

Content and Requirements for the Development of Environmental Competence in Future Teachers

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Abstract

Personal development in the education system is ensured by the formation of universal educational actions as the basis of the educational and upbringing process. The concept of universal learning activities takes into account the experience of the competence-based approach, i.e. using the acquired knowledge and skills in practice.

Key-words: Preschool Institution, Student, Teacher, Content, Development, Environmental Competence.

1. Introduction

Today, one of the leading ideas for the modernization of natural science education is the formation of an environmentally competent personality. The rapid introduction of innovations into the economy and society as a whole requires a person to be able to quickly adapt to new conditions, to be flexible and creative, to find optimal solutions to complex issues, not to get lost in a new situation, to be able to establish effective communication with different people and at the same time remain moral a citizen of Uzbekistan. The task of a modern school is to prepare a graduate who has the knowledge, skills and competencies necessary in modern life, allowing him to feel confident in an independent life. Such requirements for educational outcomes set new targets for education. To achieve such results, a complete systemic renewal of primary education is required, which is an update of the content of education, teaching methods based on the introduction of a system-activity, competence-based approach into the learning process.

2. The Main Results and Findings

The content of environmental education involves an analysis of the types of leading activities, the allocation of universal educational actions that generate competencies [1].

The search for technologies, means, methods of environmental education is becoming relevant, ensuring overcoming the insufficient development of environmental knowledge in younger schoolchildren, the formation of a value attitude towards nature, the ability to assess their behavior and the behavior of people around them and to act confidently based on their own knowledge, which ultimately ensures development environmental competence of a primary school graduate. Effective formation of environmental competencies is possible within the framework of the course "The World Around", because this course has ample opportunities to form the foundation of environmental literacy and relevant competencies in younger schoolchildren - the ability to conduct observations in nature, set up experiments, follow the rules of behavior in the world of nature and people, the rules of a healthy lifestyle.

The competence-based approach is a natural stage in the development of the domestic school and pedagogy on the way of its separation from the state apparatus and the identification of its own, internal meanings and goals. V.A. Bolotov, A.N. Dakhin, I.A. Zimnyaya, G.K. Selevko, V.V. Serikov, I.D. Frumin, A.V. Khutorskoy other.

The competence-based approach is one of the ways to achieve a new quality of education, which determines the change in the educational process, priorities, and the development potential of education.

The competency-based approach is an attempt to match the mass school and the needs of the labor market. He focuses on the result of education, and the result is not considered the sum of the acquired information, but the person's ability to act in various situations, which is especially valuable at the present stage of the development of society.

The educational tools of the competence approach are competence and competence, and before reflecting the essence of the concepts of "environmental competence" and "environmental competence", it is necessary to investigate the formation and determine the essence of the broader categories of "competence" and "competence".

The main goal of school and higher, primary and preschool education is now the formation of competencies.

Competence is a set of qualification requirements for a given professional activity, and a set of actions (procedures, powers, rights) intended to be carried out by a representative of this profession. "

You can talk about the competence of the school director, the competence of the methodologist, the competence of the teacher, etc.

Competence, in contrast to competence, is an integrative characteristic of the qualities of a person (employee), focused on solving real problems, determined by his current (or potential, desired) position.

Thus, competence is an official characteristic, and competence is a personal one, a characteristic of individuality.

Let us consider the linguistic history of the terms "competence" and "competence", since they are of foreign origin. The dictionary of foreign words gives the following definition of the concept of "competent" - having the competence (scope) of authority of any institution, person or scope of affairs subject to something to be dealt with. Competent - knowledgeable, knowledgeable, authoritative in any field [2].

The content of these concepts has certain differences. In one of the options, only experience, knowledge, abilities are taken into account, and in the other, abstract concepts of "a range of issues" are presented, the possession of the rights to solve this range of issues. The basis of the word "competence" indicates an active, activity moment, the possibility of formation, development in action, behavior, activity.

Let's consider the semantic difference in the use of the concepts "competence" and "competence" in different languages. The concept of "competence" was widely used earlier in life and literature in Russia, in relation to the characteristics of an adult. In foreign sources, one can find the formulation "early competence" - "competence of young children", which is equated to the concept of awareness, the optimal amount of skills that allow a child to effectively solve the problems facing him in everyday life.

In modern education, the concepts of "competence" and "competence" are often used as synonyms (A.A. Pinsky); or subordinate, for example J. Raven uses "competence" as a specific, narrower concept, as a synonym for "diversity of competencies" [3].

Today, many domestic researchers point to the delineation of these categories. E.F. Zeer defines competence as a set of rights and duties of a specialist; the area of professional tasks that he is authorized to solve. Competence implies the ability to update knowledge, skills and abilities in the

process of realizing one's professional functions and to bear personal responsibility for all decisions and actions [4].

According to B.I. Khasan's definition, competence is a characteristic of a place, i.e. characteristic of a social role, which in the personal plane is manifested as competence, i.e. correspondence of the person to the place occupied. Determines the ability of a person to carry out activities in accordance with the social requirements and expectations of society. The level of competence is a characteristic of the results of educational practice for an individual. A.V. Khutorskoy defines competence as a set of interrelated personality traits (knowledge, abilities, skills, methods of activity) in relation to a certain range of objects and processes and necessary for high-quality productive activity in relation to them. Thus, competence is a person's mastering of the corresponding competence, including his personal attitude towards her and the subject of activity, an already established personal quality (characteristic), and competence is a pre-set requirement for the educational preparation of a student [5].

A.S. Belkin, V.V. Nesterov under the competence understand the totality of knowledge components in the structure of human consciousness, and under the competence - the totality of those social functions that a person possesses in the implementation of socially significant rights and responsibilities of a member of society, social group, collective. From these positions, competencies can be conventionally designated as the totality of what a person has, and competence is the totality of what he owns [6].

The term "competence" in modern education is quite new, therefore, the question of the content of the concept is widely considered by researchers. The formation of the problem of "competence" and "competence" in education (V.V. Kraevsky, N.V. Kuzmina, A.K. Markova, J. Raven, R. White, N. Chomsky, A.V. Khutorskoy) three stages.

- The first stage (1960s - 1970s of the XX century) - the term "competence" is introduced into the scientific apparatus of pedagogy, the prerequisites for differentiating the concepts of "competence" and "competence" are created. The concept of "communicative competence" is introduced into the theory of teaching foreign languages (D. Himes).
- The second stage (1970s-1990s) - the use of the categories "competence" and "competence" in the practice of teaching a language, in management, leadership, management, in teaching communication. At this stage, for the first time, the content of the concept of "environmental competence" is developed. J. Raven in his work "Competence in Modern Society", which appeared in London in 1984, gives a detailed interpretation of

competence, which consists of a large number of components, many of which are relatively independent from each other. These components can replace each other as components of effective behavior. At the same time, as J. Raven emphasizes, "types of competence" are "motivated abilities" [7]. The competence model includes the following components of effective behavior: cognitive processes, affective processes and habitual behavior.

In Russian pedagogy, during this period, they begin not only to study competencies, highlighting different types, but also to build training, keeping in mind their formation as the end result of the educational process. The terms "competence" and "competence" are beginning to appear as a higher-level concept, generic for numerous types (elements) of competencies.

In the 90s of the last century, the third stage of the study of competence as a scientific category of education begins. At this stage, the International Labor Organization introduces the concept of "key competencies" By the end of the 90s, the concept of "competence" begins to define the requirements for training specialists in a vocational school (E.F. Zeer, Z. Kirsanova, I. Yu. Klimenko, N.V. Kuzmina, A.M. Novikov, V.A. Slastenin, A. Shelton and others).

With the reform of the Russian education system, the competence-based approach is being actively introduced into the practice of schools, i.e. an approach that focuses on the result of education, and the result is not considered the amount of acquired information, but the person's ability to act in various problem situations [8]. According to many domestic scientists, researchers, when implementing the competence-based approach, the content of education acts as a pedagogically adapted social experience, consisting of 4 main structural elements: the experience of cognitive activity, fixed in the form of its results - knowledge; experience in the implementation of known methods of activity - in the form of skills to act according to a model; experience of creative activity - in the form of the ability to make non-standard decisions in problem situations; experience of establishing emotional-value relationships - in the form of personal orientations. Mastering these four types of experience allows students to form the ability to carry out complex culturally related types of actions, which are called competencies [8].

In his works A. V. Khutorskoy proposes a three-level hierarchy of educational competencies:

- Key - Refer to the general (metasubject) content of education, are universal, applicable to various life situations. Each member of society must master key competencies, because competencies of this type are a kind of key to a successful life of a person in society. All core competencies are inherently social and represent universal learning activities.

Today, scientists identify many key competencies, but they all consist of four elementary key competencies:

- Informational - Represents the student's readiness to search, process, analyze information.
- Communicative - Characterizes the student's readiness to interact and communicate with other people, is formed on the basis of information.
- Cooperative - Willingness to cooperate with other people, formed on the basis of the two previous ones.

Problematic - Readiness to solve problems, formed on the basis of the three previous ones. As applied to school education, key competencies should be understood as the readiness of students to act independently in a new situation while solving urgent problems.

- General Subject - Refer to a certain range of academic subjects and educational areas.
- Subject - Narrower in relation to the two previous levels of competence, having a specific description and the possibility of formation within the framework of individual academic subjects.

Competence is a characteristic given to a person as a result of assessing the effectiveness of his actions aimed at resolving a certain range of problems. This concept includes the concepts of knowledge, skills and abilities.

The lack of terminological unity suggests that there is an unsettled system of using the term competence in Russian science. V. Khutmakher notes: the very concept of competence, entering into the concepts of skill, competence, ability, is not clearly defined in terms of content [9].

Mastering competence allows the child to use the acquired knowledge and skills in a non-standard situation at an interdisciplinary level, to achieve further results on the basis of the knowledge gained, and is formed in the activity.

Considering competence as an educational category, we note that each subject forms its own competence along with key, metasubject competencies:

1. Informational
2. Communicative
3. Analytical

Competence is a set of knowledge, skills and abilities that allow a subject to adapt to changing conditions, in fact, it is his ability to act and survive in these conditions. All of them are associated with human experience and activities. Outside the situation and activity, competence is not manifested.

The activity can be based on life experience, but it is necessary to form the experience of the student's educational activities.

How is environmental competence and environmental competence defined in this regard? Despite a sufficient amount of literature on the competence-based approach and key competencies of schoolchildren, the concept of environmental competence and environmental competence of schoolchildren is practically not mentioned among them, with the exception of the works of S.V. Alekseev, D.S. Ermakov, A.N. Zakhlebny, but also they investigate the formation of the environmental competence of secondary school graduates. This makes it relevant to disclose the concepts of "environmental competence" and "environmental competence" in relation to primary school age, a description of their content, determination of their place among other competencies allocated for general education.

S.V. Alekseev defines ecological competence as a systemic integrative quality of a student, characterizing the ability to solve problems and tasks at different levels that arise in life situations, based on formed values and motives, knowledge, educational and life experience, individual characteristics, inclinations, needs, this the result of his environmental education.

In his research, D.S. Ermakov, proceeding from the personality-oriented and activity-based nature of the competence-based approach, defines environmental competence as a meaningful ability, potential and experience of an individual in the implementation of complex environmentally friendly types of actions, and environmental competence, respectively, as an appropriate regulatory requirement for the content of a given ability, potential, experience.

If we talk directly about primary school age, then environmental competence is the willingness to choose an environmentally appropriate line of social behavior, predicting the consequences of such behavior and relying on the received environmental knowledge and experience in primary school [10];

In his research, Alekseev S.V. distinguishes three components of environmental competence:

1. Axiological (value-motivational).
2. Cognitive (meaningful, knowledgeable).
3. Activity (practical, technological).

Substantive-operational or cognitive component assumes the development of a system of certain environmental knowledge (natural science, worldview, regulatory, legal, practical). It is they, in the opinion of S.V. Alekseev, that act as the basis for choosing a method for carrying out environmental activities.

Under the prevailing system of values, interests, needs, beliefs, beliefs that induce environmental activities C.B. Alekseev understands the motivational-value component.

The presence of the formation of the behavioral or activity-practical component ensures the presence of environmental skills and abilities, ensures the observance of the norms and rules of behavior in nature, taking into account environmental requirements, practical experience of environmental activities.

Determining these components of environmental competence helps to derive a model of a student with environmental competence. This is a person who has formed objective results, there are motives for choosing an ecologically expedient line of behavior, as well as metasubject results are fully formed, there is experience in practical environmental protection, and is related to nature as a universal value. The demonstrated level of independence is the basis for distinguishing between different levels of competence.

Has moral ideals, interests, motives for choosing a positive, environmentally appropriate line of social behavior.

Knows how to recognize the universal value of nature, has a pronounced interest in environmental issues. Has knowledge of the world around him. It has formed environmental skills and abilities. Knows how predict the results of their activities and prevent its negative consequences. Has experience of self-expression in behavioral-volitional, emotional-sensual and intellectual spheres.

Knows how to follow the rules of behavior and activity in nature, has an active life position in environmental protection. Knows how to solve problems of moral choice, achieving a certain environmental result.

The formation of the environmental competence of primary schoolchildren occurs through environmental education and upbringing, is the result of their inclusion in various types of activities and the development of life experience in them, corresponding to the age of the child.

A.N. Zakhlebny defines environmental competence as the ability of a student to independently transfer and comprehensively apply general educational skills and subject knowledge for the design and organization of environmentally friendly activities in educational socially problematic environmental situations in the interests of sustainable development, human health and life safety [11].

Model of the student's personality, Exploring the features of the formation of environmental competence, D.S. Ermakov notes that “from a functional-target point of view, environmental competence, which can reproduction of life, should be considered as one of the key, general education. The general educational nature of environmental competence is justified both from private

scientific (socio-ecological, pedagogical) and general scientific, philosophical and methodological positions "[11].

Environmental competence is formed on the basis of leading activities. In primary school, this is an educational activity.

A.N. Zakhlebny considers the ecology of educational activity as a field of human ecology, which studies the relationship between educational activity of a person and the educational and socio-natural environment that surrounds him. Content of this Knowledge Area:

- Assessment of the impact of environmental conditions on the success of studies.
- Designing and organizing the environment in order to improve their health and safety.
- Using general educational skills to disseminate ideas for sustainable development.
- Organization of social partnership in solving local environmental problems.

Environmental competence in primary school provides for the student's ability to design and organize their educational activities, taking into account the spatial-subject and temporal conditions of its implementation; relations between educational objects; requirements of the State Standard and curriculum; individual resources of the learner; training loads and their impact on health and environmental safety [12].

Having analyzed the already existing definitions of environmental competence, we propose the following definition for a primary school graduate [13]. The environmental competence of younger students is the ability of a younger student to conduct observations in nature, observe the rules of behavior in the world of nature and people, and independently apply the acquired knowledge and skills in a new situation and the organization of environmental activities. The environmental competence framework includes components:

- General cultural (nature as a value; value attitude to natural heritage; greening culture; formation of environmental needs and feelings; setting for a safe, healthy lifestyle).
- Educational and cognitive (formation of environmental literacy; planning of environmental activities; development of cognitive processes for the successful implementation of environmental projects; successfully apply ICT when working with various sources of information on an environmental topic).

Behavioral-strong-willed (the ability to plan, control and evaluate educational actions in accordance with the set environmental task; the formation of the ability to predict their activities in nature).

Communicative (to develop the ability to convince in the need for environmental actions; to encourage their peers to environmental protection).

Thus, environmental competencies as regulatory requirements for the content of environmental education and environmental competence as a result of the development of the corresponding environmental competence have the following properties:

- Are integral (combining knowledge, methods of cognition and activity) characteristics of the quality of student training.
- Reflect the implementation of the subject position of students in teaching natural science.
- Aimed at preparing students for independent, environmentally friendly activities.
- Set the experience of practical environmental protection.
- Are "metasubject in nature, are part of the content of various academic subjects and educational areas" [14].

Based on the concepts and structure of the ecological competence of junior schoolchildren, we have developed a methodology for the formation of environmental competence, which was the prospect of further research.

The correctness of the hypothesis was confirmed by the theoretical and methodological study of the research problem and the obtained results of the experimental work and made it possible to formulate the following conclusions.

1. The most effective implementation of the requirements for the environmental competence of pupils allows the possibilities of elementary school, since it is there that uniform environmental conditions, a single pedagogical and student collectives, whose efforts are aimed at the formation of universal educational actions, have been created. This allows you to create a common terminological space, to implement the methodology for the formation of the ecological competence of primary schoolchildren, uniting the efforts of all participants in the pedagogical process.

3. Conclusion

The result of the theoretical understanding of the problem was the clarification of the concept of environmental competence as the ability and experience of a younger student to independently transfer and apply universal educational actions formed in the classroom and in extra-curricular environmental activities, in a new life situation. The formation of environmental competence is a

continuous process of involving junior schoolchildren in environmental activities through the acquisition of experience of participation in environmental projects, environmental campaigns, conferences, Olympiads, competitions, through the development of personal qualities (empathy, frugality, responsibility, etc.

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