ISSUES OF USING EDUCATIONAL TECHNOLOGIES IN TEACHING THE BASIC RULES OF COMBINATORICS AND ELEMENTS OF COMBINATORICS TO VOCATIONAL SCHOOL STUDENTS

Kasimova Nilufarkhan Gafurovna
Vocational school teacher

Abstract: In this scientific work, the topical issues of interactive organization of the lesson on the subject of "Basic rules of combinatorics and elements of combinatorics" were discussed in vocational education institutions. The work covers the organization of practical training and independent work on the topic. Some reforms in the professional education system were also discussed.

Key words: Combinatorics, interactive, professional education, method, formulas, training, presentation**.**

INTRODUCTORY PART

To increase the quality of education at all levels of education, to introduce international experience and requirements in the field, to include children up to school age in pre-school educational institutions, to increase the coverage of graduates of general education schools, academic lyceums and vocational colleges to higher education, to expand facilities and opportunities for applying for higher education and access to ensure the fair and transparent organization of examinations, to reconstruct the buildings of educational institutions based on the requirements of the times and to build modern ones and to update their material and technical base, to attract the private sector to the field, to improve the system of material incentives for teaching staff and to increase their salaries step by step measures are being taken.

In particular, according to the decree of the head of the state "On approval of the concept of development of the public education system of the Republic of Uzbekistan until 2030", the Republic of Uzbekistan will be among the first 30 advanced countries of the world by 2030 according to the PISA (The Program for International Student Assessment) rating. task was set. In addition, in order to organize international studies in the field of education quality assessment in the public education system, it was decided to create a national system for assessing the quality of education in general education schools, PISA, which is aimed at assessing the level of literacy of students in reading, mathematics and natural sciences.

MAIN PART

We found it necessary to provide the necessary basic concepts (without proof) in order to free the students from referring to various manuals on theories and certain concepts during independent practical training. In giving these basic concepts, in the guide as a whole, an attempt was made to maintain the sequence of the university's program for teaching the course, but in order to maintain scientificity and facilitate the presentation of concepts, it was necessary to deviate from this principle.

Each paragraph is followed by several examples and problems with solutions, followed by a series of examples and problems for independent solution, and their answers are given at the end of the manual.

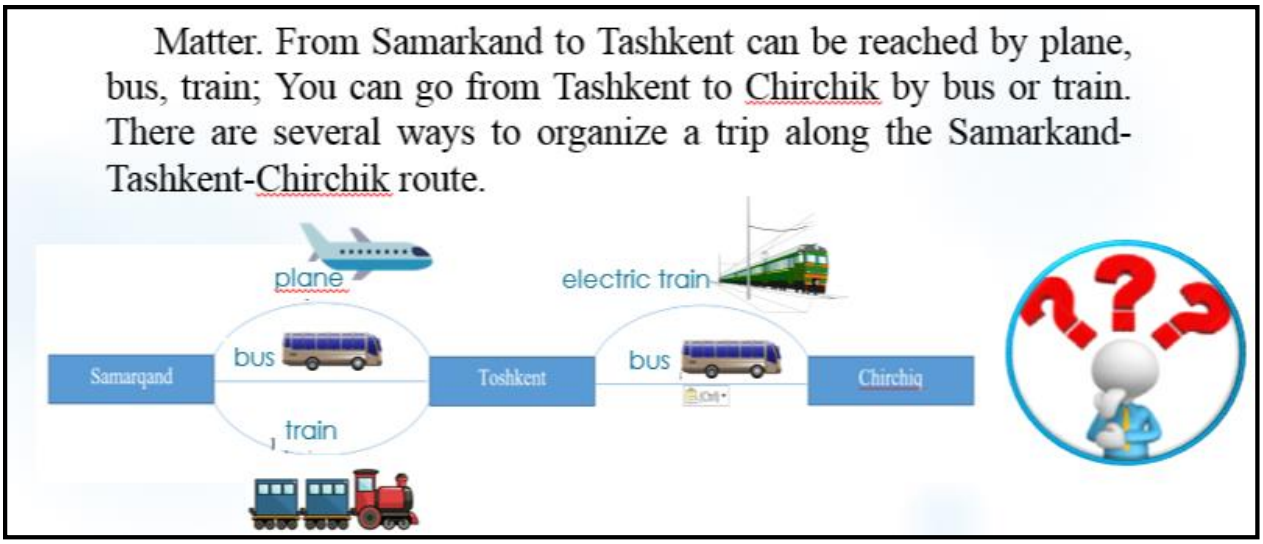
Educational technology implements all cognitive processes shown in training sessions, and ultimately helps to fully master all types of activities. In such classes, the internal connection of the parts of the lesson: education carried out by the purpose, content and working method, the stages of the classical system are preserved. That is, checking homework, the stages of acquiring new knowledge, skills and types of mental activity, as well as strengthening and independent work, summarizing the lesson and explaining homework are based on it.

Combinatorics is one of the branches of discrete mathematics, and it has become important because of its many applications in probability theory, mathematical logic, number theory, computing and cybernetics. Humanity is often faced with problems such as enumerating the number of ways to place certain objects or determining the number of all available ways to perform an action.

For example: in how many different ways can 50 people be placed in the checkout line? How many different ways can gold, silver, and bronze medals be distributed at the World Football Championship? Problems of this type are called combinatorial problems.

Let's establish a very important rule that is often used in combinatorial calculations. The mathematical science dealing with combinatorial problems is called combinatorics. Combinatorics as an independent science was first studied by the German mathematician G. Leibniz and in 1666 he published the work "On the Art of Combinatorics".

After explaining the topic to the students in general, it is necessary to give interesting questions about Mazu. Through this, the consolidation of the topic is achieved.



It is understandable that the number of ways to travel from Samarkand to Chirchik is equal to 3□2 = 6, because there are 3 different ways to travel from Samarkand to Tashkent, and 2 different ways to travel from Tashkent to Chirchik. These considerations prove the following simple assertion, known as the fundamental rule of combinatorics. 1st rule of combinatorics: If it is possible to choose some A in m ways, and to each of these ways to choose some other B in n ways, then A and B can be chosen (in the order shown) in m□ n ways .

Such interactive exercises should be organized by dividing the audience into small groups. In this, healthy competition is formed between groups. And this is achieved by the active participation of all members of the group. The main thing is to ensure physical activity of the students during the exercise, it is also necessary to pay attention to working as a team. Through this, it is possible to repeat the subject and improve their physical and mental condition.

CONCLUSION

From this point of view, it is desirable to make the topics clear and understandable for the students of professional educational institutions in a simple way and to professionalize the lessons.

It is important to explain the topic in a practical way with real-life examples, which will attract the attention of the student and ensure that he understands the topic and remembers it for a long time.

The effectiveness of education depends on the thorough knowledge of theoretical and practical knowledge of the basics of the theory of modern pedagogical technologies by teachers.

Modern methods activate students, they understand the essence of issues more deeply during mutual discussion.

If training is organized in cooperation with students, if small groups are formed, if assignments are given to small groups rather than to 1 individual student, the need and skills of students to work together will arise.

The use of educational technologies in the teaching of the basic rules of combinatorics and elements of combinatorics, as well as the use of examples from everyday life, will help students understand the topic and retain it in their memory.

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