



DEVELOPING CREATIVITY IN STUDENTS THE IMPORTANCE OF CONNECTING DRAWING SCIENCE WITH COMPUTER SCIENCE

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ABSTRACT

This article presents methodological recommendations. It is aimed at developing the creative abilities of students in computer science classes through the study of graphic image processing technology. The forms, methods and tools of teaching this subject are considered, which will have the best effect on revealing and improving the creative potential of students..

Today, our country needs personnel who can accept and implement creative ideas and solutions, who can think deeply and critically. It has been repeatedly emphasized that education should take on a completely new level, corresponding to one of the main tasks of our society - the upbringing of competitive human resources. While the content and structure of modern education are currently being updated, the development of creative abilities in students opens up a new direction and requires further clarification.

Therefore, at this modern stage, it is important to qualitatively form and develop the basic competencies of students through new innovative pedagogical technologies. For this, it is necessary and necessary to organize pedagogical situations that will help develop the child's personality, including contributing to the growth of his creative activity and interest in knowledge.

Initially, teachers need to determine the method of teaching computer graphics in their work, which consists of two main elements: the methodology of teaching the subject and the means of developing the individual creativity of the student.

Of course, let's start by analyzing the first element of the study. The entire educational process should be focused on combining three main and complementary components: regular classes, extracurricular activities with graphics, and additional training, which plays an important role in deepening the study of this topic.

What methods are most suitable for teaching students to work with graphic images (drawings) in the classroom? Let's figure it out. Of course, it is better to focus on the explanatory and illustrative method of teaching - in which the teacher first explains the material, and then demonstrates it using various visual teaching aids. This method is very useful for organizing

the topic of computer graphics. Using a display screen, the teacher demonstrates various educational elements of the lesson content (prepared presentation slides, interface elements, program fragments, diagrams, texts, etc.). At the same time, the teacher himself works at the computer, and the students watch his actions or repeat these actions on the computer screen. In some cases, the teacher sends special demonstration programs to the students' computers, and the students work with them independently. The increase in the role and didactic capabilities of computer displays is explained by the increase in the general graphic capabilities of modern computers. The main didactic task of the demonstration is to familiarize schoolchildren with new educational information.

The next method that we will consider is the reproductive method. This method is convenient when students are just starting to get acquainted with programs aimed at processing graphic images. In this method, the teacher encourages and creates conditions for the repetition of knowledge and skills. Students repeat what the teacher suggests. This method is convenient to use in the first practical work on studying graphic images. Children repeat the teacher's actions, regardless of their complexity, but it should be borne in mind that this method cannot be abused, since it develops the creative potential of students to a small extent.

Another method that is convenient when first getting acquainted with graphic image processing programs is the step-by-step instruction method. Each process is divided into stages, each stage is carried out using instructions, commands, actions and operations. Reference and control points are located between the chains of actions, that is, they determine what should result from this action. If this stage is performed correctly, the next action is performed. These instructions can be distributed in the form of cards and with an individual task for each student.

Problem method. This method is already more interesting, it can be used to develop students' knowledge and creative skills in working with graphic images. However, it should be taken into account that students should already have some skills in the software used, know the program interface. In this method, the teacher formulates some problems or issues, solves them in whole or in part, and the children perceive, understand, remember all this, and get a sample of scientific thinking. Below

An example of this method is given. The following problem is given - one of the fruits in the picture on the table needs to be painted. The teacher uses the GIMP program, paints over a part of the picture with the brush tool so that the background of the picture is not distorted, the students look at it, analyze it. Then the teacher turns to the students and asks them to do something similar, but in a different way.

The research method of teaching is an analysis of the material, the definition of problems and tasks, and after brief oral or written instructions, students independently organize literature, sources, make observations and measurements, and perform other search actions. Initiative, independence, creative search are most fully manifested in research activities. Methods of educational work directly translate into scientific research methods. Example: Students who master the ABC Pascal graphics module should be offered to program a moving image, thereby creating animation.

In world practice, ways are being sought that involve the organization of independent student activity, involving each student in active creative activity. One of the ways of such independent work is cooperative learning. Individual, paired and group work is increasingly

replacing the previous ones. Pair or group work of listeners is much more effective than explanatory, illustrative and reproductive methods. Students in groups jointly develop an action plan, find sources of information, ways to achieve goals, determine roles, put forward and discuss ideas. All students are involved in creative activity. Cooperative learning allows you to master the elements of communication culture and management in a team

(ability to share responsibility for a common task, joint

full understanding of responsibility for the result and the success of the partner). The project method always involves solving some problems, on the one hand, using various methods, and on the other - combining knowledge and skills from different areas of science, engineering, technology, creative industries.

Working on the project method involves not only the presence and awareness of the problem, but also the process of its disclosure. In the school computer science course, the following types of projects can be used to organize topics with graphic images: a picture drawn in Paint and a short story (song) to this picture; creating a wall newspaper, creating a poster for the school, modeling a self-knowledge cabinet using 3D images, developing a school logo, designing pages of the school website for the Day of Knowledge, etc. A distinctive feature of the methods for developing creative imagination is also the construction of various tasks based on the principle of combining responses to different stimuli. Stimulus can be given in the form of one type of information, and the reaction should be obtained on the basis of the previous type of information. As an example, we give the following: students are offered to listen to a musical fragment, a story or a fairy tale, after analyzing which the child creates a drawing that associates this musical fragment with this musical fragment.

Additional training in graphic information technologies should include homework aimed at a deeper understanding of the topic of the lesson. Homework is a regular form, an addition to the activities of students in the classroom, independent, because it is carried out without the help of the teacher, aimed at a deeper understanding of the topic of the lesson, an independent search for new and interesting information.

Homework is of great importance for the formation of independent mental work skills and a sense of responsibility for the assigned task. The following can be defined as homework: working with the textbook text, performing various exercises with graphic images, viewing and studying images from video tutorials on the topic.

You can also ask children to make puzzles for a short story, a report on the organized material. It will be interesting and informative if the student tries to develop and present his finished options in front of the class. As homework, students may be required to read not only paragraphs from textbooks, but also the following types of work: students create and draw puzzles on paper at home, and perform them on a computer in the classroom. The advantage of such a task is not only in mental and creative development, but also in the search for additional knowledge, the ability to work with puzzles is very good. Many young children have difficulty completing such an unusual task as a rebus.

It is interesting to organize subject circles and interest groups for children. These groups are created for students who are striving to expand and deepen their knowledge at school, engage in technical creativity, and engage in scientific research.

Consultations. They are necessary if children have a lot of questions on the topic of graphic images and are fascinated by computer graphics, and the teacher cannot answer everything in the allotted time.

The last, but not the least in terms of importance and necessity, are the following forms - olympiads, competitions, exhibitions of students' work, the desire to develop creative abilities and compete in organizing school subjects, technical modeling and stimulating the educational and cognitive activity of students. If we return to the traditional teaching method in the classroom, then the most important thing is to reduce the pattern and algorithmicity of tasks for students, which contributes to the disclosure of children's initiative. The prescribed execution algorithm also does not involve imagination, and accordingly, it does not develop. In addition, a rigid algorithm does not involve the use of even the most creative ideas of students. It is important to note that any creativity is impossible without a developed imagination. Therefore, in teaching methods, it is necessary to exclude rigid frameworks from the lessons that slow down the development of students' creative abilities.

Lessons should be structured in such a way that only the goal is stated in the lessons and the student has to use his own ideas. This, of course, involves little imagination, and shows little personal interest.

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