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ДИЗАЙНЕРСЬКА ДІЯЛЬНІСТЬ УЧНІВ ЯК ЗАСІБ ФОРМУВАННЯ ЕКОЛОГО-ЕСТЕТИЧНОЇ КОМПЕТЕНТНОСТІ

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У статті на основі сучасного бачення реформування вітчизняної освіти в контексті світових і європейських цивілізаційних тенденцій розвитку суспільства (підвищення інтелектуального потенціалу націй, всебічного розвитку особистості як найвищої цінності суспільства, уникнення екологічних небезпек і катастроф, зумовлених воєнними діями) з'ясовано необхідність формування технологічної художньо-проектної компетентності учнівської та студентської молоді.

Метою дослідження обрано багатоаспектність формування еколого-естетичних компетентностей майбутніх учителів технологій шляхом вивчення й систематизації аспектів вітчизняного досвіду, узагальнення теоретичних ідей і практики провідних фахівців дизайну, можливостей дизайн-освіти і дизайн-діяльності майбутніх фахівців.

Підтримка наукової точки зору стосовно того, що засобами і методами дизайн-діяльності можна активно захищати природу, з позицій цінності культури боротися за забезпечення екологічної чистоти конструкційних і обробних матеріалів, поліпшення стану предметного середовища багатьох сфер життєдіяльності людей привела до відбору засобів дизайн-освіти для навчальної дисципліни «Основи ландшафтного проектування», запропонованої для вивчення майбутніми вчителями освітньої галузі «Технології». До таких засобів віднесено: усвідомлення суспільно значущих функцій дизайну; знання соціально вагомих завдань дизайн-діяльності; структуру еколого-естетичних компетентностей майбутніх учителів технологій на засадах дизайн-освіти; шляхи підвищення еколого-естетичної культури учнівської молоді у дизайн-діяльності спільно з учителем.

У перспективі дослідження визначено потребу використання в навчально-виховному процесі середньої освіти національних особливостей культури українського народу, його уявлень про естетику природи і людини, здатності до естетичного вдосконалення середовища життя засобами дизайну.

Ключові слова: *дизайн-освіта, компетентнісна освіта, виховний потенціал дизайн-діяльності, ландшафтний дизайн, еколого-естетична компетентність, майбутній учитель технологій, фахова підготовка.*

Formulation of the problem. In the modern conditions of the development of society, in the context of Ukraine's entry into the unified European and world educational space, the problem of ensuring high-quality professional training of specialists with an emphasis on personally oriented training, updating and improving its content becomes of priority importance. Reforming national education contributes to the increase of the intellectual potential of the nation, comprehensive development of the individual as the highest value of society.

Modern man functions in an environment that is constantly changing, which necessitates the formation of a technological artistic and project culture of youth. It begins with design education and provides for the implementation of the design code of the design discipline both in professional design activity and in the entire system of new formations.

The end of the XX – the beginning of the XXI century. were marked by a sharp deterioration of the state of the natural environment and a deficit of public and individual ecological culture; anthropogenic activity led to an aggravation of the state of harmonization of the relationship «man-nature». Among the urgent problems of a social, political, and economic nature that characterize the development of humanity in the 21st century, the ecological one is especially acute.

Analysis of recent research and publications. In this regard, the main pedagogical idea of today is the task of increasing the ecological and aesthetic culture of pupils and students with the aim of forming radical changes in the attitude of people to the environment. Overcoming the ecological crisis situation is now a component of the national policy of our country, which led to the creation of a number of state documents and legislative acts of Ukraine on ecology and education (Constitution of Ukraine, State National Program «Education» («Ukraine of the XXI century»), National doctrine of education development of Ukraine, National strategy of education development in Ukraine for the period until 2021, Concept and strategy of the national environmental policy of Ukraine for the period until 2020, Concept of environmental education in Ukraine, National action plan for environmental protection, the Ecological Code, laws of Ukraine «On the basic principles of the state environmental policy of Ukraine», «On the protection of the surrounding natural environment», «On ecological expertise», etc.).

Therefore, the promising direction of design is ecological, the main task of which is to participate in solving the problems of protecting the natural environment that are relevant for society. With the means and methods of design activity, nature can be actively protected from pollution by the waste of man-made civilization and the violation of the ecological balance in the biotechnosphere; from the standpoint of the values of nature and culture, strive to ensure the ecological cleanliness of construction and processing materials, the environmental friendliness of production and consumption processes (taking into account the problem of waste disposal), the improvement of the physical environment of various spheres of people's life.

Presenting main material. In the process of study by future teachers of the educational field «Technology» of the course «Fundamentals of landscape design» it is possible to apply many means of design activities with the aim of forming a valuable attitude to nature, receptivity to natural objects, the ability to reveal their uniqueness and expressiveness etc.

The domestic experience of analysis, systematization and generalization of the theoretical ideas and practice of leading design specialists testifies to various methodological approaches to the realization of the socially significant goal of design activity from the standpoint of professional artistic opportunities to create a world of new and beautiful forms of the subject environment. Many aspects of design as a service profession in the comfortable conditions of civilization, creative activity, and a way of professional self-expression of the individual in modern society are also known. At the same time, design is regarded as a normal technical operation in the production process, equivalent to any other technological operation of engineering, agrotechnical procedures or landscape design, etc. Some experts see design as a technical means of achieving a normal level of production and consumption of industrial products, characteristic of beautification and orderly way of life, or simply any innovative process in the sphere of human social practice. Others see design as a way of conveying organized information. And only a few try to consider design in all its multifaceted problems, rationally balancing between theoretical and practical formulation of the question, taking into account the complexity and structural and typological heterogeneity.

The goal of design activity is not so much the things themselves (beautiful, comfortable, modern, which function perfectly and make a person's life worthy of his human essence), but people with their image and lifestyle, relationships, tastes, ideals, aspirations, culture, which forms a personality from an individual for the benefit of society. Therefore, the main task of design activity is not a thing, but a person and improving the quality of his life through the formation of a harmonious subject environment and its components in all spheres of life to satisfy material and spiritual needs (Тименко, 2010).

The multifaceted goal determines the structure of the system of such socially significant functions of design: transformative (constructive-morphological); cognitive (epistemological); value orientation (axiological); communication (communicative); socio-economic efficiency; environmental protection (ecological); adaptive; educational; artistic; hedonistic (aesthetic pleasure).

The ecological function of design is manifested in the solution of socially relevant tasks of protecting the natural environment and people from the consequences of pollution by the waste of man-made civilization, which often ignores the requirements of ecology. The demand for design in this field of social practice can be realized in the presence of a certain state policy, supported by relevant legislation, with the involvement of designers in the development of environmental programs. From the point of view of environmental requirements, the attention of designers should be directed to the properties of structural materials used to create various design objects, and the nature of the production process. Ecologically important for design is also the problem of disposal of waste from production, trade and consumption of various products that litter the environment. Design programs related to the solution of such problems as the design of objects using natural and urban landscape design tools, functional spatial design of objects using landscape design tools, the formation of flora and phytodesign of the residential environment, can have important socio-economic and ecological significance.

The hedonistic function of design – the function of aesthetic pleasure – is expressed in the ability of the design object (as a carrier of aesthetic and artistic value) to evoke positive emotions and feelings of pleasure in the subject who perceives it. A positive aesthetic attitude can have different degrees of expression of emotions. It depends on the objective, visually perceived properties of the thing, the subject's perception of the given object, the conformity of the evaluated object to the aesthetic value ideal determined by the subject's aesthetic taste, his aesthetic preferences and the general level of culture.

An aesthetically perfect thing may not be properly appreciated due to insufficient development of the subject's aesthetic taste, his misunderstanding of the essence of the meaning of the object, the author's artistic intention, a new compositional and stylistic solution unusual for a certain subject. Conversely, it is possible to fall in love with a thing that is artistically inept, vulgar, but attractive to a certain subject due to a low level of aesthetic taste.

The aesthetic perfection of design objects contributes to the harmonization of people's relationship with the material world, gives joy to the sense of beauty, and surrounds a person in various spheres of his daily life.

The main socially significant tasks of design are determined by the system of its socially significant functions. We will list the main ones.

1. Transformation of the subject environment in all spheres and branches of people's life activity, taking into account all manifestations of the human factor.

This group of tasks is divided into two subgroups:

a) ensuring the convenience and safety of using the products and the necessary level of comfort of the living environment;

b) ensuring the aesthetic perfection of the objects being created.

2. Ensuring the optimality of the structure and composition of its nomenclature and assortment, as well as a high level of consumer properties of products in the complex development of industrial products.

In solving these tasks, attention is focused on the social orientation and systematicity of design activity, which contributes to meeting the needs of members of society.

3. Ensuring social reasonableness and economic efficiency of production and sale of industrial products (objects of design) with mandatory consideration of ecological requirements.

The absolute freedom of the subjects of production and trade in the market economy should be limited by the system of appropriate legalized norms, rules, and obligations. Indispensable consideration of environmental requirements is important for society.

4. Ensuring the efficiency of consumption (exploitation) of products (objects of design) taking into account the requirements of ecology.

The role of representatives of consumers' interests in production, which socially oriented, professionally responsible designers undertook to perform, requires them to pay maximum attention to the tasks of this group.

5. Improving general culture, educating people's aesthetic taste, promoting the formation of humanistic value orientations in society.

The direction of implementation of the value-orientational (axiological) and educational functions of design largely depends on which values of modern culture will be preferred by a professional designer.

The considered groups of the main socially significant tasks of design are structural elements of the general system, which allows in the process of the real functioning of design in society to strive for the achievement of a socially significant goal of professional activity.

The decisive condition and indicator of a person's success in professional activity is his personal competence.

As theoretical studies show, the education systems of different countries of the world have differences in the interpretation of content, principles of systematization and classification of competences. The International Commission of the Security Council of Europe considers the concept of competence as key skills, basic knowledge that not only supports, but also ensures success in various spheres of life. According to the interpretation of Ukrainian scientists, competence is an approach to knowledge as a tool for solving life problems, making decisions in various spheres of human activity, it is a general ability based on knowledge, experience, values acquired through education, education, integration into the space of social and cultural relations, interpersonal integration and communication. Thus, in the content of competence education, A. Khutorskyi interprets competence as «a set of interrelated personality qualities (knowledge, abilities, skills, methods of activity) that are set in relation to a certain range of subjects and processes and are necessary in order to qualitatively to act productively»; and competence is considered as «a person's possession of the appropriate competence, which includes a personal attitude towards it and the subject of activity». The scientist emphasizes that competence is a set requirement, norm, and competence is an acquired personal quality, which requires minimal experience of using competence. Therefore, competence is a circle of authority, and competence is a property (awareness, qualification). O. Semenog, along with the characteristic of being «professionally competent», puts the following characteristics: «to be mobile», «flexible to various innovations». M. Kholodna notes that in addition to subject-specific knowledge and methods of activity in a special field, any type of competence necessarily includes universal human qualities and abilities that do not depend on the field of their detection, for example, initiative, the ability to organize activities (own or others people), the ability to adapt in new non-standard situations, the readiness to critically analyze and adequately evaluate the results of activities. The listed general signs of competence are based not only on knowledge and skills in a certain field, but also on the value priorities of the individual, the peculiarities of his mental experience (Авраменко, Лутченко, & Шлянчак, 2010).

In the conditions of the modernization of the system of higher pedagogical education, a teacher who possesses ecological and aesthetic competences is able to understand environmental problems and solve the tasks of ecological and aesthetic education.

The preparation of future teachers for ecological and aesthetic education of schoolchildren by means of landscape design can be carried out in the course of mastering the basics of landscape design by future professionals, which positively affects the formation of their professional competence.

Students must understand the integrity of the nature of the planet Earth, the unity of its processes, anthropogenic influence. Future teachers should know that their professional activity should not contradict aesthetic norms and environmental laws. Only in such conditions will competent specialists develop versatile, in-depth knowledge of the environment, an ecological

style of thinking, which implies a responsible attitude to nature and human health, the availability of skills and experience in solving ecological and aesthetic problems, direct participation in nature conservation work, as well as the ability to predict the possible negative consequences of nature-transforming human activity, that is, ecological and aesthetic competences (Головань, 2008).

Ways to improve the environmental culture of youth are determined by the following conditions for the effectiveness of environmental education:

- creation of appropriate educational and material base in educational institutions: nature protection corners, living corners, etc.;

- development of the approximate content of continuous environmental education for all age categories of the younger generation, increasing the importance and volume of environmental issues both within certain subjects and with the help of establishing internal and intersubject connections;

- improvement of forms and methods of environmental education, active involvement of pupils in environmental protection work;

- the formation of motives for a responsible attitude towards nature, the desire to get to know it more deeply, to increase its wealth.

The majority of pedagogues-researchers state the inseparability of aesthetic and ecological education in pedagogical practice. According to E. Syavavko, aesthetic education was subordinated to the principle of emotionality in education; this principle in Ukrainian folk pedagogy is primarily manifested in the promotion of communication of children and youth with nature. The analysis of scientific research and publications shows that the issue of forming an aesthetic attitude towards nature attracted the attention of many famous teachers and psychologists – I. Zverev, I. Zyazyun, L. Pechko, V. Semichenko, N. Tarasevich, G. Tarasenko, and others. But the methodical and methodological principles of the organization of ecological and aesthetic education of youth are not yet sufficiently defined.

The educational branch of «Technologies» provides for the creation of conditions for realizing the potential of design activities in ecological and aesthetic education. The content and specifics of the process of preparing future teachers for the organization of environmental education are related to the purpose and main tasks of this component. They are aimed at the formation of schoolchildren's ecological and aesthetic culture, the ability to analyze natural phenomena, include a system of knowledge about the aesthetic in nature, the ability and skills of aesthetic knowledge of nature, a careful attitude to its riches as a vital factor of human existence, the ability to sense the environment, its creative reinterpretation, formation of artistic taste, aesthetic ideal, aesthetic evaluation of natural objects on this basis.

L. Pechko offers an unusual look at the aesthetics of nature. It defines the role of the aesthetic diversity of the entire natural world as a whole and each individual part of it as unique and expressive, significant for raising the level of human culture and its worldview. The category «expressive» is established within ecological aesthetics as a result of the reassessment of the aesthetic criteria in relation to nature in accordance with the expressive approach to its study and development as an aesthetic value.

The development of the ecological and aesthetic culture of the individual is one of the topical areas of aesthetics and pedagogy, an important trend in the history of scientific thought. Therefore, the problem of finding new methodological techniques for training future teachers with the aim of forming an ecological and aesthetic culture remains relevant. It can be carried out during students' processing of ecological material in the course «Fundamentals of landscape design».

Such material can serve not only to form the professional competence of future teachers, but also to deepen the humanistic orientation of their design activities. The teacher, orienting students to the organization of ecological and aesthetic education, during lectures (for example, within the topic «Compositional techniques of designing landscape objects»), practical classes (topics «Classification of landscaping objects», «Designing flower arrangements», «Peculiarities

of landscaping interior», etc.) indirectly introduces them to the main orientations of education of ecological and aesthetic culture:

1) guides to reveal the aesthetic value of each design object and phenomenon of the natural sphere – the aesthetic uniqueness and expressiveness of any perceived process and state of the landscape design object;

2) strives to activate in the perception and aesthetic assessment of nature objective, material signs as stable criteria for the sensory-aesthetic assessment of the unique and expressive in nature, which bears the imprint of its existence and interaction with various objects and people;

3) reveals the essence of the aesthetic attitude to the sensory expressiveness of nature, which reflects the ability of a person to directly assimilate objects on the basis of emotional-sensual aesthetic receptivity, to use images of nature, to respond emotionally and actively to a natural object in nature (Коберник, 2009).

In the process of familiarization with the main orientations of education, students gradually realize that the logically determined directions of the formation of ecological and aesthetic culture foresee a prospective change of subjective orientations, attitudes in the communication of schoolchildren with nature, which can be implemented in the following sequence:

- preliminary instruction on the value and biological features of the natural object;
- communicative-cognitive contact through integrated receptivity to expressive properties of objects (shape, outlines, silhouette, symmetry, rhythm, proportions, size, color, shades, dynamic properties, sound characteristics, etc.); to the humanistic content of models of behavior, images, forms, culture that reflect the attitude of a person to nature, its specific natural object;
- correlation of states, dissonance or fusion of subject and object;
- reflection after contact and subsequent feedback (emotional, evaluative, effective);
- the emergence of a new ecological and aesthetic attitude of the individual to the meaningful value of the object of nature.

Conclusions and recommendations. Aesthetic feeling in relation to nature presupposes the development of receptivity, empathic abilities, imagination, figurative and abstract thinking, the ability to aesthetically evaluate natural objects. The effectiveness of a multifaceted spectrum of methods, means and forms of aesthetic development of the environment through direct and indirect communication with nature has been tested for years. Deep folk wisdom as a result of age-old traditions created the ideal of a person's attitude to nature and preserved it in the treasury of the genetic memory of the Ukrainian people. It is worth remembering and realizing nature conservation traditions and customs, restoring ethnic stereotypes of human behavior in nature and communication with it.

The results of the study indicate the need to use in the educational process the national characteristics of the national pedagogical culture of Ukrainians, which reflects the worldview of our ancestors, their perception of the aesthetics of nature and man, knowledge of the laws of nature, rational use of its resources and environmental protection.

Thus, the preparation of the future teacher for the high-quality organization of the pedagogical process of ecological and aesthetic education of schoolchildren by means of design activities can be carried out in the course of mastering the relevant competencies and forming the competence of a specialist.

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STUDENTS' DESIGN ACTIVITY AS A MEANS OF FORMING ECOLOGICAL AND AESTHETIC COMPETENCES

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The article clarified the need for the formation of pupils' and student youth's technological artistic and project competence based on the modern vision of reforming national education in the context of the world and European civilization trends in the development of society (increasing the intellectual potential of nations, all-round development of the individual as the highest value of society and avoiding environmental hazards and disasters caused by military actions).

The study aimed to choose the multifaceted nature of the formation of future technology teachers' ecological and aesthetic competencies by studying and systematizing aspects of national experience, summarizing the theoretical ideas and practices of leading design specialists, opportunities for design education, and design activities of future specialists.

The support of the scientific position regarding the fact that the means and methods of design activity can be used to protect nature from the standpoint of cultural values, to fight for the environmental cleanliness of construction and processing materials, to improve the condition of the subject environment of many spheres of people's lives, led to the selection of design education tools for the educational discipline «Fundamentals of Landscape Design», proposed for future teachers of the educational field «Technology» to study. These means include awareness of the socially significant functions of design, knowledge of socially essential tasks of design activity, the structure of future technology teachers' ecological and aesthetic competencies based on design education, and ways to increase student youth's ecological and aesthetic competencies in design activities together with the teacher.

From the perspective of the research, the need to use the national characteristics of Ukrainian people's culture in the educational process of secondary education, their ideas about the aesthetics of nature and man, and the ability to aesthetically improve the living environment by means of design are determined.

Keywords: design education, competence education, the educational potential of design activity, landscape design, ecological and aesthetic competence, future technology teacher, professional training.

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