

**IMPROVEMENT OF COGNITIVE COMPETENCIES OF STUDENTS IN THE
TEACHING OF DRAWING SCIENCE**

Mamatov Dilshod,

professor of Bukhara State University, doctor of philosophy in Pedagogical Sciences
(PhD).

Abstract: In the following article the modern methods of perfection of the cognitive competencies of the students in teaching the lesson of drawing are analyzed based on the available data. The article provides information about the Department of drawing and drafting Sciences.

Keywords: drawing, painting software, project, design, positioning, updated cognitive, digital, autopsychological competencies

**СОВЕРШЕНСТВОВАНИЕ ПОЗНАВАТЕЛЬНЫХ КОМПЕТЕНЦИЙ
УЧАЩИХСЯ ПРИ ОБУЧЕНИИ РИСОВАНИЮ**

Маматов Дилшод, профессор Бухарского государственного университета, доктор философии (PhD) по педагогическим наукам.

Аннотация: В данной статье проанализированы современные методы совершенствования познавательных способностей учащихся при проведении урока черчение на основе имеющихся данных. Также представлена информация по разделу рисование и начертательной геометрии.

Ключевые слова: рисунок, программа рисования, проект, дизайн, позиционирование, обновленные когнитивные, цифровые, аутопсихологические компетенции

Introduction. The future of drawing science is a field of science that is important and mandatory in classes for technical specialists taking shape in secondary and higher educational institutions. Currently, there are many different drawing programs, among which professional (paid) and simplified (free) programs can be distinguished. For you, we have prepared an overview of the most popular and multifunctional of them. Nowadays, in their tool it is possible not only to draw complex sketches, but also to print a ready-made drawing, see and correct as needed, but also to create their own projects. Drawing projection reflects on some methods of applying innovative technologies.

Methods. Graphite (general application). Designed to create two-and three-dimensional drawings, organigrams and diagrams of various levels of complexity and detail. The program has several functions and tools for quickly and accurately creating drawings. There is a spatial binding system, the ability to create special libraries, flexible dimensions, etc. This program is suitable for students of technical-oriented universities, engineers and ordinary users. This allows you to create multi-page PDF documents and provides accurate import and export of images in the popular CAD format.

The principle of operation is to build a drawing project from 2D and 3D components. This allows us to create the simplest drawing and complex mechanism. It works with three formats: DXF, DVG and DXF [1].

Unlike its predecessor, AutoCAD does not work with the ESCD system formed in Western Europe, only offering an international program. In addition, its disadvantages include the high cost of the full-featured version.

The most important conceptual position of the Innovation Platform uses the student as an active participant (subject) activating the process of professional formation of a person with general and professional competencies included in the state educational standard and additionally with updated cognitive, digital, autopsychological competencies. All this is noted in the Adaptive model of the teacher's future of an innovative type, developed in schools.

Cognitive competence refers to critical, systematic, strategic, creative thinking skills in terms of the concept of lifelong learning (lifelong education), as well as the design skills of individual educational trajectories. Information and communication (digital) competence includes: educational portals, skills for working with online course platforms, project communication skills in online groups, skills for creating adaptive electronic textbooks taking into account the cognitive styles and types of thinking of students, skills for programming educational games, as well as from digital technologies for education use skills in self-development [2, 45].

Autopsychological (regulatory) competence includes the acquisition of physical and psychophysiological resource management skills, emotional and motivational-volitional self-management, time and stress management skills in professional activities, as well as Psycho-hygiene skills of Information work ("digital sketch", "introduction of the necessary information for drawing science").

Art (artistic) projects are essentially universal: they can be high-tech classes on artistic topics, educational activities among students, as well as a form of school career guidance work among high school students of the city. The main advantage of the Art project is that students are its active partners. Each art project takes a long time to develop and implement in the audience. Below are the daslabki qualification requirements required in drawing science.

1. Formation of a creative group of students for drawing work, the formation of the theme, goals and objectives of an art project in drawing;
2. Work on the Information Project: collection, classification, analysis, processing and generalization of information on the topic;
3. Identifying the main problems on the topic of the Art project, developing problematic issues for discussion with listeners;
5. Creation of an art project structure;
6. Selection of projects for drawing work, processing and belching the composition;
8. Development of a detailed scenario of an art project;
9. Creation of an electronic support system for an artistic project: selection, processing and creation of audio and video materials, creation of presentations;
10. Creating costumes and props;
11. Distribution of drawings in the lesson and their study;
12. Selection and study of drawing compositions, miniatures, etc.;
13. Individual, differentiated, group and consolidated artistic project exercises;
14. Creating advertising for an art project (advertising posters, booklets, calendars);
15. Implementation of an art project among students.

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Each of the listed stages of work contributes to the formation and development of most of the skills of students that make up cognitive, digital and autopsychological competencies – the main components of the Adaptive model of the teacher of the future innovative type.

The most important stage in working on a drawing project is the so-called “generation of ideas”, identifying the main problems on which its structure will be built, as well as developing problematic issues for discussion with the audience during an art project (the most difficult universal problem usually becomes a mini-discussion problem).

This stage of drawing work forms critical thinking – the most important component of cognitive competence. Critical thinking is also formed at the initial stage of working on an art project, in the collection, classification, analysis, processing and generalization of information on the topic.

When working on drawing projects, the creative, systematic and strategic thinking of students is formed, which are important components of cognitive competence for them.

An artistic project is a special system of presenting new knowledge, the formation of a specific educational and educational environment with high information and emotional saturation, rich semantic potential and relative freedom of communication. Systematic and strategic thinking skills develop primarily in the construction of the structure and scenario of an art project.

The most important component of cognitive competence is the formation of creative thinking. Artistic design opens up a wide range of opportunities for the manifestation of creative abilities of each student.

When creating an art project, students can: adapt the source texts for the intended audience, draw up a script for an art project.

Draw a certain miniature, describe it in words, perform exactly this miniature in computer technologies, create costumes and props, create an ICT accompaniment, create an advertisement for an art project, organize an audience (develop and conduct Games, quests), communicate with the audience, conduct dialogue (mini - conversations), formulate and argue their point of view, develop and conduct mini-discussions, etc.

One of the important conditions of the drawing lesson is that during the lesson, the most creative students can also participate in collaboration with the teacher in order to create sketches, sketches and templates for miniature and still life.

Another component of cognitive competence is the ability to design individual educational trajectories. In artistic design, students are grouped into small groups of 7-10 people, each of whom is working on their own artistic project. In the process of work, each student can choose a business “at his discretion”, in accordance with its capabilities and abilities, each person makes a worthy contribution to the overall work.

In the process of working on projects for a drawing lesson in senior classes, self-study and mutual preparation, mutual assistance, mutual assistance in various activities are of great importance. Many students master almost all the necessary types of activities in artistic design.

As a result, the students themselves evaluate the contribution of each member of the group to collective work on the creation and implementation of an artistic project. Thus, artistic design allows the formation and implementation of individual educational trajectories of students, including such important stages of this process as interaction, mutual assistance and reflection.

This competence is formed during the work on artistic drawings. This happens both at the initial stage of artistic design when creating an Information Project (collection, classification,

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analysis, processing and generalization of information on the topic), and at the next work - when creating ICT support for an art project (system). presentations and videos that are often filmed and edited by students are subject using a bridge). The purpose of using ICT in the process of artistic design is to achieve a deeper perception of material through imaginary perception, to strengthen its emotional impact, to ensure “immersion in drawing”.

The lesson begins primarily with the definition that the methods of drawing technical drawings correctly, as well as the science of the correct Organization of all areas of the drawing industry, are called drawing.

We use innovative technologies in drawing when performing educational drawings in geometry, Projective Drawing and construction drawing.

Before making a drawing project in the audience, students create advertising posters, booklets, calendars in order to attract an audience and reward the most active listeners-participants of the art project. Students' project communication skills are also developing in online communities, as the process of working on art projects requires constant communication not only in the classroom, but also between creative team members and the teacher.

Creativity is one of the most” important " activities. The ability to regulate its physical, psychophysiological, cognitive, emotional, volitional resources (autopsychological competence) in the process of complex and long-term project activities is an important aspect of the formation of an innovative type of future teacher. The information obtained during the study of the basics of psychology on the types of personality and ways of thinking, mechanisms of psychological protection and strategies for behavior in conflicts will help students maintain a positive “self-image” in the process of preparing and conducting artistic projects.

To improve the skills of managing the physical and psychophysiological resources of students, trainings are held on the formation of a team and the development of creative thinking. Emotional and motivational-voluntary self-management skills are formed through the detailed planning of all stages of the preparation of conversations, role-playing games, drawing projects. In order to master the skills of managing time and artistic composition, a system of Quick reports is used in specially created communities (“conversations”) on social networks, in the game it makes sense to support “flow activities”(the logic of Level achievements).

Autopsychological (Regulatory) Authority also includes the use of “digital drawing”. This is not only a temporary refusal to use gadgets during classes and classes, but also the formation of students' ability to find proven information on internet sites, which is checked in terms of reliability and scientific data. In general, working on the “skills of the future” included in the autopsychological competence of the future teacher activates the processes of self-knowledge and self-development of the student.

Thus, in a comprehensive school, artistic design is an effective means of forming the personality of an innovative type of teacher. In the disciplines of drawing and drawing geometry, auxiliary projection of graphic processes, design functions and motivational-value, practical-activity, reflexive-evaluation components are determined by prioritizing the logic of optimal support for creative activities aimed at finding a creative solution to educational and cognitive tasks;

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that strictly defines methodological conditions, such as maximizing individual characteristics, ensuring the stability of the creative environment, accelerating dialogical joint activities;

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In the disciplines of drawing and drawing geometry, the methodology for the development of creative activity is improved by increasing the level of feedback with the organizational and technical inclination of heuristic methods aimed at finding the elements that will be needed in auxiliary projection (construction, projection, technical-design,) relying on associative, intuitive and logical ascetic in search of the unknown [3, 234].

The pedagogical mechanism for the development of creative thinking of future teachers is improved on the basis of expanding the positive dynamics of compositional-creative activity on the systematic correction of the state of reflexivity with the individual educational trajectory of the subject-subject relations system, aimed at demonstrating the student's personal potential.

Discussion. The problem of developing spatial thinking at a qualitatively new level can be solved by modern computer-aided design systems. Since architectural and construction drawings are studied by students of the Faculty of Arts and graphics at the end of the course “fundamentals of drawing and drawing geometry”, the logical continuation of this course is the study of computer tools for displaying graphic information, which, in our opinion, is more visible. dynamism, high speed of execution of various images, convenient and intuitive graphical interface.

A special influence on the formation of positive motivation is exerted by: the information saturation of the curriculum, its relationship with previously studied material, a clearly realized perspective of the educational work of future teachers, the use of the “success methodology”, instilling in the student faith in their abilities and strength, the use of a rating system for assessing students' knowledge.

Modern software used in chess lessons.

The following programs are used for use in drawing classes: Adobe Photoshop CC; MyPaint; DrawPlus; Clip Studio Paint; CorelDRAW; Affinity Designer; Autodesk Sketchbook; YouiDraw Drawing; Mybrushes Paint for Mac; Epic Pen; Flame Painter; ChemDoodle; Paintstorm Studio; MyPaint; Mischief; DrawPlus; Clip Studio Paint; Krita; MediBang Paint Pro; procreate.

In addition to these broad-spectrum applications, there are also narrow-focus applications. For example, for drawing electrical circuits: DSSim-PC, sPlan, Circuit program, for computer — aided design of diagrams and microcircuits-ExpressPCB.

Conclusion. A positive motivational attitude towards graphic activity in the Visual Arts Educational direction can give a significant impetus to design. At the same time, the motivation for the fertile use of innovative technologies in drawing science is determined by the positive

attitude of the student youth to the entire educational process, stable internal motives, a passion for finding an original solution to the assigned graphic task.

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