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DEVELOPING MOTIVATION FOR ENVIRONMENTALLY RESPONSIBLE ACTIVITY IN THE PROFESSIONAL TRAINING OF FUTURE TEACHERS OF TECHNOLOGIES

Abstract

The article examines the problem of developing motivation for environmentally responsible activity in the process of professional training of future technology teachers. The relevance of the study is determined by the need to form environmentally competent teachers capable of implementing the principles of sustainable development and environmental education in their professional activities. Based on the analysis of psychological and pedagogical literature, the essence of motivation, motives, environmental values, and their role in shaping environmentally responsible behavior is clarified. Particular attention is paid to the relationship between environmental values and internal motivation as key factors in the development of environmental competence.

The study substantiates the importance of increasing students' motivation for environmentally responsible activity as a pedagogical condition for developing environmental competence. The article characterizes the value-motivational component of environmental competence and highlights the role of environmental values in fostering responsible attitudes toward nature and environmental problem-solving.

The effectiveness of various pedagogical means aimed at developing students' motivation is revealed. These include environmental educational

trainings, participation in environmental projects, campaigns and initiatives, activities of the student scientific club “Upcycling,” and practical training with environmental content. It is shown that the implementation of these forms and methods contributes to students’ emotional involvement in environmental activities, promotes reflection, enhances environmental awareness, and strengthens their readiness for environmentally responsible professional practice.

The findings indicate that the development of motivation for environmentally responsible activity should be considered a key component of the professional training of future technology teachers and an important prerequisite for the successful formation of their environmental competence.

Keywords: environmental competence, motivation, environmentally responsible activity, environmental values, future teachers of technologies, professional training, environmental education, sustainable development, upcycling, environmental training.

Problem statement. The current stage of educational development is characterized by increasing attention to the issues of environmentalization of the educational process, the formation of environmental awareness, responsible attitudes toward the natural environment, and readiness for environmentally responsible activity. These issues are of particular importance in the professional training of future technology teachers, as they are expected to ensure the development of students’ environmental competence, responsible consumption culture, and skills in the rational use of materials, resources, and technologies.

The problem of developing motivation for environmentally responsible activity is one of the key aspects of forming environmental competence in future technology teachers. Possessing knowledge about environmental problems does not automatically ensure a person’s readiness to act in an environmentally responsible manner. Environmentally responsible behavior becomes sustainable

only when it is based on internal beliefs, values, needs, interests, and professionally significant motives. Therefore, an important task of higher education institutions is to create pedagogical conditions that promote not only the acquisition of environmental knowledge but also the formation of an internal need for environmental protection, eco-transformative, and educational activities.

One of these pedagogical conditions is increasing students' motivation for environmentally responsible activity. Its implementation involves the formation of environmental values, the development of value-based attitudes toward nature, and the involvement of students in environmental training sessions, campaigns, projects, scientific clubs, and practical and pedagogical activities with an environmental focus.

Analysis of recent research and publications. The problem of motivation occupies an important place in psychological and pedagogical studies. Motivation is defined as "a set of stable motives and incentives that determine the content, direction, and nature of human activity and behavior" [1]. The concept of a motive refers to an incentive for activity associated with satisfying a particular need and serves as the driving force behind actions and behavior [2]. Motives are considered relatively stable personality traits or manifestations [3].

According to the source of influence on the formation and activation of motives, researchers distinguish between external and internal motivation. External motivation is associated with external conditions, influences, and circumstances aimed at forming or strengthening a particular motive [4]. In the context of environmental activity, it may manifest itself through fines, sanctions, rewards, or social approval. Internal motivation is determined by an individual's needs, interests, beliefs, inclinations, and desires without external pressure [4]. It is reflected in actions that correspond to personal values and convictions and is accompanied by satisfaction derived from the activity itself, its outcomes, and an awareness of its social significance.

The analysis of scientific literature indicates that various motives can encourage individuals to engage in environmental activities. However, such activity becomes environmentally responsible only when “the undeniable value of nature is reflected in a person’s consciousness” [5, p. 239] and when it is driven by “an altruistic desire to preserve the environment” [6, p. 13]. Under these conditions, environmental value orientations function as an internal incentive for environmentally responsible behavior and activity.

Of particular importance to our study is the view of O. Dubaseniuk, who argues that “the motivation of a future teacher is determined by professional interests, value orientations, and ideals. It manifests itself both in professional activity as a whole and in individual pedagogical situations, influencing the perception of external events and the logic of behavior” [7, p. 86]. Thus, a future teacher’s motivation is directly related to professional development, value systems, and readiness to act responsibly in the educational environment.

One of the leading determinants of personal self-activity is the system of values, which internally determines the direction and content of activity as well as its motivation [8]. A value is considered in two dimensions: social, where it is viewed as a property of an object or phenomenon capable of satisfying human needs and interests, and personal, where it is expressed through an individual’s attitude toward reality manifested in value orientations, social attitudes, and personality traits [8].

S. Tolochko, N. Bordiuh, and L. Mironets define environmental values as “nature, its objects, conditions, and resources that create an optimal environment for human existence and needs (landscapes, biodiversity, natural resources, ecosystem components, etc.), the preservation of which should occur regardless of the benefits they provide” [9, p. 9]. Environmental values are expressed through a person’s attitude toward the natural environment [8, p. 35].

Purpose of the Article. The purpose of the article is to theoretically substantiate the peculiarities of developing future technology teachers' motivation for environmentally responsible activity in the process of professional training and to reveal pedagogical means of its formation.

Main Findings and Discussion. In the context of this study, environmental values are understood as a set of norms, attitudes, and ideals aimed at ensuring harmonious coexistence between humans, nature, and society, oriented toward sustainable development, biodiversity conservation, responsible resource use, and maintenance of ecological balance.

Developed environmental values serve as a source of motivation and a regulator of environmentally responsible behavior and activity among future technology teachers. They influence attitudes toward nature, interest in solving environmental problems, and aspirations to develop both personal environmental competence and that of future students.

The development of motivation for environmentally responsible activity was achieved through the formation of the value-motivational component of environmental competence. This component includes the development of values, motives, needs, and interests that determine students' attitudes toward the natural environment; willingness to participate personally in solving environmental problems, including eco-transformative activities; and aspirations to develop their own environmental competence and foster environmental competence in school students.

To strengthen students' motivation for environmentally responsible activity, a series of environmental educational trainings was developed and implemented. Their purpose was to identify students' priority values, determine their attitudes toward their own value systems, shape environmental worldviews, and increase awareness of the importance of environmental protection activities.

These trainings ensured students' emotional involvement in environmental activities, emphasized the importance of preserving the natural environment as a global challenge, and encouraged emotional experiences that contributed to the formation of value-based attitudes toward nature. They also facilitated the acquisition of environmental knowledge, skills, and practical experience, promoted reflection on previous environmental behavior, and contributed to transforming objective environmental values into personally meaningful ones.

To broaden students' understanding of environmental values and increase their interest in environmental activities, the training session "Environmental Values" was conducted. The program consisted of introductory, main, and concluding stages. During the introductory stage, participants identified the most important values in their lives. This was followed by discussions emphasizing nature as one of the fundamental values of human existence.

A role-playing activity entitled "The Trial of Nature" was used to engage participants and encourage them to defend the value of the natural environment, justify the need for its preservation, and reflect on the consequences of consumer-oriented attitudes toward nature. The main stage included a mini-lecture accompanied by a presentation on environmental values, their classification, influence on human behavior, and examples from different cultures and societies.

An important component of the training was a questionnaire designed to identify students' environmental values. Participants evaluated their awareness of environmental problems, assessed their own environmental behavior and activities, proposed ideas for improving environmental conditions in their city and university, and reflected on actions they were willing to take to protect and restore the environment. Group discussions and collaborative problem-solving activities followed, during which students proposed solutions to environmental issues based on their own environmental values.

The concluding stage involved reflection and feedback. Participants accepted an "environmental challenge," committing themselves to developing a specific environmental value through practical actions such as reducing plastic use, organizing clean-up campaigns, using reusable shopping bags, or conserving water.

Additional environmental trainings implemented during the experimental work included "Responsible Consumption," "Environmentally Friendly Lifestyle," "Harmony with Nature: Developing Environmental Ethics," and "Environmental Thinking and Creativity." These trainings focused on fostering environmental worldviews, responsible consumption habits, awareness of human–nature interdependence, and creative approaches to solving environmental problems.

An effective means of developing motivation for environmentally responsible activity is involving students in environmental campaigns, initiatives, projects, and problem-solving groups. Such collective activities contribute to the formation of environmental awareness, responsibility, initiative, determination, fairness, cooperation, and environmentally responsible decision-making.

To promote environmental competence through the design and production of upcycling projects and to motivate students toward environmentally responsible activity, a student scientific club entitled "Upcycling" was established. Its objectives included familiarizing students with the concept and significance of upcycling, developing creativity and artistic abilities, forming skills in reusing and transforming waste materials, improving project-technological competencies, promoting sustainable development and responsible consumption, and fostering environmental responsibility in everyday life.

The club's activities resulted in the creation of interior items and decorations for university facilities, upcycled furniture, participation in scientific conferences, seminars, round tables, workshops, exhibitions, and presentations, as

well as dissemination of information through social media. Such activities contributed not only to students' professional development but also to reducing waste and promoting sustainable resource use.

Student scientific work within the Upcycling Club contributed to the development of value-motivational and activity-technological components of environmental competence. Participation in these activities enabled students to acquire environmental knowledge and experience personal involvement in solving environmental problems.

Practical training also played an important role in developing motivation for environmentally responsible activity. During technological, pedagogical, extracurricular, and assessment-based teaching practices, students had opportunities to apply environmental knowledge and approaches in real educational settings. This helped them realize the importance of environmental competence as a component of professional readiness and encouraged them to implement environmental education and upbringing among school students.

Environmental tasks were incorporated into the content of these practical placements. Students analyzed opportunities for integrating environmental issues into technology education, developed environmentally oriented lesson components, organized student mini-projects, prepared environmental educational activities, and used recycled materials in project-based technological activities.

Motivation increased through the practical application of acquired knowledge and skills in authentic educational contexts. Future technology teachers realized that environmental competence is an essential component of professional readiness, enabling them to organize educational processes based on sustainable development, responsible consumption, resource conservation, and environmental culture.

Conclusions. The development of motivation for environmentally responsible activity is an important pedagogical condition for forming

environmental competence in future technology teachers. Motivation determines the direction of personal behavior, readiness to act responsibly toward the natural environment, willingness to participate in solving environmental problems, and commitment to fostering environmental competence in school students.

The study has shown that the formation of environmental values plays a decisive role in motivating future technology teachers. These values serve as an internal source of environmentally responsible behavior and a regulator of professional activity. A value-based attitude toward nature facilitates the transition from external motivation to internal motivation grounded in beliefs, responsibility, interests, and professional ideals.

Effective means of developing motivation for environmentally responsible activity include environmental educational trainings, participation in environmental initiatives, campaigns, projects, the activities of the Upcycling Club, and environmentally oriented tasks during teaching practice. These forms of work promote students' emotional involvement, reflection, environmental experience, and awareness of the professional significance of environmentally responsible activity.

Further research should focus on developing methodological tools for assessing the level of motivation of future technology teachers toward environmentally responsible activity and determining the effectiveness of specific pedagogical means used to foster such motivation in professional training.

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