



FEATURES OF TEACHING THE SUBJECT “NATURAL SCIENCES” TO PRIMARY SCHOOL STUDENTS ON THE BASIS OF THE COMPETENCE-BASED APPROACH

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ABSTRACT

The article discusses the principles of using advanced scientific research, their significance, efficiency and scientific nature of the educational system with the transition to a new level in teaching primary school students.

Today, the current state of education and the level of its development acquire special significance because of its complexity and richness of contradictions. The introduction of new requirements for the education system, including the introduction competence-based approach requires further improvement of its content and methods of teaching subjects. Implementation of a new competency-based paradigm emphasizes the need to apply specific methods for the formation of students of certain skills and competencies. These competencies allow students to effectively adapt to society in a fast changing environment, developing such qualities as freedom, self-control and the ability to develop oneself in the future [7]. This creates favorable conditions for training competitive specialists in changing socio-economic conditions. The competence-based approach takes a special place in the educational process. Cabinet Resolution Ministers of the Republic of Uzbekistan dated April 6, 2017 №187 “On approval of state educational standards of general secondary and secondary special, vocational education” defines the main directions of development of education based on competency-based approach [1]. This document also defines the main directions and stages of formation of the necessary competencies among students.

The main problems of the formation of basic and scientific competencies among students were studied by Mc.Gilvray, N.Xomskiy, G.Hamel, A.Heene, S.K.Prahalad, T.F.Gilbert, Dj.Raven, Mr.Walo Hutmacher; N.V.Kuzmina, A.K.Markova, L.M.Mitina, A.V.Khutorskoy, I.A.Zimnyaya, V.I.Baidenko.

In the education system of Uzbekistan, preliminary ideas about the concept of competence-based approach. It is known that competency-based approach in Uzbekistan began to operate in the second decade of the 21st century. In the context of competencies that help to understand environment reflects practical actions that serve to expressions of the landscape of material existence. Skill develops understand the role of nature in daily activities



and lifestyle, consciously treat it, understand the beauty of nature, carefully preserve what belongs to her.

A distinctive feature of the educational process based on competence-based approach is that students learn on their own apply knowledge in their practice. In addition, students theoretical information about the origin of this knowledge is given. It requires from students mastering the concepts and knowledge needed to independent solution of specific problems. With this approach, educational activity acquires a routine research character. In that In this case, the educational activity of students acquires a practical character.

Competencies are manifested in the form of basic and scientific competencies. These competencies always complement each other and contribute to the formation practical activities. Basic and scientific competencies are general and specific character. Types of competencies:

1. Core competencies are competencies that are common to all items.
2. Competences related to science are competences related to to the subject. In particular, individual educational competencies, formed in the lessons “Natural Sciences”, fall within the competence of pedagogical science. For this reason, the main goal competence-based approach is the formation of students with developed, practical experience, natural science knowledge, skills and abilities, creatively active, able to consciously relate to environment, love nature and preserve its riches [6].

In order to effectively organize the educational process on the subject “Natural Sciences” must be selected content, forms, methods and techniques. At the stage of primary education, a number tasks may become irrelevant. Because such tasks do not serve for the formation of students' competencies. When choosing study assignments attention should be paid to their ability to serve the formation of students of certain competencies. For example:

- tasks that help students to understand problems, arising in the environment, develop the ability to solve them;
- a clear, understandable statement of tasks that serve to form student competencies;
- analysis of methods and techniques used in the performance of tasks;
- to interpret the obtained results based on the task;
- tasks that serve to formulate and record final solution of the tasks.

In our time, a variety of problems that arise in nature, require the formation in the younger generation of the ability to consciously respond to them. In particular, it is important to form in schoolchildren intolerance for to negative conditions such as fresh water pollution, rude attitude towards nature, destruction of plants. [5]

Cruelty to nature today leads to deterioration ecological situation. The growing needs of people make it necessary to acquaint students with the subject “Natural Sciences” in elementary school, in order to more carefully use natural resources (water, air, soil, energy).

Conservation of natural resources is an important task and duty of everyone man, because man is an important force that regulates the positive interaction between nature and society. Scientific competencies play an important role in the development of AI in elementary school students conserve natural resources. Therefore, they are required to know formation of interactions in nature, its inherent laws, events. Students should have a clear idea about the change of day and night, about animals, the adaptation of plants to natural conditions, the



dynamics of their development, an increase in the number of representatives of fauna and flora and the reasons for their disappearance. It is also important that they clearly represent wildlife. The fact that natural phenomena occur in a certain space and time is also of particular interest to students. They care understand that for the survival of any living organism, certain conditions, and that these conditions must be created by man. The fact that animals are kept away from where they live because it is dangerous for them life. Explaining information to students in the lessons of "Science" will form in them a valuable attitude towards the benefits nature.

The study of the relationship between animate and inanimate nature, obtaining clear knowledge and understanding of it forms in students a conscious attitude to nature [4; pp. 115-116]. Primary school students also need acquire the knowledge that the change of nature by man should not put jeopardize its integrity.

The occurrence of positive changes in nature is also determined by the influence of the human factor on it. Human Involvement into natural processes through production activities allows him to improve the connections between his individual parts: plowing and mixing of the earth, its interaction with atmospheric air, energy, moisture should also inform students that connections between natural objects are improved.

Knowledge of the interdependence of the benefits of nature expands students' understanding of natural science knowledge. This knowledge, in in turn, contribute to the formation of certain competencies. Scientific competencies are important because they contribute to a thorough scientific substantiation of the skills of using and modifying nature.

All changes occurring in nature, events, are based on a certain law. The relationship between air, water, soil and sunlight, the main natural resources of the origin natural phenomena, plays an important role in the transfer of students natural science knowledge. Of the natural resources, the most important is water. The importance of water is that it is the source of life for Living creatures. In particular, if 15% of the water in the human body is lost, he dies [4; pp. 12-13]. That is why it is important to convey to the younger generation the need to conserve clean water and not waste it in vain.

The amount of water on Earth is 70-72%. 70-72% of a person's weight is water. Water is the main source of growth and development in nature. Knowledge about water is imprinted in the minds of students through various articles, texts, illustrations. This is because the metabolic process, occurring in nature, first occurs in water.

All available water on Earth forms the hydrosphere. The hydrosphere is the water crust of the Earth, which includes oceans, seas, lakes, rivers, ground waters and glaciers.

The oceans are inexhaustible, and water resources are constantly replenished by circular motion. Mankind only uses one percent of the world's water, clean water, which is 70-72 percent water in the world. This water, suitable for drinking, is fresh water. It has been observed that 1 liter of fresh water contains up to 1 gram of soluble salts (0,1%). The population of the planet will need an average of 7-7,5 million m³ of fresh water.

The main sources of water are snow and ground water in the mountains.

By fundamentally reforming the mechanisms of water use, ensuring their rational and efficient use [2; pp. 163], The problem of saving clean water remains very relevant today. Information about water is very interesting for schoolchildren, and transferring it to students



elementary grades through various poetic texts, stories, pictures and illustrations, role-playing videos, didactic games effective results. Providing students with accurate scientific information about the depletion of water resources due to pollution, they develop a cautious attitude towards this good of nature. Water care is also necessary because it is a blessing of nature, which is restored very slowly and with difficulty [4; pp. 12-13].

Students should be aware of two important factors that should be Consider when using fresh water:

- 1) population growth;
- 2) increase in water consumption as a result of rapid development industry and agriculture.

It is also important to convey knowledge about clean water to students through various methods, such as the lack of clean water and the need use it with caution. One of the main goals science teaching - understanding by students that one of the the most important task is to provide the population with clean drinking water, and on this basis to have practical water saving skills.

Concepts and information about the nature of the environment should be included in the teaching materials provided in the lessons "Natural Sciences". Such concepts and information include information about water, air, land and wildlife. [4; pp. 7-19]

All natural resources are interconnected. In this process, it is necessary make students aware of the important role that humans play in conservation and reproduction of natural resources. Man uses natural resources to develop their activities, to create material wealth. That is why natural resources serve as the basis for creation of human life, activity, material and spiritual benefits. In our holy books, Avesto, Qur'an and Hadith, natural resources revered as a great blessing. There are many tips on how to save them. For example, Avesto teaches how to keep water clean and environment [3]. Our ancestors, understanding that water and the environment play an important role in human life, put forward the idea of its preservation. They taught that it is necessary to treat water and the environment wisely, that it is the duty of everyone human being to keep clean. Our people have always said that nature is it is the source of prosperity.

Respect for nature is a centuries-old value of our people. Such rules are ingrained in the minds of children from an early age, and as as they grow up, they rise to the level of faith. As a result of educational activities, children are educated on the following rules: "Drink water, but do not pollute the spring. Don't spit in the well where drink water."

Our ancestors with their centuries-old life experience taught us, that clean water, fresh air and flora are necessary for life person. They created lush green gardens, words of wisdom and tales of protection of water and fresh air, its rational use. In this young people received knowledge about nature and its conservation.

Parents and teachers regularly explained to young people that neglect of nature can have serious consequences. Today in the lessons "Natural Sciences" it is necessary educate teachers about the need to make effective use of such tips created by our ancestors.

Knowledge about nature, which is taught in the lessons "Natural Sciences", as well as in the lessons of reading, native language, mathematics, fine arts, are comprehensive and interesting for schoolchildren. Within each subject, students natural science knowledge is provided on the basis of interdisciplinary connections.



We came to the conclusion that the choice of natural science knowledge for teaching students in the lessons “Natural Sciences” should be based on certain principles, because knowledge and comprehensive understanding of nature. Bringing them to students requires use of certain methods and adherence to certain principles. Including:

- natural science knowledge that is taught to students, appropriate for their age;
- natural science knowledge provided to students, correspond to the content of the curriculum;
- students do not need additional time to master selected learning materials;
- knowledge, concepts and illustrations included in the program and the textbook should be of interest to primary school students;
- ensuring the scientific and practical orientation of educational materials;
- orientation of natural knowledge and concepts in textbooks to regional and universal problems;
- clear and understandable natural science knowledge, taught illustrations;
- presentation of knowledge to students in accordance with environmental, economic, spiritual and ethical standards;
- make it easy for students to understand the content Sciences;
- the knowledge and concepts taught should determine the conscious attitude of students to nature and its resources.

In the lessons “Natural Sciences” students acquire basic scientific knowledge and practical actions.

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