U.A.Kosybaeva, I.S.Kauymbek, N.K.Shamatayeva

E.A.Buketov Karaganda University, Karaganda, Kazakhstan

Features of the use of information tools in the algebra lesson

The use of the computer as a tool in the process of learning algebra-entails many changes in the process of education and upbringing. Recently, in the context of computerization of the educational process, there have been works of teachers devoted to professional orientation, and in the works of foreign and Kazakh researchers, this issue has been considered in more detail [1].

Multimedia tools used in these conditions of computerization-have great opportunities to achieve their goals at the training stages [2]. Let's give a few explanations for the concept of multimedia that has come to society.

Even because multimedia is a tool for learning:

- improving the cognitive activity of students;
- introduction of computer technologies in the educational process;
- development of methods of using multimedia tools in the classroom;
- is a single didactic purpose of the lesson.

Multimedia is a tool for learning and learning new things during various classes. Multimedia contributes to the acquisition of communication skills, new skills, the accumulation of real knowledge, as well as the development of information knowledge. Multimedia never changes the way students relate to each other. It creates an opportunity only for them to use new resources in different learning situations, for students to exchange views with the teacher and peers in the process of learning the subject.

Modern computer technologies create great opportunities for the development of the educational process. According to K. D. Ushinsky: "the nature of the child requires clarity." Now this is not a diagram or a table, not pictures, but scientific and educational games that are close to the nature of the child.

It became known that multimedia such as slides, presentations, and video presentations are used on a large scale. The computer has now become an amazing tool that allows you to change sounds and create special effects for videos, insert sound into videos, create animations. The correct use of such techniques in the educational process plays an important role in the development of thinking, coherence of students. Modern computer information tools provide this with unlimited possibilities. Unlike other technical means, learning using information and communication technologies develops the intellectual and creative abilities of students.

The use of multimedia visualization in the interpretation of the material activates all the visual, mechanical, auditory, and emotional abilities of the student. Using multimedia presentations in any part of the lesson always gives a positive result. At first, there may be cases of reviewing a section or demonstrating knowledge and skills without accumulating or completely immersing in the desired topic, and in-depth study of the desired topic and the development of skills and abilities can be carried out through self-education. This technique allows you to better remember and understand the training material more easily. You can save time by interpreting the training material using a multimedia presentation. This method of conducting the lesson increases the interest of students.

These classes will help you solve the following didactic tasks:

* basic knowledge of the discipline;

* systematization of the acquired knowledge;

* organization of self-monitoring;

* special preparation for general education and specific subject matter;

* providing educational and methodological assistance to students when working independently with educational material.

How computer technologies are used during the educational process in general education schools depends on how they are thought out in its sequence. Now let's look at the possibilities of using computer technology in most schools.

The first step is to create media libraries for mathematics. All schools received CDs on various subjects, which can be used for self-study, as a reference guide for this subject. You only need to correctly determine the content of the lesson, it is very convenient to use ready-made lessons that are now of interest to many.

Conclusion: if the educational material is presented on the screen with color colors, sound and other effects, no matter how complex or uninteresting the topic of the lesson is, it will be interesting to the student.

The second step is to develop the teacher's ability to make a presentation for the lesson. The simplest and most accessible way to prepare such lessons is Power Point. Allows you to quickly create simple slides for classes. This is very convenient. The teacher is freed from drawing the necessary pictures for the lesson, which saves time, and the drawing on the screen will be different compared to the drawing on the blackboard. It is large, straight, painted, and light. To explain a new topic with such a picture is a pleasure. When explaining, it is appropriate to use animated slides. Specify which element or object you need to pay attention to so that the necessary information appears at a certain point in time. Adding sound is also possible, for example, during mathematical dictation and for other purposes. At the end of a certain course, you can consolidate your knowledge with a test created using Microsoft Word. But the Power Point looks prettier. The test results will be immediately visible on the demo screen, and if the students ' answers are correct, they will be delighted.

Conclusion: using a presentation when explaining new material allows the teacher to conduct the lesson without writing on the blackboard, which, in turn, helps to save time.

The third step is to teach students the skills of working with multimedia programs. One of the ways to form students ' knowledge of mathematics is to work with a book, and the ability to work with a computer is the most popular method. The technology is mastered in project forms. An elementary school student can create a project that has a Microsoft Power Point and the content is simple. In this project activity, the student understands his mission-to reveal to others the meaning of the

project created by him using the technological method. Its purpose is to develop the abilities necessary to reveal the meaning of the subject, to draw up a plan divided into steps, then to show it on slides, and thus to analyze the result through a step-by-step passage.

Conclusion: the ability to work with multimedia programs is better learned in groups with fewer students during extracurricular or extracurricular activities. It is these students who, by using the programs they have studied, can arouse the interest of other students in the class, since they can get as much information as possible through these programs.

The main goal of the teacher is to form the primary knowledge of students. To do this, it should consider the following:

- introduce students to the main objects;
- develop the ability to search for the right information.

Of course, the use of a multimedia projector, demonstration and front-end work with the class give good results, but we think that teaching multimedia technologies through individual work with each student will give even better results.

The method of using multimedia technologies in general provides for the following:

- improving the learning management system at different stages of the lesson;
- strengthening the cause of learning;
- improving the quality of education and training (which increases the information culture of students);
- improving students ' understanding of modern information technologies;
- demonstrate other features of the computer not only for games.

This technology can be considered as an explanatory and illustrative method of teaching. This method is aimed at the successful perception of this information by organizing the assimilation of information by students through the communication of educational material and memorization by vision. It is known that most people remember 5% of what they see, and 20% of what they hear. Sharing Audio and video information increases memory by up to 40-50%. Multimedia programs present

information in various forms, and also help to make the learning process more comfortable. On average, the time spent on reviewing the necessary material is saved by 30%, and the knowledge gained is remembered more [3].

The use of multimedia tools in algebra lessons does not affect the structure of the lesson. In it, as before, all the initial stages are saved, of which only the temporary content can change. It should be noted that in this case, the period of the cause increases and there is a cognitive morbidity. This is a necessary situation for obtaining productive knowledge, since interest and creative skills are extremely necessary for the student to make up for the lack of knowledge.

With the help of a presentation on the topic of the lesson, you can use various teaching methods: frontal, group, individual training. Therefore, the multimedia presentation is very rational and effectively corresponds to a single didactic purpose of the lesson: in such conditions, there is an educational aspect: students ' perception of the educational material, understanding the connections and relationships of the objects of research.

Developing aspect: increasing the cognitive interest of students, generalization, analysis, comparison, development of creative activity.

Educational aspect: perception of the world, education of the ability to clearly perform independent and group work, to help others.

In algebra lessons, multimedia tools can be used at the following stages: to communicate a topic, as an assistant for explanation by the teacher, as an information and training tool, to test knowledge.

Special attention should be paid to the joint use of multimedia presentations and notebooks during classes. Despite the fact that it is the best means for color transmission of information, students ' notebooks should contain the necessary references in the form of copies, and not just a computer. The notebook occupies a special place when writing answers to certain calculations independently. Multimedia presentations and notepads have different functions, so you should only use them in the right place.

There are also several advantages to using multimedia presentations. Students are interested in classes conducted with the help of multimedia tools. During such a lesson, real communication takes place in the classroom, students try to convey their thoughts "in their own words", solve problems with a special emphasis, show interest in the material being studied, and the fear of the computer disappears. Students will learn to work independently with a textbook, use reference manuals and literature on other subjects. Students have an interest in getting even better results, and they are ready and willing to complete tasks. Self-control occurs when performing practical work.

Judging by the above expertise, there will also be recommendations for creating multimedia presentations. Multimedia programs have greater opportunities for transmitting information, have more functions than conventional ones, have a better impact on the learning of students, increase the speed of perception of the material, and also have a full impact on the learning process.

When creating multimedia presentations, you must consider the following circumstances::

- psychological characteristics of this class.
- goal and result in education.
- the structure of the space of knowledge.
- the use of effective elements of computer technology to achieve a specific goal of the lesson.
- design of the training material in each color scheme.

When using multimedia presentations in the classroom, first of all, you should pay attention to the psychophysiological pattern of perception of information from computer screens, TV. The use of information coming from the screen for a long time, in some cases, can negatively affect vision.

Currently, the advantages of computer technology in education are obvious to the naked eye. However, we should not forget that the computer is a multi-faceted and very powerful structure, with which the teacher has the opportunity to qualitatively make the learning process.

The main difficulty in preparing for a specific lesson is that only a small part of the computer programs are intended for teaching, so the delivery of material, teaching, depending on the educational standard, in most cases causes difficulties. But there are no multimedia encyclopedias, dictionaries, game educational programs created by teachers and methodologists of special professions.

Therefore, for most of us, we think it is right to use the Microsoft PowerPoint program, because this program is very easy to learn for computer science teachers and has the simplest interface possible.

Especially interesting are the slides made by teachers who take training and observation courses. First, they form a methodically correct understanding of the new material. Secondly, it strictly follows the sequence in the curriculum. Third, the didactic material passed during the course can be as diverse and updated as possible.

The use of a computer project is based on the calendar topic of the topic being studied and takes into account the content of the material being studied.

To plan a specific computer lesson, the teacher must first:

- creates a temporary structure of the lesson, considers the questions and steps necessary to achieve the goal;

- selects the most effective of the computer structures, considers its advantages over conventional ones;

- the selected material is evaluated by time; their duration should not exceed the norm; all material should be reviewed; additional time is planned;

- a presentation program is compiled from the materials found.

You can use charts, diagrams, images, movies, and audio recordings for a large-screen presentation to display information better, more colorfully, and more clearly. It is also important to use a computer mouse as a tool to draw students ' attention to the most important places on the screen. Using a computer allows you to deepen and strengthen control. To do this, use the author's or game programs included in the presentation.

In recent years, personal computers have been used in our daily lives. The consequence of this is a change in the situation on the labor market. One of the main

requirements for applying for a job is the ability to use a computer. A similar requirement applies to the secretary, accountant, editor, and other professions. In this regard, the development of computer technology begins with the school bench. To use a computer effectively, you need to have practical computer skills and be able to independently use ready-made programs used for solving various tasks.

The use of computer technology in teaching algebra is now a concern for many teachers. Despite the ghostly "computer boom" of recent years, the use of computer technologies is revealed as a prospect in any field. In addition to difficulties in technical equipment and methodological justification, there is a problem of dividing classes into groups. One class consists of 25-30 students, and in computer classes 12-13 computers. To do this, you need a convenient schedule of classes, but it is not always fulfilled. In addition, you need a teaching staff that is fluent in general computer skills.

Thanks to the long-term penetration of information technologies in various industries, countries, different opinions of teachers about the use of computer technologies in teaching algebra have been formed. Another problem is that for the effective use of multimedia tools in education, it is necessary to teach teachers how to work with a new computer. It is necessary to properly organize their elimination of the existing psychological barriers. Today, there is a need to create a new program for teachers that would meet the needs of specialists.

Along with the established requirements, today algebra teachers need to master the following questions in general education schools:

- computer literacy;
- acquisition of personal computer skills;
- mastering new technological programs over time;
- learning in a new way in computer training with an analysis of the essence of the problem under consideration, phenomena on previous topics;
- the range of methodological and pedagogical tasks solved with the help of a computer is different [4].

Having conducted a comprehensive analysis of the features of the use of multimedia tools in the study of algebra in general education schools, we will draw the following conclusions about the use of these multimedia tools:

it allows you to independently analyze the material using text definitions and definitions, expand knowledge through reference books;

student control;

preparation of an individual training program;

learn to own ready-made effective programs for solving various tasks.

Algebra does not interest many students, it is accepted only for setting tasks on the blackboard and getting grades in the control work. I hope that the way out of this impasse will show the" viability " of the subject of algebra with the help of new information technologies.

References

1. State program for the development of education of the Republic of Kazakhstan for 2011 - 2020 // www.zakon.kz

2. Abdigappapova U.M. Issues of improving the quality of education of the Republic of Kazakhstan: Sat. nauch. st. - Region: State Enterprise "National Center for the Assessment of the Quality of Education" MON RK, 2010

3. Belgibaeva G.K. Modern education: collection of scientific articles: in 3 hours. - Karaganda: Publishing House of KapSU, 2011.

4. Zhaksylykova G.T. Methodical features of profile - oriented training of mathematician in the class of economic direction: autoref. Case. nat. ped. un - t im. Abaya. - Almats, 2010 .- 29 p. - Bibliography: c. 24.