

Use of Modern Technologies which are Significant in Teaching the Subject "Chemistry of Biogenic Elements"

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Abstract: It is shown what modern pedagogical technologies should be used to explain the topic "Chemistry of biogenic elements".

Keywords: biogenic element, essential, macro elements, micro elements, auction.

Today, when fundamental reforms are taking place in the education system of our republic, it is one of the urgent problems to prepare pedagogues who are mature in all respects, highly qualified, highly moral, cultured and devoted to their profession.

The use of modern and information technologies in the educational system, formation and development of independent thinking and learning skills of our children is one of the urgent tasks facing the representatives of the education sector. Among all educational subjects, the use of modern ped technologies has a great role in the thorough and effective mastering of chemistry. Students' understanding of the content of the given topics, chemical concepts, laws, and evidential data in the example of some substances is carried out with the help of teaching methods. In order for all this to be at the level of demand, the use of modern technologies in chemistry education today has a good effect. In particular, the use of modern technologies in the teaching of medical chemistry classes helps students to understand how important chemistry is for the human body and how important it is in human life.

The article brought to your attention contains modern technology suitable for medical chemistry education and recommendations for its effective use in the educational process.

Before starting a lesson, the teacher should master the systematic application of new methods to each component of the lesson. Accordingly, it is effective to explain the basic concepts and laws of medical chemistry to students when using the methods of pedagogical technology in organizing and conducting chemistry lessons. "Venn diagram" and "Sinquain" methods are used in the questioning section of the previous topic, "Insert", "Pinboard" and "Zinema-zine" technology elements in the explanation section of the new topic, "3x4 technology" and "Concept analysis" methods are used in the part of the lesson to strengthen the new topic, "Blitz-survey" and "Charkhpalak" methods are used in the evaluation part of the new topic, and "FSMU" technology element and "Cluster" are used in the homework assignment part. the use of methods helps to increase the knowledge of students while serving to increase the efficiency of the lesson.

Pedagogical studies have revealed that students studying medical chemistry for the first time have difficulty mastering the topic of biogenic elements in medical chemistry.

Therefore, we recommend using the following method in teaching the topic of biogenic elements of medical chemistry.

Practical part: One of them is the "Auction" method. The advantage of this method is that the Auction method has the ability to develop and educate. As a result of this, interest in chemistry arises among students and the culture of working in groups is formed. We will use this method in teaching the topic of biogenic elements. For this purpose, the students are divided into three groups and cards prepared by the teacher are distributed to each group (Table 1).

Table 1.

Copper, manganese, molybdenum	S, P, D elements
Micro elements	In the pancreas
Oxygen, Nitrogen, Phosphorus	Essential elements
Macro elements	In the adrenal glands

After the cards are distributed to the members of the group, questions related to the topic are read out in turn (Table 2). Students, in agreement with the group, pick up a card with the correct answer.

Table 2.

1.	According to the meeting of oxygen, nitrogen, phosphorus in the body, is this...?
2.	The elements that play an important role in life activities are...?
3.	Find the micro elements.
4.	Zinc, nickel, and a small amount of cobalt are found in which organ?
5.	According to the presence of zinc, fluorine, bromine, and iodine in the body, is this...?
6.	Bromine, Iodine, Silicon, Titanium, Lead, Chromium, Zinc are found in which organ?
7.	What are the groups of elements according to their electronic structure?
8.	Find macro items.

Evaluation: Each correct answer is encouraged by cards of Green, Yellow, Red color and various shapes (Table 3).

As a result, it will be possible to give the necessary assessment through the collected cards.

Table 3.

 5 - excellent	 4 - good	 3 - sided
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In conclusion, the use of such pedagogical technologies in the teaching of chemistry, like all other subjects, is very effective in order to increase students' interest in chemistry and helps them to increase their knowledge.

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