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IMPROVING THE TEACHING METHODOLOGY OF INFORMATICS AND INFORMATION TECHNOLOGIES IN PRIMARY CLASSES UNDER DIGITAL CONDITIONS

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Annotation:
In this article, the attention to digital education in our country and special attention to the requirements for teaching computer science from elementary grades and the educational programs, new content and new textbooks related to it, the necessary methodological support Opinions about the development of manuals are given. In order to improve informatics and IT science in elementary grades, it is appropriate to compare the knowledge of children in traditional previous education with the new improved methodology, and the effectiveness of teaching in it indicates how correctly this methodology was chosen. This can be seen from the introduced changes and from the children's increased knowledge of informatics, knowledge indicators.

Keywords: digitization, digital technologies, informatics and computer technologies, software tools, teaching methodology, improvement.

Introduction

Currently, information technologies and digital technologies, which are a type of them, as well as digital educational platforms that are used for preschool and school education, for example, daily.com, contribute to the development of children's digital thinking. in the air. Children encounter the digital world first in kindergarten and then in elementary school. Children can log in and see their grades with their login and password, they are under the control of their parents, which motivates them. This ensures that they communicate with digital technologies from an early age. At the stage of school education, great attention is paid to starting the subject of "Informatics and IT" from the elementary grades, which indicates how necessary the subject is. The gradual and continuous teaching of this subject from an early age contributes to the development of up-to-date personnel. The knowledge given at an early age remains in memory for a lifetime, like a seal on a stone, and develops a person throughout his life. This knowledge remains the main fundamental knowledge, and the knowledge of the next stages of education is added to it as a superstructure. Therefore, since our country introduced the science of computer science and information technology from elementary school, we should think about the curriculum of this subject, its content, and new textbooks to be written based on it.

Literature Analysis

As textbooks for higher education are being prepared through the platform [12], [13], textbooks, methodical manuals and recommendations should be developed based on the model program for the elementary education informatics course. In our country and Russia, For the first time, we got acquainted with the works dedicated to teaching computer science from a young age in America and

other countries. [5] In the article of T.E. Sorokina, there are very appropriate recommendations about teaching children to program early, therefore, in our country, attention is being paid to learning programming from an early age. A number of articles by Pervin Yuriy Abramovich [4] are devoted to teaching computer science from a young age. Many pedagogical schools have also conducted research on the issues of teaching early computer science and teaching early programming. Bosova L.L. in Russia. carried out scientific research in this field. [1],[2], [3],[4], [5] .Abroad A.M. Reznik, Simor Papert, in Russia Ershov., Kuznetsov A.A., Monahov V.M., Shkarban F.V. were engaged in the issues of early education of children in informatics. In Uzbekistan Yunusova G.N.,[6], [7], [8], [9], [10], [11] Najmiddinova H.Ya., Ikromova M.N., Bahramova M.B. and others are conducting scientific research on teaching informatics and programming in preschool and elementary school [1], [6], [9], [10]. [1], [2], [3], [4], [5], [6], [7], [8], [9] gave ideas for strengthening knowledge from programming in teaching robotics in STEAM education. [10].

Methods/Methodology

This is one of our latest scientific researches. In the first case, we got acquainted with the information science taught in 5th grade and what its content was. we met [1]. Taking into account the child's first acquaintance with a computer and a mobile phone, knowing that it is appropriate to introduce the device to the primary school, we have developed one lesson plan for it, and we will implement the rest based on a sample program. We used the methods of analysis, synthesis, comparison and mathematical statistics in the first steps of our research. Having familiarized with the content of computer science, taking into account that nowadays every child in every household is familiar with a computer and a mobile phone from an early age, in the elementary school computer science class, they can imagine the appearance of a computer and a mobile phone, the appearance of a computer, its devices Thinking that it is appropriate to start with teaching names, we planned to teach this process depending on the psychological aspects of the child and his age: [2], [3], [4], [5], [6], [7], [8], [9], [10], [11].

Result

As a result, we managed to develop the lesson development and the methodology for its teaching, as well as the aspects that take into account the mental, physiological and psychological development of children, and the ergonomic, psychological and technical requirements for computer programs in teaching the child computer science and IT using computer programs. We determined that it should be taken into account. We created a scenario for the "Getting to know the computer" lesson for elementary school informatics, and after conducting the lesson based on it, we got positive results. The results can be seen in **table#1**.

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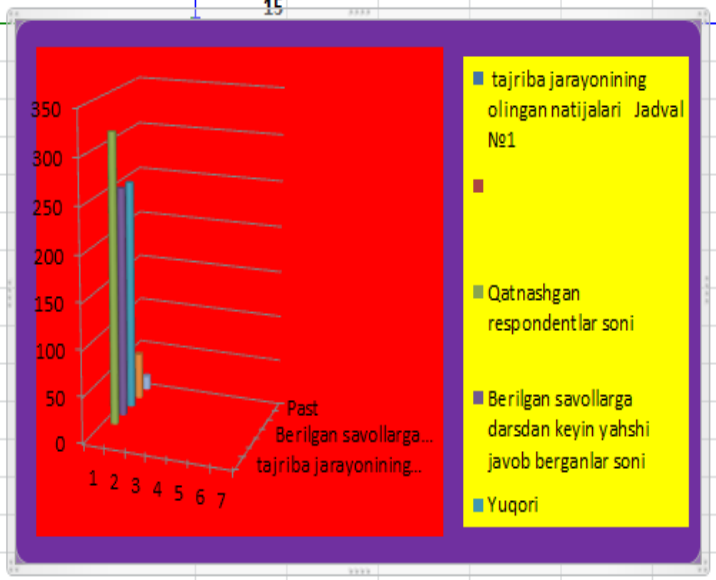


It can be seen that the high results gave high indicators on the received questionnaire, the children got good knowledge from the lesson about computer input and output devices that we organized.

Acknowledgments. We conducted a lesson on our lesson plan prepared for primary grades at school #31 and interviewed them before and after the lesson. We conducted an analysis based on the questionnaire. We would like to express our gratitude to the school administration who facilitated the implementation of the experiment and helped to collect the respondents.

Discussion

Now we present the content of the lesson on providing basic knowledge about computers to elementary school students:

Basic parts of a computer

The word computer is familiar to you from a young age!

Here is a computer: a monitor or Display, a mouse, a keyboard and a System unit:

The main parts of the computer

Processor and memory - are located inside the system unit. Monitor, keyboard, mouse are input and output devices. What do we include and exclude? Of course, information! They can be textual, pictorial, tabular. (The pictures show their appearance).

Text is entered from the keyboard or using the mouse, commands can be given to the computer. A person displays text and images on the monitor and sees them. That is why these devices are called input and output devices.

This is a **monitor**.

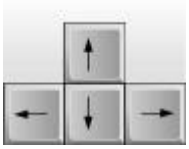
Look, it's like a TV. A computer displays text and images on its screen. A monitor is a playback device.

In the picture, we marked the computer with the letter K. Information is transmitted from the computer to the monitor.

This is a **keyboard**

It is used for typing (entering) text:

You can enter commands from the keyboard, for example, when playing a game, you can use the arrow keys to move the game character to the right, left, down, up on the screen:



A keyboard is an input device.

The arrow on the left in the picture indicates that information is entered from the keyboard.

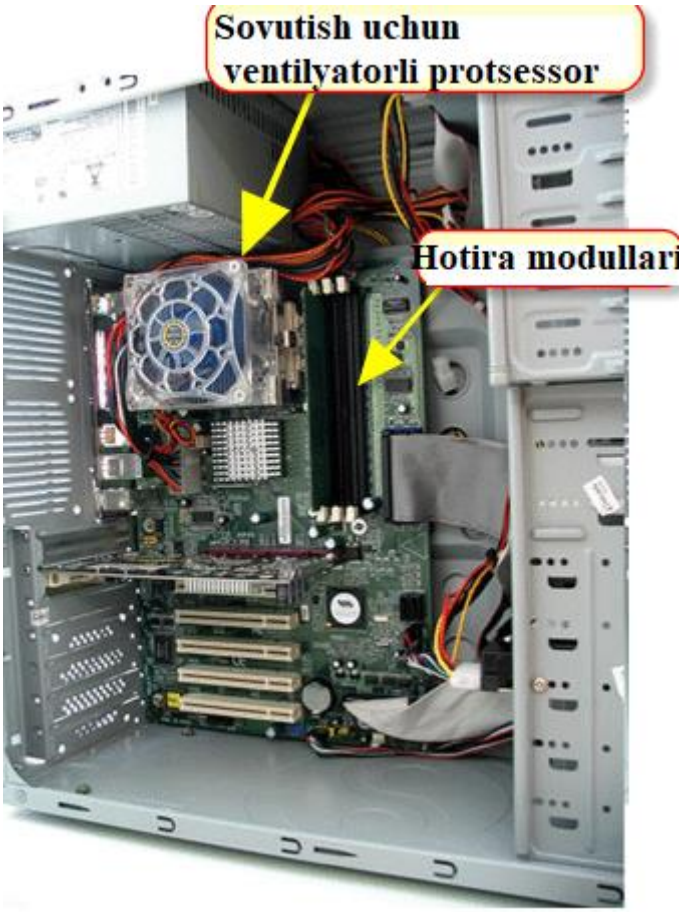
This is a computer mouse.

The movement of the mouse is indicated by an arrow on the monitor screen. This arrow is a cursor. The mouse has buttons, you can press its fields and use it to enter commands. A mouse is an input device.

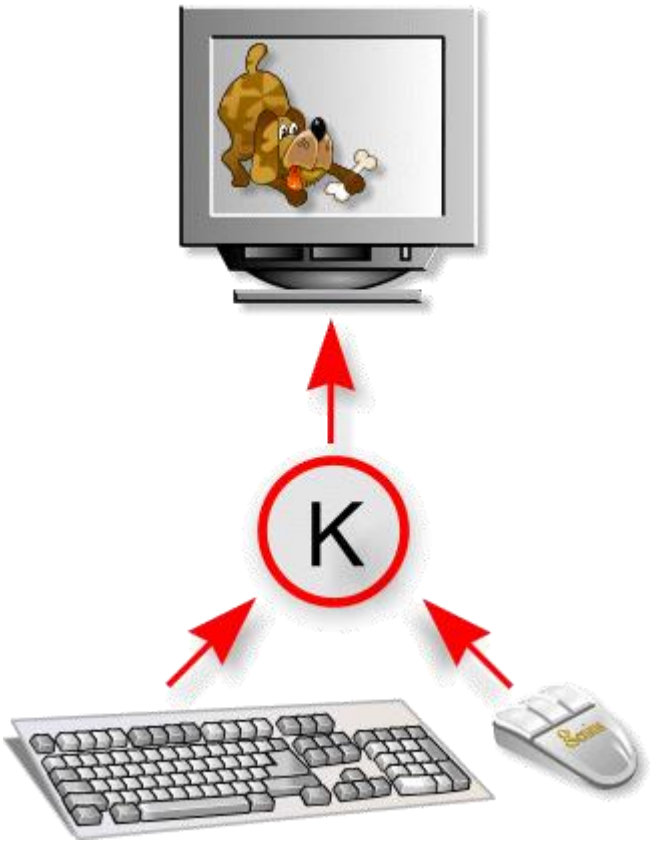
This is a **system block**

It contains:

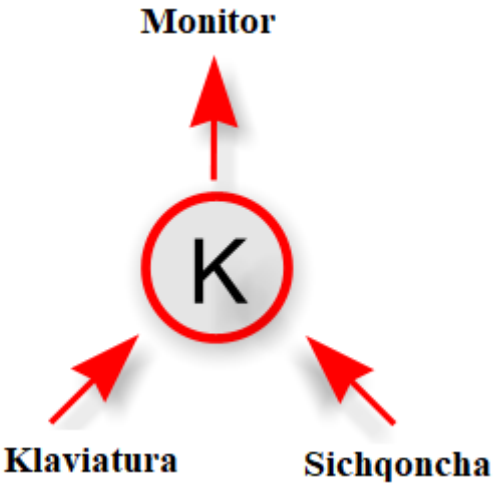
- processor (computer «brain»);
- information storage device ("memory" of a computer).



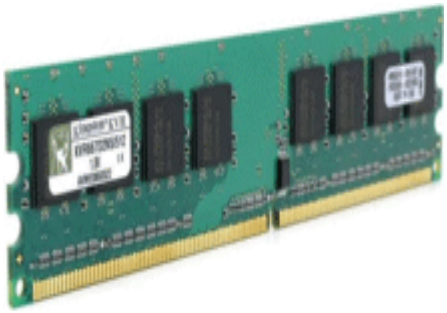
If you open the system unit, you can see the processor and computer memory



The picture shows the input of information, first to the computer and then to the monitor.



Keyboard and mouse are input devices. A monitor is an output device.



We will talk about inputting information to the computer and outputting it from the computer. The question arises: where is the information entered and where is it taken out?

What device stores information?

Of course in memory!

Information is entered into computer memory from the keyboard and mouse. It is output to the monitor.

What does the processor do in it?

The processor processes information. If "2 + 2" is entered into the computer's memory, the processor will process this information and get the result 4

- We learned that the main parts of a computer are: system unit, keyboard, mouse and monitor.
- We learned that the processor and memory are located in the system block.
- Keyboard and mouse are input devices.
- A monitor is an output device.
- Computer memory stores information.
- The processor processes information.

Conclusion. Children were interested in learning about computer devices by showing and showing them how to enter information and images on input and output devices, and they also saw that a scanner can display text as an image and a scanner can also scan paper. they saw that the given information was transferred to the monitor and then printed on the printer. The children received very thorough, consistent and accurate information, and according to the survey, 285 of the 315 children gave correct answers, and the remaining 15 gave 2-3 wrong answers and the remaining 15 had 1-2 wrong answers. It was concluded that if the lesson is interesting and passed within the scope of understanding the child, he can understand the content of any topic.

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