

# INNOVATIVE METHODS OF TEACHING ARCHITECTURAL DISCIPLINES

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**Abstract** - This article presents materials that reveal the importance of introducing innovative methods of education in the technology of teaching architects, integrating interactive techniques of mastering an architectural specialty into traditional methods, which is a means of intensifying the educational process.

**Index Terms** - interactive learning, distance education technologies, projecting method

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## INTRODUCTION

Architectural education is one of the most interesting fields of activity. Students who receive artistic and design specialties acquire the skills to create a new aesthetic that transforms the spatial environment. To date, the use of innovative methods of teaching, which are remote technologies are gaining momentum, are one of the promising directions in teaching, the implementation of which is part of the state program for the development of education and regarded as one of the effective tools of innovative education.

Based on the new directions of innovative education and taking into account the relevance of distance teaching methods in interactive learning technology, within the framework of the specialization of architects, these tendencies specified and reflected in the training methodology for students.

At the stage of mastering new technologies, teachers transfer didactic and traditional methods to distance education, although the content of pedagogical activity in the new educational environment is certainly different from the traditional one.

When organizing the educational process, many teachers also actively use the method of projects. The design process allows you to integrate knowledge from different learning areas and subjects, makes it possible to apply them in practice, encourage the promotion of new ideas. In addition, the project activities of students can be

widely used at any level of education in educational institutions of various types. The educational process based on designing is a search by students of new cognitive-applied, practical information, knowledge about the ways of organizing future professional activity. At the heart of educational design are sequential blocks of actions and their operations. However, this activity does not presuppose a rigid algorithmization of actions, does not exclude a creative approach. Design assignments provide students with the opportunity to think and reason about various solutions to design problems. Therefore, when carrying out project assignments, the emphasis from various types of exercises transferred to active thinking activity.

Design allows students to creatively applied knowledge. In carrying out project tasks, students acquire certain intellectual and creative skills. The intellectual skills include the ability to work with text and visual information, analyze it, and draw conclusions. Creative skills involve the generation of ideas, finding several solutions to the problem, predicting the consequences of a decision.

First of all, "infocommunication" classes come to replace standard contact classes. To conduct such classes, electronic training resources developed, which are a product of joint activities of teachers acting as developers and programmers, creating a shell for a new resource. Therefore, the creation of an innovative, fundamentally distinct educational environment is possible only based on telecommunications.

First, this is the development of a new method of teaching in the electronic educational environment, where everything is adapted to the learner, the process of individualization of instruction is laid down and a methodology for optimal mastering of knowledge is developed by restructuring the educational environment to the individual capabilities of the student.

Creation of the electronic information educational environment in the university, first, will require the development of so-called intelligent educational robots (these are lectures with feedback, super-tutors, and adaptive test-trainings) in relation to the specifics of the teaching of architectural disciplines. In other words, it is required to develop interactive teaching methods (in the form of computer programs) that allow applying the system of asynchronous counseling of students through communication networks and realize this concept in the form of a set of software and technical tools of the educational environment. One of the most promising and popular information technologies is multimedia (multimedia from English, multi, media), which allow creating entire collections of images, texts and data accompanied by sound, video, animation and other visual effects (Simulation); include an interactive interface and other management mechanisms. Currently, there are many different ways to provide information using multimedia tools. The most common for today is a set of equipment - a multimedia projector and a computer. Interactive whiteboard, computer, projector, specialized software allow you to configure and use the entire multimedia package as a whole. The principles of the interactive whiteboard with a direct projection (on reflection) are quite simple. In fact, this is a large graphic tablet. Its white surface plays the role of a conventional screen, but unlike him, it is sensitive to depression (touch pad). "Draw" on the board can be any solid object or even a finger. The computer program perceives these actions as the movement of a mouse on a conventional PC. Touching the surface of the board or navigating through it, you can also press the on-screen buttons, drag objects, scale and rotate them, work with the elements of the dialog boxes displayed on the board. In the same way, print the text,

touching the keys of the virtual keyboard on the screen-board.

Electronic educational-methodical complex (EEMC) is a comprehensive educational software system providing continuity and completeness of the didactic cycle of the learning process. It provides theoretical material, provides training and information retrieval activities. The EEMC can be placed on a website on the Internet (in this case, the trainee gets the opportunity to download the EEMC to his computer and work with it) and recorded on a CD ROM.

EEMC has a lot of advantages: it can be easily republished, i.e. correct as necessary; allows to represent phenomena and processes in dynamics (use elements of animation); use video insets. In addition, the electronic educational and methodical complex is personal-oriented - each student chooses an individual trajectory of learning in the course of training.

The teacher's electronic portfolio designed to organize a productive interaction between the teacher and students in the learning process. It is a means of forming a model of individual pedagogical experience, as it allows each teacher to develop his own individual teaching strategy, his pedagogical system.

The electronic portfolio includes materials for conducting classes (presentations, supporting abstracts, etc.);

- ✓ Materials for the organization of independent work of students (descriptions of practical and laboratory works, task cards, handouts, topics of abstracts, etc.);
- ✓ Materials for monitoring the results of training (tests, control practical tasks, means of rating evaluation of knowledge);
- ✓ Articles for journals, reports at educational-methodical conferences;
- ✓ Materials that represent the experience of colleagues.

The process of teaching, the student uses materials from the teacher's portfolio, and the teacher uses the best work of the students. As a result, a unified educational environment created that ensures effective interaction between teachers and students.

The use of multimedia technologies in the process of teaching makes it possible to present educational material not only in a traditional, but also in a more accessible form for students' perception visually. Having access to the Internet during the classroom, a student can immediately find a textbook recommended by the teacher and, if necessary, clarify the information; in the on-line mode to pass a test for personal characteristics. Preparation of creative assignments in the form of computer presentations (for example, reports to student conferences) develops students' creative imagination, forming imaginative thinking. The presented video contains not only analytical information (in the form of graphs, diagrams, definitions), but also drawings and photographs illustrating the main points of the report. Using the interactive whiteboard allows the teacher to reproduce formulas, create charts, draw tables using the computer and the projector on-line, without using the traditional whiteboard and chalk, and fully use the Internet during the session.

Traditionally, architectural education built on the principle of direct transfer of knowledge, skills and abilities from teacher to student, but today's tendency to self-gain knowledge and refinement of acquired skills and skills without directly involving the teacher in this process becomes one of the main elements.

With the traditional process of teaching architectural design, in the form of consultation, the teacher has the necessary feedback for learning immediately, and how to do it remotely and without a teacher. To what extent should interactive fragments be included that allow the teacher to connect without showing how "the pencil lies on paper", but entering into direct communication through technical means.

Thus, the use of interactive forms of education is increasingly becoming an integral part of educational technologies, including in the field of architectural education. Increasing the professional competence of teachers in this direction is the key to the success of this innovative process.

## CONCLUSIONS

It can be concluded that the approach to the integration of innovative methods into the system of architectural and artistic education acquires the character of successive improvement of its components to the level of their interactivity and infocommunication. The types of their development tend to the forms of matrix schemes that are convenient for digital provision of the learning process.

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