STUDYING OXYGEN-CONTAINING ORGANIC COMPOUNDS USING INTERACTIVE METHODS

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Abstract*. The article discusses interactive forms and methods of conducting classes, features of their application, general results and effects of interactive teaching of chemistry. It is believed that the practical application of interactive forms of teaching is one of the most serious areas of training students in higher education in this specialty.*

Keywords*: interactive teaching methods, education system, teaching method, active and passive method, interactive techniques.*

Relevance. Today, interest and attention to the use of interactive methods, innovative technologies, pedagogical and information technologies in the educational process is growing every day. One of the reasons for this is that until now, in traditional education, students were taught to acquire only ready-made knowledge, while modern technologies teach them to search, independently study, analyze and even draw their own conclusions.

Interactive teaching methods are currently the most common and widely used in all types of educational institutions. At the same time, there are many types of interactive teaching methods. This circumstance has now given rise to the problem of the correct choice of interactive teaching methods to achieve certain goals.

Materials and methods. Learning can be considered successful only if the knowledge is acquired and understood by the student or if the student can demonstrate in practice tasks designed to improve skills.

As is known, the process of obtaining education (obtaining information) is a process consisting of the systematic development of spiritual and mental abilities, the formation of knowledge and concepts, and the ability to use the acquired knowledge. This process can be carried out through the student himself or with the support of someone else—an educator. On the other hand, the learning process takes place using various methods.

A teaching method (technique) can be defined as a specific systematic and regulated management of the organization of joint activities of the student and the teacher, aimed at achieving a specific goal.

We can consider an educational model as a structure for the implementation of the educational process, which is carried out using one or more teaching methods. A teaching method is a certain systematic management of the organization of joint activities of the student and the teacher, aimed at achieving a specific goal. A teaching method is a way of joint activity between a teacher and students in the learning process, aimed at achieving a specific goal.

Teaching methods are understood as ways to achieve the set learning goals, as well as methods of theoretical and practical orientation of educational material.

The interactive method is a joint solution to any activity or problem based on thinking in mutual communication, in mutual discussion. The advantage of this method is that all activities prepare the student for independent life, teaching him to think independently.

When choosing interactive teaching methods, the educational goal, the number and capabilities of students, the educational and material conditions of the educational institution, the duration of training, the pedagogical skills of the teacher, etc. are taken into account.

The expansion and deepening of knowledge, abilities, skills, and students is achieved by analyzing various theoretical and practical problems using interactive methods.

From the above, it becomes obvious that there is a need for a proper analysis of interactive teaching methods and their classification on this basis. When classifying methods, they can be divided into interactive methods, interactive teaching strategies, and interactive graphic organizers.

Currently, the most popular methods of interactive learning are:

1. Interactive methods: “Case studies” (or “training cases”), “Blitz survey”, “Modeling”, “Creative work”, “Problem-based learning” and others.

2. Interactive educational strategies: “Brainstorm”, “Boomerang”, “Gallery”, “Zigzag”, “Staircase”, “Icebreaker”, “Rotation”, “Snowball”, etc.

When isolating interactive learning strategies from the structure of interactive learning methods, the approach to organizing group work is in a certain sense based on a comparison with the strategic approach. In fact, these strategies are also more related to interactive teaching methods, without any other differences between them.

3. Interactive graphic organizers: “Z/X/U”, “Conceptual table”, “Venn diagram”, “T-table”, “Insert”, “Cluster”, “Why?”, “How?” and others. When highlighting interactive graphic organizers in such trainings, it is based on the fact that the main points are expressed in writing in various graphic forms. In fact, working with these graphic organizers is also more of an interactive teaching method, with other differences between the loads.

Interactive teaching methods are often used simultaneously with various forms of learning technologies. The use of these methods increases the activity of training participants and increases the effectiveness of training.

In this article I would like to show some of them that can be used in chemistry classes. They give good results when studying organic compounds containing oxygen.

1. Graphic organizers (Organizer) – a means of visually representing thought processes. The method and means of structuring and subdividing data, establishing connections and correspondence between the concepts being studied (phenomena, events, topics, etc.).

Interpret carboxylic acids in a conceptual table from graphic organizers using an interactive method.

Schedule concentrate

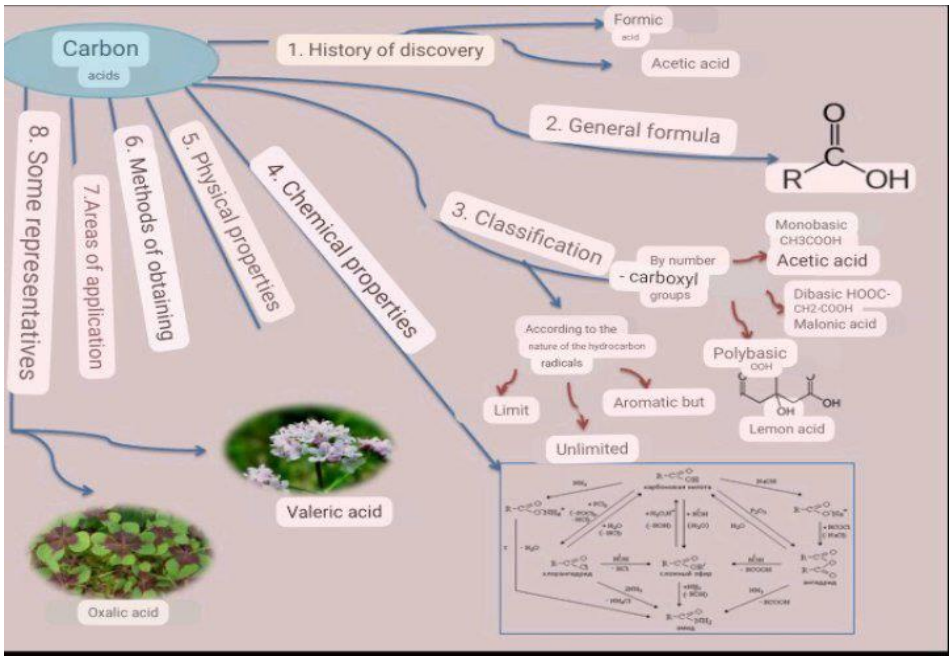
acids	Peculiarities		
	Structure	Name	Isomers
CH_3COOH			
$C_2H_5\ COOH$			
$C_3H_7\ COOH$			
$C_4H_9\ COOH$			

Interactive method «Mind map». A mind map, also known as a mental map or associative map, is a way of depicting the process of general systems thinking using diagrams. It is important to note that the mind map has features of presenting the information being studied compared to conventional diagrams:

– concentration of attention is directed to specific issues (the whole picture of the lesson is visible before the eyes and the significance of each idea; it is easier for students to identify the main ideas and say them out loud);

– the use of different colors and multidimensional presentation helps to remember the material much faster and more effectively, promotes a creative approach to communicating your educational achievements;

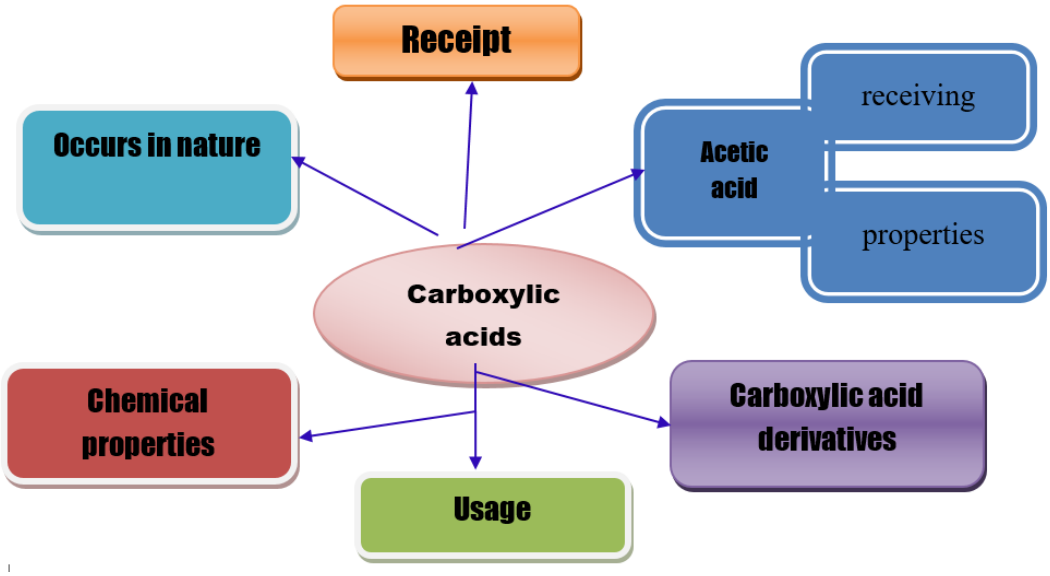
– the tree form makes it easy to edit during discussions between students and supplement it with new information, without the need to cross out anything;



– a mind map in class does not have to be presented in ready-made versions; you can create it throughout the lesson, adding to it as the topic is revealed, while activating creative and logical thinking through group interaction of students.

At a lecture, the teacher can present this map and challenge students to present it in more detail during practical classes on this topic.

In our teaching practice, we have identified a number of principles necessary for the correct construction of mind maps in chemistry classes. Here is a representation of one of them.



Conclusions. An interactive method of teaching subjects in the vocational education system gives good results in teaching chemistry to students of medical universities. Visual perception improves several times, the cognitive activity of students is activated, they gain theoretical knowledge and practical skills.

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