APPLICATION OF PEDAGOGICAL TECHNOLOGIES IN BIOLOGY LESSONS TO INCREASE THE EFFICIENCY OF TEACHING THE SUBJECT

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ABSTRACT

This article discusses the use of modern technologies to improve the effectiveness of teaching the subject of biology. The use of modern pedagogical technologies makes the learning process interesting, multifaceted, creative, students increase their motivation to study, the quality of education, students begin to show creativity, the ability to work independently, analyze, reason, and communicate.

KEYWORDS: *Education, Pedagogy, Method, Educational Process, Problem-Based Learning, Game Technologies, Creativity, Lesson, Independence.*

INTRODUCTION

A new technological approach to the construction of the educational process itself has appeared in modern biology teaching. Today, the concept of educational technology can be viewed broadly as a field of pedagogical science and as a specific educational technology. Pedagogical technology is a set, a special set of forms, methods, ways, methods of teaching and educational means, systematically used in the educational process. In the process of teaching biology, the following pedagogical technologies can be used: design, game, group, problem-based learning technologies, learning through learning, developmental learning technology with a focus on developing the creative qualities of the individual, information and communication technologies. Game technologies are one of the unique forms of education, which makes it possible to make the work of students interesting and exciting at the creative and search level. **[1]**

METHODS

The use of basic forms, technologies and teaching methods plays a major role in improving the level of biology teaching. Game technologies can be used in almost every lesson. The amusingness of the conditional world of the game makes the monotonous activity of

memorization, repetition, consolidation or assimilation of information positively emotionally colored, and the emotionality of the game action activates all the mental processes and functions of the child. Another positive side of the game is that it promotes the use of knowledge in a new situation, thus, the material learned by students goes through a kind of practice, diversifies the learning process. Students become more motivated and interested in the subject. Biology lessons can be conducted in the form of travel games: "To the zoo", "To the forest", "To the greenhouse", "To the desert", etc. What is group work in the educational process? What distinguishes it from other types of group interaction? The first step to group work is student self-determination. This process should orient students to achieve certain results. He must determine his place in the group, his relationship with other members of the group. Thus, as students are drawn into the process of self-determination, the processes of studying the situation and studying the conditions of the task assigned to the group begin to unfold. **[2]**

1) "Botany" - "Fruits". Each group has its own question:

1 gr. - What juicy fruits do you know?

2 gr. What dry fruits do you know?

3 gr. - Compare dry and juicy fruits.

4 gr. - What vitamins are rich in juicy fruits

5 gr. What is the importance of fruits in a person's life?

Problem-based learning is the modern level of development of didactics and advanced pedagogical practice. It arose as a result of the achievements of advanced practice and theory of education and upbringing, in combination with the traditional type of education, is an effective means of general and intellectual development of students. Training is called problematic because the organization of the educational process is based on the principle of problematicity, and the systematic solution of educational problems is a characteristic feature of this type of training. Since the whole system of methods is aimed at the comprehensive development of the student, his cognitive needs, at the formation of an intellectually active personality, problem-based learning is truly developing learning. **[3]**

RESULTS

To implement the cognitive and creative activity of students in the educational process, modern educational technologies are used, which make it possible to improve the quality of education and use study time more efficiently. The main innovative educational technologies that can be used as the basis for the study of biology are: The technology of problem learning is the creation of problem situations in educational activities and the organization of active independent activity of students to resolve them, as a result of which there is a creative mastery of knowledge, skills, skills, mental development capabilities. **[4]**

There are many varieties and types of business games aimed at creating problem situations, the main advantage of which is their focus on practice, the performance by the participants of the game of role-playing, imitation functions, creating a situation where students, based on already accumulated knowledge, should make decisions close to reality (for example, cases) . The effect of conducting business games increases if the questions of the game are based on specific information and are tied to those practical situations (territories) faced by specialists and just

participants in the game. Interdisciplinary aspects of the organization during the conduct of a business game make it possible to establish links between biology and mathematics, chemistry, physics, technology and other sciences. An analysis of the methods and forms of organization of the educational process in biology shows that an important direction for its improvement is the use of active teaching methods - conducting business games, discussion round tables, analysis of practical situations, a combination of theoretical studies with laboratory and independent ones. **[5]**

DISCUSSION

Therefore, problem-based learning is a type of developmental learning that combines independent systematic search activity of students with their assimilation of ready-made conclusions of science, and the system of methods is built taking into account goal-setting and the principle of problematicity; the process of interaction between teaching and learning is focused on the formation of the worldview of students, their cognitive independence, stable motives for learning and mental (including creative) abilities in the course of mastering scientific concepts and methods of activity, determined by a system of problem situations. Learning through learning is a method of teaching in which students themselves, with the help of a teacher, prepare and conduct a lesson. This may apply to individual episodes or even entire parts of the lesson. Often, aspirations become apparent if teachers of well-performing students are placed as assistants to poorly-performing students. This technology can be used in secondary schools, students themselves prepare and conduct individual stages of the lesson: oral answer, checking homework, etc. **[6]**

The method of developing education is a system of qualitatively new knowledge that offers a fundamentally different structure of educational activity that has nothing to do with reproductive, based on coaching and memorization, learning and conservative pedagogical consciousness. The essence of the concept of developmental education is to create conditions when the development of the student becomes the main task for both the teacher and the student himself. This complex pedagogical problem is solved sequentially: at the first stage (elementary school) - by forming the child's need and ability for self-development, and in subsequent years - by strengthening this ability and creating conditions for its maximum implementation. The developing system should provide, in addition to knowledge, skills and abilities, ways to independently comprehend knowledge in academic subjects. Only then will this knowledge contribute to the development of abilities in the process of carrying out independent cognitive activity, as well as ensuring an emotional and value attitude to the content and process of education, and the formation of a humanistic orientation of the individual. **[7]**

Information technologies today organically fit into any sphere of human activity and become one of the main means of adapting a person to life in the information society. Computerization has covered all aspects of human life: production and culture, everyday life and science, art and education. Psychological readiness for life in the information society, basic computer literacy, skills in using a personal computer are necessary for every person. The term information technology is understood as a set of technical means and methods of information processing. The development of a student's abilities in a general education school depends on many factors, including how visual and convenient for his perception the educational material is. **[8]**

CONCLUSION

Thus, the use of modern pedagogical technologies makes the learning process interesting, multifaceted, and creative. As a result of the use of pedagogical technologies, it can be said that students increase their motivation to study, the quality of education, students begin to show creativity, the ability to work independently, analyze, reason, and communicate. The teacher has the best opportunity for individual, differentiated work, the formation of personality traits that are necessary for further successful learning, self-realization, self-development, self-education, the formation of an original creative image, for dialogic, comfortable interaction with people and nature.

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