PEDAGOGICAL MODEL OF FORMATION OF ECO-LITERACY IN THE MODERNIZATION OF ECOLOGICAL EDUCATION

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Abstract: In this article, the theoretical-methodological foundations of the formation of eco-literacy in students in the process of modernization of environmental education, pedagogical-psychological features of modernization of environmental education, the corrective effect of eco-creativity, eco-responsibility, eco-literacy competencies in students between nature and human relations studied. Pedagogical model of formation of eco-literacy in the modernization of ecological education are also analyzed.

Key words: ecology, biosphere, formation of eco-literacy, environment, national values, healthy lifestyle, ecological dialogue, pedagogical process, professional-pedagogical activity, integrative, value, value approach, national, historical, technological.

INTRODUCTION. The principle of interdisciplinarity in the formation of eco-literacy in students ensures the complete mastering of the complex aspects of inter-discipline relations, provides penetration into the inner essence of knowledge, as a result of which various systems are interrelated and integrated. Implementation of interdisciplinarity in the educational process has a strong impact on the quality of education, allows for the modernization of education, and the expansion of innovative teaching opportunities.

LITERATURE ANALYSIS AND METHODS. Pedagogical foundations of ecological education are expressed in the research works of Academician I.D. Zverev, A.N. Zakhlebniy, the content, methodology, form, and tools of ecological education in the teaching of natural sciences, E.O. Turdigulov. The biological direction of ecological education was studied by I. T. Suravegina, as well as socio-philosophical aspects by Y. Shodimetov, B. Ziyomukhamedov. In the researches of L.T. Shonosirova, G.O.Komilova, environmental education for preschool children, and in the researches of M.A. Yuldashev, M.M.Abdullayeva, M.B.Rahimkulova, G.Sultonova, N.Ashurova, issues of environmental knowledge in primary education were investigated.

Abroad, scientists R.G.Barker, W.R.Catton, D.D.Chiras, R.E.Dunlap, the content and essence, structure of environmental education; the issues of creating eco-literacy in students were mentioned in scientific researches of D.H.Meadows, D.L.Meadows, J.Randers, A.W.Wiecker, Ch.M.Geesteranus, J.C.Smith, L.F.Schmore, A.J.Suvan, O.D.Duncan, S.Foresman and U.Halbach.

RESULTS AND DISCUSSION. The content of natural science education should reflect the coherence and integration of knowledge related to various academic subjects that study the relationship between man and nature, which will bring new changes in the quality of natural science knowledge. This knowledge is manifested as a unique synthesis, a set of knowledge related to natural sciences and humanitarian directions. Their description as a systematic and probabilistic way of thinking is one of the distinguishing features of natural knowledge.

The integration organized on the basis of unity appears as the main mechanism of humanizing the content of natural science education. In the development of a new didactic system, the first intended goal is the holistic perception of the world, systematic thinking and axiological assessment of the "nature - man" system. In this approach, the scientific principle of teaching acquires a completely new quality. It is today's demand to strive to raise school-aged students to the level of a perfect human being, to enjoy spiritual experiences, to educate them faithfully to our national and universal values. For this, the teacher must have mature pedagogical skills and embody high human qualities.

The main goal of integrating education is to have a good idea of nature and society at school and to form their own relationship to the laws of their development. That is why it is important for a school student to see science or events from several angles: from a logical and emotional point of view, in a work of art and a popular scientific article, from a biological point of view, etc.

Integration is a means of accepting new ideas at the frontier of scientific knowledge. First of all, it is necessary to fill the unknown places among the classified knowledge, to establish connections between them. It is aimed at increasing the knowledge of the learner, updating the narrow specialization in education. At the same time, integration education should not take the place of classical educational prerequisites, it should only combine the acquired knowledge into a single system.

The didactic nature of the integration of academic subjects is determined by the need to develop the order and rules of pedagogical activities that allow to determine the conceptual structure and methods of forming new knowledge in various academic subjects. In a narrow sense, the integration of academic subjects is an organic continuation of the mutual synthesis of scientific fields and scientific knowledge. The main goal of the integration of academic subjects is the synthesis of subjective new knowledge, and the main task of integration processes is the development of innovative pedagogical technologies aimed at the synthesis of subjective new scientific knowledge.

Ecology and biology, considered one of the leading natural sciences, have very responsible tasks in forming the scientific worldview of students. Therefore, the content of school ecology and biology has great potential in forming a scientific worldview in students. In the teaching of natural sciences, first of all, it was intended to familiarize students with the basic concepts, ideas, theories, laws of ecology and biology, their role in various branches of the national economy, and the importance of acquiring biological knowledge.

The system of education and upbringing is created, which is inextricably linked with the formation of eco-literacy in students and the formation of a conscious attitude of a person to nature and society. In this system, along with students' solid mastery of science fundamentals, formation of scientific outlook and ecological thinking, issues of spiritual-ethical, patriotic, ecological, aesthetic, economic, physical, hygienic, labor and international education of students. embodies.

In the process of studying ecology in connection with biology, chemistry and physics, it leads to the understanding of the laws of the structure, development and life activity of ecological objects with the help of the laws of physics. This knowledge forms the system of students' scientific outlook and beliefs. The students' scientific worldview is based on the understanding of biological laws from the point of view of the historical development of "Nature - man - society" relations.

"Botany", "Zoology", "Man and his health" educational courses in general secondary schools are rich in facts in terms of content and allow to develop students' eco-literacy in each subject. In the process of environmental problems and stress on the planet, there is a need to form the ecological culture of students. Eco-literacy is considered an important component of the general culture and includes qualities such as awareness of the invaluable importance of life and nature, showing activity in their preservation and protection, manifested in the spiritual life and everyday life of a person. . The creation of this culture on the basis of environmental education and upbringing of students, the main task of this process is to form students' duty and responsibility towards nature, to form a conscious attitude, and to form a behavior in accordance with the standards of oriental manners and ethics. it is determined that the teacher should carry out planned and regular work on the formation of environmental culture in students in every lesson, extracurricular activities, extracurricular activities and excursions.

The main goal and task of environmental education in the teaching of ecology in connection with biology, chemistry and physics in general secondary schools is to ensure the formation of ecological thinking, a sense of responsibility and attitude towards the environment in the growing young generation. theoretical ecological knowledge (a complex of natural-scientific, natural-mathematical, technical and social-humanitarian knowledge about the interrelationship of nature and society), valuable goals (the material and spiritual value of nature in meeting the needs of each person and society - understanding the value), manners - ethics (following the norms and rules of attitude towards nature), practical skills and competencies (socially useful, such as studying and protecting nature, assessing its condition, promoting ecological knowledge, productive activities), views and beliefs (having a careful and caring attitude towards the natural environment, actively fighting against any forms of mismanagement towards it), in short, students' understanding of the natural environment It is an interdisciplinary composition of environmental knowledge that regulates district activities.

Formation of eco-literacy on the basis of theoretical ecological knowledge, practical skills and competences in the process of teaching natural sciences to students in connection with chemistry and physics is dialectical knowledge.

In the formation of eco-literacy in students, the process of acquiring certain knowledge, skills and competencies, training them and developing ecological thinking by students in the teaching of biology in connection with natural sciences. requires the use of different forms of teaching. The lesson, which is a form of teaching that fulfills the requirements of the program, and depending on it, excursions, homework, extracurricular and extracurricular activities should be used appropriately and effectively.

These forms of teaching form a system of teaching forms of biology. Lessons, field trips, homework, extracurricular activities, and extracurricular activities together provide the general learning goals envisioned by teaching biology in connection with natural sciences, as well as the development of ecological thinking by students. assimilation of educational material serves to analyze the obtained results.

Depending on the selected educational content, purpose, task, certain methods and tools are used in various ways of organizing the process of teaching ecology in connection with other natural sciences. Therefore, in this process, the choice of teaching forms by the teacher is of great importance, that is, the content of education, the purpose and function of

these forms, their role in the educational process, their compatibility with their specific goals. should be taken into account. For example, if the subject to be studied is related to magnifying devices or laboratory equipment, as well as anatomical content, physiological processes, theory, ideas, concepts, laws, problem solving, then of course the main form of teaching it is necessary to choose a lesson. If the educational content requires studying the diversity of flora and fauna, adaptation to different environmental conditions, then it is appropriate to organize an excursion or show video films.

Along with the lesson, extracurricular and extracurricular activities also play an important role in the formation of ecological concepts. The use of physical laws is of great importance in observing and experimenting with environmental problems.

In the lesson, the teacher envisages the achievement of educational goals through the combination of educational content, teaching methods and tools that prepare the ground for the formation of environmental literacy of students. But not all issues can be studied in class, for example, extracurricular activities were used to conduct experiments that required long-term observation.

Homework is inextricably linked with the lesson, it is considered a logical continuation of the content learned in the lesson and a factor of students' independent learning. According to the teacher's instructions and instructions, students can conduct simple experiments, make observations in nature, study additional literature, prepare lectures or abstracts on certain topics, collect collections. they do cloak work. Pupils are prepared to master the methods of cognitive activity by completing educational tasks.

CONCLUSION. Effective implementation of interdisciplinary environmental education in natural science lessons, preparation of students to accept new educational materials, implementation of interdisciplinary connections, creation of problem situations, as well as planning and skillful conduct of each lesson requires deep and requires careful preparation. This, in turn, serves to increase the effectiveness of the lesson. By learning this knowledge, young people analyze the relationship between nature and man, their interconnectedness and the nature of unity, their attitude to the environment, the actions taken in the way of nature protection, and the causes of environmental problems. tries to identify the factors.

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