

## **WAYS TO USE INNOVATIVE TECHNOLOGIES IN TEACHING CHEMISTRY IN ACADEMIC LYCEUMS**

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### **ABSTRACT**

*The article analyzes the example of ways to use innovative technologies in the teaching of chemistry. The problems of training chemists, bringing the content of education to the level of world standards, the opportunities for students to independently master the teaching materials are analyzed in terms of improving the quality of their professional competence.*

**Keywords:** *Teacher, pedagogical field, education, pupils and students, methods, interactive methods.*

### **АННОТАЦИЯ**

*В статье анализируются на примере способов использования инновационных технологий в обучении химии. Анализируются проблемы подготовки химиков, доведение содержания образования до уровня мировых стандартов, возможности самостоятельного освоения обучающимися учебно-методических материалов в плане повышения качества их профессиональной компетентности.*

**Ключевые слова:** *Учитель, педагогическое поле, образование, учащиеся и студенты, методы, интерактивные методы.*

### **INTRODUCTION**

Today's reforms in the field of education are aimed at increasing and improving the efficiency of the transition process, which has risen to the level of state policy in the field of education in the country. Today, innovative technologies have their own characteristics, which include:

- Innovative technologies always increase students' interest in science;
- In the process of applying innovative technologies, the culture of student communication develops;
- Innovative technologies allow students to demonstrate their talents and knowledge;
- Forms positive qualities and qualities of the student.

## **MATERIALS AND METHODS**

There is a growing interest in the use of interactive methods, innovative technologies, pedagogical information technologies in the educational process. The reason is that in traditional education the student is given ready-made knowledge, while modern technologies teach them to search, to study and analyze independently, to draw their own conclusions.

The ability of teachers to organize the process of teaching the basics of special subjects in non-traditional forms, to design the educational process on the basis of perfect standards, to use these projects wisely is a guarantee of thorough, in-depth theoretical knowledge, practical skills and competencies.

There are several types of teaching chemistry. In particular, in their explanation we define methods and tasks, determine their place of application, general methods, dogmatic method, illustrative method, heuristic method, etc.

Teaching method is a goal-oriented collaborative activity of students under the guidance of a teacher. There are specific features of chemistry teaching methods: they are;

1. The content and methodology of teaching chemistry is a theoretical science based on practice.

2. Cognitive activity of students is aimed at developing the aspects of thinking, the change of the exact properties of matter, its state, properties, structure, composition, etc., leads students to think. It is expedient to apply each method in the same process where it effectively performs educational, pedagogical, developmental functions.

The methods also educate students with their application.

There fore, the teacher should pay attention to the effective implementation of all three functions when choosing each method.

## **RESULT AND DISCUSSION**

There are problems with the optimal choice of methods. Then you need to pay attention to the following.

- Laws and principles of teaching.
- Goals and objectives of teaching.
- The content and organic compatibility of the content of science and the subject under study.
- Student learning opportunities. (age, level of preparation, characteristics of the class community).

- Peculiarities of external conditions.
- The teacher's own capabilities.

The structure of teaching methods is diverse, and they are constantly evolving with the improvement of a particular process.

Methods of teaching chemistry are carried out in different ways. Method is the “way”. It can be dogmatic, illustrative, heuristic. The dogmatic method of teaching is that the teacher narrates the material orally, without the use of visual aids, without proof, and only by involving the students in the repetition and memorization of the material.

Illustrative method of teaching - the teacher uses a variety of special methods to explain to the student the ready knowledge. These are: teacher explanation, work with the textbook, work with the tape recorder and so on. Such exhibitions are used in experiments, models, display manuals tables. The teacher demonstrates and explains the laboratory experiments.

Some exhibits that can be applied in chemistry interactive methods.

"Observation test": this method can be used to conduct additional surveys on chemical elements, atomic structure, periodic table and all other topics. To apply this method, we use the following illustration, which is to draw a large poster with 60-80 large chemical elements on it, and a small (invisible) sequence number on each element. The chemical elements are selected from Mendeleev's periodic table with a serial number depending on the size of the poster, but when drawing on the poster, the chemical elements are placed randomly and the poster reads "Observation Test". This method can be used in the form of a game in the above topics, in groups within group leaders, or in each lesson to help students develop skills in the periodic table. In this case, one student has to go to the board and name the chemical elements one by one for a minute. can help tell. If a student finds the most items in a 1-minute period, that student will be graded with the highest rank or score.

In this way, the teacher ensures that students are constantly interacting with the periodic table and that memorizing the sign of the chemical elements is fun.

## **CONCLUSION**

Here are some examples of the use of innovative technologies in the teaching of chemistry. They are: "Knowledge Pool", "Game of Cubes", "House of Knowledge", "Mystery Box", "Sniper Game" and many others.

The future of our country, the future of our people, the prestige of our country in the world community, first of all, depends on how our children grow up, grow up and become human beings. "The new model of education will lead to the formation of a free-thinking individual in society. We will have the opportunity to bring up people who understand their dignity, have a strong will, whole faith, and a clear purpose in life."

The conclusion to be drawn from this is that in the new conditions, the main task of the education system will be to train qualified personnel for the manufacturing sector.

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