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METHODOLOGICAL FOUNDATIONS OF THE USE OF IT IN THE CLASSROOM OF SCHOOL SUBJECTS (FOR EXAMPLE, MATHEMATICS LESSON)

Аннотация: в создании Республики Казахстан как суверенного государства огромное социальное значение имеет реализация реформы сектора среднего и высшего образования. Авторы статьи считают, что реализация многих задач, стоящих перед системой образования на современном этапе, невозможно без использования методов и средств информации.

Ключевые слова: процесс информатизации, информационные технологии, учебный процесс, образовательная деятельность.

Abstract: in the establishment of the Republic of Kazakhstan as a sovereign state, tremendous social significance is the implementation of sector reform secondary and tertiary education. The realization of many of the challenges facing the education system at the present stage, is impossible without the use of methods and means of information.

Keywords: process of informatization, information technology, educational process, educational activity.

To date, the current period is characterized by the development of education informatization process, which involves the implementation of information technologies (IT) to improve the educational process, organizational forms and methods of training

to ensure the development of the learner, the formation of independent learning skills implementation of the collection, processing, transmitting information about the studied objects, phenomena, processes.

At the same time, in a period of rapid information society for human development gain importance ability to gather the necessary information, the ability to hypothesize, to draw conclusions and inferences used for information of new information technologies.

Therefore, information technology can be used to familiarize children with the new material in school subjects, as they can be used to secure and repetition studied. In particular, it should be noted, for example, in math class information technologies are not just for diversity in the classroom, but also to the training material had more clarity, more understandable.

In this regard, the priorities in the methods and methods of delivery vary ready knowledge learning methods of searching, storing, selecting, processing quality information and its use.

Thus, the program information – a complex of measures aimed at ensuring the use of operational knowledge in all kinds of school activities. In this case, the goal of a modern lesson – is the formation of creative thinking and bright ideas about the subject. This may mean that a great opportunity for its implementation laid down in the use of computers in primary school.

However, modern education system involves the use of a wide variety of innovative technologies that address the following two main advantages – qualitative and quantitative.

New opportunities are evident when compared with direct verbal descriptions audio-visual presentation.

Quantitative benefits are expressed in the fact that the environment is much higher for multimedia information density.

All of the above reminds us once again that the development of new information technologies in education, encourages the development of software tools and applica-

tions that implement methodological ideas associated with semi-automatic or automatic access to educational information, validation of the results, evaluation of the initial and ongoing training and so on.

In this case, it can be argued that a careful application of modern information technology in the school curriculum contributes to:

1) activation of cognitive activity, improve quality student achievement;

2) the achievement of learning objectives by means of modern e-learning materials for use in the classroom in elementary school;

3) development of skills of self-education and self-control in primary school children; improve the comfort level of education;

4) reduce the difficulties of teaching students;

5) an increase in activity and initiative younger students in the classroom; Development of the Information pupils' thinking, the formation of information and communication competence;

6) the acquisition of computer skills students in compliance with safety regulations.

Therefore, the «core» of professional competence is not the student's awareness of and ability to use new technologies that have social value and a great motivational incentive value; to resolve the problems in various fields [1].

This creates favorable conditions for the formation and development in the process of learning activities of students personal qualities.

For example, in primary school use of information technology helps the teacher to visualize the necessary didactic units of educational information, increase the interest of pupils to study the subject of mathematics, students contribute to the accumulation of facts and ways of supporting the activities of the sample.

So, by using information technology in the learning process there is a significant change in the educational process:

– refocusing on the development of thinking, imagination as basic cognitive processes necessary for quality education;

– effective organization of cognitive and self-activity of pupils' equipment;

– manifested the ability to cooperate, self-improvement, creativity, etc.

However, it is worth noting that the use of information technology preserves all the main stages of the lesson, i.e. in the traditional lesson electronic versions of some of the educational material to make the process of learning a complex and effective. They allow you to talk about the formation of core competencies students, consisting in:

– ability to systems thinking, self-sufficient in the face of uncertainty and unpredictability;

– willingness to be responsible for the work;

– ability to independently and effectively solve problems encountered in the course of practice;

– readiness to positive interaction and cooperation with classmates;

– the ability to quickly and effectively make decisions, actively contribute to conflict resolution in solving the problems;

– the ability to quickly and flexibly to apply their knowledge and experience in solving practical problems;

– willingness to acquire new knowledge and self-improvement;

– understanding of the meaning, using informational technologies and master them in the

– process of teaching;

– ability of subjective self-assessment, reflection and others.

Therefore, at the lesson of mathematics with the help of computer it is possible to solve a problem of shortage of mobile clarity, when students under teachers control on the monitor screen compare the way of imposing geometrical figures, analyze the relationship between sets and etc. so, a computer is a powerful stimulus for creative children. A screen attracts attention which sometimes cannot be achieved at the front with the class work.

But we should also understand that in order with the students' desires to use the laptop as an assistant in study, it is necessary to take care of the universality of their user skills, tat is, with the help of modern technology, audiovisual media and intensive

training methods we can interest students and facilitate the assimilation of the material [2].

All the above said make it possible to note once again the fact, that multi-media lessons help to solve didactic tasks:

− learn basic knowledge on the subject;

− systematize the acquired knowledge;

− develop skills of self-control;

− generate motivation for learning in general and mathematics in particular.

− provide educational assistance to students in methodological work on self-study material.

In math class it is possible to use the following two types of informational technologies: presentations and slide-shows, which allow to explain visual and acceptable to children to students the material.

Here a presentation will be informational support of frontal work of the teacher with a class and consists of slides. Basic forms of this certain information is − a text, pictures and drawings [3].

Presentations are the modernist technologies of information, so the forms and places of using presentation at the lesson depends on the content of this lesson, the purpose, which is placed at the lesson. In learning new material the using of a presentation helps to illustrate teaching material and in using oral exercises a presentation makes possible rapidly give tasks.

So, at the lesson of mathematics is important an application of animated drawings, when you need to organize the work of students with graphs, drawings with proving theorems and problems, to perform a scheme and to use the table and so on.

Also at such lessons is used electronic applications of various types:

− illustrations and demonstrations of audio and video;

− applications which combines illustrations and posing problematic issues with the subsequent verification of assumptions and decisions, frontal tests, crosswords and puzzles;

– develop a series of lessons on the subject, which allows the material to present the most complete and painting a picture of the whole view of the world and successfully integrating the various fields of knowledge in one subject;

– the development of electronic applications for the lessons by using Visual Basic programming language that give direct communication of the student with computer (it is performed by teachers who mastered object-oriented programming).

However, it must be noted the following, that not all students have a computer at home and don't know how to use it, so before you organize the work at the computer, you must give them a basic knowledge of working with a computer.

There is also the most important problem is to equip classrooms with computers and the necessary of software tools. Generally, the amount of personal computer to the classes just enough for half of the students, that is why it's necessary to organize the teacher training process so that all students have been busy. For example, if computer programs are used as a visual aid the collective work in the classroom you must use both of your computer possibility and other technical means. All this require large cash costs. Some schools cannot afford it.

It should also take into account the fact, that compiled programs for elementary schools must sort well with the requirements:

– program should be easy to run;

– transitions from one task to another must be carried out after entering the response when you press the Enter key or by using the pointers that are in the program;

– the program should handle input symbols in accordance with the previously programmed correctly answers derive an estimate;

– to demonstrate student the questions in which they have made mistakes and show correct answers;

– to carry out the completion of the programs at any stage at the request of the student and make an assessment in accordance with an assignment;

– program should be protected from unauthorized changing of information.

Many students have their own computers at home and can easily understand the software, so it will not be difficult for them to change acquired information and marks or to find out the correct answers.

However, given data requirements for the preparation of the program, the teacher can easily organize the educational process with the use of ICT, create all the necessary programs for differentiated operation respectively based on the goals will be able to verify the result of knowledge of children, to identify badly acquired material and work it for further studies.

Thus, all above said and analyzed suggests that the informational technologies, the most commonly used in the learning process can be divided into two groups:

1) network technologies using local area networks and wide area network Internet (electronic version of the guidelines, manuals, training distance learning servers that provide interactive communication with students via the Internet, including real-time;

2) technologies focused on local computers, educational software, computer models of real processes, demonstration programs, electronic problem books, monitoring programs, teaching materials [3].

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