



---

# ECO-ORIENTED PROJECT TECHNOLOGY IN TRAINING OF FUTURE CONSTRUCTION INDUSTRY WORKERS IN THE CONTEXT OF EUROPEAN INTEGRATION

**Tetyana Pyatnichuk**

candidate of pedagogical sciences, Senior Research Fellow laboratories of vocational training technologies  
Institute of Vocational Education of the National Academy of Pedagogical Sciences of Ukraine,  
<http://orcid.org/0000-0002-5607-2949>, e-mail: [ptv2613@ukr.net](mailto:ptv2613@ukr.net)

---

## Abstract

*Relevance:* taking into account the need for innovative development of modern professional education in Ukraine, the article substantiates the expediency of teachers using the experience of educators and scientists from EU countries, in particular project-based learning technologies for the formation of professional competence of construction workers. At the same time, the problem of the harmful influence of the construction industry on people and the environment is becoming relevant in the professional training of construction workers, which requires the introduction of eco-oriented technology of project training into the educational process for the ecologically oriented education of future workers and the formation of environmental self-awareness.

*Purpose:* substantiating the effectiveness of the use of eco-oriented technology of project training in the professional training of workers in the construction industry in the conditions of the European integration of Ukraine.

*Methods:* theoretical – analysis of regulatory documents, scientific works, educational and methodological literature; comparison, systematization and generalization of information; empirical – observation, simulation of educational situations, conversation, survey.

*Results:* an analysis of normative documents, works of scientists on cooperation between Ukraine and the countries of the European Union in the field of professional training was carried out; the possibilities of implementing the technology of project training were analyzed, taking into account the environmental problems created by the construction industry and the need for a careful attitude to natural resources and the environment; types and examples of application of eco-oriented technologies of project training in professional-theoretical and professional-practical training of future construction workers are considered.

*Conclusions:* the expediency of implementing the technology of project training for the formation of professional competence of future workers in the construction industry, the ecological direction of the content of professional training, the use of the experience of the European Union countries in environmental education and upbringing is substantiated.

---

**Keywords:** *European integration, eco-oriented project learning technology, workers in the construction industry, professional competence*

---

**Introduction.** Today for Ukraine, according to V.G. Kremen (2015, p. 1), «cooperation with the countries of the European Union in the field of vocational education and training is urgent and necessary. Thanks to the use of the EU experience, the development of national vocational education becomes innovative, the need of specialists in advanced training during their working life,

which meets the requirements of the modern European labor market, is growing; the national system of competencies and qualifications is being improved».

Given Ukraine's strategic focus on association with the European Union, in the Strategy for the Development of Vocational (Vocational and Technical) Education for the period up to 2023,

the Ministry of Education and Science of Ukraine provides for «building the capacity of vocational (vocational and technical) education institutions to establish international relations, participate in international programs and projects to develop innovations, study and exchange experience and successful practices» (21.12.2020 № 12/2-3), aimed at European integration, the reforms of the Ministry of Education and Science of Ukraine are «Best skills for modern Ukraine». At the same time, the professional training of future workers in the construction industry should be based on the requirements of the legislation of Ukraine «to introduce environmentally friendly practices for the management of chemicals and all waste throughout their life cycle in accordance with agreed international principles, to significantly reduce the release of these substances into the air, water and soil in order to minimize their negative impact on human health and the environment» (Law of Ukraine, 2018).

Thus, the eco-oriented technology of project-based learning is designed to ensure the formation of professional competence of future builders and their environmental education.

**Sources.** The peculiarities of the introduction of project technologies in the educational process, theoretical and conceptual provisions were considered by Ukrainian scientists M. Elkin, I. Yermakov, O. Kobernyk, G. Romanova, S. Sysoieva, foreign - J. Dewey, J. Johnson, J. Pitt, W. Kilpatrick, E. Collings, D. Fried, A. Flitner, D. Hopkins and others. W. Kilpatrick was the first to introduce the concept of «project method», scientifically described it, he considered a project any activity with a high degree of independence of a group of students united at a certain moment by a common interest. According to J. Dewey (2003, p. 20), «the project method always involves solving a specific problem, which involves, on the one hand, the use of various methods, teaching aids, and on the other - the integration of knowledge, skills from various fields of science, engineering, technology, creativity» The results of research by scientists prove the effectiveness of using project-based learning technology in the formation of students' professional competence, intensification of learning activities, and development of students' independence.

The need to green the professional training of future workers is emphasized in the works of L. Lukianova (2016). The problems of the formation of ecological culture were solved by scientists V. Boreiko, A. Yermolenko, V. Krysachenko, L.

Lukyanova, V. Logvinenko, S. Ryzhkov, O. Saltovsky, G. Filipchuk and others.

**The purpose** of the article is to substantiate the necessity and expediency of using eco-oriented project-based learning technology for the formation of professional competence of construction industry workers in the context of Ukraine's European integration.

**Research methods:** theoretical – analysis of scientific works, regulatory documents, educational and methodological literature; comparison, systematization and generalization of data; empirical – observation, modeling of educational situations, conversation, survey.

**Results and discussion.** According to scientists, the economic efficiency of vocational education can be dramatically increased by the introduction of new «effective technologies of training and education of future skilled workers, based on competence-based, personality-oriented approaches, systems of external and internal assessment and monitoring of the quality of vocational education and training» (Kremen, 2015, p. 11).

One of the modern effective pedagogical technologies is project-based. According to the Encyclopedia of Education (2021), a project (from Latin *projectus* – thrown forward) is a plan, idea, image, embodied in the form of a description; justification, calculations, drawings that reveal the essence of the plan and the possibility of its practical implementation. Design is «the creation of a project – a prototype of a proposed or possible object» (2021, p. 870). According to P. Luzan (2014), a training project is «a complex of search, calculation, research, graphic and other types of work performed by students independently with the organizational and advisory support of the teacher for the purpose of practical or theoretical problem solving». N. Kulalaeva (2017, p. 23) notes that educational project activity is «stimulating students' interest in certain problems, which involves mastering a certain amount of knowledge in order to solve these problems through project activities, the use of critical thinking, the ability to practically use the knowledge gained».

In the professional training of future workers in the construction industry, project-based learning technology involves the process of designing by students – the formation of an idea, building a plan, performing current or diploma creative work. The ecological direction of this technology requires the project to address the issues of environmental protection, natural resources, taking into account possible damage from construction work; taking into

account the requirements of today's legislation of Ukraine, which aims to «create a modern infrastructure for the collection, sorting, processing and disposal of waste, including hazardous industrial and electronic waste as secondary raw materials, attracting investment in waste management and by 2030 to reduce the amount of production and consumption waste by 20%» (Law of Ukraine, 2018).

According to L. Lukianova (2016, p. 109), the ecologization of the educational process «should provide the ability to choose from a number of possible options for professional activity the most optimal in terms of preserving the environment and human health». Ecologization of professional education «consists in saturation of ideas, concepts, principles of ecology of all disciplines, especially professionally oriented, which creates the basis for training environmentally competent specialists of various profiles. It is necessary to realize that greening causes qualitative changes that arise in all spheres of life under the influence of the current environmental situation and are aimed at optimizing the impact of society on nature» (Lukianova, 2016, p. 110).

The purpose of the introduction of eco-oriented project-based learning technology in the professional training of future construction workers is to develop the ability of students to understand the possible negative consequences of their work and apply the acquired knowledge and skills in environmentally appropriate professional activities.

The project activity of students of construction professions should achieve the set goals:

- formation of the ability to find, analyze, select the necessary information on the implementation of construction work, taking into account possible environmental problems;
- ability to plan your work and perform it in accordance with it;
- ability to show initiative, enthusiasm, develop critical thinking and creativity;
- ability to draw up the results of work, present it in different audiences - group, subject weeks, exhibitions, etc.

According to scientists (Goloborodko, & Gnedashev, 2005, p. 87), in the process of implementing educational projects, students achieve certain mental and practical skills: understanding of the task, the essence of the educational task; planning of its final result, individual actions; implementation of the design algorithm; making adjustments to previously made decisions; constructive discussion of the results and problems of each stage of design; drawing up the necessary calculations;

expressing their own thoughts, constructive solutions with the help of drawings, diagrams, sketches, products; independent search and finding the necessary information; evaluation of the results of achievement planned goal; understanding the criteria for evaluating projects and defending them.

At the same time, we must determine that the project technology should be combined with other technologies, and the process of developing project technology is a purposeful, socially significant, pedagogically appropriate, practically implemented innovative activity of the teacher to design and ensure the functioning of the educational and developmental environment in which the project activities of students will be carried out (Osmolovsky, & Vasilenko, 2000).

According to scientists, the following types of projects are effective and appropriate in educational activities: informational, practice-oriented, research, role-playing, creative (Luzan, 2014; Romanova, 2014; Sysoieva, 2011). Thus, the options for students to implement eco-oriented projects in the professional training of construction workers can be different.

*An information eco-oriented project* involves students performing tasks to collect and process information. Thus, a project on the topic «Technology of high-quality plastering» of the subject «technology of plastering works» may have the following areas of work of students «history of humanity's use of plaster from natural materials», «ways of waste disposal», «environmental consequences of careless use of building materials», etc. Tasks in these areas on part of the information project can be individual – they develop independence, improve search, analytical skills.

Working in a group of 2-4 people teaches to distribute roles, to work in a team, to be responsible for joint results. To develop confidence, independence, creativity of students, the results of the work (report, abstract, video, etc.), conclusions, proposals developed by them during the implementation of the eco-oriented information project should be presented to a wide audience at lessons for classmates, during subject weeks, exhibitions, round tables, etc.

*A practice-oriented project* in the professional training of builders should increase the motivation of students to improve their professional skills and form environmentally appropriate behavior in their professional activities:

- a) in professional and theoretical training: projects «Determination of possible damage to the environment from the use of natural materials

(water, sand, clay, etc.); «Ways to minimize the impact of the construction industry on the environment» when students master the topics «Characteristics of sands, gravel, crushed stone. Harmful impurities in sand», «Preparation, transportation, quality control of mortar mixtures», «Technology of high-quality plastering» in the subjects «material science», «technology of plastering (painting, facing, etc.) works», conducting binary lessons together with teaching the subject «basics of ecology», «biology», «chemistry», etc;

b) in professional and practical training (in the lessons of industrial training and practice) in the performance of complex works, in particular the implementation of their own practical projects on the problems of saving building materials, environmentally sound waste management on the topics of «plastering surfaces with simple, improved, high-quality plaster», «plastering pillars, pilasters and columns of constant section smooth and with cannel», etc;

c) independent home project-tasks on the implementation of layouts, models for subject weeks, exhibitions of technical creativity, the work of the admission committee;

*Eco-oriented research project* – involves the study of environmental problems related to the production of building materials and the execution of construction works on the site and taking into account scientific rules, in particular: studying the properties of established and modern building materials and developing proposals for the possibilities of their use, determining the features and advantages, ecological projects on the history of the history of the origin and development of construction production «portland cements of antiquity and modernity», «mortar mixtures for winter works»; «equipment of surfaces with decorative colored plasters», «construction technologies of antiquity», etc.

*Eco-oriented role-playing project* – business games, simulation games are indispensable in the course of any project for students, given that a certain part of their work is carried out in teams, links «performing plastering work using mechanization», «pulling straight architectural details with a template», etc.

*Eco-oriented creative project* – provides for the most independent practical implementation of their own ideas: creating their own samples for finishing surfaces of various subjects; performing real tasks; performing creative work for phased and state qualification certification. The implementation of creative projects by students ensures the

development of their independence, self-confidence, ability to apply the acquired knowledge in practice, improvement of professional knowledge and skills.

According to scientists (Romanov (Ed.), 2019), the advantages of students' performance are: recognition of students' achievements, which makes future specialists realize their own dignity, confidence and self-confidence; purposeful independent activity of students, the results of which have cognitive, practical and personal significance; formation of a set of skills in students participating in creative projects: search, research, management, planning, reflective, communicative, presentation and teamwork; development of professionally important qualities in future specialists: dedication, diligence, responsibility, organization, sociability, ingenuity, creativity, adaptability, confidence, etc.

The spread of the use of eco-oriented project-based learning technology in the professional training of construction industry workers is due to the need to teach them to independently acquire knowledge of the environmental problems that the construction industry can create:

- the need to teach them to independently acquire knowledge on environmental problems that the construction industry can create and use them in professional activities;

- the relevance of developing students' ability to perform different social roles (leader, performer, mediator, etc.), communication skills and ability to work in groups, overcome conflict situations, produce joint results, draw conclusions;

- the need to develop the ability to use research methods: to collect the necessary information, analyze it from different points of view, put forward hypotheses, summarize the results.

For future workers in the construction industry, the development of eco-oriented projects has features:

- the project has one topic, and students perform separate partial tasks, or is implemented by different groups of students on the initiative and their vision;

- the topic of the project activity of students is pre-planned by the teacher, but provides flexibility and multidirectionality in the course of development - all project options, approaches to design using various materials, tools, devices, methods of action are subject to consideration and discussion;

- students' work on project activities should be practically oriented to construction production

and have a research character;

– the results of work on the project should be significant for students regardless of the possibilities of application in the construction industry, with the main goal of developing students' creative thinking, understanding of responsibility for the consequences of their own professional activities.

The implementation of any eco-oriented project involves the following stages: preparatory (organizational), educational (search and research), actual design (technological), final (presentation).

At the preparatory stage, students together with the teacher determine: the feasibility of implementing an eco-oriented project on a particular topic, the tasks of future work, the expected result; at the educational stage, information is obtained, new knowledge and skills are acquired on the topic, graphic and technological documents are prepared; at the technological stage, students analyze the information received on environmental problems of the construction industry, prepare conclusions on the possibilities of improving production technology, proposals for improving the use of natural materials, and prepare proposals for improving the use of natural materials.

Scientists have developed the following algorithm of students' work on the project (Kulalaeva (Ed.), 2019, p. 22-23):

– initiation (motivation-oriented): identification of the problem to be solved in the project, its discussion; familiarization with the task, rules, stages of work;

– planning (prognostic and planning), project development: creating project teams; generating project ideas; discussing and defining the topic, formulating the goal, objectives, as well as the possible result (product) of the project;

– implementation (organizational and executive): final determination of the result (product) of project work and criteria for its evaluation; construction of a technological map of the project; distribution of individual tasks; determination of own capabilities, means and resources, methods of collecting materials, methods of information analysis, its processing; independent work of students on the creation of the product itself (search work in the team and implementation of operations on the main tasks of the project, preparation of theoretical and practical materials to be used during the presentation of the project, etc;)

– monitoring (evaluative-reflective): consistent discussion of the results obtained (self-assessment of activities); clarification of the methods and forms of project presentation; design of the project in the chosen form; development of a methodological passport and creation of a project portfolio;

– presentation (presentational-implementation): presentation and defense of the project; participation in the discussion; defending one's position; self-, mutual and expert evaluation of students' project activities; formulation of conclusions; discussion in the student group of the results of project activities; supplementing the portfolio (description of one's role, materials used, one's impressions of teamwork and the role performed); implementation of project results by students.

The results of students' work during the implementation of eco-oriented educational projects require evaluation (Romanova, 2014; Luzan, 2014):

– by teachers: to determine the level of acquired cognitive and practical achievements; appropriateness of research methods and processing of results; activity of participants; level of relationships and mutual assistance; answers to questions, arguments; design of project results;

– self-assessment: provides for an objective assessment by students of their own strengths and capabilities, an objective and critical attitude to themselves and the results of their own activities, changes in motivation in learning: the growth of professional values, interests, needs. At the same time, student self-assessment allows the teacher to get information about difficulties at different stages of the project;

– expert (external) evaluation: experts can be teachers, classmates, students of parallel groups and senior courses, representatives of organizations-customers of personnel, etc.

**Conclusions.** The implementation of eco-oriented educational projects by students – future builders forms professional competence, develops their ability to independently search for information, analyze, draw conclusions and make decisions, present the results; increases students' interest in the profession; forms an environmental culture, responsible attitude to the environmental results of professional activity; makes it possible for the student to become a direct participant in training, interested in the results of the project.

## List of references

- Аніщенко, В. М., Артюшина, М. В., Герлянд, Т. М., Кулалаєва, Н. В., Романова, Г. М., Шимановський, М. М., & Пятничук, Т. В. (2019). *Теорія і практика проєктного навчання у професійно-технічних навчальних закладах: монографія*. (Н. В. Кулалаєва (Ред.)). Житомир: Полісся.
- Глуценко, О. В., Романов, Л. А., Пашченко, Т. М., Пятничук, Т. В., & Шимановський, М. М. (2019). *Проєктні технології навчання учнів професійних (професійно-технічних) навчальних закладів: довідник*. (Л. А. Романов (Ред.)). Житомир: Полісся.
- Голобородько, В. В., & Гнедашев, В. М. (2005). *Наукова робота учнів: програма організації науково-дослідної діяльності учнів*. Київ: Основа.
- Кремень, В. Г. (Ред.) (2021). *Енциклопедія освіти*. АПН України. 2-е видання, доповнене та перероблене. Київ: Юрінком Інтер.
- Дьюї, Д. (2003). *Досвід і освіта*: [пер. з англ. Марії Василечко]. Львів: Кальварія.
- Закон України «Про Стратегію сталого розвитку України до 2030 року» (2018, Серпень 07). <https://ips.ligazakon.net/document/JH6YF00A?an=393>.
- Кулалаєва, Н. В. (2017). Формування культури екологічної безпеки майбутніх фахівців будівельного профілю через проєктне навчання. *Збірник наукових праць НУК*, 3.
- Кремень, В. Г. (2015). Професійний розвиток особистості – ключове завдання в умовах євроінтеграції. In В. Г. Кремень, М. Ф. Дмитриченко, Н. Г. Ничкало (Ред.), *Концептуальні засади професійного розвитку особистості в умовах євроінтеграційних процесів: зб. наук. статей* (с. 9-11). Київ: НТУ.
- Лузан, П. Г., Манько, В. М., Нестерова, Л. В., & Романова, Г. М. (2014). *Теорія і практика впровадження інноваційних технологій навчання у професійну підготовку кваліфікованих робітників: монографія*. Київ: Поліграфсервіс.
- Лук'янова, Л. Б. (2016). *Основи екології, методика екологізації фахових дисциплін: навчально-методичний посібник для викладачів*. (вид. 2-ге змінене і доповнене). ДСК–Центр.
- Осмоловський, А., & Василенко, Л. (2000). Від навчального проєкту до соціальної самореалізації особистості. *Шлях освіти*. 2, 34-37.
- Романова, Г. М. (2014). Проєктування технологій професійного навчання майбутніх кваліфікованих робітників. *Професійно-технічна освіта*, 1, 11-15.
- Сисоєва, С. О. (2011). *Інтерактивні технології навчання дорослих: навчально-методичний посібник*. ВД «ЕКМО».
- МОН України. (2020). *Стратегія розвитку професійної (професійно-технічної) освіти на період до 2023 року: рішення колегії МОН України, № 12/2-3*. <https://mon.gov.ua/storage/app/media/kolegiya-ministerstva/2020/12/.pdf>

## Translated & Transliterated

- Anishchenko, V. M., Artiushyna, M. V., Herliand, T. M., Kulalaieva, N. V., Romanova, H. M., Shymanovskyi, M. M., & Piatnychuk, T. V. (2019). *Teoriia i praktyka proiektnoho navchannia u profesiino-tekhnichnykh navchalnykh zakladakh: Monohrafiia [Theory and practice of project-based learning in vocational and technical educational institutions]*. Zhytomyr: Polissia, [in Ukrainian].
- Hlushchenko, O. V., Romanov, L. A., Pashchenko, T. M., Piatnychuk, T. V., & Shymanovskyi, M. M. (2019). *Proiektni tekhnolohii navchannia uchniv profesiinykh (profesiino-tekhnichnykh) navchalnykh zakladiv : dovidnyk [Design technologies of training students of professional (vocational and technical) educational institutions: a guide]*. (L. A. Romanov, red.). Zhytomyr: Polissia, [in Ukrainian].
- Holoborodko, V. V., & Hniedashev, V. M. (2005). *Naukova robota uchniv: prohrama orhanizatsii naukovo-doslidnoi diialnosti uchniv [Scientific work of students: the program for organizing scientific research activities of students]*. Kyiv: Osнова, [in Ukrainian].
- Kremen, V. H. (Red.). (2021). *Entsyklopediia osvity [Encyclopedia of Education]*. Druhe vydannia, dopovnene ta pereroblene. Kyiv: Yurinkom Inter.
- Diui, D. (2003). *Dosvid i osvita [Experience and education]: [per. z anhl. Marii Vasylechko]*. Lviv: Kalvariia, [in Ukrainian].
- Zakon Ukrainy «Pro Stratehiiu staloho rozvytku Ukrainy do 2030 roku» [Law of Ukraine «On the Strategy of Sustainable Development of Ukraine until 2030»] (2018, Serpen 07). <https://ips.ligazakon.net/document/JH6YF00A?an=393>, [in Ukrainian].
- Kulalaieva, N. V. (2017). Formuvannia kultury ekolohichnoi bezpeky maibutnykh fakhivtsiv budivelnoho profilu cherez proiektne navchannia [Formation of the culture of environmental safety of future specialists of the construction profile through project training]. *Zbirnyk naukovykh prats NUK*, 3, [in Ukrainian].

Kremen, V. H. (2015). Profesiyni rozvytok osobystosti – kluchove zavdannia v umovakh yevrointehratsii [Professional development of the individual is a key task in the conditions of European integration]. In V. H. Kremen, M. F. Dmytrychenko, N. H. Nychkalo (Eds.), *Kontseptualni zasady profesiinoho rozvytku osobystosti v umovakh yevrointehratsiinykh protsesiv: zbirnyk naukovykh statei* [Conceptual principles of professional development of the individual in the conditions of European integration processes: coll. of science articles] (s. 9-11). Kyiv: NTU, [in Ukrainian].

Luzan, P. H., Manko, V. M., Nesterova, L. V., & Romanova, H. M. (2014). *Teoriia i praktyka vprovadzhennia innovatsiinykh tekhnolohii navchannia u profesiinu pidhotovku kvalifikovanykh robitnykiv: monohrafiia* [Theory and practice of introducing innovative learning technologies into professional training of skilled workers: monograph]. Kyiv: Polihrafservis, [in Ukrainian].

Lukianova, L. B. (2016). *Osnovy ekolohii, metodyka ekolohizatsii fakhovykh dystsyplin: Navchalno-metodychnyi posibnyk dlia vykladachiv. (vyd. 2-he zminene i dopovnene)* [Fundamentals of ecology, methods of greening professional disciplines: A textbook for teachers]. DSK – Tsent, [in Ukrainian].

Osmolovskyi, A., & Vasylenko, L. (2000). Vid navchalnoho proiektu do sotsialnoi samorealizatsii osobystosti [From the educational projekt to the social self-realization of the individual]. *Shliakh osvity* [The way of education], 2, 34-37, [in Ukrainian].

Romanova, H. M. (2014). Proiektuvannia tekhnolohii profesiinoho navchannia maibutnikh kvalifikovanykh robitnykiv [Designing technologies for professional training of future skilled workers]. *Profesiino-tekhnichna osvita*, 1, 11-15, [in Ukrainian].

Sysoieva, S. O. (2011). *Interaktyvni tekhnolohii navchannia doroslykh: navchalno-metodychnyi posibnyk* [Interactive technologies of adult learning: a textbook]. VD «EKMO», [in Ukrainian].

*Stratehiia rozvytku profesiinnoi (profesiino-tekhnichnoi) osvity na period do 2023 roku. Rishennia kolehii MON Ukrainy № 12/2-3* [Strategy for the development of professional (vocational and technical) education for the period until 2023] (2020). <https://mon.gov.ua/storage/app/media/kolegiya-ministerstva/2020/12/.pdf>, [in Ukrainian].

## ЕКООРІЄНТОВАНА ПРОЄКТНА ТЕХНОЛОГІЯ У ПІДГОТОВЦІ МАЙБУТНІХ РОБІТНИКІВ БУДІВЕЛЬНОЇ ГАЛУЗІ В УМОВАХ ЄВРОІНТЕГРАЦІЇ

**Тетяна Пятничук**

кандидат педагогічних наук, старший науковий співробітник лабораторії технологій професійного навчання Інституту професійної освіти НАПН України, <http://orcid.org/0000-0002-5607-2949>, e-mail: [ptv2613@ukr.net](mailto:ptv2613@ukr.net)

---

### Реферат

*Актуальність:* урахувавши необхідність інноваційного розвитку сучасної професійної освіти України, у статті обґрунтовано доцільність використання педагогами досвіду освітян і науковців країн ЄС, зокрема технології проєктного навчання для формування професійної компетентності робітників будівельного профілю; водночас актуальним у професійній підготовці будівельників постає проблема шкідливого впливу будівельної галузі на людину та навколишнє середовище, яка потребує упровадження в навчальний процес екоорієнтованої технології проєктного навчання для екологічно спрямованого виховання майбутніх робітників та формування екологічної самосвідомості.

*Мета:* обґрунтування ефективності використання екоорієнтованої технології проєктного навчання у професійній підготовці робітників будівельної галузі в умовах євроінтеграції України.

*Методи:* *теоретичні* – аналіз нормативних документів, наукових праць, навчально-методичної літератури; порівняння, систематизація й узагальнення інформації; *емпіричні* – спостереження, моделювання освітніх ситуацій, бесіда, опитування.

*Результати:* здійснено аналіз нормативних документів, праць науковців з питань співробітництва України з країнами Європейського Союзу в галузі професійної підготовки; проаналізовано можливості упровадження технології проєктного навчання з урахуванням екологічних проблем, які створює будівельна галузь та необхідності дбайливого ставлення до природних ресурсів і навколишнього середовища; розглянуто види та приклади застосування екоорієнтованих технологій проєктного навчання у професійно-теоретичній та професійно-практичній підготовці майбутніх робітників-будівельників.

*Висновки:* обґрунтовано доцільність упровадження технології проєктного навчання для формування професійної компетентності майбутніх робітників будівельної галузі, екологічного спрямування змісту професійного навчання, використання досвіду країн Європейського Союзу в екологічній освіті і вихованні.

---

**Ключові слова:** *євроінтеграція, екоорієнтована технологія проєктного навчання, робітники будівельної галузі, професійна компетентність*

---

Received: 10 October 2022

Accept: 10 December 2022