

Ecologo-pedagogical activity as a type of professional pedagogical activity

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Summary. The article says about main point of ecologo-pedagogical activity of future biology teachers. It is emphasized such types of ecologo-pedagogical activity: explorative, methodical, educational, socially useful, aesthetic, and naturalistic. The components of ecologo-pedagogical activity of a biology teacher are ecological, psychopedagogical and methodical knowledge; ecological and educational skills; motives, convictions and values; personal qualities that promote the formation of preparedness of future biology teacher to ecologo-pedagogical activity.

Key words: *ecologo-pedagogical activity, types of ecologo-pedagogical activity, components of ecologo-pedagogical activity, skills of a biology teacher, professional education.*

Introduction. Ecological education and training of future biology teachers should be pointed not only at formation of knowledge and skills but also at formation of moral values and motives, attitude to the environment, experience of its protection and preservation. Yet at higher education institutions this process is sometimes minimized to the accumulation of knowledge without gaining some experience of ecological activity. That is why in the content of pedagogical education should be included the elements of this activity. This would help to prepare students for ecologo-pedagogical activity at school.

Brief inspection of publications on this topic. The problem of ecologo-pedagogical activity is analyzed by N.D. Andreeva, S.S. Kashlev, A. Kramarenko, N.P. Nesgovorova, O.G. Rogovaya etc.

As the term ecologo-pedagogical activity combines several words we will try to explain them. S.U. Goncharenko considers *activity* as a mode of human being in the world, its capability to introduce changes in the reality. The main components of the activity according to S.Goncharenko are the subject with its needs, the aim and the means of its realization [3, p. 98].

Psychologists explain *activity* as internal and external human activeness which is directed at personal changes like transformation of items and events depending on the needs of a person and also creation of the new ones [2, p. 686].

Ecologo-pedagogical activity is one of the types of activity, in particular of educational. So we suppose that it has the same properties as the educational activity – sense of purpose, motivation, and thingness. V.A. Slastionin considers *pedagogical activity* as a sort of social activity that foresees the delivery of culture and experience accumulated by humankind, creating conditions for personal development and preparedness for performances of certain social roles in society [9, p. 18].

M.M. Fitzula considers pedagogical activity at higher education institutions as one, which “is pointed at the training of a skillful professional who is able to find his own place at the labor-market, to enter rapidly into political, social, cultural and other spheres of social life” [10, p. 440].

The definition of the term “ecologo-pedagogical activity” is related with an explanation of ecological activity. V.S. Kryshchenko and M.I. Hylko consider *ecological activity* as a result of training to ecological education. Ecological activity works to correct and regulate ecological education and is the element of ecological culture, in the heart of which there are ecological knowledge, ecological conscience and ecological conviction [5, c. 490]. Ecological activity includes all types and forms of activity that are connected with the solutions of ecological problems, ecologization of any activity (productive and social in particular).

The object of the article is to identify the main point of the term “ecologo-pedagogical activity of future biology teachers”, its components, types and forms.

The exposition of principal material. We should distinguish the term ecologo-pedagogical activity in details. N.D. Andreeva thinks that the theory of *ecologo-pedagogical activity* came into existence and began to develop at the cusp of 3 sciences – ecology, pedagogy and ecological psychology. Ecology is the basis when we are talking about searching of the concrete point of ecological education, training and enlightenment. Pedagogy determines general pedagogical principles, methods, organizational forms, which pedagogues use to solve tasks of ecological education and training. Ecological psychology forms the image about common factors and peculiarities about development of person’s ecological conscience [1, p. 87].

S.S. Kashlev explains ecologo-pedagogical activity as a certain kind of professional educational activity, factor and the way of realization of “natural potencies, development of psychic occurrences, personal qualities of pedagogue during the process of socio-environmental existence” [4, p.17]. The teacher as a subject of ecologo-pedagogical activity, should realize the condition and the development stages of pupil’s ecological culture [4].

Ecologo-pedagogical activity is considered by O. Rogovaya through the prism of ecological and educational activity. In the researcher’s opinion the content of ecologo-pedagogical activity has an integrated

nature and reflects the combination of ecological and educational activity in order to solve professional and pedagogical tasks – the organization of continuous ecological education and training. She considers ecologo-pedagogical activity as an activity of solving. So far as ecologo-educational activity is a certain system then ecological and pedagogical activities are its subsystems. O. Rogovaya emphasized these components of ecologo-pedagogical activity: education, training and enlightenment [8, p. 119-122]; and characterizes the following conditions: informative, material and technical, organizational and managerial.

The result of ecologo-pedagogical activity should be realized into high level of ecological culture. The efficiency of ecologo-pedagogical activity is determined by the system of motives, among which the motive of realization the ecologo-pedagogical activity by the pedagogue as his professional responsibility is basic.

O. Rogovaya describes the aim of ecologo-pedagogical activity in the development of ecological culture both of the participants of educational process and of the society at all. She thinks ecologo-pedagogical activity is directed at creation of pedagogical conditions for the development of person's ecological culture.

As a result, ecologo-pedagogical activity of future biology teacher is considered as a form of educational activity, which is connected with organization and realization of ecologically directed events, with realization of the whole potential of the subject "Biology" during task-works, off-hours works and out-of-class activities. The main aim is to form ecological culture, motives and interest to environmental protection among pupils.

We tried to classify and detach such types of ecologo-pedagogical activity at school: research activity, methodical activity, enlightenmental activities, community service, artistic and aesthetical activities, area studying activity, naturalistic activity. We suppose that exploratory *ecologo-pedagogical activity* is connected with surveillance study of environmental condition (ecological researches and analysis of aerial environment, water bodies, soil, definition of quality attributes of air, water, problems of water supplying and water purification), observation of causes and regularities of ecological processes and establishing cause-and-effect relations; including those programs into out-of-class activities in particular – study groups.

We consider that *methodical ecologo-pedagogical activity* consists of academic supplying development for ecological education, organization of methodical help by means of seminars, trainings, surgery classes at refresher courses for biology teachers, establishment of academic programs for ecological subjects at high school.

Educating ecologo-pedagogical activity includes improvement of social ecological literacy by propagandizing healthy living, growing and eating green products, water and energy savings; explaining product labeling, creation of ecological education database (normative and juridical documents, scientific literature).

Area studying ecologo-pedagogical activity includes inventory of early flowering species of plants and some species of animals that are brought to the Red Book of Endangered Species of Ukraine; to make a status report about cultural heritage sites in particular botanic sights, to study their history and nowadays value; participation in organization of ecotourism; organization of summer recreation camps; creation of ecological routs and directions.

Artistic and aesthetical ecologo-pedagogical activity – planting of greenery on the territory of educational institutions, exhibitions holding, creating of school ecological calendars, booklets; organization of ecological evenings, competitions, games, theatres, spoken magazines.

Naturalistic ecologo-pedagogical activity consists of engaging pupils to study groups with ecological direction, ecoclubs, to help birds in difficult environment, taking part in planting of greenery in pupils' settlements.

Socially useful ecologo-pedagogical activity – the organization of environmental campaigns that would be directed at cleaning the area from garbage and attraction to environmental campaigns of national and local scale; participation in environmental protection campaigns ("Save prilumas", "Earth Day" ect.); working at public environmental organizations.

In our research we used the concept of teacher's activity developed by A.K. Markova [6], L.M. Mytyna [7] and identified the following *components of ecologo-pedagogical activity of biology teacher*: ecological, psychological and educational, methodological knowledge; ecologo-educational skills; motives, beliefs and values; personal qualities that promote the formation of readiness of the future biology teacher for ecologo-educational activity.

Ecological knowledge we combined in several blocks – general and applied ecology, social ecology. Knowledge of general ecology includes: target and significance of ecology, its historical development, contributions of domestic and foreign scientists in the development of ecology, methods of ecological researches; environment of organisms and their adaptation; life-forms of plants and animals, their adaptive significance; basic characteristics of the population, the forms of animal groups, biocoenosis and its

structure; types and structure of biogeocenoses, their components; ecological system, organisms – producers, consumers, decomposers; ecological pyramids; structure and boundaries, the stages of biosphere evolution, living matter and its functions, biogeochemical cycles and circulation of substances and chemical elements.

Content knowledge in applied ecology is associated with the formation of concepts about atmospheric, hydrosphere and lithosphere ecological problems – sources of pollution, consequences and control measures; Red Book of Endangered Species of Ukraine, landscape protection; alternative sources of energy, methods of their usage; impact of industry, transport, military activity on the environment.

Knowledge of social ecology covers the study of relationship between nature and society; human ecology, formation of ecological thinking, ecological culture, ethics and morality, human spirituality in communication with nature; laws and statutory enactments on environmental protection of Ukraine, Ukraine's participation in international cooperation in the sphere of environmental protection.

Psychological knowledge includes familiarization with the formation regularities of ecological concepts, with involvement mechanisms of environmental consciousness and beliefs, with determining methods of subjective attitude to nature, perception peculiarities of nature and ecological thinking formation through the development activities, with motives for environmental performance, structure and peculiarities of ecological and educational activity (based on activity theory), psychological communication characteristics.

Pedagogical knowledge formation is connected with familiarization with the content and forms of environmental education by forming ecological culture.

Methodical knowledge includes formation of ecological concepts among pupils; content and methods of environmental education during studying biology; means, forms and methods of formation among pupils of ecological consciousness and ecological culture, during the process of teaching biology, cultivate love of nature and mother Earth, value attitude to the objects of animated nature through biology; conducting methods of phenological observations; organization and conducting methods of extracurricular activities (naturalistic events, scientific conferences, exhibitions, competitions, academic competitions, excursions, ecological and area studying routes, expeditions and contests).

If we are talking about *skills*, we should emphasize works of A.K. Markova, A.O. Marchenko, A.I. Kuzminska. We think that future biology teacher should possess such skills to realize successfully main goals of ecologo-pedagogical activity:

- *be cognitive* – to find and use ecological information during teaching biology; use the possibilities of biology as a school subject in realization of certain aims of ecological education; conceive and adapt educational material in order to academic activity; to find ways of getting the information and gain it by himself (to work with primary sources of information and bibliographic materials);
- *be projective* – to form goals and aims of learning sessions and ecologo-pedagogical activity, to predict its results and difficulties; to plan his actions; to use his knowledge in professional occupation; to predict the consequences of man-made activity on environment to preserve this environment; to develop recommendations about preserving some objects and rational environmental management.
- *be constructive* – to create the model of planned activity; to reflect the system of pedagogical means, forms and methods for successful achieving goals; to transform scientific information and to define the content of academic studies;
- *be exploratory (naturalistic)* – to observe daily; to describe, determine rare and endangered species that are itemized to the Red Book of Endangered Species of Ukraine; to analyze causes and regularities of ecological occurrences and processes and accommodation of organisms to environmental conditions; to lead field studies to use their results during academic and practical activities; to be skillful as to modern methods of ecological researches and equipment; to attend plants and animals, to propagandize healthy living;
- *be managerial* – to organize ecological education of students and ecologically directed events (excursions, to create ecological and area studying routes, ecological camps, to hold expeditions and contests, exhibitions), to actualize activity plan.
- *be communicative* – to be able to establish relationships with subjects of ecologo-pedagogical activity; to form the atmosphere of confidence during communication; to be knowledgeable at rhetoric and public speaking; to control personal emotions;
- *to master evaluation-reflexive skills* – to analyze and evaluate results of ecologo-pedagogical activity, define the problems and fix them in time; to detect skills, experiences and activity state; to rule the means of self-control and self-concept of own ecological and professional preparedness, to simulate readiness to self-education;

- *to possess special artistic skills* – painterly (to decorate stands, expositions, posters, to make sketches of different objects outside), to be experienced in taking photos, filming, collecting (of seed, feathers, stamps, etc.), floristry and phytodesign, applicable art (like making compositions of natural materials).

Composing components of ecological preparation are also motives. The motives of ecologo-pedagogical activity arise when there are certain needs for this kind of activity. We consider that the advantage should be given to form cognitive, professional and creative self-actualization motives.

Among *the special qualities of the teacher* that will promote successful organization of ecologo-epedagogical activity, especially valuable are sense of duty and responsibility, will power, self-discipline, patriotism, egghedism, fairness, tolerance, integrity (commitment to principle) and humanity, sprightliness and animal spirits, concentration, objectivity, self-criticism, high moral character, patience and insistence, ingenuity, emotional intelligence and resilience, longterm memory, a quick eye, alertness, development of imagination and objective self-evaluation.

Conclusion. Thus, ecologo-pedagogical activities of future biology teacher regarded as a form of educational activities connected with organization and conduction during the tee time, unsociable hours and extracurricular biology activities, ecologically oriented events, realization of educational potential of school subject “Biology” in order to form ecological culture among pupils, motives and interest in the protection and preservation of the environment, the need for participation in ecological activities. Components of ecological and educational activities of biology teacher are ecological, psychological and educational, methodical knowledge; ecological and pedagogical skills; motives, beliefs and values; personal qualities that promote the readiness of future biology teacher to ecological and educational activities. We attempted to classify and singled out the following types of ecological and educational activities in/at the General Educational Institutions (GEI): exploratory, outreach, methodic, socially useful, artistic and aesthetic, tourist and local studies, naturalistic activities.

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Эколого-педагогическая деятельность как один из видов профессиональной педагогической деятельности

М.М.Скиба

Аннотация. В статье обоснована сущность эколого-педагогической деятельности будущих учителей биологии. Выделены и охарактеризованы такие виды эколого-педагогической деятельности: исследовательская, методическая, просветительская, общественно полезная, художественно-эстетическая, туристско-краеведческая, натуралистическая. Компонентами эколого-педагогической деятельности учителя биологии определено – экологические, психолого-педагогические и методические знания; эколого-педагогические умения; мотивы, убеждения и ценности; личностные качества, способствующие формированию готовности будущего учителя биологии к эколого-педагогической деятельности.

Ключевые слова: *эколого-педагогическая деятельность, виды эколого-педагогической деятельности, компоненты эколого-педагогической деятельности, умения учителя биологии, профессиональная подготовка.*