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SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL THINKING

Mykola Savytskyi, Dr. Sc., Prof.,

Marina Skladanovska, Dr Phil.

State Higher Education Institution

“Prydniprovskya State Academy of Civil Engineering and Architecture”

Problem statement. The concept of sustainable development integrates environmental, social and economic components and provides for the creation of stable conditions for a healthy life for present and future generations in harmony with nature. The leading idea of sustainable development – the interaction of all segments of the population, scientific and cultural community in solving the most urgent problems of civilization: to ensure quality of life and preserve the environment, not only as a source of resources for future generations, but also as a biological condition of the species Homo Sapiens and spiritual development of human civilization. Taking into account the human factor and the possible consequences of human behavior – this is the main difficulty of predicting the development of mankind and the coevolution of man and nature. Greening the public awareness, education, thinking is the main condition for implementing the concepts of sustainable development of modern society.

Purpose of the study – an analysis of the importance of environmental thinking in implementing the concept of sustainable development and need of its formation and development in process of engineering education.

Main results. We consider the environmental thinking as the level of understanding of reality, forming conclusions as a result of reflection and motivation for further action. Theoretical and practical research allowed to determine the main components of the formed environmental thinking:

1. Developed logical thinking as a necessary tool for understanding information, its analysis and establishing patterns and relationships in the system "man-nature", "man-environment", the essence of the interaction of the biosphere and technosphere;
2. Developed figurative thinking associated with the aesthetic perception of the environment, with the process of transition of information into personally meaningful knowledge associated with one's own experience, images of his imagination and memory;
3. Creative thinking, characterized by originality, flexibility, non-standard approach to solving existing problems.

Environmental thinking is a systemic thinking that requires the study of not one factor, one aspect in the system "man-nature", but a set of relationships, interactions of abiotic and anthropogenic factors.

Of particular importance is the need for the development of environmental thinking in the process of forming professional thinking - a leading tool of engineering education. Priority in this area get new pedagogical models and technologies, methods and teaching aids that have a shape future competence at first as a specialist subject of sustainable development concept: problem teaching, dialogic, interactive forms, the development of reflexivity, creativity, logic reasoning. The most important are the ability and the need to acquire new knowledge, the independent cognitive activity, the ability to analyze unusual situations and based on this analysis, the knowledge gained by working in a team of professionals, make informed decisions and take responsibility for their consequences.

Results of the study are introduced to the work of the Laboratory of Environmental inculturation – the structural unit of the Ukrainian National Center for Environmental Architecture and Green Building, which is established in the Dnieper State Academy of Construction and Architects, in the development of innovative technology projects based on the synthesis of modern technical and humanitarian culture [2; 3].

Conclusions. The human factor is becoming decisive in the implementation of innovative projects and environmentally friendly technologies. The need for rigorous environmental expertise, the search for new creative solutions, mastering environmental thinking – this is a requirement for a modern specialist, for modern engineering education. The developed environmental thinking that allows us to conclude that the only way to resolve disputes and conflicts is through negotiations, the path of compromise, and the achievement of consensus. This way not only morally justified but also sensible from a pragmatic point of view: economic, political, ecological. Now we want to remember the words of our great compatriot V.I. Vernadskyi that the noosphere must be created [1]. It is a process that includes not only scientific knowledge, education, intellectualization of all spheres of human activity, but also the formation of democratic and social organizations of people capable of uniting humanity, social structures capable of ensuring the purposeful development of the biosphere and controlling these processes on a global scale.

References

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3. Skladanovskaya M.G. Ecological inculturation International Book Market Service LTD. Member of Omni Scriptum Publishing Group, 2018, 200 p.