

METHOD OF WORK IN GROUPS WHEN TEACHING DISCRETE MATHEMATICS

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Abstract: *This article presents opinions on the use of “Methods of working in small groups,” one of the interactive methods of modern education, when teaching discrete mathematics in higher educational institutions. The structure and application of this method is explained using the example of teaching the topic “Post’s Theorem”. It is noted that scientific innovations in the theory of Boolean functions can be used to substantiate the connection of the subject with other sciences. The use of interactive teaching methods in the practice of higher education helps the student not only to master the subject, but also arouses interest.*

Key words: *Small group work, Post's theorem, Boolean function, teaching effectiveness, interactive teaching methods.*

In the article we present some thoughts about Small Group Work and its application, which is one of the interactive teaching methods.

Working in small groups is one of the most popular strategies because it gives all students the opportunity to participate in the work, practice cooperation and interpersonal skills (in particular, the ability to actively listen, develop a common opinion, and resolve disagreements). All this is often impossible in a large team. Small group work is an integral part of many interactive methods, such as mosaics, debates, public hearings, almost all types of simulations, litigation, etc. The recommendations below are general in nature and apply to any form of small group work.

At the same time, working in small groups requires a lot of time; this strategy should not be overused. Group work should be used when there is a problem to be solved that students cannot solve on their own. If the effort and time spent do not guarantee the desired result, it is better to choose the “one-two-all together” method for quick interaction.

First, concepts such as Boolean functions, dual and self-dual functions, monotone functions, Zhegalkin polynomial, linear functions, functions preserving one and zero, function of complete systems, Post's theorem will be repeated. Their content is revealed through examples. In order to determine the level of students' proficiency in the subject and fill gaps in them, small groups are formed from among the students in the group. Depending on the number of students, you can divide from 3 to 5 small groups. For example, in a group of 28 students, you can form 4 small groups of 7 people each. When selecting small group members, it is important to consider student talent. Then, for each small group, groups are presented with pre-formulated tasks of equal strength.

Task for group 1: Check the functional system for completeness using Post's theorem

Task for group 2: Check the functional system for completeness using Post's theorem

Task for group 3: Check the functional system for completeness using Post's theorem

Task for group 4: Check the functional system for completeness using Post's theorem.

After the process of consolidating students' knowledge, it is appropriate to provide elements of scientific news and research results related to the topic. This naturally leads to increased interest among students in discrete mathematics.

Implementation of deep reforms in the field of education, positive changes in the education system abroad, the desire to get closer to world education standards, the creation of textbooks and curricula of a new generation, the organization of lessons in a more concise and interesting form. form, large-scale reforms carried out today in the field of education, decision-making to improve the content of education. Government decisions require connecting education with life, increasing the efficiency of teaching, and raising a comprehensively developed generation for a rapidly developing society.

As for discrete mathematics, this subject develops students' will, concentration, logical thinking, abilities and activity, imagination, moral qualities of a person (stubborn, purposeful, creative, independent, responsible, hardworking, disciplined and critical) and independently develops skills the ability to defend one's views and beliefs based on evidence.

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