THE USE OF INTERACTIVE METHODS OF TEACHING MATHEMATICS IN ACADEMIC LYCEUMS

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Abstract: *Interactive activity in the classroom involves the organization and development of dialogical communication, which leads to mutual understanding, interaction, and joint solution of common but significant tasks for each participant. Interactive methods exclude the dominance of both one speaker and one opinion over another.*

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Currently, there is a wide emphasis on the use of interactive methods, one of the modern methods of organizing classes. With the help of interactive methods, it is possible to encourage the process of making students active in each lesson, to independently create an opportunity to develop their mental activity. In the lessons mentioned on the basis of modern pedagogical interactive methods, the teacher and students deeply analyze the interdisciplinary connection, the essence of the content of the topics.

Problem situations are created in the lesson. Sometimes the teacher, and sometimes the students themselves, throw the problem between themselves and, thinking, strive to find a solution. It is necessary for a modern teacher to organize each lesson in an interesting and meaningful way . The teacher should use such a method that he does not take too much time in the lesson, while in use,both the teacher and the student will not have difficulty.

The interactive method ("inter" is mutual, "act" is to act) means to interact, to be in the mode of conversation, dialogue with someone or something. Interactive methods and techniques are aimed at wide interaction of students not only with the teacher and with each other, but also with a computer, an interactive whiteboard and other interactive means. The term "interactive methods" is usually associated with two groups of interrelated methods: the first group is learning based on communication with and through a computer and the second group is computer—free — specially organized educational interaction between students.

During dialogue learning, students learn to think critically, solve complex problems based on an analysis of circumstances and relevant information, weigh alternative opinions, make thoughtful decisions, participate in discussions, and communicate with other people. To do this, individual, paired and group work is organized in the lessons, research projects,

role-playing games are used, documents and various sources of information are being worked on, creative work is being used.

The teacher's place in interactive lessons is reduced to the direction of students' activities to achieve the goals of the lesson Interactive teaching methods require compliance with the following rules:

- criticism of put forward ideas and intermediate critical assessments of statements are prohibited; judgments about the unsolvability of the problem are not allowed;

- the more proposals put forward, the more likely it is that a new and valuable idea will appear; improvement and development of the proposed ideas are welcomed during the brainstorming;

- when solving a difficult problem, it is divided into its component parts; the presence of roles; a friendly, creative atmosphere; active interaction of all participants in the game;

- simulation of the real process in the game using a model; distribution of roles between the participants of the game, their interaction with each other;

- the difference of interests among the participants of the game and the emergence of conflict situations;

- the presence of a common game goal for all participants, against which private conflicts and contradictions develop;

- taking into account the probabilistic nature of the results of activities due to the incompleteness of information and the inability to foresee all the consequences of decisions made; the implementation of a "chain of decisions", each of which depends on the previous one, as well as on decisions made by other participants in the game;

- using a flexible time scale;

- the use of a system for evaluating the performance of each participant and game teams, as well as an incentive system.

Interactive learning tools are the means by which a dialogue arises, that is, an active exchange of messages between participants in the learning process or between the user and the information system in real time.

Interactive learning tools include:

- printed textbooks and printed manuals on the type of intellectual self-help;

- multimedia textbooks;

- multimedia educational programs;

- computer;

- interactive whiteboards (panels, tablets);

-media viewer;

- telecommunications facilities, including e-mail, teleconferences, local and regional communication networks, data exchange networks; electronic libraries.

The introduction of new technical means into the educational process expands the possibilities of visual learning tools. In modern conditions, special attention is paid to the use of such a means of visualization as a computer. The use of computers in the educational process increases the amount of information communicated to the student in the lesson,

activates, in comparison with ordinary lessons, the organization of cognitive activity of students.

The computerization of education around the world is associated with hopes to increase the effectiveness of the educational process, reduce the gap between the requirements that society imposes on the younger generation and those. Thanks to the computer, the teacher gets the opportunity to better control the learning process, which reduces the degree of instructional introduction to learning situations and the need to replace passive illustrations with examples.

The use of computer software in the classroom can allow the teacher to: make mental — visual, namely, to increase the level of clarity in teaching mathematics; to increase the individualization of learning; to facilitate the verification and analysis of various test papers; to increase the interest and cognitive activity of students. The main purpose of using multimedia equipment in the classroom is to achieve deeper memorization of educational material through imaginative perception, enhance its emotional impact, and ensure "immersion" in a specific socio-cultural environment. This is done by using a multimedia projector, an interactive whiteboard and a computer that provides Internet access. Due to the size of the interactive whiteboard, the images are visible to the entire class, and this, in turn, is a way to focus and hold the attention of schoolchildren whose processes of arousal and inhibition are not balanced.

The interactive whiteboard allows you to diversify the frontal form of work and combine it with an individual one within the framework of a traditional classroom-based system. She helps me bring information to everyone in the class. This visual resource helps to present new material in a very lively and exciting way.

Using the ability to move objects on the blackboard, grouping them according to certain signs and in math lessons, familiarization with the outside world. Recordings and color highlighting can be performed directly on slides, on scanned documents. When conducting mathematical dictation "Check yourself", it is possible to use a timer from the blackboard menu with a fixed time to complete the task, since students must learn to organize their activities in accordance with the regulations.

Role-playing games are actively used in interactive teaching methods. There are several types of role-playing games: a role-playing game in the form of a discussion and a special role-playing game, for which it is necessary to formulate and understand the meaning of the situation. The principles of role-playing as a method of interaction between participants in the educational process. First, the role-playing game involves the participants assuming certain roles, the implementation of which requires them to have additional knowledge related to the accepted role. Unlike a business game, the participants in a role-playing game have different goals and perform different roles that contribute to the formation of skills and abilities that help solve problems of professional self-determination. Secondly, role-playing involves the imitation of reality by its participants in speech and non-speech behavior. Thirdly, the interaction of the participants of the game is not only based on dialogue and polylogue, the presence of cooperation and partnership between the participants.

The organization of appropriate interaction as a result of a role-playing game is considered impossible without observing certain rules: the presence of roles; a friendly, creative atmosphere; active interaction of all participants in the game. Thus, in preparation for the game, cognitive skills are improved to analyze, compare, draw conclusions, and the ability to work independently with additional literature.

The main purpose of the business game is to model a certain managerial, economic, psychological, pedagogical situation and formulate the ability to analyze them and make optimal decisions. Another interactive learning method is the method of analyzing specific situations. Students are presented with a situation related to the educational material on this topic and requiring a decision on a certain system of behavior in these conditions.

When discussing decisions, preliminary review, public protection of decisions, and various ways to evaluate the results are possible. Depending on the purposes of use in the educational process, situations can be of a different nature: illustration situations, exercise situations, evaluation situations, problem situations, predictive situations.

Creative tasks. The inclusion of methods and techniques of interactive learning in the composition of mathematics lessons helps to switch students' attention to the right moments, redirect their activities in another direction, and focus students' attention on general relevant conclusions.

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