not guaranteed.

Basically, only creative teachers achieve good results. The technology differs from the methods in its reproducibility, the stability of the results of the work of many "if" (if the teacher is gifted, if the children are gifted, if good parents ...) differs in its absence.

That is, the technology differs from the method, which is very individual in that it can be restored and applied by all specialists with appropriate training. Alternative methodology is an integral part of pedagogical technology. Today, in the period of the growing movement for the development of innovative and scientific potential in our country, educational, spiritual - our main task is to increase moral, innovative, scientific and intellectual potential, the introduction of new teaching methods, technologies and innovations into educational processes.

The numerical value of any value can be found using the measurement operation, that is, to determine how many times this value is greater or less than the same value in the same type, which together is assumed to be equal. A measurement is the result of comparing a measured quantity with a quantity taken as a unit of the same type using a physical quantity. Any measurement is the definition of the expression of the measured quantity in a form convenient for use, modification, transmission or processing.

According to the method of forming the measurement result, direct, indirect and combined measurements are distinguished. With the direct type of

measurement, the value of the measured value is directly as a result of the experiment. For example, measuring current with an ammeter, power with a wattmeter, temperature with a thermometer. Measuring the value of an unknown quantity using comparative instruments also refers to the type of direct measurement.

With the differential method, the device shows the difference between the measured values and the measured value. The peculiarity of this method is that during the measurement process, the value of the measured value is partially balanced by the measurement value. Resistance measurement using an unbalanced bridge circuit is an example of a differential method. The accuracy of this method depends on how much the measured quantity and measurement differ from each other. The smaller this difference, the higher the accuracy of the method.

In the comparison method, the measured value and the measured values simultaneously affect the comparison device. This method is considered convenient if there is a multi-valued measurement with high accuracy and a comparison device with a simpler structure. In the exchange method, the measured values and measurement values are measured sequentially with one instrument.

Two measurement results will be found, as well as the desired value of the measured value. An example of this method can be the measurement of the resistance value using an adjustable scale (resistance store) and an AC bridge (Whitson Bridge).

In subsequent years, along with chemical methods, physical methods of analysis are widely used to determine the structure of a substance. Physical methods have a number of advantages over chemical methods. When using physical methods, the analysis can be performed in a very short time and with a small amount of substance. Secondly, with the help of physical methods, results are obtained that are inaccessible to chemical methods.

It is wrong, of course, to understand that these advantages of the physical method completely negate the chemical method. On the contrary, an effective result can be obtained by using physical and chemical methods together. Of the physical methods, the most commonly used are: UV and IR spectroscopy, optical deflection dispersion and rotational dichroism, nuclear magnetic resonance (NMR), electron paramagnetic resonance (EPR), mass spectroscopy, X-ray diffraction analysis and Mossbauer spectroscopy.

One of the main issues of chemistry is the definition of what a substance is and its structure. This work used to be solved by chemical methods, but now it is solved mainly by physical methods. Usually a chemist begins the study of a substance by determining what elements it consists of, and finds the gross formula. Only after that he tries to determine the structure of his molecule.

If a chemical process is being studied, then the question also arises of determining the components of the mixture formed as a result of the reaction at a certain stage of this process, as well as the quantitative characteristics of the compound.

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In a word, education is education, improving the literacy of the younger generation, ensuring the future future of the country. The use of various methods of scientific research in the process of teaching physics increases the effectiveness of teaching, forms the process of independent thinking of students, increases the motivation and interest of students in studying the subject, forms skills and abilities to consolidate, assimilate the acquired knowledge, freely use them in practice.

The electromagnet is located in the center, in a vacuum chamber. It is surrounded by a shell containing liquid helium. This shell is surrounded by a liquid nitrogen shell through a vacuum intermediate layer. The temperature of liquid nitrogen is minus 196 degrees Celsius, nitrogen is necessary for helium to evaporate as slowly as possible. Finally, the nitrogen shell is separated from room temperature by an outer vacuum layer.

Such a system is capable of maintaining the required temperature of a superconducting magnet for a very long time, but for this it is necessary to regularly pump liquid nitrogen and helium into the Magnet. The advantage of such magnets, in addition to their ability to create high magnetic fields, is also that they do not consume energy: after the magnet is triggered, the current passes through the conductive wires for many years with virtually no loss.

The method of infrared spectroscopy allows for a very short period of time to obtain information about the relative location of molecules, as well as to assess the

nature of the relationship between them. This is considered important when studying the structural properties of various substances.

This method is based on such a physical phenomenon as infrared radiation. Infrared radiation, also called "thermal" radiation. This is because all solid, liquid bodies heated to a certain temperature emit energy in the infrared spectrum. The spectrum of absolute blackbody radiation at relatively low temperatures (several thousand kelvins) lies mainly in this range.

Possibilities of application in high-quality recording and determination of the structure of infrared spectroscopy. Infrared spectroscopy is a universal physico-chemical method and is used in the study of structural features of various organic and inorganic compounds. The method is based on the absorption of electromagnetic radiation in the infrared range by a group of atoms in the body under study.

The absorption is probably due to the disturbance of molecular vibrations by quanta of infrared light. When irradiating molecules with infrared radiation, not only quanta are absorbed, the frequency of which corresponds to the valence, the frequency of deformation and vibration vibrations of molecules.

Among the many substances found in nature, there are fibers, veils, etc., which differ sharply from others in their physical properties due to the high viscosity of their solutions. There is a group of substances capable of forming varnish.

This group includes cellulose, lignites, pentosans, starch, proteins and nucleic acids formed during the vital activity of plant and animal organisms. Various fibers, leather and rubber, called natural polymers, have been used since ancient times. High-molecular compounds differ from low-molecular compounds by the limiting size of their molecular weight.

The basis of a living organism is also made up of high-molecular compounds. These are proteins consisting of high-molecular compounds, which make up almost

the entire part of a living organism - muscles, connective tissue, brain, blood, skin, hair, wool, horns, hooves, etc

. Just as organic high-molecular compounds are important in wildlife, inorganic high-molecular compounds play a similar role and are just as common in the world of minerals. The main part of the earth's crust consists of oxides of polyvalent elements, which make up silicon, aluminum and other macromolecules.

First of all, the peculiarity of the chemistry of high-molecular compounds is that molecular weight is a completely new concept. For low molecular weight compounds, the molecular weight value is a constant that characterizes the singularity of a chemical compound. In them, the change in molecular weight is manifested by transformation into another substance and a change in its properties. During the transition of a representative of a homological series from one species to another (a change in the value of the molecular weight), the physical properties of a substance change so much that it can be used to distinguish homologues from each other. Thus, polymer homologues can be divided into fractions consisting of compounds, each of which is close in molecular weight.

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