

The importance of teaching the process of energy production in the system of continuing education

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Abstract: One of the main factors of development is energy. Rational use of nuclear energy remains one of the most effective solutions to the energy problem. Training for AES is one of the most pressing issues today. In order to improve the quality of education in the classroom, the use of various new pedagogical technologies and didactic games is being introduced, and this method is quite effective today. The whole world around us is full of energy, which not only exists in the depths of the earth, but can also create energy sources based on everyday conditions. However, it may be more appropriate to apply more modern and effective methods to the learning process without stopping. The basis for training specialists for the production of renewable and useful energy sources should begin in secondary schools.

Key words: energy production, didactic games, nuclear energy, pedagogical technologies, natural sources.

1. Introduction

Currently, the world economy is developing rapidly. One of the key factors in development is energy. Rational use of nuclear energy remains one of the most effective solutions to the energy problem. The training of personnel who can compete with international personnel in the production of nuclear energy is the main goal of any country that has set itself the goal of development. A good example of this is the launch of a nuclear energy project in Uzbekistan.

The Ministry of Energy provided detailed information on the construction of a nuclear power plant in Uzbekistan. "Uzbekistan plans to build a state-of-the-art nuclear power plant with Russian VVER-1200 reactors. The project will provide 15-18% of the country's electricity needs by 2030. "The ministry said. The durability and safety of the VVER first generation reactor are recognized worldwide.

According to the press service of the Ministry, Uzbekistan and Hungary agreed to implement promising projects in the fuel and energy sector of the Economic Cooperation. The Hungarian side offered to consider a proposal to send nuclear energy specialists to study under scholarships for Uzbekistan. The best educational program at the Technical University of Budapest and the opportunity to do an internship at the Paks NPP were noted. Training for AES is one of the most pressing issues today.

The national training program was developed in accordance with the Law of the Republic of Uzbekistan "On Education", which provides for the certification of educational institutions, new stages in the construction of a system of continuing education, new types of training. showed that the establishment of educational institutions, the creation of new curricula, programs, textbooks, the development and implementation of modern didactic support is one of the most pressing issues today. The training of high-level and potential teachers is also important in

achieving the goals of the program. Currently, teacher retraining centers are both traditional and online, and they are active. Graduates of higher educational institutions should also work in secondary schools, vocational colleges and academic lyceums as competent and high-quality personnel who meet modern requirements. One of the most difficult issues facing higher education institutions is to provide students and masters with teachers who can meet the requirements of the current State Standard. Higher education institutions are actively working to this end. There are enough conditions and teaching aids for students today. There are many textbooks on physics teaching methods for students studying in the physics department of universities and pedagogical institutes, which meet the current requirements.

Depending on the size of the yard, only one or two toys will fit. One of the most pressing issues today is the efficient use and application of the cheapest, most convenient, environmentally friendly and renewable types of energy resources in social life. As the level of development increases, so does the need for energy. Our country has enough energy resources to meet this need of society and industry. However, it is very important to use it wisely when processing it and presenting it to the public. Natural energy resources are not unlimited. But the demand is enough. Advanced thinking personnel and advanced equipment are important factors in energy saving and efficiency to ensure efficient use. Ultimately, the only solution to the problem of training such personnel and training potential national personnel for the effective use of modern equipment is inextricably linked with the quality teaching of physics and other specific sciences in educational institutions.

In order to improve the quality of education in the classroom, the use of various new pedagogical technologies and didactic games is being introduced, and this method is quite effective today. However, it may be more appropriate to apply more modern and effective methods to the learning process without stopping.

The following methods can be used to increase the effectiveness of teaching:

- online tour: to establish a strong connection with energy generating companies (eg, HPP, TES, IES, AES, etc.) to give students an idea and interest in modern professions and effective methods of obtaining energy, their engineer and conducting conversations with experts, gaining visual information by establishing online communication of the performance engineer on the job during the course;
- Online communication with scientists: videoconferencing with scientists who have contributed to the organization of this process is also an effective way;
- Online acquaintance with the work process: it is possible to imagine the production of a certain type of energy by observing it with the help of cameras via online video surveillance;
- Laboratory model of renewable energy sources: the method of modeling large projects known to us is used in all areas and gives good results, for example, in windshield generators for small farms, solar panels, methods of obtaining energy from natural fuels in optional classes teaching models makes a great contribution to the achievement of creative and potential thinking of students;
- Virtual laboratory work on some phenomena in atomic and nuclear physics

In addition, some of the discoveries in the film industry can be partially ensured by the participation of the student in an online tour of the processes of obtaining the above energy resources in the development of science and the effectiveness of education. From the psychology of today's youth, we can say that many teenagers can only believe something if they see it. It is important to take this feature into account when teaching science.

If we study the educational process in developed countries, as students move into the upper grades, each area of the specific sciences will be conducted in a separate in-depth and experimental way. The conditions for energy production are much better. In our country, too, we can see that in the 2016-2020 academic year, the material and technical base of the education system has been significantly updated. The development of the academic system of academic lyceums and the establishment of presidential schools are good examples of this.

We know that since independence, Uzbekistan has established and developed a system of in-depth lyceums (up to 9th grade) and academic lyceums (after 9th grade). The radical reform of the higher education system has also raised the quality of education to a much higher level than before. Yesterday, our President signed a new concept:

The concept of science development until 2030 has been approved. The relevant presidential decree has been issued. According to this concept, from January 1, 2021:

- The system of training and continuous training of heads of scientific organizations at the Academy of Public Administration under the President;

- The program "Academic Mobility" in order to support talented young people engaged in scientific activities in the regions, to attract them to science;

- Electronic system of coordination of training at the scientific level, which provides for the following:

-creation of a database of trainee researchers, researchers, supervisors and consultants, record the implementation of the individual plan of trainee researchers and trainees;

-monitoring the effectiveness of research institutes of scientific level, the formation of relevant reports and analytical data

-Registration of candidates for study at research institutes of scientific level;

From the above concept we can see that special attention is paid to each aspect of the development of science in our country. As a result of the reforms carried out in recent years, we can see a significant change in the development of science.

One of the most pressing issues today is to expand the ranks and further build the capacity of the national workforce to address energy issues in the future. To do this, in addition to higher education and subsequent research, it is necessary to further deepen and expand the teaching of specific subjects in secondary schools.

The basis for training specialists for the production of renewable and useful energy sources should begin in secondary schools. When renewable energy sources are included in high school textbooks as a separate optional course, the learning process will be more interesting for students.

In the course of the lesson, it is advisable to explain the following information to the students in a perfect and practical way.

The types of alternative energy sources are very advanced today. Uzbekistan has access to a number of energy sources. Among the natural sources of private energy supply are:

- solar panels;
- solar collectors;
- heat pumps;
- wind generators;
- water-absorbing devices;
- biogas plants.

Once the house is built and commissioned, the main costs fall on the actual energy consumption. This situation requires the use of alternative sources.

With sufficient funds, we can purchase a ready-made model of one of these devices and order its installation. Taking into account the wishes of consumers, industrial enterprises have long mastered the production of solar panels, heat pumps and more. But their prices remain stable. Such devices can be done independently, which saves a certain amount of money, but consumes more time and effort.

However, devices that generate alternative energy are expensive and have a payback period of at least 10 years. At home, there will be alternative energy sources for the home. Their production cost is several times cheaper. In this case, assembly from finished parts is used, not production from scratch. There are many solutions here. They can be divided into power generation systems and energy storage systems. These include: Wind turbines for the summer

home: The wind generator is more efficient in mountainous and desert areas. They are fun because of the low prices for self-production.



The noise of wind turbines is its shortcoming. High-speed models are not dangerous when operating in strong winds due to the expansion of the blade elements. Windmills are best suited for large, windy areas with low dryness. There, they can allocate a few hundred square meters in the far corner. They are not suitable for small areas. If we popularize their production, the problem of self-sufficiency in energy for the population, the problem of energy supply in remote areas will be solved.

Solar panels: They can be called the best source of alternative energy. Solar panels have no moving parts, are very reliable and efficient, and are suitable for all residential climates. Solar panels can be installed in summer settlements, in compact urban areas, on the roof of the house.



Even schoolchildren know that oil, gas and coal reserves are not unlimited. Energy prices are constantly rising, forcing payers to think hard about falling and increasing their revenues. Despite the achievements of civilization, there is no gas in many places outside the cities, and even no electricity in some places. When such an opportunity exists, the cost of installing the

system sometimes does not match the income level of the population. Today, it is not surprising that “spontaneous” alternative energy is attracting interest for large and small business owners. There are a number of ways to further improve the lives of rural and urban residents.

The whole world around us is full of energy, which not only exists in the depths of the earth, but can also create energy sources based on everyday conditions.

We know that the use of nuclear energy in industry and society is still the most convenient way. Further expansion of the role of nuclear forces in lifelong learning will lead to further development in this area. Knowledge of the use of atomic and nuclear energy has expanded significantly internationally. However, students should be told that a complete theory of nuclear forces has not yet been developed and research is underway. Therefore, we are not able to theoretically calculate the interaction energy of nucleons in a particular nucleus. However, recent scientific research has led to the creation of programs that allow the partial calculation of this energy. A good example of this is “Fortran” program. These and similar programs can be used to solve a number of complex problems. That includes the impact energies in the nucleus. We know that the use of nuclear energy in industry and society is still the most convenient way. Further expansion of the role of nuclear forces in lifelong learning will lead to further development in this area.

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