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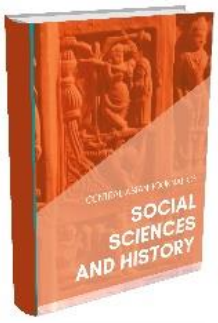

Use of ICT in Preschool Education Using the Scratch Program

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Abstract:
The article considers the use of ICT in preschool education using the Scratch program, which forms ICT competence in children up to school age through an interactive game. The concepts are disclosed: competence-based approach, key competencies, Scratch software.

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Digitalization is an active natural introduction of ICT into modern life in the variability of its forms. The implementation of digital technologies is a legislatively enshrined national strategy in many countries, including the Republic of Uzbekistan. Despite the obvious advantages of such solutions, mainly related to the optimization of processes and the processing of significant amounts of information, there is an obvious wary attitude towards the digitalization process, which stands out most clearly in the field of educational practice [2]. In this context, the psychological content of the practice of introducing ICT comes to the fore, which, in line with the cultural and historical tradition, brings us to the problem of interaction between the child and the teacher as a key aspect of the social situation of development [1], and also opens up the possibility of using a digital device as a cultural tool. Consideration of these aspects comprehensively forms a strategic view, where dialogic pedagogical interaction is enriched through new forms of information transfer, thus creating an opportunity for seeing ICT as a means of development.

The digitalization of education, despite its all-round distribution, is characterized by extremely uneven effects for different stages of the educational process, which correlates both with the introduction of new tools into traditional face-to-face practice, and with the availability of distance and online forms of the educational process. The traditional opposition of full-time and distance education [4] consists

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in comparing various factors of learning effectiveness, mainly related to the design of this process, modality, the ratio of students and teachers, the source and characteristics of feedback, assessment, the roles of teachers and students, features of communication and etc. [5]. This issue, in turn, is inextricably linked with the age and psychological characteristics of students, which is the main reason for the differences in educational practices at different levels: in particular, if we consider higher education, then the introduction of ICT, as well as the spread of online and distance forms much more represented in comparison, for example, with school and preschool education.

One of the main requirements for education is its modernity. New conditions of the XXI century. more and more focus on "free development", creative initiative, independence, mobility of the child [1]. In contrast to the concept of "mastering knowledge", the modern competence-based approach involves the formation of key competencies - the readiness of students to use the acquired knowledge, skills and methods of activity in real life to solve practical problems. In fact, in this approach, the understanding of knowledge as an increase in the amount of subject information is opposed to knowledge as a set of skills that allow you to act and achieve the desired result, often in uncertain, problematic situations [2].

Undoubtedly, every year information technology plays an increasingly important role in the lives of modern children. The use of ICT expands the information space, increases the speed of information retrieval and the intensity of processing the acquired knowledge. Ultimately, this comes down to saving time, increasing the productivity of its use, and a higher quality of training.

Therefore, the educator should not oppose the adoption of these technologies in the lives of children, but, on the contrary, should contribute to the formation of skills for transferring information from one sign system to another and its structuring. And where, if not in the humanitarian cycle, to put these ideas into practice.

For the preschool teacher, ICT is also a great help. Multimedia-based methodological support has a strong impact on memory and imagination, facilitates the process of memorization, makes the lesson more interesting and dynamic, creates the illusion of participation, empathy, and contributes to the formation of voluminous and vivid ideas about the past. Another advantage of such software is an increase in the pace of the lesson, which allows you to optimally approach thematic planning.

From the foregoing, it follows that the formation of ICT competence in children in kindergarten will be advisable through the use of appropriate multimedia software. As experience shows [3], multimedia programs are most effective for consolidating knowledge and learning new material.

The Scratch algorithmic environment is well suited for developing a simple interactive game - it is software, a programming language, an interactive environment and a multimedia system all rolled into one. Scratch is a project created and developed by the Lifelong Kindergarten Group, part of the MIT Media Lab.

When studying computer science and ICT, the issue of increasing the motivation of children in a preschool institution becomes an urgent issue, especially for the “boring” topics of studying the basics of algorithmization and programming.

To resolve this issue, we can recommend the use of the Scratch environment in the lessons.

Scratch is a free-to-use, visual object-oriented environment with programming elements for teaching children aged 5-6 years the basics of modern information and communication technologies in

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kindergarten and at home, including through distance forms of education.

The name comes from the word "scratching" - a technique used by hip-hop DJs to turn records back and forth with their hands in order to mix different musical themes and obtain special effects.

Scratch was created as an implementation of the ideas proposed in the Logo language and the Lego constructor and is written in the Squeak programming language. Scratch began to be developed by a very small team of specialists at the Massachusetts Institute of Technology.

The history of this environment begins in 2003, when a group of programmers "Lifelong Kindergarten" (which translates as "kindergarten for life"), led by head Mitchell Resnick from the MIT Media Lab company, set out to create a public programming environment for preschoolers younger and middle ages. Programming, they believed, should be taught as early as possible. A few years later, the unique Scratch environment appeared. Even preschoolers could create computer programs in it. The latest release, 2.0, was released on May 9, 2013. The most popular release is version 1.4.

Scratch programs consist of a number of graphic blocks (blocks are collected into specialized sections that describe the general behavior of the blocks), the captions for which change depending on the language selected inside the interface. There is a choice of one of 50 interface languages. Template gettext files can be used to switch the interface to a new language.

The secret is that there are no words in Scratch - key operators, the syntax of which you need to know and be able to write in scripting software modules without errors. Programs in Scratch, in fact, do not write at all. Script programs are assembled using the mouse from existing cubes-blocks-commands, outwardly similar to the blocks known in the children's Lego environment. Each block has its own unique character.

From independent blocks, according to certain rules, sequences of actions of sprite objects are assembled. At the same time, various changes can be made to the program at any time. Visually, the child will immediately see how his changes affect the work of the project.

The main task of Scratch is to teach a child algorithmic thinking in a playful way. Therefore, a whole community has united around Scratch, consisting of scientists, teachers, parents and students. Learning with the use of Scratch is a process that is developing and exciting in its essence: the environment provides the ability to create cartoons with the participation of both one and several characters (sprites), modify their appearance, move around the screen, program their interaction.

As emphasized in his article Boburov M. [2], the use of simple commands in Scratch allows you to create a fairly complex model in which many objects with different properties can interact.

The convenience of this environment is the combination of commands in groups into special multi-colored blocks.

The accumulated experience of using the Scratch environment in preschool classes in kindergarten allows us to conclude that due to its simplicity and convenience, it is easier for a child under school age to master the knowledge of the content line of algorithmizing and programming. At the same time, one of the ways to organize the educational activity of a child is the method of projects, where Scratch acts as the most suitable tool that allows not only to form algorithmic thinking in a child before school age, but also to develop their creative potential.

Thus, the process of digitalization of education correlates mainly with the pedagogical attitudes of teachers, as well as with their actual practice of using ICT in their work. This is what determines the

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implementation of child development strategies and the design of specific activities, so the teacher is not just a transmitter of knowledge, but rather a facilitator who creates and maintains a fruitful environment for the development of the child's abilities through his own experience in interaction with peers and the teacher. The results of our study show that the experience of Russian preschool teachers with digital programs and devices is still somewhat fragmented and rather represents the frontal use of available funds, therefore it is necessary to assimilate the experience of educators in order to form general recommendations to maintain the effectiveness of the educational process.

References

1. Abdullayev S. D. On the use of modern technologies in the development of intelligent systems / Lopatin Journal of scientific publications of graduate and doctoral students. 2020. No. 3 (93).
2. Boburov M.K. Intelligent information technologies - Birobidzhan, 2020.
3. Sattorov B.A. Principles of regulation of the market of educational services// V.A.Veksler, L.B. Reidel - Legal policy and legal life. 2020. No. 2.

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