

Methodology of development of didactic education with the use of multimedia technologies

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Abstract: *Today, progress can not be imagined without information and communication technologies. Great attention is paid to the issues of informatization of education in Uzbekistan. In particular, in order to improve the quality of general secondary education through the development, improvement and introduction of e-learning resources on the basis of information and communication technologies in our country, the Center for the development of multimedia secondary education programs was established under the Ministry of public education of the Republic of Uzbekistan.*

Today's pedagogy requires further colorization and enrichment of methods of cultivation in the field of education, proper and productive use of pedagogical technologies. In particular, the use of multimedia in teaching foreign language subjects plays an important role in achieving the intended goal.

Keywords: *multimedia, educational multimedia, interactive, teaching, method, abilities, silent reading, intonation, accent, imitation.*

I. INTRODUCTION.

In the preparation of educational multimedia presentations it is necessary to consider, on the one hand, General didactic principles of the educational courses, requirements, dictated by the psychological features of perception of information from the screen and on a printed basis (because any text can be displayed with printer on paper), ergonomic requirements, and to maximize the opportunities that provide us with software tools telecommunications networks and modern information technologies. Naturally, it is necessary to start from didactic and cognitive goals and objectives, because the means of information technology are the means of implementing didactic tasks.

In other words, the effectiveness of multimedia presentations depends on the quality of the materials used (training courses) and the skills of teachers involved in this process. Therefore, pedagogical, informative organization of multimedia presentations (both at the design stage of the presentation and in the process of its use) is a priority. Hence the importance of conceptual pedagogical provisions, which are supposed to build a modern lesson using multimedia presentations. When creating multimedia presentations, consider the following requirements:

Motivation. Motivation is an essential component of learning that must be maintained throughout the lesson process. Of great importance is a clearly defined goal that is set for students. Motivation quickly decreases if the level of tasks does not correspond to the level of training of the student.

Setting a learning goal. The student from the beginning of work at the computer should know what is required of him. Learning objectives should be clearly stated during the lesson.

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Creating prerequisites for the perception of educational material. To create prerequisites for the perception of educational material can be useful auxiliary materials (guidance for the student), included in the textbook or prepared by the teacher.

Submission of educational material. The strategy of presenting the material is determined depending on the educational tasks to be solved. An important problem is the design of the frames supplied to the display screen. It is necessary to use well-known principles of readability.

Assessment. While working with the computer, students should know how they cope with the educational material. The most important is the organization of communication "student-teacher-student". For these purposes, it is recommended to organize the work of students in projects or "learning in cooperation" discussions.

When creating a multimedia presentation, it is necessary to take into account not only the relevant principles of classical didactics, but also the specific principles of using computer multimedia presentations.

The study of the classics showed that teachers - developers of multimedia presentations will be useful. They remain extremely relevant in our time with the most modern educational technologies. Here are some of them:

- allocate each material at a certain step and a small finished part;
- specify at each stage of the individual parts of the subsequent material and, without allowing significant breaks, bring from it some data to excite the curiosity of the student, not satisfying it, however, in full;
- distribute and arrange the material in such a way that, wherever possible, the next step in the study of the new again repeated the previous.

It is necessary that the material you captured. The use of well-known authoritative sources, brands and concepts could make people treat it with great interest. The use of a variety of graphics, animation and simulation should enhance the attractiveness of interactive courses

The use of multimedia technologies for the creation of electronic materials dictates its own laws and imposes certain requirements on the approaches and methods of development.

Multimedia educational presentations are designed to help the teacher and allow you to conveniently and clearly present the material. Applying even the simplest graphical tools is extremely effective.

Masterfully made presentation can attract the attention of students and awaken interest in learning. However, you should not get carried away and abuse the external side of the presentation associated with special effects. If you overdo it, you will reduce the effectiveness of the presentation as a whole. It is necessary to find such a balance between the material and the accompanying effects that your students literally "sat on the edge of the chair." This rule is true for all multimedia presentations in General, but especially for training presentations.

The following principles should be followed when creating a scenario diagram and drafting text accompaniment to a multimedia presentation:

- The presentation should be concise, accessible and compositionally complete. The duration of the presentation with the script should be no more than 20-30 minutes. For the demonstration, you need to prepare about 20-25 slides (one slide takes about 1 minute, plus time to answer questions from the audience).
- Several key points should be highlighted in the presentation and revisited from time to time during the demonstration to highlight the issue from different angles. This ensures proper perception of the information by your listeners. Don't be afraid to repeat your thought if you want it to be understood.

The following outline will be useful when you are working on your own presentation.

- Before you start working on your presentation, you should have a full understanding of what you are going to talk about.

- There should be nothing superfluous in the presentation. Each slide should be a necessary part of the narrative and work on the overall idea of the presentation. Unsuccessful slides must be merged with others, moved or deleted altogether.

- Use ready-made templates when choosing character style and background color. Don't be afraid to be creative. Experiment when placing graphics and creating special effects.

- Do not overload slides with unnecessary details. Sometimes it is better to present several simple slides instead of one complex one. You should not try to "cram" too much information into one slide.

- Additional effects should not become an end in itself. They should be kept to a minimum and used only to draw the viewer's attention to the key points of the demonstration. Sound and visual effects should never come to the fore and obscure useful information.

A multimedia presentation should have the following qualities:

- User-friendly navigation system that allows you to easily navigate the presentation
- Use of multimedia capabilities of modern computers and the Internet (graphic inserts, animation, sound, if necessary, etc.).

- Breakdown of the lesson into small logically closed blocks (slides).

- Each slide in your presentation should have a title.

- References to literature, digital libraries and sources of information on the Internet.

- Accessibility-fast loading, without complicating the effects.

When you create a multimedia presentation, you must:

- conduct a breakdown of the lesson into small semantic parts-modules. Each slide should have a title;
- selection of the appropriate form of expression for each module and presentation of the section title, texts, figures, tables, graphs, sound and video, etc. (according to the content);

- modeling of cognitive activity of students in the study section and the use of the results in its preparation (determined by the main sequence of transition between slides);

- design of ways to consolidate knowledge and skills and implementation of feedback (selection of tasks, control questions, tasks for modeling, development of methods of analysis of answers, replicas of typical wrong answers, preparation of tips (help));

- preparation of texts, development of drawings, tables, diagrams, drawings, video, according to the requirements of ergonomics; arrangement of modules of each section of the lesson from an ergonomic point of view.

Each module to the maximum includes:

- Text mental attitude

- Objectives of the module

- Training issues

- Training material

- Set of key issues related to the module

- The best work of students of past groups

- New works of students

- Questions for self-examination and reflection (preferably with answers, comments and recommendations)

- Structural and logical scheme of the module
- References to the module and links to Internet sites on the subject of the module. When creating multimedia presentations, it is necessary to take into account the peculiarities of perception of information from the computer screen.

You must maintain a consistent presentation style for the entire lesson and strive to unify the structure and form of presentation of educational material (unification of the user interface, the use of graphic elements, the creation of lesson templates). It is recommended to use standard fonts - Times, Arial. It is best to limit the use of two or three fonts for the entire presentation. For example, the main text of the presentation is times New Roman, the title of the slide is Arial.

It is advisable to use different markers, etc.) to highlight text elements (bulleted lists). For example:

- Text 1
- Text 2
- Text 3
- Text 4

It is recommended that you use color in your presentation, most effectively highlighting individual pieces of text with color and individual table cells or the entire table with color (cell background or table background). The entire presentation is done in a single-color palette, usually based on a single template.

It is important to test the presentation for readability from the computer screen. Presentation texts should not be large. It is recommended to use a concise, informative style of presentation.

When creating a multimedia presentation, you need to solve the problem: as with the maximum information saturation of the product to ensure maximum simplicity and transparency of the organization of educational material for the student.

One of the ways to solve this problem is to limit both the ways of presenting the training material and the set of navigation objects. In this case, the student, quickly mastered the features of the interface of this presentation, in the future will not be distracted by it, focusing all attention on the content of educational information. When creating a multimedia presentation, the teacher faces a number of challenges:

- the need to create a simple and intuitive interface in which educational information is visually combined with the means of navigation;
- definition of the structural organization and form of presentation of educational material corresponding to the set pedagogical goals.

The main purpose of the proposed approach is to focus on the study of the process of organizing content and presenting it in the form most convenient for the perception of the trained audience.

An important point is the choice of the overall presentation style. When defined presentation class, category of trainees, then make the choice of style becomes easier. To choose the right style, you need to know the principles of ergonomics, which include the best, proven methods of using certain components of a multimedia presentation. Considering this stage, you can analyze several presentations in detail, identifying their shortcomings and suggesting ways to fix them.

It is necessary to be able to contain a maximum of information in a minimum of words, to attract and keep the attention of students. Simply copying information from other media and placing it in a presentation is no longer enough.

Once the "highlight" is found, you can begin to develop the structure of the presentation, build a navigation scheme, select tools that are more consistent with the intentions and level of the lesson. To ensure the didactic functions of the educational and methodical complex, the following requirements are imposed on the multimedia presentation:

1. Text fragments can be accompanied by audio or video information to highlight semantic accents. It is recommended to use a multi-window interface to present heterogeneous or hypertext information.
2. The multimedia presentation may contain additional material, as well as material for in-depth study of the topic.
3. The most important elements of a multimedia presentation should have hints or explanations. The reference material of the presentation contains the main definitions, the most important dates of the history of Informatics, tables for comparing certain characteristics of objects, etc.
4. After studying each structural unit of the training material, the presentation contains material for generalization, presenting the studied material in a more concise form.
5. Multimedia presentation should be open for development.
6. The text of the multimedia presentation should be able to copy, print.

When preparing multimedia presentations, the teacher should use the Internet, modern multimedia encyclopedias and electronic textbooks. Over time, the network will have the best multimedia presentations to use them as a base in the preparation of the lesson.

When creating a presentation, you should find as many points of contact between the subject and the "external" information flows as possible. This allows you to make the presentation more interesting, relevant and exciting.

The multimedia tools used in the presentation help to communicate more effectively with the learners. Plan in advance all aspects of its conduct.

Flexibility is one of the foundations of a successful presentation. Be prepared to make changes as the presentation progresses in response to the students' reactions.

A presentation can have two versions for teacher and student. Electronic presentation is constantly updated with new materials and improved. For the student, his presentation is supplemented by personal works. Modern software and hardware make it easy to change the content of the presentation and store large amounts of information. Stages of multimedia presentation preparation:

- Structuring of educational material
- Development of the implementation scenario
- The design of the presentation
- Preparation of media fragments (texts, illustrations, video, recording audio fragments)
- Preparation of musical accompaniment
- Testing-verification
- 3 methods of using multimedia presentations.

Forms and place of use of multimedia presentations (or even a separate slide) in the classroom depend, of course, on the content of the lesson, the goal set by the teacher. However, practice allows us to identify some common, the most effective methods of application of such benefits:

1. In the study of new material. It allows you to illustrate a variety of visual AIDS. The application is particularly beneficial in cases where it is necessary to show the dynamics of any process.
2. When pinning a new topic

3. To test knowledge, Computer testing is a self-examination and self-realization, it is a good incentive for learning, it is a way of activity and expression. For a teacher it is a means of quality control of knowledge, a programmed way of accumulating assessments.

4. To deepen knowledge as additional material to the lessons.

5. When checking the front independent work. Provides along with oral visual control of the results.

6. When solving problems of educational nature. Helps to execute the drawing, to make the decision plan and to control intermediate and final results of independent work on this plan

7. A means of emotional relief. During the block lessons or long consultations before exams-it is necessary to include video sequences of experiments or cartoons at the same time the students disappear fatigue, there is interest, they are looking for answers, turn to the teacher with questions, charged with new energy. Multimedia programs look like a video, but with the ability to intervene in the course of action and dialogue.

8. As a means to making distributing didactic material, codogram and cards. Personal computer in the hands of teachers, in addition to the scanner and printer is a mini-printing office of a teacher.

In educational activities, the use of the computer is possible in three forms,

1) the machine as a simulator,

2) the machine as a tutor, performing certain functions for the teacher, and such that the machine can perform better than a person.

3) device that simulates a certain environment and the actions of specialists in it.

Training systems are most appropriate to apply to consolidate previously acquired skills. Tutoring systems are best used provided that the goals and objectives of training are clearly defined. Simulation training modeling is most suitable when the training material is not systematic, and its boundaries are not clearly defined.

When using a multimedia presentation, it can be used in a classroom system or use new models of its application. It is possible to note a method of projects as the most perspective pedagogical technology which allows to open most fully creative abilities of school students, to form ability to be guided in the huge sea of information, focusing attention on the main thing, to take responsibility and to make decisions. Of course, the method of projects requires the highest qualification of the teacher, creative approach to the school curriculum, the ability to aggregate knowledge in several subjects and, of course, organizational skills. The use of information technology in the project at school and, of course, in the development of materials for it, was decisive, breathed new life into the well-known design methodology for a long time. The main components of the project method are the research work of schoolchildren and the evaluation of this activity

Of all the tools of cognition, multimedia is the best way to represent knowledge in a variety of ways, including all the modalities of perception. Working with multimedia tools, students have at their disposal a rich Arsenal for self-expression of the studied material. Multimedia implements a more creative approach to the process of assimilation and presentation of knowledge.

A learning system in which students acquire knowledge and skills in the process of planning and performing progressively more complex practical tasks-projects. One of the personality-oriented technologies, a way of organizing independent activities of students, aimed at solving the problem of the educational project, integrating the problem approach, group methods, reflexive and other techniques.

In our opinion, the most progressive possibilities of multimedia are to use them in the educational process as an interactive multi-channel learning tool. The research, project approach in the system of education of schoolchildren,

the development of their own multimedia / hypermedia projects, the constant use of multimedia for educational purposes in all blocks of disciplines of General cultural and subject training, allow to transform the traditional learning process into developing and creative.

Information technology allows students to give a unique opportunity to learn a new concept independently of the teacher, to notice a pattern, to put forward their own hypothesis, to feel how mathematical questions arise.

The ability to use the method of projects-an indicator of high qualification of the teacher, his progressive methods of teaching and development of students. No wonder these technologies are referred to the technologies of the XXI century, assuming primarily the ability to adapt to the rapidly changing conditions of human life of post-industrial society. But it should also be noted that the project method can be useful only if it is used correctly, a well-thought-out structure of the projects and the personal interest of all project participants in its implementation.

Teaching methods have a close relationship with the nature of presentation and perception of information for both the learner and the trainer. And in connection with this fact it should be noted that the use of multimedia technologies significantly affects the nature of the presentation of information, and, consequently, on the methods of teaching

There are opportunities to use the methodical technique of do as I do – it is a joint activity of the teacher and the student.

Or the presentation option is not brought to the end, and the student is invited to illustrate the text.

Game teaching methods are widely used.

Multimedia elements create additional psychological structures that contribute to the perception and memorization of the material, for example, the summing up of each presentation is preceded by a certain sound or melody that sets the student to a certain type of work.

The most effective use of combined teaching methods. In computer science classes it is recommended to combine both traditional forms of education (conversation, lecture, self-study, group activity with visual display on the computer) and various new forms of organization of educational activities (project method, work in small groups, game methods, extensive use of individualized training programs, training testing). It is reasonable and appropriate to use the creative potential of students. The organization of students' work on the creation, development and design of specific Web pages contributes to a significant increase in their cognitive activity. This work is usually accompanied by a deep inner motivation, allows you to connect teachers and students, to show ingenuity and imagination, to achieve self-expression. Computer science education traditionally uses computer training programs for a number of reasons. Firstly, one of the main developers of computer training programs were specialists in the field of computer science, and secondly, the formal language descriptions of algorithms allowed to produce high-quality automated control of grammatical structures, and, thirdly, the content of a number of sections of computer science is well structured, which contributes to its computer representation. The most productive and promising areas of use of the Internet by students are: interpersonal communication, search for additional information on various academic disciplines, familiarization with educational projects, self-production of Web sites. Current research on the use of multimedia has identified the following problems:

- personalized learning styles are not taken into account when using multimedia. In other words, the real individualization of learning through the use of multimedia occurs only if the cognitive style of the author of multimedia programs with the style of the user;

- do not take into account the communicative or socio-cognitive aspects of learning. The introduction of graphics, video images and audio information does not solve the problems of ensuring effective communication, which has a significant emotional (and therefore motivational) impact on the student;
- the introduction of different types of media exposure (including sound, graphics, video, animation) does not always solve the problem of improving perception, understanding and memorization of information, and sometimes interferes with the perception of students due to noise channels;
- the lack of preparedness of teachers to free use of multimedia in education due to low media literacy (the ability to make informed choices of media tools to achieve educational goals, knowledge opportunities and modern trends in the development of multimedia capability of developing multimedia educational purpose for the Assembly of multimedia modules);
- the problem of rejection of existing programs and resources, which occurs for reasons of inadequacy multimedia programs real educational process;
- the use of multimedia as a new didactic tool in traditional learning systems does not allow optimal implementation of educational and developmental multimedia resource; Thus, traditional learning technologies should be replaced by new information educational technologies. With their help at lessons such pedagogical situations in which activity of the teacher and pupils is based on use of modern information technologies, and has research, heuristic character has to be realized. For the successful implementation of these technologies, the teacher should have the skills of a PC user, to possess the skills to plan the structure of action to achieve the goal based on a fixed set of funds; to describe objects and phenomena by building information structures; to conduct and organize e-discovery; to clearly and unambiguously formulate the problem, task, idea, etc. currently, schools are formed the conditions for solving most of the problems listed above. Crystallized the essence of new information technologies - providing access to teachers and students to modern electronic sources of information, creating conditions for the development of the ability to self-learning through the organization of research and creative educational work of students aimed at the integration and updating of knowledge gained in various subjects. The reform of modern education can take place only if electronic sources of educational information are created.

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