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Advantages of Using Information Technologies in Primary School Mathematics

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Abstract: The article reflects the advantages of information technology, methods of their use, the effectiveness and use of modern information and communication technologies in primary school mathematics lessons. It is noted that the lessons organized on the basis of information technology are based on the improvement of the education system.

Keywords: *information technology, pedagogical technology, information and communication, innovation, modern approach, multimedia, presentation, animation, slide, electronic manual, interactive whiteboard, information space.*

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Learning if the teaching methodology at school does not change neither the quality, nor the content, nor the environment change.
Sh.M. Mirziyoyev

In the Decree of the President of the Republic of Uzbekistan dated September 5, 2018 No. PF-5538 "On additional measures to improve the public education management system": Enter the top 30 countries of the world in the ranking of the International student assessment program PISA, aimed at improving teaching methods, gradually applying the principles individualization in the educational process and modernization of public education, for example, the introduction of information and communication technologies and innovative projects.

According to the Ministry of Public Education, today the state provides a creative approach to teaching, the widespread introduction of advanced pedagogical and information and communication technologies into its activities, as well as a solid foundation for the acquisition of basic knowledge by students. The necessary measures are being taken. developed and implemented with the aim of increasing interest in the study of all disciplines. In this regard, it is important to inform the educational process, especially taking into account world experience. The ongoing reforms in the lifelong education system are aimed at improving the national education system, introducing the "national model" in accordance with modern requirements, in accordance with world standards, and further improving our morale. The modernization of the education system is today considered as the potential for innovative development of society and is based on the implementation of new conceptual approaches to the development of education. Providing a high level of quality education today remains a serious problem. The introduction of information technology into school practice is one of the priorities of modernization, which not only improves the quality of education, but also

helps to reveal the intellectual and creative potential of the student, to develop information potential.

The beginning of the 21st century began to be called the "information age" at the end of the last century, since the role of information in the 20th century was constantly growing and played an important role in the development of society. The economy, science, technology and culture are developing. However, the 21st century is called not only the "information age", but also "the age of the global information society." In such a society, education, knowledge, information and communication are the foundation of human development and well-being. To better adapt to social and professional changes, people today need to have the skills to critically analyze the data of any symbolic system. In this regard, teachers face a new task: to prepare a new generation for life in a modern information environment, to understand various information, teach it to understand, study the influence of the psyche, master it, etc. One of the important tasks of modern pedagogy is to increase students' interest in science, the development of their intellectual and creative thinking, intellectual abilities, ensuring interdisciplinary communication.

The priority is to organize lessons on the basis of advanced pedagogical technologies, teach students to work independently, competently use information technologies, and improve the quality of studying the subject. In this regard, different methods of organizing mathematics lessons in primary school are used. One of them is the use of modern information technologies. The rapid development of modern information technologies and their rapid penetration into the field of education, which are becoming more and more important in our life, require the appropriate formation of our knowledge and skills in this area. Therefore, it is recommended to use computers in primary school.

In math lessons, we can use simple operations, solve problems using slides and organize various arithmetic games using information technology. The organization of mathematics lessons in elementary school using modern information technologies increases the effectiveness of the lesson, ensures its quality, develops the knowledge and skills of students. Today, the role of innovative technologies, technical means, including modern computers, in the correct and effective organization of the educational process is invaluable. Using multimedia, animation, graphics, slides and videos on the lesson topic will make the lesson process more interesting so that the teacher can work on himself and explain each lesson “how innovative I am in today's lesson process”. can make the lesson interesting, ”he said.

The use of information and computer technologies opens up new opportunities for teachers to teach their subject. Studying any subject using information technology allows students to reflect and participate in creating lesson elements that help them develop interest in the topic. Classical and integrated lessons, along with multimedia presentations, online tests and software products, help students deepen their knowledge, increase learning efficiency, increase the intellectual level of students and develop self-study skills. Helps to teach, self-organize.

The use of information technology is a powerful tool for creating optimal working conditions in the classroom, but it must be focused and methodologically sound. These technologies should be used only when it gives an undeniable pedagogical effect. One of the new technical teaching aids, including modern information technologies, is an interactive whiteboard, which is a modern convenient way to convey information to students, expanding learning opportunities depending on the level of knowledge and interests of the student. An interactive whiteboard works well in elementary mathematics lessons. The whiteboard problem helps students visualize the problem. In this process, students work independently and think with their classmates and teachers.

Over the past decade, the use of computers in teaching mathematics has been carried out in several main areas. These include computer assessment of knowledge, the development and implementation of various types of educational programs, the development of cognitive mathematical games, and much more. Another aspect of the usability of computers in teaching mathematics is the modeling of individual learning situations. The purpose of using simulated programs is to ensure that figurative and understandable material is understood when using other teaching methods. With the help of simulation, students can present information graphically in the form of computer multimedia. As a result, they tend to be more independent in their in-depth study of mathematics and teaching.

When we organize math lessons using didactic games, we turn directly to information technology. As you know, the main occupation of junior schoolchildren is games. It is very difficult for a child to listen to a lesson without moving for 45 minutes and to assimilate all the information that the teacher gives. In order to easily integrate such a complex process into the child's mind, play and educational activity must be closely linked. That is, using educational and active games in the classroom, we can increase the learning efficiency to the desired level. The use of didactic games in the classroom allows the child to communicate freely, freely express their thoughts and fully memorize using new knowledge and imagination.

Another aspect of the educational game is that it allows the child to work with both hemispheres of the brain at the same time. Such activity in the brain simultaneously receives the given information, remembers it and gives a quick and accurate answer to the edited question. With this in mind, the modern teacher is required to organize each lesson on the basis of didactic games. As a result, the child does not feel tired during the day. Achieving a high level of efficiency in the learning process depends on the correct motivation of the child to learn. Didactic games can be just as motivating. Considering the learning process as a separate process and separating it from the child's main activity, play activity, is tantamount to placing the child in a cage. Play actions consist of winning

or losing concepts, and when they are used in class, the child struggles to win and easily gains knowledge by listening carefully to the information gained as a result of this struggle. At the same time, he applies this knowledge in practice.

As an example, consider some didactic games organized using information technology. For example, in the didactic game "33 by 33" the child will need to memorize the multiplication table and carefully participate in it. The prerequisite for the game is that the students clap their hands instead of saying numbers in the order of 3 and numbers divisible by 3. (1.2, applause, 4.5, applause, etc.). Counting continues until number 33, the student who missed the count leaves the game, and the count starts over.

In didactic games, integration is obvious, that is, interdisciplinary connections. As an example of the Travel Lesson didactic game in mathematics, a mathematics lesson can be combined with your native language and natural sciences at the same time:

Didactic task: correctly and accurately solve the given examples, work on mistakes;

Game task: to increase students' interest in mathematics. To connect with the science of the native language, to educate in the spirit of love for the Motherland, giving knowledge about the ancient cities of our Motherland, Uzbekistan, paying attention to the writing of famous horses;

The condition of the game is the image of the airport on a magnetic board. The names of our ancient cities will be written on the photo. Tickets are prepared according to the number of students in the class, with examples on the back of the tickets and directions on the front. For example, Bukhara-Tashkent, Bukhara-Khiva. If the students solve the problems correctly, they will go in the given direction. That is, he gets up and walks around the classroom in the form of a train. A video projector screen shows videos of ancient cities. Once the plane lands at the airport, students are asked to look closely at the tickets. Students must find a mistake in the ticket, which means that the name of the seat on one ticket is written in lowercase letters, and the student who finds this error will be offered the known horse rule.

Game "Funny carriages or trains"

Didactic task: to teach students to eliminate errors in the process of performing arithmetic operations;

Game task: strengthen students' knowledge by solving circular problem examples.

Description of the game:

The teacher asks the students the following questions:

- What kind of transport do you know?
- Answer: - bus, tram, trolleybus, train, metro, cars.
- Teacher: You answered very correctly, now we will play the game "Funny carts" with you. This game can be played in many different ways.

Task 1: Find the answer to the examples in the visual.

17-2 = 15, 15 + 1 = 16, 16-8 = 8, 8 + 9 = 17, 17 + 0 = 17

18 + 2 = 20, 20-5 = 15, 15 + 4 = 19, 19-11 = 8, 8 + 10 = 18

Once they find an answer to the examples, they will be asked to find the interesting side of it. Interestingly, students recognize that the answer of the first and the beginning of the second are like a "chain."

Assignment 2: A sample card is pasted in front of the students. Once he quickly and quickly finds answers to examples, students will know who is next to whom. One student should stand in a row as a flight attendant, and the rest as carriages. Students who have made a mistake will be helped. Thus, the game is repeated several times.

Objective 3: You can load vegetables and fruits into freight train cars and send them from one city to another. Students should be able to find answers to examples and quickly say how many pounds will be sent. This reinforces children's knowledge of mass measurements.

The use of "multimedia lessons" in mathematics in primary school can also improve the quality of the educational process. Multimedia allows you to present information in various forms and create dynamic images, receive and visualize it through the organs of sight and hearing. In multimedia technologies, presenting information in the form of images, sounds and actions, rather than in the form of text, teaches students to be more active, attentive, focused and curious in the classroom, because every information recommended is their participation ..and is carried out through movement.

In this case, the teacher:

- Demonstrates presentation of educational material;
- can quickly deliver new material;
- can control the speed and volume of information through animation.

"Multimedia lessons" allow students to develop an interest in science, control and consolidate their knowledge, choose a convenient speed and level of assimilation when studying a topic.

Electronic programs in mathematics for junior schoolchildren, such as "Let's learn to count", "Algebra" and "5 * 5", developed by RTM, are interesting, age appropriate, easy to use, have intellectual potential. that this prompts logical observation.

Learning to Count is an electronic math textbook for elementary school students. Through this e-learning process, elementary school students will be able to use a computer mouse while developing the ability to perform four tasks.

Algebra is a 1st grade math program. As part of the program, students learn to count, sort, add and subtract 10, and compare. The program allows the student to automatically master the solution of oral examples. It also helps to develop independent work skills.

5 * 5 is a multiplication table program designed for use in grade 2 math classes. In the repeated part of the program, the computer learns the table 2 to 9 times in order. In the exam section, the student draws up a timetable on his own. It is important to note that the lack of transition from one room to another forces the student to work on himself. The program can be considered a real help for the teacher, because 30-40% of students in the class have difficulty learning the multiplication table. The program ensures that students learn the multiplication table automatically.

Today's teacher must be able to use information technology in the classroom, teach students to use computers freely, master modern knowledge, and become spiritually mature.

By using information technology in the classroom, we can achieve the following benefits:

1. Information technologies make the learning process more modern, colorful and rich;
2. Significantly expands the possibilities of providing educational information. They strongly influence the child's perception, allowing him to work with a variety of large amounts of information;
3. Provides the appearance, beauty, aesthetics of the design of mathematical activities;
4. Makes the educational process more attractive for children and increases their interest in classes, helps them understand examples and problems and work with pleasure;
5. Promotes the adaptation of the child to the modern information space and the formation of information culture;
6. Provides an opportunity to combine different types of activities, sources of information and educational technologies in mathematics lessons;
7. Helps to better implement the system of diagnostics and monitoring of mathematics lessons in the educational process;
8. Improves the quality of pedagogical work;
9. Significantly contributes to the effectiveness of educational activities.

The qualified and systematic use of information, communication and communication technologies in mathematics lessons is a modern tool for increasing the effectiveness of the educational process.

In short, the use of modern information and communication technologies in primary grades allows students to think independently, expand their creativity and logical thinking, and connect what they

have learned in class with life. The quality of the educational process is guaranteed by the fact that teachers effectively use the conditions created in accordance with such modern requirements, and organize not only mathematics lessons, but all subjects on the basis of advanced pedagogical and information and communication technologies. It is worth noting that the use of multimedia applications in math lessons helps students develop independent creative thinking. In short, the use of information and communication in primary school helps to improve the quality and effectiveness of the lesson.

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