

2.2 Formation of junior schoolchildren's environmentally appropriate behavior experience as a pedagogical problem

One of the most important global problems of the 21st century is environmental, because people's living conditions on our planet depend on its solution. This fact was realized at the end of the 1960s, and from that moment active international cooperation in the environmental protection sphere began, as well as one of its directions – education in the environmental protection sphere.

The potential of theoretical and practical development of environmental education problems is laid in various branches of scientific knowledge. Leading among them are: V. Vernadskyi's teaching [31] about the noosphere, philosophical ideas about the interaction in the "nature – man" system of both an individual and society as a whole (V. Karpenko [37], M. Kiselov [39], I. Knysh [40], A. Matviychuk [43], etc.); the position of modern environmental psychology and pedagogy on the necessity of forming ecological awareness (O. Bacyleva [25], D. Bashtanik [26], S. Boychenko [28], P. Volodin [34], V. Hakopyan [24], etc.); theory of personality development in activity (O. Leontiev [42], S. Rubinstein [47], etc.).

Since the second half of the 20th century, scientific conferences of various levels (from inter-university to international) on the problem of ecology and nature protection have been held repeatedly, speeches by the public and various nature protection organizations have taken place, many state and interstate packages of environmental documents have been adopted [41, 44-46].

At the end of the 20th century, in various countries of the world, the results of ecological and nature protection activities at various levels have been summarized. And the experts' assessments turned out to be uniformly negative. It also turned out that eight years after the UN Conference on Environment and Development (Rio de Janeiro), the state of affairs in the sphere of improving environmental education quality and the establishment of sustainable development of the world community not only did not improve, but also became worse. Scientists have come to the conclusion that

humanity must hurry in conducting research and implementing ecological programs at all levels of nature and man [43].

Research shows that the level of environmental culture, knowledge and relevant experience among the population is extremely low. Because of this, it does not realize that an ecological disaster is approaching and is generally indifferent to the surrounding environment protection. For obvious reasons, this also applies to children's behavior. The shortcomings and miscalculations in environmental education, as noted by O. Hroshovenko, are caused by the fact that for many years the problem of studying nature and forming schoolchildren's attitude towards it was the subject of natural science methodology [36]. In schools, significant attention was paid to the organization of observations in nature, conducting excursions, setting up experiments in the "green laboratory under the open sky", in the corners of living nature, etc. However, pupils' educational and practical work, provided by the school program, bore a certain imprint of the desire to "fight against the nature forces", to uncontrollably use its wealth as an "inexhaustible storehouse". The problem of nature educational influence on schoolchildren and the formation of their attitude towards it still attracts little attention of specialists in the general education theory. The shortcomings probably start with the training of teachers, who are far from all and not fully able to implement the task of raising children's caring attitude towards nature.

From the beginning of the 1980s, S. Glazachov and his colleagues actively developed the problem of teachers' ecological culture formation and readiness for the ecological education implementation. The researches of this group of authors emphasize the necessity of environmental education reorientation from anthropometric positions to the position of harmonious human relations with nature [35].

The above mentioned allows us to formulate a contradiction between society's need for effective environmental education, which is based on the ideology of sustainable and harmonious development, and the traditional system of its organization, which is based on anthropocentric models, unable to withstand the further development of the ecological crisis.

In philosophy, “ecological awareness” is interpreted as an established and conscious system of ideas about natural environment state, the ability (individual or collective) to adequately understand the organic connection between man and nature and the use of ecological knowledge and beliefs in all spheres of practical activity without exception. It is noted that an integral condition for the formation of ecological consciousness as an important component of the worldview of a modern person is a system of multi-level and fundamental ecological education and propaganda [50].

In psychology, “ecological awareness” is considered as a set of ideas (both individual and collective) about the interrelationships in the system “man – nature” and in nature itself, existing attitudes towards nature, as well as appropriate strategies and technological interaction with it [51].

Nowadays, when nature is subject to powerful destructive influences, the human’s ecological awareness has become so acute that it has begun to act separately as a special phenomenon. This became possible thanks to the fact that an environmental crisis arose. As long as the balance in nature was stable, there was no special place for it in the human activity structure. It arose when anthropogenic impact on nature required a specific practice: neutralization of these impacts and, as far as possible, balance restoration in the ecosystem [28, p. 15].

In the modern world, there is an intense search for ways of development, new human landmarks in various spheres of human culture: philosophy, art, religious world understanding, science. It is about the fundamental foundations of human existence, new values creation, new meaningful life landmarks, which are designed to ensure the survival strategy and humanity progress, to help revise the former attitude to nature, to create new human activity ideals in terms of its feasibility with an ecological principle. S. Sovhira considers the ecological nature of personality as a system-forming factor that contributes to the formation of real intelligence and civilization in a person. She believes that ecologically oriented pedagogy creation is necessary [49, p. 8].

One of the theoretical foundations of modern person’s ecologically appropriate behavior formation is ecological ethics as a teaching about his moral relationship with nature, based on the nature perception as a moral partner (subject), the equality

recognition and the equal value of any self-interest, and human rights and needs. Ecological ethics directs human behavior in nature: people act or avoid actions for the good of nature, protect nature for its own sake, actions and deeds are done from a moral principle, without any selfish, pragmatic interests, and even to their detriment. From the standpoint of ecological ethics, a person should value everything that is somehow connected with nature, that refers to the life spheres related to it (economic, aesthetic, spiritual, religious, scientific, educational, recreational, etc.), the highest of which is internal, independent value of nature, self-value, value outside of relations with people [31, p. 9].

Ecophilosophers have developed a number of rights for living beings and nature as a whole, among which the following are noted:

- the right of life,
- the right to freedom,
- the right not to be held accountable to a person,
- the right to protection by law,
- the right to protection from unnecessary suffering due to human fault (for living organisms).

Ecological psychology [25, 48, etc.] considers the development of an ecocentric type of ecological consciousness based on such positions:

1) the highest value is the harmonious coexistence of man and nature. The natural is initially recognized as intrinsically valuable, which has the right to exist “just like that”, regardless of its usefulness or futility for man. Man is not the nature owner, but one of the natural community members;

2) rejection of the hierarchical world picture. The world of people is not opposed to the world of nature, they are both elements of a single system;

3) the goal of interaction with nature is the maximum satisfaction of both human needs and the needs of the entire natural community. The impact on nature changes with interaction;

4) the way of interaction with nature is determined by a kind of “ecological imperative”: it only is correct and permissible which does not disturb the ecological balance existing in nature;

5) nature and everything natural are perceived as a full-fledged subject in interaction with man;

6) ethical norms and rules also apply both to the interaction between people and to the interaction with the natural world;

7) the development of nature and man is thought of as a process of co-evolution, mutually beneficial unity;

8) nature protection activities are dictated by the need to preserve nature for its own sake.

According to D. Bashtanyk, the fundamental principles of educating environmentally appropriate behavior are: existence universality, life humanitarianism, socio-natural world integrity, personal and moral life definition, fullness of “encounters” with nature. Ecologically appropriate life experience characterizes a pupil as a holistic competent personality capable of productively solving life problems in the information society on a humanitarian basis [26, c. 10].

On the basis of the above mentioned, we came to the conclusion that successful personality socialization is possible only in the context of the child’s adaptation to the ecological imperative conditions, in which ecologically acceptable, harmonious human activity in all spheres of their life is a priority goal.

Ecologically appropriate behavior in modern conditions becomes the most important factor in the spiritual and physical mankind survival and biosphere existence, the successful neogenesis development. The personality’s essential integrative characteristic is its ecologically appropriate behavior as an objective indicator of modern person’s morality and spiritual development.

Concepts synonymous with this are widely used in pedagogical literature: nature-appropriate behavior, ecologically appropriate behavior, ecologically oriented behavior, ecologically justified behavior, etc. There are reasons to believe that the term

“environmentally appropriate behavior” most adequately reflects the situation in society.

The content of the term “environmentally appropriate” reflects two aspects. The first is the basic principles of the biosphere and the ecology laws development. The second aspect is the humanist philosophical propositions that assert the highest independent nature value.

Based on the above mentioned, ecologically appropriate behavior can be defined as an integrative characteristic of the entire human life system, which is consistent with the regularities of the biosphere and the ecology laws development, based on the reasonable integrity and value of living nature, on the awareness of oneself as a part of life, accepted of independent greatest value regardless of its manifestation form.

The experience of environmentally appropriate behavior is a concept that reflects a personal approach to the problem. From the point of view of personally oriented education concept, a qualitatively new educational goal is set to give the child the initial experience of searching for values and the attitude to nature meaning. The experience of ecologically appropriate behavior means the child’s personal self-determination in nature, it will be needed and will be accumulated throughout his life.

Often, not only children, but also teachers do not have a sufficient idea of the requirements, norms and rules for the ecological actions implementation and treat them formally. Behavior regulators must be accepted by the child, i.e., become personally significant for him. Behavioral norms cannot be set by someone or something – they are the result of the meaningful interaction of subjects with each other and with the study object. In the center of such interaction, values are revealed, their second birth takes place in the personality consciousness, then they find their meaning for a specific personality and become internal regulators of relations and behavior of the educational process subjects. It is unequivocally clear that the learned value cannot be the same for all pupils, it is individual, deeply personal for each of them. Thus, the personal experience core is a value that has become a personal content for a child.

Analysis of psychological and pedagogical studies [25, 28, 29, 35, 36, 40, 52, etc.] allows us to state the fact that currently in environmental education there are three

main approaches to the problem of the environmental education content. The first (“representative”) trend in environmental education is connected with the emphasis on the formation, first of all, ecological ideas system. In this case, environmental education, as a whole, is implemented in this way. Preschoolers will get to know individual objects and nature phenomena, take care of animals and plants in the classroom’s living area. Environmental education for junior schoolchildren is an elementary knowledge deepening, the ecological aspects’ introduction, examples of irrational natural resources use in the general education content. The main difference from the previous stage is the assimilation of facts as scientific knowledge. Further, in the middle classes, the plants and animals’ nutrition is studied and the related problem of nature pollution with chemical fertilizers, the hydroelectric power stations creation and the measures used to protect “fish wealth”, rare animals and plants habitats, and the appropriate protected areas organization, etc. Ecological problems are considered already in independent courses of botany, zoology, geography and in extracurricular work on these subjects.

The process of senior pupils’ environmental education is characterized by a focus on worldview, philosophical aspects of society and nature interaction, as well as deepening and expanding knowledge of an evolutionary, complex, generalizing nature. Environmental education, just as at the previous stage, is carried out within the framework of biology, geography courses and, in some cases, as an independent subject – “ecology”. For higher school students, there is practically no conceptually and substantively built system of environmental education, with the exception of individual subjects in the higher schools’ curricula. But even when these subjects are present, they most often have a narrow professional orientation, and in the educational programs of other subjects, environmental problems, if present, are presented fragmentarily and in a modest amount.

As a rule, with such an ecological education orientation, the monological method prevails in practical experience and methodological developments. Pupils receive various information, memorize a lot of digital data, and often without a clearly thought-out logic present all this material.

The second (“attitude trend”) trend in environmental education is related to the emphasis on the formation, first of all, of attitudes towards nature. In this case, they focus on the selection of such environmental information, the personality inclusion in such activities, the special creation of such pedagogical situations that have the greatest impact on the subjective attitude to nature.

It is within the framework of this orientation that ecological education is carried out, for example, in Waldorf schools, the philosophical basis of which is the anthroposophical teaching of R. Steiner. Pupils in these schools are taught to observe and empathize with everything that surrounds them in the external environment: every plant, every animal, every person. According to pedagogues-anthroposophists, studying natural sciences requires a high level of spiritual development from a child: the ability to fantasize, feel, and not only think. Knowledge must be “experienced” by the child, this is what ensures their understanding by the personality and the formation of its relationship with the world.

The third (“technological”) trend in environmental education is associated with an emphasis on the formation, first of all, of strategies and technological interaction with nature. In this case, they focus on the personality’s inclusion in such an interaction with nature, which to the greatest extent provides the possibility of learning adequate ecological strategies, acquiring the skills and abilities (technologies) necessary for their implementation. The “technological” trend in environmental education is characteristic, for example, of the USA. A distinctive feature of the American educational system is its focus on the environmental problems of the area where pupils live, rather than on the protection of “nature in general”. Learning methods involve working “in the field” and not simply looking at office tables.

From the standpoint of ecological psychopedagogy, the goal of environmental education, as S. Shmaley believes [52, p. 6], is the ecological personality formation. An ecological personality is considered to be a personality that possesses an ecocentric type of ecological consciousness. It is characterized by three main features: 1) psychological inclusion of man in the natural world, 2) natural objects perception as

full-fledged subjects, 3) striving for non-pragmatic interaction with the world of nature. Accordingly, these same features are also characteristics of an ecological personality.

1. An ecological personality is characterized by psychological exclusion from the world of nature, which is based on the idea of the interrelationship between the people's world and the natural world, which is based on the following statements:

a) Man is not isolated from nature, but included as one of the elements in a complex ecological relationships system. Any of his actions can have unpredictable consequences that disturb the balance in the ecosystem. Therefore, an ecological personality strives to be environmentally careful.

b) The waste of human activity, "thrown into nature", does not disappear there without a trace, but one way or another returns to a person and causes a destructive effect on his organism: all the laws of ecosystem functioning are as binding for a person as for other living beings. Therefore, an ecological personality strives to be ecologically moderate.

c) The natural world is not only a source of material resources, but a factor in human's personal and spiritual development. Therefore, the ecological personality strives for psychological unity with the natural world, which allows its spiritual potential to be realized.

d) Not only does human society influence nature, but nature also influences the society's development.

Therefore, the ecological personality seeks to influence other people, various social, economic and political structures, so that their activities are ecologically appropriate, do not lead to such changes in nature, which will then have a negative impact on the society development, in other words, he seeks to be ecologically active.

2. The ecological personality is characterized by the subjective nature of natural objects' perception, which is manifested in the following:

a) natural objects belong to it in the "human" sphere, equal to it in its self-worth and, accordingly, interaction with them is included in the sphere of ethical norms, rules, etc.;

- b) natural objects can act as reference persons for the ecological personality, change views, assessments, attitude towards oneself, things, nature and other people;
- c) natural objects can act as full partners in communication and joint activities.

3. An ecological personality is characterized by a desire for non-pragmatic interaction with the natural world, which manifests itself in four main areas:

- a) aesthetic development of natural objects and their complexes;
- b) cognitive activity caused by interest in the natural life, satisfaction from the cognition process;
- c) practical interaction with natural objects, the basis of which is not the desire to obtain any “useful product”, but the need to communicate with them;
- d) participation in nature conservation activities, dictated not by considerations of “far-off pragmatism” (the need to preserve nature so that future generations can use it), but by the need to take care of nature for its own sake.

From our position, in the environmental education process, it is necessary to form a system of ideas about the natural world as a set of concrete natural objects (and their complexes), a conscious attitude to natural objects as such, which has uniqueness, inimitability and self-value, and to have strategies and techniques of non-pragmatic interaction with them, that is, everyday behavior in the natural environment. At the same time, the education of environmentally appropriate behavior involves the development of new means, methods and technologies for the formation of child’s environmentally competent behavior in nature, such as modeling situations of interaction with nature at different moments of human life, etc.

The concept of personally oriented education considers environmentally appropriate behavior as a personal phenomenon connected with the person’s deep needs and experience, as a complex multifaceted personal formation of cognitive and affective components of a child’s experience in their relationship. Ecologically appropriate behavior acts as a generic concept, which means the diversity of its manifestations, connected into a single system, interpenetrating and mutually complementary to each other (ecological feelings, perceptions, values, etc.).

For the theoretical substantiation of the concept of “junior schoolchildren’s ecologically appropriate behavior experience”, we analyzed the psychological literature about this age period. The latest psychological-pedagogical research allows us to revise the previous ideas about the limited age-related cognitive activity possibilities, about junior schoolchildren’s personal sphere, which creates the basis for changes and renewal of all components of primary environmental education.

A child’s transition to school age is associated with qualitative changes in his activities, communication, and relationships with other people. The leading type of activity in this age group is a factor in the development of environmentally appropriate behavior experience. For a junior schoolchild, this type of activity is an educational activity. The main task of this age is the understanding of the surrounding world: nature, human relations, among which the junior schoolchild’s behavior in the natural environment, his voluntary and involuntary contacts with natural objects, is becoming more and more significant. Child’s further environmental and cultural socialization depends on the way he acquires the necessary experience of interaction with the natural environment at this stage.

Many research psychologists have been engaged in the study of junior schoolchildren’s personal sphere [27, 33, 42, 47, etc.]. Scientists indicate that children of this age group already have the ability to assess and self-assess the personality’s qualities and people’s behavior, the external behavior arbitrariness appears and develops. In junior schoolchildren, motivational and semantic sphere structure changes qualitatively, motives acquire a mediated character, they are mediated by the goals and tasks set for the child by an adult.

In order for the pupil to enter this great new world of human-nature relations, he needs not only the relevant information, but also the experience of human behavioral contacts with nature. He needs a life example, approval, support, emotional contact with those who really create a harmonious world of life forms, whose life example will inspire him in any life circumstances. The attitude towards nature is always person’s mediated attitude to another person, and therefore is a moral phenomenon, as a result

of which the environmentally appropriate behavior education can be considered as the most important direction of moral education.

The starting point, the beginning of the process of developing ecologically appropriate behavior experience are situations when the child perceives examples of ecologically appropriate and not nature-destructive behavior. The sources of such situations are in child's real actions with natural objects, in adults' behavior observations, as well as in mythological fairy tales' images, artistic works images and visual art objects. The next step is the accumulation of one's own positive experience, when a schoolchild, communicating with nature, takes care of it, and such interaction brings him satisfaction and joy. And, finally, the third step is the formation of environmentally appropriate behavior experience in the form of stable habits, the experience reflection of relations with nature, the development of behavior principles in it, which are ideally preserved throughout life and become child's beliefs.

Constructing a model of ecologically appropriate behavior experience, we took into account the previously made conclusions that the main factor in its structure is the value-meaning behavior regulation, as well as the acceptance of the absolute nature value meaning. Environmental behavior by its very nature is part of personality's general characteristics as its organic property, and is the result of child's ontogenesis.

Environmentally appropriate behavior experience is a specific element of junior schoolchild's personality value orientations system, which ensures his choice of a morally justified and ecologically appropriate behavior line with natural objects. In the structure of this type of experience, the following are distinguished: child's independently obtained conclusions about the natural world self-worth and its significance for man, about the place and role of man in nature; knowledge of the basic cultural and moral norms of human relations with nature; the presence of human behavior image adequate to ecological laws when communicating with inanimate and living nature; moral choice experience and assessment of one's own and others' actions in the natural environment; the ability to show volitional effort to obtain an ecologically valuable result.

According to the interpretation of the behavior content proposed above, as criteria for the formation of junior schoolchildren's ecologically appropriate interaction with natural objects, we singled out:

- 1) knowledge and understanding of behavior norms in nature (at a level accessible to junior schoolchildren);
- 2) mastering the basic methods of ecologically appropriate interaction with natural objects, the ability to predict human actions consequences for their development;
- 3) independent and arbitrary choice of an ecologically appropriate act in situations of interaction with nature, its implementation and other people's encouragement to similar behavior;
- 4) awareness of the intrinsic natural world value and its multifaceted significance for human existence, which acts as a meaningful determinant of the child's behavior in the surrounding environment.

Among the signs of the formation of ecologically appropriate behavior experience, the relationship between ecological assessment and objective value, its correspondence or inconsistency with this value, the place of intrinsic nature value in the system of other values is particularly important.

On the basis of the structure, content and criteria of ecologically appropriate behavior experience defined by us, the characteristics of each of its components described above, it is possible to understand and distinguish the essence of the formation level of junior schoolchild's ecologically appropriate behavior experience.