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# INNOVATIVE TECHNOLOGIES AND METHODS OF TRAINING IN PROFESSIONAL EDUCATION

**Abstract**

Modern professional education is actively developing and provides people with more opportunities to acquire knowledge, skills, competencies that will help them in professional growth and social advancement. To carry out the cognitive and creative activities of the student, modern educational technologies are used, which make it possible to improve the quality of education, effectively use the educational time and reduce the proportion of reproductive work of students. The modern development of information technologies determines the features of vocational education, which has become more mobile and accessible, as well as the closest to the requirements of employers. The use of interactive technologies in the educational process of any educational institution will allow this institution to enter a new stage of development.

**Key words:** Innovative technologies, professional education, interactive learning technologies, technology project-based learning, computer technology, electronic textbook.

Educational technology — a systematic method of design, implementation, evaluation, correction and subsequent reproduction of the educational process. Modern educational technologies are aimed at individualization, distance and variability of the educational process, mobility of students [2, p. 162].

Today, special attention is paid to the development of innovative technologies of vocational education, which implies a purposeful change in the educational process through the creation and implementation of innovations in educational institutions [3, p. 3].

Innovative learning technologies include:

- interactive learning technologies;
- technology project-based learning;
- computer technology.

Interactive learning technologies. Interactive learning is called learning, built on the interaction of the student with the learning environment, the learning environment, which serves as an area of learning experience [1, p. 107]. Their essence is determined by the fact that they rely primarily on creative, productive thinking, behavior, communication. In interactive learning technologies, the roles of the teacher (instead of the role of the informant – the role of the Manager) and students (instead of the object of influence – the subject of interaction), as well as the role of information (information is not the goal, but a means to master actions and operations), change significantly.

Let's consider some forms and methods of interactive learning technologies.

1. Problem lecture. It involves the formulation of the problem, the critical situation and their solution. In the problem lecture contradictions of reality are formed by means of their expression in theoretical systems. The main objective of this lecture – the development of knowledge of students with their direct participation. The problem statement stimulates students to mental activity, to the independent solution of questions, and also generates interest in the studied material and activates the attention of students.

2. The seminar. It involves a collective discussion of problems to determine ways to solve it. The seminar is held in the form of dialogical communication of its participants. It involves high mental activity, teaches to debate, discuss the problem, defend their beliefs, clearly express thoughts.

3. Educational discussion. This is one of the methods of problem learning, which is used in the study of problem situations, when it is necessary to give a definite answer to the question, while other solutions are assumed.

4. Cooperative learning. It is used to engage all those present in the discussion. This method of training is based on joint training in the mutual work of students in small groups. The main idea of educational interaction is simple: students combine their mental abilities and activity to perform a joint task and achieve a common goal.

The technology of the training group includes:

- problem statement;
- formation of small groups (5-7 people), distribution of responsibilities;
- discussion of the problem in micro groups;
- presenting the results of the discussion to all students;
- continuation of the discussion and summary.

1. «Brainstorming». Its purpose is to collect the greatest number of ideas, to release students from passivity of thinking, to stimulate creative thinking, to overcome the usual course of thought in solving a certain problem. This technique allows to increase efficiency of formation of new ideas at students. Brainstorming prohibited to criticize any ideas proposed by the participants, and encourages a variety of remarks and even jokes.

2. Didactic game. It is an important pedagogical means of stimulating the educational process in a professional organization. In the process of this

technique, the student must perform actions similar to those that may take place in his professional activity. As a result, there is an accumulation, updating and transformation of knowledge into skills, accumulation of personal experience and its development.

3. Internship with the performance of the official role. This is a method of training in which the "model" is the sphere of professional activity, the reality itself, and imitation affects the performance of the role. The main condition of the internship is controlled by the teacher performance of certain actions in real production conditions.

4. Simulation training. It involves the development of professional skills and abilities for activities with various technical means and devices. The situation, position of professional activity is imitated, and as "model" the technical means acts.

Project-based learning technology. The technology of project training in the innovation of vocational education is considered as a changeable model of the organization of educational activities in a professional institution, aimed at the creative self-realization of the student's personality through the development of his mental and physical abilities, leadership qualities and creative abilities. The result of this activity is educational creative projects, the implementation of which is carried out in three stages: research, technological, final.

The educational creative project itself consists of an explanatory note and a product or service. The explanatory note reflects:

•selection and explanation of the project theme, historical background, formation and •development of ideas, creation of reflection schemes;

• description of the stages of construction;

•selection of material for the object, design analysis;

• serial production, graphics;

• selection of tools, equipment and workplace organization;

• occupational health and safety in the performance of work;

• economic and environmental justification of the project and its advertising campaign;

• use of literature;

•applications in the form of sketches, diagrams, technological documentation.

The technology of project training contributes to the creation of pedagogical conditions for the development of creative abilities and personal qualities of the student, which he needs for creative activity, regardless of the future specific profession.

Computer technology. Computer technologies of training is the process of collecting, processing, storing and transmitting information to a student using a computer. Currently, the most widespread technological areas in which the computer is considered:

• a means to provide a teaching aid to the student for the transfer of knowledge; means of information support of educational processes as an additional source of information;

• a means to establish the level of knowledge and control the development of educational material; a tool for learning the practical use of knowledge;

• a tool for conducting educational experiments and business games on the subject of training;

• one of the most important elements in the future professional activity of the student.

The list of software for educational purposes (LSEP) today includes:
Electronic (computerized) textbook - automated educational system, which includes didactic, methodological and information and reference materials on the subject, as well as software that allows you to use these materials for self-knowledge and control.

Structure of the electronic textbook [4]:
1) Electronic lectures that control computer programs are didactic means that in the shortest possible time provide quality and comprehensive control over the progress and results of the development of the studied material;
2) Directories and databases of educational purposes allow the student at any time to quickly get the necessary background information in a concise form. The electronic directory contains duplicate information and supplementary material of the textbook.
3) Collections of tasks and generators of examples (situations); subject-oriented environment – they organize the activities of students, the result of which is not only the formation of knowledge, skills, but also the development and formation of a certain type of thinking, skills and implementation of experimental research activities, information culture.
4) Educational-methodical complexes is a complex of systematic materials, the student need for the learning activities that ensure students ' success in educational, creative, communicative and other activities.
5) Program-methodical complexes - a set of teaching materials that contribute to the effective assimilation of students ' educational material included in the curriculum of the subject, the plan of training students in one of the areas.
6) Computer illustrations to support various types of activities.

The use of computer technology in vocational education contributes to the implementation of pedagogical goals:

• development of the student's personality, preparation for independent professional activity;

• implementation of social order, specific needs of modern society;

• strengthening the productivity of the educational process in a professional organization.

One of the main tasks set before the modern educational organization is the search, creation, implementation of educational innovations that are aimed at meeting the public order and the needs of the participants of the educational process.

The use of information and communication technologies makes it possible to significantly accelerate the process of information retrieval and transmission, to transform the nature of mental activity, to automate human labor.

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**Аннотация**

Современное профессиональное образование активно развивается и предоставляет человеку все больше возможностей приобретать знания, умения, навыки, компетенции, которые помогут ему в профессиональном росте и социальном продвижении. Для осуществления познавательной и творческой деятельности обучающегося используются современные образовательные технологии, которые дают возможность повысить качество образования, эффективно использовать учебное время и уменьшить долю репродуктивной работы студентов. Современное развитие информационных технологий определяет и особенности профессионального образования, которое стало более мобильным и доступным, а также, наиболее приближенным к требованиям работодателей. Применение интерактивных технологий в образовательном процессе любого учебного заведения позволит выйти этому учебному заведению на новый этап развития.

**Ключевые слова.** Инновационные технологии, профессиональное образование, интерактивные технологии обучения, технология проектного обучения, компьютерные технологии, электронный учебник.