

**THE ROLE OF PROGRAMMING EDUCATION IN TEACHING PHYSICS****Hamdamova Sevara Nomoz qizi**

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**Abstract.** *Programming teaching physics, the development of the sequence of programming physics in the educational system consists in increasing the interest of educators in physics and facilitating the process of mastering. Programmed education mainly involves the performance of students on a particular program, during the same process it takes knowledge. The role of the teacher is to regulate the psychological state of the student and the effectiveness of the step-by-step development of the teaching material and, where necessary, programming activities.*

**Keywords:** *program, programming education, methodology, programming education in physics*

**РОЛЬ ПРОГРАММНОГО ОБРАЗОВАНИЯ В ПРЕПОДАВАНИИ ФИЗИКИ.**

**Аннотация.** *Программное обучение физике - это последовательное развитие программного обучения физике в системе образования, направленное на повышение интереса учащихся к физике и облегчение процесса ее усвоения. Программируемое обучение в основном предполагает работу учащихся по определенной программе, в процессе которой они получают знания. Роль учителя заключается в регуляции психологического состояния учащегося и эффективности поэтапного освоения учебного материала, а при необходимости и программной деятельности.*

**Ключевые слова:** *программирование, обучение программированию, методика, обучение программированию по физике*

**INTRODUCTION**

The education programmed in Physics was similar to the system of targeted education, which was highly defined according to its content and structure as well as its purpose.

In this system also serves as the basis of mastering with small-scale steps bulib aimed at the end result of all business activities . Education on programming in physics provides the basis for the direction of taking into account the possibilities of more students and an individual approach.

The main meaning of dastolic education in physics from this it turns out that the phrase teacher divided the entire teaching material into several syllables. These compounds are placed from simple to complex. After full information about each part is given, the level of assimilation of this part is checked. The second half is uttered by making sure that all students have mastered it, and the dressing part of the instructional material is studied once it is determined that this knowledge is also mastered perfectly. The main task of physics programming education is to deliver the instructional material to the students with small steps and to supervise their mastering under constant monitoring. It has its own dealings of how to master each step. Bunda also immediately emerges information about which part of the students are deeply and which part is poorly mastered in the teaching material. Uncertainties and misunderstandings are corrected in their own way.If in a traditional lesson only after studying the teaching material, attention is paid to strengthening and verification of the object, then in programmed education all stages of the

process of mastering the teaching material are controlled. The concept of programmatic education has not yet become widespread in the 60 - ies in the methodology. Because this method requires a lot of work and creativity from the teacher. On the positive side of this method, one can say that the separation of instructional material into logical pieces will help to systematically assimilate knowledge. And the monitoring of the appropriation at each stage allows each student to check the level of appropriation and make corrections in time. Without occupying the first part, the second part can not be switched. As a result, all students better master the new topic. The purpose of training on the basis of the program is to provide education based on the basic legalities of the educational process and create the most favorable conditions for the management of this work.

### **MATERIALS AND METHODS**

The content of education , the processes of giving knowledge and obtaining it to read , the formation of qualifications and skills are programmed. In the programming of education, it is envisaged to first determine exactly what knowledge , qualifications and skills the students should acquire as a result of the study of this theme, and which of the previously acquired knowledge and skills the students will be required to directly study this science and other mixed disciplines in order to be able to read these theme materials.

At present, programming education is important in physics education. Because before we study the science of physics, we will develop a program for the sequence of its subjects. And this will serve us as a clear plan in the study of physics. When we study physics on the basis of a specific program, it serves us to increase the efficiency of reading. We are currently studying the science of physics in the following program:

#### **1. Kinematics mechanical movement.**

Understanding of space, time, counting systems. Straight linear movement. Smooth movement with straight lines. A straight-line alternating movement with a straight line. Curve linear motion. Rotary motion. Movement of the body with a steep throw to the top. Horizontal and horizontal inclined body motion and their equations of motion.

#### **2. Dynamics**

Interaction of bodies. Strength. Measuring forces. Add forces. The equilibrium condition of the forces acting on the point. Newton's laws. Newton's I law. Mass. Overview of Newton'S II law. Newton'S III law and its application. Free fall of bodies. Weightlessness. Overloading. Non-free movement of the body. Impulse. Strength and body impulse. The law of impulse avoidance. Movement of a body with a variable mass. Subtraction of the Meshchersky equation.

#### **3. Work and energy is the work of power.**

### **RESULTS**

F.I.K. Deformation. Types of energy. Deformation potential energy. Kinetic energy. Full energy of the body. The law of conservation of energy. Full noelastic and elastic collisions. Potential energy of the body in the gravitational field of the Earth. Inersial counting systems. Movement of the body in the non-linear system. Inertial forces in the system moving in a circle. Friction forces are types of friction. Melon friction. Stox formula. Dry friction. Slip friction. Rolling friction.

#### **4. Rotational motion of solid bodies**

Illiquid and rotational motion of a rigid body. A condition of equilibrium of a body with an inertial axis. The law of rotational motion around the fixed axis of a body and its equation. Impulse torque. Centers of gravity and inertia methods of its determination. The law of motion of the center of inertia of a solid body. Introduction of the Steiner theorem. The Basic Laws of dynamics for the movement of a rigid body. Rotation and acceleration are the kinetic energy of the moving body. Free rotation arrows. Gyroscopes. Movement of a free gyroscope arrow. Gyroscopic forces.

#### 5. Deformation

Deformation. Types of deformation. Plastic deformation. Elastic bodies. The law of Guk. Elastic deformation (stretching and compression). Deformation formula and chart. Deformation energy and energy density. Consistency limit and consistency zap.

#### 6. The law of attraction of the whole universe

Potential energy of gravity. The Basic Laws of the mechanics of the universe and its proofs. Movement of the Earth's satellite and space apparatus. I, II, III-cosmic speeds.

#### 7. Movement of liquids and gases

Aggregate states of matter. Stationary flow of liquid. The Basic Law of dynamics for an Ideal fluid membrane. Bernoulli equation. The effect of fluid or gas flow on the body. Reynolds number. Torricelli formula. Magnus effect. Lifting force.

#### 8. Vibration movement

Davriy processes. Harmonic oscillation motion, its parameters. Concepts of amplitude, frequency, period of oscillations. Mathematical pendulum and its kinematics, dynamics. Mathematical pendulum laws. Physical quantities, types, equations of their motion. Pendulum pendulum, the equation of its motion, the laws of vibration. The implementation of Kyo's theorem. The change in energy in private vibrations and its graph. Quenching vibration action. Fading gradient. Forced oscillations and its motion equation. Resonance. Add vibrations. Biennial (vibration). Add mutual perpendicular vibrations. Forms of Lissaju.

#### 9. Waves

### DISCUSSION

Wave concept. Transverse and longitudinal waves. Wave surface and front. Vibration of sweat. Flat sinusoidal wave. Wave motion energy. Wave energy flow. Umov vektori. Wave intensity. Wave interference. Stagnant wave. Sound and its nature. Acoustic elements. Sound parameters: strength, height, timbre. Sound pressure. Sound intensity. Sound power (hardness) units: bell and detsibell. Doppler effect. Ultrasound and methods of its formation; piezoeffect, magnetostriction. Application of ultrasound. the course of physics in this physics program, which is based on the gi training system, begins with 6 classes on the basis of a separate subject of flow.

### CONCLUSIONS

In the first year of school physics training, mites are given general information about physical phenomena and sizes. In this way, mites are interested in physics, a preliminary idea of the science of physics is formed, a scientific worldview is formed by elemental explanation of the essence of the surrounding physical phenomena. At the same time, it prepares for a decrease in the knowledge of physics, which can be found in the content of natural geography, biology and Chemistry subjects.

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