

USE OF INTERACTIVE METHODS FOR TEACHING NATURAL SCIENCES IN PIRMARY SCHOOL

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Abstract. *This article examines the effectiveness of using interactive methods in the process of teaching natural sciences in elementary school. In modern education, due to the ability to attract and motivate students, methods based on the principles of learning the game are actively developing. The advantages of this approach include increasing students' interest, activating the learning process, and focusing on developing critical thinking. The results of the research show the positive effect of interactive methods on the effectiveness of teaching natural sciences in elementary school, which confirms their potential as an innovative educational tool.*

Keywords: *interactive method, teaching science, educational events, primary school, attract students, active learning, educational technologies, motivation to learn, academic performance, educational innovation, game technologies.*

Introduction:

In the modern world, education is increasingly interactive and adapted to the needs of students. One of the main methods successfully integrated into the educational process is game technology. In particular, the use of various interactive methods in the teaching of natural sciences in primary school brings great benefits for both students and teachers. Interactive methods have a unique ability to interest and motivate students. Instead of the traditional approach of boring kids into science, gamified apps offer an interactive and immersive experience. Children have the opportunity to learn through play, which helps to master the material more deeply and increases the motivation to learn subjects. The use of interactive methods during the lesson allows students to apply their knowledge in practice.

Virtual labs, simulations, and scenario labs produce and experiment with physical experiments in a controlled environment to provide scientific research [1]. It helps children to develop abstraction. In reactive methods make it possible to adapt the educational process to the individual production of each student. Many game programs create a personalized, personalized offering that allows students to learn the material within the program and document based on their skill level. This is especially easy in a co-ed school, where students' knowledge and skill levels may vary.

Many interactive methods help develop cooperation and teamwork skills. Students can work together to solve problems by sharing ideas and strategies. Not only does this help develop social skills, it also teaches children to work effectively in a group, which is important for their future success in school and in life. Interactive methods not only help students learn scientific concepts, but also teach them the skills of working with modern technologies. In today's digital world, the ability to use computers and software is becoming increasingly important. Games help children develop digital literacy and confidence in using technical devices [2].

In today's world, technology plays an important role in education, especially when it comes to teaching science in elementary school. Interactive methods become a powerful tool for engaging

students in the learning process by stimulating their interest in science and teaching them basic concepts and skills. In this article, we will consider how the use of interactive methods can increase the effectiveness of learning science in elementary school. One of the main problems of teaching science in primary school is the insufficient attention of students and their low level of motivation. Interactive methods offer a solution to this problem by providing interactive and interesting ways to learn scientific concepts.

Interactive methods can offer students a variety of tasks, including solving puzzles, conducting experiments, and interacting with virtual models. Such tasks not only make the learning process more interesting, but also allow students to actively participate in the learning process, which helps to better master the material. Interactive methods, as well as the basic necessary for learning science helps develop skills [3]. For example, solving problems in a playful way requires students to think analytically, logically, and to work in a team. These skills are important not only for the successful acquisition of scientific knowledge, but also for further academic and professional activities.

One of the main advantages of interactive methods is the ability to adapt the educational material to the individual needs of each student. Many gamification programs offer a personalized approach that allows teachers to create learning programs that match each student's learning level and ability. This is especially important in elementary school, where the difference in student readiness can be significant [4]. Interactive methods also help to develop students' creative thinking. Many games offer the opportunity to create their own projects or experiments, allowing students to put their knowledge into practice and develop their unique creative abilities. The use of interactive methods in teaching science in primary school is an effective and promising approach. They help engage students in the learning process, develop basic skills, and stimulate creative thinking.

In modern education, games cease to be just entertainment and become a powerful educational tool, opening up new opportunities for the development of students and improving the quality of education. In the modern world, where computers and gadgets have become an integral part of everyday life, primary school education will have new forms and methods. This applies especially to the subjects of the natural-scientific cycle. In recent years, there is a tendency to actively introduce interactive methods into the educational process [5]. The use of games becomes not only an effective educational tool, but also a way to motivate students.

One of the main advantages of using game technologies in teaching science in primary school is the fun and interactive nature of teaching. Rather than the traditional methods of reading a textbook and completing paper-based tasks, students can immerse themselves in virtual worlds where knowledge is acquired through play. This allows them to better understand the material and memorize the educational material more effectively. In reactive methods also help students develop basic skills such as problem solving, critical thinking, cooperation and communication. After all, many educational games require students to analyze situations, make decisions, and interact with other participants. This helps them not only to master a certain material, but also to develop universal skills that are useful in life. An example of the successful use of interactive methods in teaching science in primary school is the development of specialized curricula and programs. Such applications are interactive tasks, experiments, quizzes and simulations that allow students to experiment, learn and teach through a game experience. In addition, interactive methods can be successfully integrated into the educational process using special equipment such as interactive whiteboards or virtual reality. This allows students to literally immerse themselves

in the material being studied, which makes the lessons more memorable and interesting. However, it should be remembered that game technology should be used in moderation and in accordance with educational goals.

Frequent use of methods can cause students to lose attention and distract them from the main material [6]. In general, the use of interactive methods in teaching science in elementary school opens up new learning opportunities and makes lessons more interesting and interactive. It helps to master the material better and develop the basic skills of students, which makes this approach an important element of modern education. The introduction of technologies in modern education has become an integral part of education. This is especially important in primary school, where the foundations of knowledge and skills are formed on which further education is built [7]. Interactive methods play an important role in the educational process, especially in subjects related to natural sciences. Interactive methods are an innovative approach to learning, which includes the use of various game elements and techniques in educational tasks.

Advantages of using game technologies

1. Motivation hobby

Game elements such as tasks, achievements, scores and levels can motivate students and make the learning process more interesting and exciting.

2. Interactivity

Interactive methods allow creating interactive environments where students can interact with the material and receive quick feedback.

3. Visual and audio effects

The use of graphics, animations and sound effects helps to better memorize the material and understand the concepts.

4. Individualization of education

Interactive methods allow to adapt the educational material to the individual needs of each student, while providing a personalized learning experience.

Using Game Technologies in Elementary School Science Teaching

1. Virtual Labs

Using computer simulations, students can conduct experiments and research without leaving the classroom, which is especially important for schools with limited resources

2. Education games

Games in which students solve problems and problems related to natural sciences help them better understand and remember the learning material

3. Visualize abstract concepts

Use interactive programs and animations to visualize complex concepts such as diffusion, magnetism, and electricity will help.

4. Creating role-playing games

Role-playing games in which students play the role of scientists or researchers allow them to enter the image of the scientific community and understand the principles of the scientific method.

In recent decades, the world of education has witnessed a revolution in the use of technology for teaching. Interactive methods, game technologies, in particular, have become a powerful tool for attracting students' attention and effective learning. The use of various interactive methods in the teaching of natural sciences in primary school, where the foundations of knowledge and skills are formed, plays an important role in stimulating children's interest in science and

forming their basic competencies. One of the main challenges faced by primary school teachers is to attract children's attention and make the learning process interesting and fun. Interactive methods provide different tools to solve this problem. Through games designed specifically for learning, students can immerse themselves in interactive and fun scenarios where they not only learn new concepts and facts, but also apply them, solve problems and solve problems.

In conclusion, the use of game technologies in elementary school science teaching is an effective and innovative approach that not only improves understanding of scientific concepts, but also helps students develop cooperation, critical thinking, and problem solving. This approach makes it possible to create an interesting and stimulating learning environment where every child can use their potential and become interested in the world of science. The use of interactive methods in teaching science in primary school is an effective and innovative approach that helps students to actively participate, develop their skills, and increase their motivation to learn science. This method not only makes learning more interesting and exciting, but also prepares children for the modern digital world where technology plays an increasingly important role.

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