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**INTERACTIVE TECHNIQUES OF TEACHING BIOLOGY**

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**Abstract**

The article talks about the teaching of this science in schools using interactive techniques in biology. conclusions from the article can be used in the teaching of future biology teachers in higher educational institutions.

**Keywords:** biology, European, Zuev, Karl Linney, Darwin, plants, animals, teaching, natural sciences, ecology, methods, interactive.

**Introduction**

Interactive is derived from the English word interact, meaning to act in inter - cooperation. Internality is understood to mean that the interaction of the reader with the reader or the interaction with the computer works in a mode of interaction. Interactive training is primarily training in a dialogue manner, solving problems in cooperation by all participants in the process of communication. The main essence of interactive teaching is that in the process of teaching, all students become an active participant in the process of cognition, they understand the problems discussed, the development of events and phenomena, understand problematic situations, look for ways to solve it, recommend the most optimal option. Based on the study of instructional material, recommendation of solution in various variants on problem solving, the interaction of learners in the process of cognition paves the way for each student, group to add their share of success, exchange of opinion, information and experience between them. Since this cooperation takes place in an atmosphere of sincere, comfortable social psychological, mutual assistance, students not only absorb new knowledge, but also develop their own cognitive activities, elevating it to a higher level and allowing them to enter into cooperation. In the process of teaching, the use of interactive methods necessitates the organization and management of the students' access to interaction, in this case, the students will be sought in cooperation and begin to solve a problem that is common, as well as significant to each reader, and there will be mutual understanding, collaborative work and solidarity among them. In the lessons where interactive methods are used, it is not allowed for a single student to dominate, to conduct his own opinion. In the application of interactive methods, students acquire the skills of critical thinking, information sources and analysis of the situation, solving complex problematic situations, analyzing the opinion of their comrades,



draw conclusions on the basis, participate in the discussion, engage in communication with other persons. There are the following features of interactive techniques of teaching: it is used at all stages of the communication – teaching process in which a person has an important vital need. In the process of teaching, students are given equal opportunities to show their strength, knowledge, ability.

A socially and psychologically comfortable environment is created in which students work in small groups in cooperation, paving the way for a gradual and effective participation in communication. In order for students to actively participate in communication, it is not enough only to hear, but also to analyze what they have heard, to understand that it is necessary to be able to think, to be able to reason and understand thoughts. In cooperation with students, it is necessary to fulfill the tasks set by their performance in small groups at the required level, to analyze the results obtained, to verify their correctness, to present and to achieve their recognition by other groups. The active group of methods used in teaching biology includes problem-finding methods of teaching, logical methods, techniques of independent performance, methods of motivation and justification of students performance, methods of control and self-control. Active methods are based on the ability to analyze individual objects, phenomena and laws in the process of finding answers to complex questions, actively working together in small groups of students, developing problematic situations, will require active cognition activities based on skills and knowledge. Therefore, in the teaching of biology, the use of problematic research and logical techniques in combination with oral statement, visual and practical techniques, which are the reproductive techniques of teaching, plays an important role. To do this, the teacher must have a proper understanding of the characteristics of these techniques, the methodological methods that they are part of, and the skills of effective use in their place. Problem-solving techniques contribute to the active acquisition of instructional material through the application of the previously acquired knowledge and skills of students in new situations of problematic situations that arise consistently and purposefully during the course. This group of methods paves the way for students to develop intelligence, develop creative and independent thinking skills, analyze problematic situations and find the most optimal way out of it, get the goal right.

When using the problematic-research method of conversation, which belongs to the group of problematic-research methods, first problematic situations are created, a chain of previously prepared problematic questions is described, allowing the reader to reason logically together with the teacher, to form and prove educational hypotheses, to find answers to problematic questions in the process of conversation. In the problematic narrative method, the teacher creates problematic situations in the process of studying a new topic, in cooperation with the students, it is possible to find answers to problematic questions in the narrative process, form and prove educational hypotheses, problems are solved on the basis of the answers of the students. When using the problematic-practical method, problematic tasks are created, on this basis, experiments are conducted, educational hypotheses on solving problematic situations are formed, educational-research experiments are conducted, problems are solved by describing educational conclusions and generalizations. Lessons using problematic techniques will be taught in the following years with a new name ("Storm of thought" B.R.Kadyrov), ("attack on



the brain”, “conflict of thoughts”, “Battle of thoughts” V.M.Karimova, F.A.Akramova), (“Attack Of The Mind ” J.G‘.Yoldoshev) the name became a picture. The lesson (“Smart attack”) using the problematic method is organized on the basis of the following stage: I-stage. Formation of small groups of students with equal numbers from psychologically close to each other. Stage II. Disseminate teaching assignments that consist of problematic questions to small groups and familiarize them with the didactic purpose of the assignment. Stage III. To direct the cognitive activities of the students towards the solution of educational problems. Stage IV. Listening to the information of the students on the solution of problem situations. V-stage. Conduct training discussions and discussions among small groups. Stage VI. Draw a general conclusion. In the” smart attack”, the students acquire the previously mastered knowledge, support in new situations, deepen their knowledge, master the methods of intelligent activity. These methods include the creation of problematic situations, the formation of a chain of problematic questions, the conclusion of problematic assignments and conducting experiments, the formation of educational hypotheses on the resolution of problematic situations, the proof of educational hypotheses, the prosecution of objects, logical reasoning, the conduct of educational experiments, the definition of educational conclusions and generalizations. Group of logical methods of teaching. This method determines the direction of the content of the educational material, allows students to distinguish the main idea, analyze the subject under study, compare, generalize skills, master the methods of rational activity, develop abstract thinking, understand the cause-and-effect connections.

The group of logical methods of teaching includes inductive, deductive, analysis, methods of separation, comparison, generalization of the main idea. In the inductive method – studentsibitori are first involved in the study of private Fakt, and then oriented from private to general conclusions. In the detective method, students first study the general laws, and then are taught to draw a private conclusion from the general. Students will be able to perceive information using the method of analysis, determine the similarities and differences of the studied objects, divide the studied objects into components, identify the beginnings, cause consequences between them. The method of separation of the main idea is of great importance, it provides the basis for the separation and sorting of the main idea in the study material, the division of information into logically completed thought parts, the separation of the main idea and secondary thoughts, the separation of base words and concepts, the conclusion of the main idea. Students will learn how to identify comparative objects given in teaching assignments, identify the main characters of the objects, compare, identify similarities and differences, formalize the results of the comparison with the conditional characters, through the method of comparison.

The method of generalization in the process of solving problems prepares the ground for the identification, comparison, preliminary conclusions, the reflection of the dinakmika of the development of the phenomenon, the formalization of the results of generalization with the help of conditional signs, the general conclusion. These methods correspond to: a) inductive method-a problematic statement of private Fakt, directing the activities of students from private to general conclusions, methods of giving problematic assignments; b) deductive method - a method of explaining general laws, directing the activities of students from general to private



conclusions; C) analytical method-an understanding of information, identifying similarities and differences between the studied objects, dividing the; d) the method of separation of the main idea - the method of separation and sorting out the main idea in the educational material, the method of dividing information into logical completed-minded parts, the separation of the main idea and secondary thoughts, the separation of base words and concepts, the methods of drawing conclusions about the main idea; d) the method of comparison - the; g) the method of generalization - the identification, comparison, preliminary conclusions, the reflection of the dynamics of the development of the phenomenon, the formalization of the results of generalization with the help of conditional signs, the embodiment of the methods of generating a general conclusion.

The group of independent working methods includes textbooks, additional educational literature and techniques of independent work on visual aids. one of the peculiarities of the independent method of performance is that the students perform their teaching tasks without the direct management of the teacher. The method of independent performance implies the organization and management of independent educational-cognitive activities of students. In this method, textbooks, additional educational literature, results of independent observation and experiment on visual aids, work on the issue and exercise are considered a source of knowledge. Like all methods, the method of independent work has an educational, educational and developmental function. As an educational task – it can be noted that students independently acquire knowledge and skills, deepen, strengthen and ensure repetition of knowledge. They are particularly valuable in the good assimilation of students ' practical learning skills and skills because they can not be carried to the level of qualification of an independent acting skills automatism and creative character.

The function of the educational direction helps the reader to find independence, cognitive activity, spirituality, active life position, diligence and the content of human qualities. The task in the direction of development-development of the scientific worldview, thinking, skills and skills of students, will really help. The composition of the methods of independent work includes the issuance of independent work assignments, the development of independence in educational activity, the content of training labor skills, the organization of independent work according to the sample, the methods of creative assignment. The group of techniques of motivation and justification of students performance in teaching through pedagogical stimulation in the process of learning will bring into being positive motivations that provide enthusiasm and activity in the acquisition of new teaching material by the students.

These methods prepare the ground for the development of students ' interest in knowledge, their mental activity, the need to acquire new knowledge, the culture of communication, self-control and management, assessment skills. Also, to explain the social importance of education, the content of conscious discipline, duty and responsibility in students is toptiradi. To increase interest in reading, didactic-play, educational discussions, the methods of formation of duty and responsibility of students in obtaining a tax return are relevant, they include the following: a) methods of increasing interest in reading to bring about positive emotion in students, the use of interesting analogies, the effect of disgust, the way to bring into being the joy of knowing, the way to encourage and rebuke students.



b) Didactic-the method of the game is the choice of the plot of the game, the embodiment of game situations, the choice of educational-cognitive games, the style of motivating students.

c) method of educational discussions to create a situation in which educational arguments come out, to create scientific arguments. Transfer of students to success, explain the opinion of students, correct the mistakes in their response, style of motivating students.

d) the method of formation of duty and responsibility of the students in the study embodies such methods as explaining the social importance of education, explaining the personal importance of reading, putting educational requirements, encouraging and rebuking in teaching.

Control and self-control techniques in teaching. Control is considered one of the integral parts of the educational process. The regularity and consistency of control motivate students to work actively intellectually, develop in them the skills of responsibility, duty, attention, memory, self-control and evaluation. These techniques prepare the groundwork. The completeness, fairness, wide scope, regularity of control allows all techniques to carry out their functions such as educational, educational, developmental and discriminatory approach to students. These techniques are an example of control techniques using a control sheet and tests, self-control, interaction with the help of oral and written Control, Laboratory and practical work to the group, and are as follows:

a) oral and written control techniques are the methods of teaching students to explain knowledge logically consistently, to cultivate speech, to identify and eradicate typical errors in students response.

b) control techniques with the help of laboratory and practical work determine the educational and practical skills, determine the skills of students in working with educational equipment and tools, determine and evaluate the quality of the tasks performed, the correct selection of objects and tools depending on the content of the work, formalize the completion and result of the work, the methodology for determining.

v) methods of self-control a short plan on the educational material, drawing up questions, dividing the main idea, finding answers to questions, solving issues and checking them according to the sample, comparing, method of verifying the correctness of the results obtained.

g) control techniques with the help of cross-control sheet the chapter studied, compiling control questions on the topic, methodological correctness of the questions, logical sequence, accuracy of control over the knowledge of the students, method of wide scope.

d) the chapter, in which control techniques are studied using the tests, consists of such techniques as the formulation of control tests on the subject, the methodological correctness of the test questions and answers, logical sequence, the accuracy of control over the knowledge of the students, the wide scope.

Like all methods, the control and self-control techniques in teaching also have an educational, educational and developmental function. The educational task of the control is provided by the teacher to listen to the answer of all the students of his partner, correct the errors and omissions in the answer, propose Corrections and the introduction of birches. Thanks to this, the knowledge gained by the readers in this process is integrated into the system, repeated and strengthened. The educational task of the control is to ensure that it stimulates the students, the



responsibility and duty in the education is manifested in the formation of content, emotion. The developmental function of control is evident in the possession of stable attention, memory reinforcement, self-control and evaluation skills in the reader.

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