



## Teaching Integration Tasks Based on Information Technology in Primary School Mathematics

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### ABSTRACT

This article discusses the integration of information technology, the integration of assignments, the teaching of integration tasks on the basis of information technology, its effectiveness, methods and techniques, which serve to increase information competence in the process of working in mathematics lessons in primary school.

### Keywords:

integration, integration tasks, information, information competence, information technology, educational effectiveness, communication, integration task.

As the Republic of Uzbekistan, as an independent and democratic state, aims to build the most developed society, deep and radical changes are taking place in the education system. Mathematics has been identified as one of the priorities for the development of science in our country in 2020, and a number of systematic measures are being taken to bring the development of mathematics science and education to a new level.

In particular, the "Concept of development of the public education system of the Republic of Uzbekistan until 2030", adopted on the basis of the Decree of the President of the Republic of Uzbekistan No. PF-5712 of April 29, 2019, "Further development of mathematics education and science" of July 9, 2019 Resolution of the Government of the Republic of Uzbekistan No. PQ-4387 "On measures to radically improve the activities of the Institute of Mathematics named after VI

Romanovsky of the Academy of Sciences of the Republic of Uzbekistan", May 7, 2020 Resolution No. PQ-4708 of January 24, 2020 "On measures to develop research" sets out a number of important tasks for the comprehensive improvement and development of mathematics and education in mathematics.

In the current context of changes in the system of general secondary and higher education, a number of pressing issues are facing the science of technology and its teaching methods. One of them is to ensure the readiness of teachers in primary education to conduct lessons in a variety of programs using information technology, the introduction of information technology in education using a variety of methods, including modern foreign textbooks, through which integration tasks equipping them with training and teaching methods and adapting the content of education to the age of the students. One of the goals of

the National Curriculum for General Secondary Education is to develop a person who is able to function successfully in a rapidly evolving society, who is clear and concise, and who is able to think critically and logically. A competency-based approach to mathematics education involves students acquiring a variety of skills that enable them to act effectively in everyday situations, both professionally, personally, and in society.

The integration of our country into the world community, the development of science and technology and the competitiveness of the younger generation in a changing world require a perfect mastery of science, which is ensured through the introduction of international experience and standards in the education system, including mathematics. The introduction of modern pedagogical innovative methods of teaching students in secondary schools is important for the economy of the Republic of Uzbekistan to become one of the most developed countries in the world in the next 10 years, ie to become one of the world's leading countries in science and technology by 2030. is one of the conditions.

The main tasks of university teachers are to integrate lessons in the teaching of mathematics in secondary schools, to increase students' creativity, to introduce them to ways to activate students' learning, to give advice to teachers on didactic games, to develop skills in preparing didactic materials used in these lessons. Today's demands place great challenges on the world's education, that is, to teach students to learn on the basis of modern information technologies, first of all, to form in today's students the image of professionals who are actively working in accordance with rapidly changing and updated information. Today, the use of information technology in the educational process is one of the most effective methods. Obtaining, processing and applying information in practice is a key task.

At the same time, integration in education is important, especially in mathematics lessons. This process has many advantages, but it also requires a lot of responsibility and knowledge. Mathematics classes are integrated with a number of disciplines. In particular, as noted in

the National Curriculum for General Secondary Education, Informatics and Information Technology It provides a great opportunity to increase the effectiveness of the process of teaching mathematics through the use of various forms of information and communication technologies and computer technology.

In analyzing the above considerations, it is important to know, first of all, the content and importance of information technology, the process of its emergence and a number of stages of its entry into the educational process. First of all, let's think about what the concept of "technology" is. The National Encyclopedia of Uzbekistan defines the concept of "technology" as follows:

**Technology** ( *techno - art, skill, logos - science* ) - a system that regulates the methods of obtaining, processing and processing products in industrial construction, transport, agriculture and other fields, with the development, implementation and improvement of these methods science

Information means some kind of information, some evidence, the essence of knowledge. So far, no single definition of information has been developed.

**Information** is information obtained from it in the process of adaptation to the external environment.

Information provides information about events and happenings. The event reveals the essence of the events.

In general, **information technology is** the totality of methods, devices, techniques, and processes used to collect, store, search, process, and disseminate information.

Information technology refers to the various means of transmitting information: writing, the invention of paper, printing, radio, sound recording equipment, computers.

The main purpose of the introduction of information technology in the educational process is the emergence of new types of learning activities that are characteristic of the modern information environment.

Information technology has existed at various stages of development, but the peculiarity of today's information society is

that, for the first time in the history of civilization, the power expended on knowledge and production outweighs the cost of energy, raw materials and consumables. Information technology is one of the leading new technologies.

is difficult to imagine existence outside the realm of information and information technology today . The growing number of different types of information is forcing us to introduce new, advanced methods and means of processing it. Modern educational conditions are increasingly demanding its implementation. Education is an integral part of human life, as well as a source of new knowledge in this field and the field of application of this knowledge.

Integration through the use of information technology in education is one of the most important tasks of a teacher.

**Integration (Lat. Integratio - from the word "restoration", "complement", integer - "whole") - 1)** a concept that describes the state of interdependence of parts and functions of a system or organism, as well as the process leading to such a state; 2) the process of convergence and interaction of disciplines; accompanied by differentiation; 3) Coordinating and merging the economies of 2 or more countries.

Integration in education means that the content of education is delivered to the student in a comprehensive way, combining several disciplines. Using information technology in

elementary math lessons, the teacher uses innovative methods and technical skills to integrate the tasks. In order to prepare integration tasks, the teacher should consider the following:

- Harmony of professions or disciplines;
- Appropriate use of each method;
- The complementarity of content;
- Creative approach to the process;
- Compliance of general secondary education with the requirements of the National Curriculum;
- Availability of delivery on the basis of modern approaches;
- Take into account the opportunities for students to acquire knowledge and skills.

The use of new methods of explanation, especially in the form of games, increases children's compulsive attention. Information technology provides a personalized approach. The capabilities of the computer allow you to increase the amount of material offered to introduce yourself.

When assignments are prepared in the form of games and used in the classroom, they attract the student's attention, increase their interest , and increase their competence in working with information.

Here are some examples of integration tasks. Let's integrate this task from the 2nd grade math textbook through information technology.

Construct an expression based on the image and find its value.

1. What is the name?

2. Place in baskets.

3. Compare.

4. Numbers in colors.

5. Where it grows?

Based on the given task, we deliver it to the student, integrating it with other disciplines. In this, the role of information technology is invaluable. Through modern technology, the content of education becomes interesting and high-quality.

We developed 4 different assignments from a single assignment. It is clear that if the teacher is researched and takes a creative approach to the process, creativity will emerge on its own. The variety of colors and imagery is sure to capture the reader's attention.

Based on the assignments in the textbook, the teacher completes the next assignments for the students in a consistent and consistent

manner . The condition of Task 1 is that the student first needs to know the names of the objects in the picture. In other words, the mother tongue is connected with science. Of course, students need to know what the issue is about. In the process of writing their names, not only does the student acquire writing skills, but his vocabulary increases.

the knowledge of grouping things according to their characteristics and qualities. In this case, the student places the fruits and vegetables correctly in the baskets and pronounces them by name.

During the next task, the teacher asks the students to compare the given items according

to the amount given. That is, if a cucumber and a tomato are to be compared, the mass of the cucumber is determined and the mass of the tomato is also determined. Now it is possible to compare them. Thus, this task is accomplished.

The purpose of our task, called "Numbers in Colors", is to find out what we have to do with the given colors: what can we find in green? We were given a cucumber in this color. He asks what color it is. And the color of other things is also asked. Now, using the number of items in these colors, their quantity is written in the cells. This process encourages students to think in two ways: both analyzing the color and adding quantities of objects of the same color to form an expression. The answer to the expression is calculated and written down.

Task 5 is integrated with the natural sciences, in which it is determined whether the data grows on a tree or on the ground.

strengthen understanding in the process of integration with other disciplines.

In general, the integration of information technology in primary school mathematics is promising for modern primary education. One of the priorities is to develop this person on the basis of upbringing in the spirit of universal and national values, that is, the process of upbringing aimed at educating a comprehensively developed person.

Thus, the use of information and communication technologies (ICT) in the educational process is relevant to modern education problem is \_ Today, in any school discipline, a teacher must prepare and conduct lessons using ICT. Lessons using ICT are visual, colorful, informative, interactive, save teacher and student time, allow students to work at their own pace, allow teachers to work with students in a variety of ways and individually, and quickly monitor and evaluate learning outcomes

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