

## INNOVATIVE TECHNOLOGIES IN THE PREPARATION PROCESS OF FUTURE BUILDERS (THEORETICAL ASPECTS)

**Mariia Nakonechna<sup>1</sup>**

Scientific Supervisor: **Dolnikova L.V.**

DOI: <https://doi.org/10.30525/978-9934-588-39-6-12>

Professional training of future specialists in the construction profile is carried out through the implementation of educational and professional program, which provides for the integration of the content of the disciplines of fundamental and vocationally oriented blocks and the need for appropriate methodological support. In accordance with the requirements of the labor market and social order, educators of educational institutions have to form a competitive specialist, ready for information mobility and professional growth, which determines the main purpose of educational institutions – to create favorable conditions for the full development of intellectual and creative potential of the student with expected learning outcomes. In the modern base of pedagogical technologies there are enough traditional methods, technologies, concepts and tools implemented in the educational process that contribute to this goal, but innovative technologies are preferred. Experience shows that the traditional system of education does not provide a sufficient level of effectiveness of the educational process due to the following factors: insufficient student activity; low level of efficiency of independent work; insufficient teacher-student feedback; irrational use of time by both teacher and student; low control efficiency, which limits the teacher and the student [6, p. 267]. O. Gulai in his pedagogical studies, He considers the innovation of the educational process as a set of consistent, interconnected, targeted actions that should improve the quality of professional training [1]. S. Goncharenko, V. Kremen, O. Piekhota consider the innovative model of training in the context of a personality-oriented and activity-based approach. According to them, the innovative model assumes the following aspects:

- active participation of the student in the educational process;
- possibility to use the acquired knowledge and skills in real conditions;
- demonstrating competencies in solving problematic tasks;
- perception of learning as a collective activity;
- emphasis on learning, not memorizing theoretical material [1].

---

<sup>1</sup> Lviv Polytechnic National University, Ukraine

The most widely used in the educational process are such innovative methods as:

- contextual learning, the essence of which is to apply the educational, scientific and practical activities of students, allows you to use and combine different methods of future professional activity, contributes to a better understanding of their activities;

- simulation training, which consists of simulation game simulation identical to the real. Imitation learning enables the student to see the tasks and tasks of his / her future activity;

- problematic training is creation of a professional problem by the teacher, and the student from the complex of their theoretical knowledge and practical skills has to make the most effective and reasonable solution to the task. The method of problem teaching determines the student's independent work, reveals his individual and creative characteristics [5];

- modular training, the essence of which is that the content of the structural and logical scheme of the sequence of presentation of educational material is aimed at its maximum learning.

The modules are blocks or sections of the discipline with required practical skills and a system of assessment. This method is effective in the presence of a large amount of material, because it allows the teacher to provide the material differentially, and allows the student to learn and perceive the learning material more significantly;

- a method of full assimilation of knowledge, authored by J. Carroll and B. Bloom, According to their interpretation, the educational process should have fixed concrete results, the conditions of study – optimal and mobile, taking into account the individual subject of the educational process. The teacher uses this method, aims to prepare each student, develops different levels of tests, introduces various ways of processing material that gives the student the choice;

- method of projects, the founder of which is U. Kilpatrick, and interprets: «The method of projects is a method of planning expedient (purposeful) activity in connection with the solution of a certain educational task in a real life situation» [6, p. 24]. The project method involves a system of methods, pedagogical tools and techniques aimed at reproducing of the acquired knowledge, which are manifested as a practical result, designed and presented in a certain way, provides for individual or group independent work of students, which, in addition to professional competencies, is also communicative. N. Zubova highlights the project method as a flexible model of organization of the educational process, focused on the creative self- realization of the individual due to the development of his intellectual and physical abilities, willing qualities and creative abilities in the process of creating under the control of the teacher a new product that has a

subjective or objective novelty as well as practical weight. The educational project acts as a means of implementing pedagogical technologies in a broad sense [4, p. 112]. We use the project method the most often, as its effectiveness in mastering and displaying the knowledge and abilities of students of professional knowledge is indisputable. In the process of working on the project, the student mobilizes and integrates knowledge of various interrelated disciplines to the fullest, and features of the training for future construction specialists foresee it. We agree with the opinion of many teachers, in particular O. Gulai, who outlines in his research the main aspects of project training for future builders:

- the educational process acquires personal content, enhances its motivation, realizes a personality-oriented approach to learning; -complex approach to the implementation of educational projects contributes to the student's self-realization and intellectual development (developmental training);

- deep, informed mastering of basic knowledge is ensured by their use in non-standard situations which are foreseen by the project (fundamentalization of training);

- the students' creative potential is developing. Working on projects by students with low level of knowledge has a positive effect on their self-esteem and attitude to the discipline (humanization of education) [1].

It is interesting and effective the remote learning related to distance learning, the essence of which is to apply innovative information and communication technologies. This method allows you to organize a virtual learning environment that may be open to the student for processing under certain conditions. Distance learning satisfies and fulfills the requirements of modernity to the educational process: mobility of organizational forms, individualization of the content of education, intensification of the learning process and exchange of information. The peculiarity of distance learning is the indirect advisory role of the teacher and the large amount of educational material that is learned during the independent study.

The use of e-learning elements allows you to choose the place, time and method of learning, allows the teacher to evaluate and monitor student activity. Electronic provision of educational and methodological base is currently carried out by the teachers of educational institutions in accordance with their own needs (development of instructions for laboratory and practical work, methodological manual for course or diploma design), due to the content of the discipline.

For today's generation of students, it is important for educators to choose the best teaching method that takes into account their personal characteristics and social needs.

### References:

1. Gulaj, O. I. (2016). *Teoretichni ta metodichni osnovi profesijnoi pidgotovki majbutnix faxivcivziv budivelnogo profilyu v umovax nepererвної osviti* [Theoretical and methodological bases of professional training of future specialists of construction profile in the conditions of continuous education]. dis. dlya nauk. stupin kand. ped. Nauk: Specz. 13.00.04 «Teoriya ta metodika osviti profesora» Gulaj O. Hmelniczkij, 435 p.
2. Dudko, L. A. (2004). Rol innovacijnix pedagogicnix tehnologij u formuvanni konkurentospromozhnix faxivcivziv [The role of innovative pedagogical technologies in the formation of competitive specialists]. *Multivers Filosofskij almanax*, no 39, pp. 78–84.
3. Zhilyaeva, Yu. M. (2008). Kategorichnij analiz ponyattya «proektnij metod» [Categorical analysis of the concept of «project method»]. *Visnik Zhitomirskoi derzhavnij. un-tu. Pedagogichni nauki*, no. 39, pp. 110–113.
4. Kozyar, M. M. (2004). Innovacijni tehnologii yak instrument orientovanogo na studentiv pidxodu u prakticnij pidgotovczi majbutnogo inzhenera [Innovative technologies as a tool of student-centered approach in practical training of future engineer]. *New pedagogical thought*, no. 1, pp. 90-93. URL: [http://nbuv.gov.ua/UJRN/Npd\\_2014\\_1\\_28](http://nbuv.gov.ua/UJRN/Npd_2014_1_28)
5. Kylpatryk, V. Kh. (1925). *Metod proektov. Prymenenye tselevoj ustanovky v pedahohycheskom protsesse* [Method of projects. The application of the target setting in the pedagogical process]. L.: Brokhaus-Efron, 43 p.

## THE PREPARATION OF THE TEACHER OF LABOUR PROTECTION TO WORK IN VOCATIONAL COLLEGES

**Tetiana Petrenko<sup>1</sup>**

DOI: <https://doi.org/10.30525/978-9934-588-39-6-13>

A teacher of labour protection is a person with higher education (pedagogical or special), has moral principles in relation to attitude toward colleagues and students, corresponding professional level in the conditions of educational process, due to in-plant training (each 5 in a volume 150 hours), has the proper physical and psychological health.

In the process of teaching disciplines: «Labour protection» from the teacher requires the following organization of the educational process:

1. The establishment of a working curriculum (based on the curriculum approved by the Ministry of education and science of Ukraine), the calendar-themed plan (in accordance with the load and work program).

---

<sup>1</sup> Open International University of Human Development «Ukraine», Ukraine