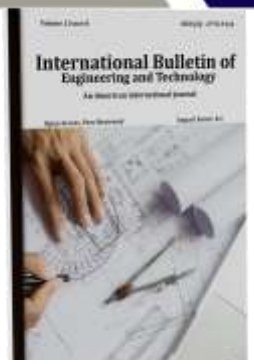

INNOVATIVE EDUCATIONAL TECHNOLOGIES FOR DRAWING LESSONS METHOD OF DEVELOPING STUDENTS' DESIGN-CONSTRUCTIVE COMPETENCE BY ORGANIZING ON THE BASIS OF

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Abstract. In this article, innovative teaching of drawing lessons comments on the methodology of developing students' design and construction competence by organizing on the basis of technologies.

Keywords: profession, competence, technology, students, information, specialist, production, research, engineering, computer graphics.

Currently, higher education institutions are increasingly interested in the use of innovative educational technologies in the educational process. In this, students are not limited to mastering ready-made knowledge, but through innovative educational technologies and tools, it allows them to individually search for knowledge, independently study, analyze and come to conclusions. In this process, the student's theoretical knowledge is strengthened, practical skills are formed, and psychological characteristics are developed. Scientists such as E.M. Fazlulin, A.V. Petukhova and E.L. Rukavishnikova correct the stages and sequence of the pedagogue's educational tools and application in order to achieve the educational goals and to make the used technology, methods and tools effective at the level of innovation. who emphasized that it is a choice. Therefore, the correct selection of educational technologies and tools in the teaching of drawing provides a correlation between the goal and the result. Therefore, pedagogues of higher education institutions are required to pay special attention to their correct selection and application. "Innovation" - (ingl. "innovation") - innovation, invention. If the activity has the characteristics of a short-term, integrated system and serves only to change some elements in the system, it is called novation (updating). if it serves a fundamental change, it is called innovation. "Education" is the process of imparting knowledge, skills and abilities, the main means of preparing a person for life and work. In the process of education,information is obtained and education is carried out. Education means teaching in a narrow sense.

But it is not only the process of teaching in different types of educational institutions, but also family,production. and also refers to the process of providing information in other areas.

"Technology" - (Greek. "techne" - skill, art, "logos" - understanding, doctrine) organization of certain (production, social, economic, etc.) processes at a high level of skill and art. Educational technology - (see "an educational technology") the organization of the educational (teaching) process at a high level of skill and art.

Educational technology is a step-by-step implementation of the educational process on the basis of an integrated system, certain methods, forms and tools to achieve a specific goal. system development, their effective and efficient use, and high-level management of the educational process.

Educational method is a method (way) of joint activity of teachers and students aimed at solving the collective tasks of the educational process. Educational methodology is a system (procedure) of implementing the educational process through scientifically based methods, rules and methods.Educational tools are a set of forms, interactive teaching methods and tools that help to achieve the goal in the educational process.

Innovative educational technology is a set of new methods, forms and tools based on a new approach to achieving educational goals. In the process of conducting the research, the teaching methodology based on practical integration in the development of students' design and construction competence was focused on the introduction of career-oriented creative issues, personal qualities and the structure of professional graphic activity, and the effective use of innovative educational technologies in classes.

In this, first of all, they are characteristic for practical training innovative educational technologies "Effective practical project" and "Ubiquitous Learning" that can provide the expected result, taking into account their characteristics, were developed and improved in terms of content. These educational technologies are important in forming students' skills of creative activity and organizing collective creative work.

1. "Effectstive pratstitsal projetst" (Effective practical project) technology. is an innovative educational technology with a special program. The purpose of technology. Future teachers of drawing will develop group, collective and individual work, creative, creative and initiative activities, practical application of theoretical and practical knowledge and responsible approach to work, as well as design and construction skills. The advantage of technology : based on the principles of systematicity, efficiency, innovative approaches, cooperation, demonstration, programming, creativity, individuality, the communication between the teacher and the learner is explained on a completely new basis.

Classification of technology: for each meeting with the teacher, the learner brings a certain level of preliminary preparation with the help of this technology, taking into account the abilities of personal learning. The essence of the technology: "Effectstive pratstitsal projetst (Effective practical project)" innovative technology of education provides individuality, integrity, relative independence and logical completion of content, flexibility of structure, speed of monitoring and evaluation of educational results, learner, future or ensures that the working specialist has special (professional) competence qualities and achieves a specific goal in development.

Technology methods and tools: "Blitz survey" method, "Who can make a model faster" game technology, handouts, visual graphic images (posters), 3D animations and automated non-traditional test questions.

Equipment: Computer, electronic board, mobile communication tool, touch tablet, set of equipment and educational tools necessary for design and construction activities. Details of the technology. In practical training, small groups of three participants are formed and named as follows: Group 1 - Designer, Group 2 - Designer and Group 3 - Constructor. Each student in the group is assigned the task of drawing a detailed project (using AutoCAD graphics software) and building its structure in 3D (using 3D Max graphics software). The detailed projects of each student are evaluated by a group of experts, one of the most suitable detailed projects from the group is selected and approved. Based on the approved detail project, the detail construction is built by the participants in the group, and the construction technology is

implemented and brought to the state of the finished detail. The finished product of each group is evaluated by an expert group and the evaluations are explained.

The innovative educational technology "Effetstive pratstitsal projetst" is implemented in the following stages:

Stage 1: Formation of small groups and expert group;

Stage 2: Presentation of methods and educational tools for the performance of the task;

Stage 3: Selection of a suitable project and recommendation for the next stage;

Step 4. Development of detailed construction based on the selected project;

Step 5: Analysis and evaluation of the created structure. Stages of implementation of the innovative educational technology "Effectstive pratstitsal projetst".

Stage 1. Formation of small groups and expert group.

Students are divided into 3 subgroups depending on the level of mastery of knowledge related to science. The expert group consists of the 3 students who scored the highest points based on the questions on the topic, and their task is:

1. Supervising the activities of students and groups;
2. Evaluation of detailed projects (according to detailed requirements) and approval;
3. Determining the suitability of the detail for work;
4. Pay attention to the correct choice of construction methods;
5. Monitoring the stages of the construction process;
6. Making a conclusion on the quality indicators of the correct implementation of construction technology;
7. Taking into account the standard of time;
8. It will consist of evaluating the total product.

Stage 2. Presentation of methods and educational tools related to the performance of the task. The components of the innovative educational technology "Effectstive practical project" developed for the development of students' design and construction competence, spatial imagination, logical thinking and creativity are presented. is called a method that requires a return. During the lessons, questions according to this method are mainly asked by the teacher. The answers to the given questions can be returned collectively, in groups, in pairs or individually.

In the first stage, each student participates and is evaluated individually. In the second stage, the group will be divided into small groups of at least 4 people and will be evaluated.

At the end of the lesson, the teacher shows and evaluates the shortcomings of each student individually and in groups.

The purpose of using the above method in classes is to provide students with theoretical knowledge and improve their practical skills.

Because this method differs from other methods in that it teaches the student to work with a team, to think freely, and every student is not left out of consideration. It is also easy to teach and evaluate the teacher. The main advantage of this method for the student is that the student learns to work in an orderly and step-by-step manner, not on white paper, but in his imagination, that is, in his spatial imagination.

The teacher draws up questions that require to reveal the essence of the studied topic, certain components, and brings it to the attention of students.

For example, it is in the content "Find the third view of the detail based on the given two views, construct the axonometric projection, cut in the orthogonal and axonometric projections" and its plan-algorithm is required to be determined.

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