

IMPROVING THE DESIGN-CONSTRUCTION COMPETENCE DEVELOPMENT MODEL OF STUDENTS

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ТАЛАБАЛАРНИНГ ЛОЙИХАЛАШ-КОНСТРУКТОРЛИК КОМПЕТЕНТЛИГИНИ РИВОЖЛАНТИРИШ МОДЕЛИНИ ТАКОМИЛЛАШТИРИШ

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СОВЕРШЕНСТВОВАНИЕ МОДЕЛИ РАЗВИТИЯ ПРОЕКТНО- КОНСТРУКТОРСКОЙ КОМПЕТЕНТНОСТИ СТУДЕНТОВ

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Annotation

This article provides reasonable information about the development model of project competence of future drawing teachers. It is written on the basis of the results of research conducted by scientists-teachers on the development of professional and project competence of future teachers.

Keywords

model, design, graphics, competence, sketch design, raw construction, creativity, creative, procedural, interactive methods.

Аннотация

Ушбу мақолада бўлажак чизмачилик фани ўқитувчиларининг лойиҳалаш компетенлигини ривожлантиришнинг модели ҳақида асосли маълумотлар берилган.

У педагог-олимулар томонидан бўлажак ўқитувчиларнинг касбий ва лойиҳалаш компетентлигини ривожлантириш бўйича олиб борилган тадқиқот натижалари асосида ёзилган.

Калит сўзлар: *модел, лойиҳалаш, график, компетенция, эскизли лойиҳалаш, ҳомаки конструкциялаш, ижод, креатив, процессуал, интерфао методлар.*

Аннотация

В данной статье приводятся обоснованные сведения о модели развития проектной компетентности будущих учителей черчения. Она написана на основе результатов исследований, проведенных учеными-педагогами по развитию профессионально-проектной компетентности будущих педагогов.

Ключевые слова

модель, проектирование, графика, компетентность, эскизное проектирование, необработанное конструирование, креативность, креативные, процедурные, интерактивные методы.

Introduction. The professional activities of bachelors in the field of Fine Arts and engineering graphics Bachelor's degree include the following:

- teaching drawing in general secondary schools and secondary vocational schools;
- work as a tutor in secondary schools and non-secondary vocational schools;
- to work in the educational system in the positions of kabinet mudiri, Laboratory Assistant and equivalent;
- teacher of drawing science working as a Methodist in the ministries, departments and institutions carrying out education in the areas of appropriate education;
- work as a junior researcher in research organizations in the direction of pedagogy and technical sciences;
- work in general secondary and extracurricular educational institutions;
- work in local self-government bodies and on-site spirituality and enlightenment centers [1].

Design by P.Khill - several different stages of design activity have been identified:

- Evaluation of implementation - perception of preliminary information, creation of methods of holistic production of products.
- Sketch design - develop and choose the optimal concept and its best solutions.

Half-ready construction – to reveal the engineering essence of the construction, where the options for making decisions corresponding to the requirements are changed and evaluated, the use and completion of the product used is carried out in accordance with the requirements of production.

There are general legalities in the design and construction activities that unify this area of study: to understand the terms of the task, to plan for its solution and to solve it. These three main parts of the design process, in a condensed form, represent creativity and are considered the main managers of the solution process in the design activity. All these components - the idea of understanding the terms, solving the problem-perform the task of regulating [2].

Fine Arts and engineering graphics on the basis of the qualification model of the graduate of the direction of education, the issue of increasing the interest of the pedagogical community in the modernization of the content of drawing science, the revision of educational goals and results is covered in many scientific and pedagogical studies. According to the results of the study, the graduate's competency model is formulated on the basis of a competency approach that strengthens the practical direction of education, including the individual and active sides, the humanitarian direction of Education. The competency approach allows enhancing to focus attention on the side of the result, k expansion the educational content significantly expansion.

The analysis of the pedagogical system of higher educational institutions on "drawing science" made it possible to identify the problems of formation of the subject of educational activity. Proceeding from the requirements of the new paradigm of drawing science, it is necessary to understand the quality of drawing science from a new point of view, interpretation showed the need to improve the method of development of design competency in future drawing science teachers on the basis of a modular-competency approach. To do this, the pedagogical bases of the introduction of modular and interactive educational technologies into the process of drawing science, primarily changing the content of pedagogical activity, were formed.

Literature analysis. In the research work of Professor N.A.Muslimov, scientific and methodological bases of formation of professional pedagogical qualities are studied, as well as special attention is paid to the issues of formation of a new generation of specialists, spiritual-morally mature, having an independent worldview, educating a creative thinker, a harmonious person loyal to Universal and national values and bringing up an adult [3].

Pedagogical scientist Sh.S.Sharipov developed the theory and practice of ensuring the continuity of professional creativity of students, scientific and pedagogical bases of development of inventive and creative abilities of students [4]. D.K.Mamatov developed the scientific and methodological basis for the development of spatial imagination of students in the teaching of drawing science and showed ways of application to the practical process. The sum and conditions of the factors providing the process of developing the personality of the teacher of drawing science have been determined and the content has been revealed [5].

Analysis of scientific and pedagogical literature makes it possible to determine the following composition of the design competence of the future drawing science teacher:

- motivational-value component (personal qualities that determine the position and direction of a person in the quality of an object of activity;
- availability of theoretical knowledge that provides conscious activity;
- the knowledge and skills mastered by the individual, tested in practice, are considered the most effective;
- to assess the individual's independence, activity, creativity, creativity and self-evaluation in the design activity, constructiveness in the implementation of design work.

Research methodology. In the development of the design competence of future drawing science teachers, it is important to choose the right educational methods, to master the methodology in the organization of training sessions, especially practical ones. In the selection of educational methods in the teaching of engineering graphics subjects, attention was paid to the following: general objectives of teaching; specific aspects and characteristics of a particular educational science; objectives, tasks intended for the teaching of the subject, as well as the content of the instructional material intended for each particular occupation; the volume of time allocated for the study of; the level of preparation of students, psychological and physiological indicators; the availability of educational, technical and technological equipment (educational equipment, pointing weapons, technical, computer and other material means) of the educational process; the level of technological readiness and personal qualities of the educator.

The creation of a model of the process of development of the design competence of teachers of the future drawing science at the university was one of the scientific and pedagogical tasks solved during the research period. "The Model is a model – that is, an analogue of the original (system, structure, drawing), similarity of a part of a certain natural or social things, the dressing of human

culture, congestive-theoretical formation, etc. – in the logic and methodology of science. This analogue serves to expand and preserve the knowledge (information) about the original and to design, modify or manage the original" [6].

It makes it possible to determine the content of the development of the design competence of the future drawing science teacher and determine the composition of the model of its development. As a result of the study and analysis of scientific research works, as well as practical pedagogical experience, a model for the development of the design competence of the future drawing science teacher was developed

The model of the development of the design competence of the future drawing science teacher consists of the goal (goals and objectives of the same process), the pedagogical process (theoretical, methodical and technological processes of educational and professional activity of the educators), the result-evaluation components.

The purpose of the block is to prepare a drawing science teacher who has mastered the necessary and sufficient content of drawing science, successfully mastered the programs of drawing science, deepened his knowledge in the disciplines of specialization and carefully mastered technological competences, which are defined in the "qualification requirements of The Bachelor of drawing science". The development of design competency dictates the formation of graphic knowledge, skills, qualifications and competences, taking into account the requirements established in the standards of public education in future drawing science teachers, employers proposals, trends in the development of Science, Technology and technology.

As the organizers of the pedagogical process block, the following were defined: the subjects of graphic preparation, methodological approaches, development of design competency focused on the development of the drawing science environment (goal setting, research, analysis), stages of development of design competency (organizational, developing, practical, reflexive, analytical), integrated application of pedagogical technologies, interactive teaching methods, forms of Education (theoretical, practical, individual), educational tools (graphic assignment systems, tools, machine details); didactic conditions for the development of design competence of teachers of the future drawing science: qualities that form the basis of competence (motivational-valued, cognitive, practical-active, reflexive-evaluation), educational-methodical provision.

In the result-evaluation block, the criteria for assessing the development of design competence (motivational-valued, cognitive, practical, creative) and levels (high, medium, low) were selected in the future drawing science teachers.

Conclusion. Pedagogical experience-in the process of testing, interactive methods of teaching can be purposefully used. In the introduction of the model, it is possible to achieve effective results in the process of drawing on the basis of the use of interactive techniques such as "mentalit" and "studes".

When applying the "Mentalit" method (mentalit is frantically derived from the word "mentalité", which means "mindfulness"), it was envisaged to develop the skills and skills of performing graphic and constructive work in students by ensuring that the drawing (image)is generated at the same time together with the teacher of science directly or the moderator who is taking the "master class".

The method "mentalit", which has a competitive character, helps students to develop their interest in deep mastering of the basics of drawing science, to increase the activity of teaching and learning, to form the ability to quickly receive information (educational information). On the basis of the application of the Studes method, students develop graphic creativity skills, develop skills of working in a team.

The investigative activities of small groups were carried out in several stages. At the first stage, each student has chosen a topic that is interesting to him and joins a small group of people working with the appropriate topic. At the second stage, the group members draw up a joint plan for the execution of training assignments on the subject, and the tasks are distributed among the group members. At the third stage, each member of the small group is searched for a way to perform a specific task: collected information, summarized the data, analyzed it, came to the final conclusion, exchanged views with his groupmates, revised the conclusion on the basis of their feedback. At the fourth stage, each member of the small group prepared a report on the results of the research. At the fifth stage, a presentation of a small group is prepared on the basis of reports. At the sixth stage, each subgroup activity in the academic community is assessed.

During the period of the study, a presentation was made on a number of topics in small groups based on the Studes method and the result was evaluated based on the selected criteria. The use of interactive techniques "mentalit" and "studes" in the process of drawing science allows you to achieve effective results.

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