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THEORY AND PRACTICE OF USING PEDAGOGICAL TECHNOLOGIES AT THE LOCAL LEVEL IN BIOLOGY TEACHING

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ABOUT ARTICLE

Key words: Quality of education, local level, educational technology, interactive education, interactive method, cognitive activity, scientific worldview, cellular structure, eukaryotic and prokaryotic cells, nucleic acids.

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Abstract: This article highlights the theory and practice of using technology at the local level, which allows students to develop creative thinking and increase the effectiveness of education, which is a pressing issue in the methodology of teaching the science of biology.

INTRODUCTION

Fundamentally reforming the content and quality of education at all stages of the continuous education system in the world is considered one of the important goals of comprehensively developed personnel training. In today's society, which is moving towards rapid development, the intensity of information is increasingly showing its effect. This process affects the emergence of new views and sharp turns in the minds of young people, who are the basis of society. One of the important tasks of today is the new effective approach used in the process of educating young people, which will serve as one of the factors that will shape their spiritual and intellectual image in the future.

The introduction of state education standards based on the competency approach in our country, the organization of eleven-year education in general education schools, as well as the establishment of basic schools specialized in chemistry and biology in each region of our country, as well as in the districts (cities) of our country The establishment of specialized schools for in-depth teaching of chemistry and biology, in turn, creates new needs for the formation of professional competence of future teachers along with chemistry and biology teachers of general secondary schools. released.

THE MAIN RESULTS AND FINDINGS

Today, at all stages of our country's educational system, "Yangi Avlod" textbooks, based on foreign experiences, enriched with local information, incorporating the latest achievements of science, and serving to ensure the unity of theory and practice, are being published. In particular, textbooks for students of the 7th-10th grades of secondary schools on the subject of biology have been published in

a new edition, completely updated in content, which are fundamentally different from the existing textbooks.

The harmonious growth and well-being of the mature generation in all aspects, the creation of conditions and effective mechanisms for the realization of individual interests, and the change of outdated patterns of thinking and social behavior are the main goal and the main driving force of the economic reforms implemented in our country. The formation of an excellent system of personnel training based on the achievements of modern culture, economy, science, technology and technology based on the rich intellectual heritage of the people and universal values is an important condition for the development of Uzbekistan".

In the course of the implementation of the above-mentioned tasks, it is necessary to know the teachers of the subject of biology and future teachers of general secondary educational institutions:

- to be able to effectively use innovative technologies in explaining the topic in one's pedagogical activities;
- introduction of modern information and communication technologies;
- fully mastering the content of the topics given in the new generation textbooks;
- formed the competence to use pedagogical technologies at local levels at which stages of the lesson;
- which technology or method can be chosen based on the content of the subject;
- they must have the skills, qualifications, and competencies to achieve specific goals using new methods in laboratory, practical, project work.

In the course of education, under the direct guidance of the teacher, with the help of educational content, methods, tools and forms, the student learns the essence and characteristics of biological laws, theories, phenomena and events that occur in living organisms, knowledge , acquires skills, qualifications and competencies. In the process of education, the teacher organizes, manages, controls, evaluates the cognitive activities of students and creates a foundation for comprehensive development of the individual by implementing educational, educational and developmental goals.

For a teacher, the educational process is inextricably linked with the activity of students, and it is considered a work process, professional-methodical activity, which analyzes and summarizes this process and makes changes in appropriate cases.

The main goal of the organization of education: a person who has a competitive level and specialization in the labor market, who is responsible, a master of his profession, who can freely master similar professions, who can perform effective work at the level of world standards in his specialty, regularly consists of training qualified specialists who work on themselves. The qualification of the personnel being trained directly depends on the level of improvement of the professional-methodical level of the teacher teaching them.

Based on the didactic purpose, tasks, and content of the subject studied in biology lessons, it is recommended to future biology teachers to use the forms of organization of students' cognitive activities individually, in small groups, and as a whole.

In the process of methodical training of biology teachers to work in schools, in order to activate the students' cognitive activity, the lesson should be used to determine the knowledge, skills and abilities of the students on the previous topic, systematize them, and the knowledge acquired on the new topic. , control and evaluation of skills and competencies, as well as in the process of learning a new subject, interactive educational technologies gain practical importance.

Interactive teaching is a special organizational form of developing the cognitive activity of learners, and in this process, the learner turns from the object of learning into the subject of mutual cooperation, and is characterized by his active participation in the learning process. Interactive methods of teaching are considered in the modeling of life situations, use of role-playing games, cooperative problem solving. Interactive teaching not only forms students' activity, creativity, and independence in the process of acquiring information, but also helps in the full realization of educational goals.

In order to effectively organize and rationally manage students' independence of knowledge, future biology teachers should perform the following actions:

- based on the educational, educational and developmental goals of the studied subject, in what form to organize students' cognitive activities;
- planning in advance ways to activate students' cognitive independence;
- determining the ways to realize the goal of training;
- to analyze the results obtained from students' cognitive activities during the lesson and to check its appropriateness;
- in necessary cases, make changes to the project of students' cognitive activities in the appropriate order.

Also, by using technologies at the local level in their pedagogical activities, it prepares the ground for students to activate their cognitive activities through interactive activities, and to understand the basics of science in a meaningful way.

It is of great practical importance for the teacher to first determine which topics and at which stage local technologies can be used during the teaching of biology. Also, it is appropriate for them to form a system of tasks based on the methods used in the course of the lesson.

The use of local pedagogical technologies in the teaching of biology is understood as the technologies used in the stage of asking for homework in a certain part of the lesson and strengthening the newly learned topic.

Like all subjects, local technologies in biology classes include Case Study, Insert, Cluster, Venn Diagram, Brainstorming, Working in Small Groups, SWOT Analysis, FSMU, Assessment ", "Sinkvein", "Charkhpalak", "Analysis of Concepts" as a result of the use of a number of methods and technologies in the teaching process, it is possible to fully master the essence of biological processes, events and phenomena that occur in living organisms.

Eukaryotic cell from the textbook "Biology" intended for students of the 7th grade of general education schools. It is recommended to use "Assessment" at the stage of knowledge activation (motivation) during the teaching of the cell shell topic. This method is aimed at assessing the level of knowledge of learners, checking their mastery rate and practical skills. Using this technique, the cognitive activity of learners is diagnosed and evaluated in various directions (test, practical skills, problem exercises, comparative analysis, identification of symptoms).

Test	**Comparative analysis**
In the cells of a living organism, carbon, hydrogen, oxygen and nitrogen make up more than a few percent of all chemical elements? A)10% B)50% C)2% D)90%	Compare and contrast the difference between DNA and RNA?
Simtom Cell...	**Practical skills** Write 3 characteristics of each prokaryotic and eukaryotic cell?

Also, we recommend to analyze the similarities and differences and common aspects of the passage of substances through the cell membrane by passive and active transport on the basis of the Venn diagram. This method allows to consider the analysis and synthesis of various concepts, bases, ideas through two aspects, to identify and compare their common and differentiating aspects.

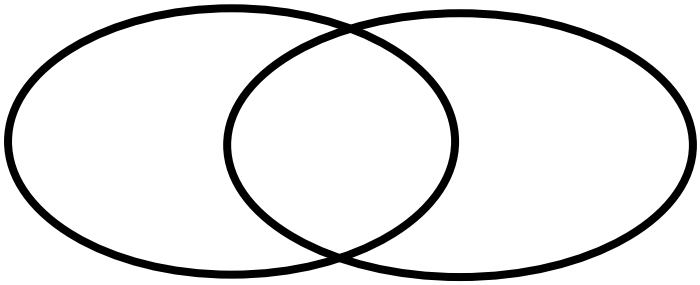

Figure 1. Cluster overview

At the stage of reflection on this topic, it is useful to use charhipalak technology. This technology serves to strengthen, analyze, synthesize, repeat, evaluate and independent creative work skills of future teachers. It is appropriate to use this technology in the repetition of homework, assessment and control work in accordance with the subject. During the implementation of the technology, the participants are divided into small groups of four people and handouts prepared on a specific topic are distributed to them; it is explained to mark the action that they find correct from among the characteristics of the given action with special symbols (+, -, X, Y) in the indicated cells; each member of the group individually selects their answers to the indicated boxes, and the teacher changes the answer sheets of the groups in clockwise order at the next stage; this action is repeated until each group returns to its original work. After the handouts reach their owners, the teacher reads out the correct answers. Participants check the correct answers according to their initial signs and evaluate each correct answer with a score of "1". At the end of the training, the teacher will read out the evaluation criteria and each participant will self-evaluate based on the correct answers they have collected. (For example, if there are 12 actions, then: "excellent" for 11-12 correct answers, "good" for 9-10 correct answers, 6-8 correct "satisfactory" is given for the answer). The trainer clarifies the grades and summarizes and concludes the necessary aspects of the training. It is advisable to use this technology in the following way.

№	Representatives of the organic world	EUKARYOTIC CELL. CELL SHELL		
		Eukaryote	Cell Prokaryote	Cell A non-cellular form of life
1.	Cocci		+	
2.	Erythrocytes	+		
3.	Phages			+
4.	Molodilo	+		
5.	Bacillus		+	
6.	Viruses			+
7.	Tradeskancy	+		
8.	Vibrios		+	
9.	Tobacco mosaic			+

10.	Red mukhamor	+		

In order to systematize and ensure the stability of the acquired knowledge of future biology teachers or students, the use of the Cluster method is important in biology lessons.
Based on what you learned from the textbook, complete the exercise represented by the Cluster below. In it, the class, genera and species of birds are written.

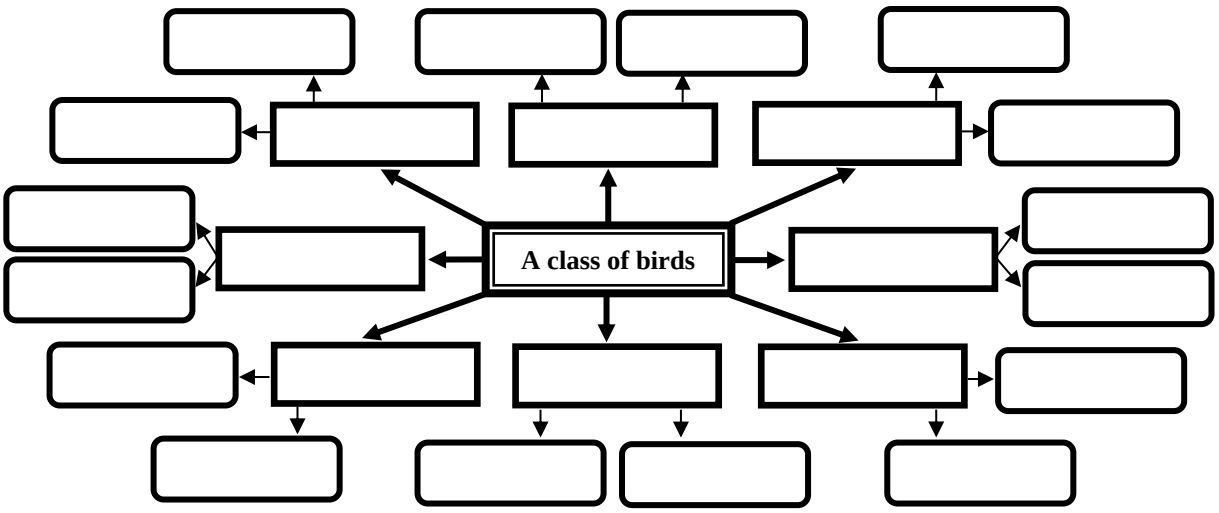

Figure 2. Cluster overview

The cluster method creates a basis for students to think systematically on one topic or chapter. The main idea or concept is based on the cluster method.
The cluster method can be used not only in learning a new topic, but also in evaluating students' acquired knowledge by applying it to an unexpected new situation. In the course of the lesson, the teacher encourages the students to fill in the "Cluster" given above based on the theoretical knowledge obtained from the textbook.

CONCLUSION

Based on the recommendations given above, the teacher prepares the ground for the formation of the following characteristics among students in addition to improving the quality of teaching in the biological education process:

- forms the competencies of working in cooperation with a group or team;
- develops the skills of finding creative ways to solve the problem;
- creating spiritual and friendly relations with the group or teammates;
- being able to fully demonstrate one's internal capabilities and abilities among the team;
- think freely about the given problem, summarize thoughts, sort the most important ones;
- monitoring and independent assessment of own activities;
- to be sure of one's capabilities and strength;
- mastering the skills of moving in different situations and getting out of difficult situations.

Effective use in the process of organizing biology classes based on the above-mentioned interactive educational technologies and technologists at the local level is considered appropriate. Therefore, every

teacher or student should have the competence to use interactive methods, information and communication technologies and local technologies in their pedagogical activities.

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