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Using Multimedia Technology Problems in Professional Education

Key words: *professional education, multimedia, computer, virtual learning.*

Annotation: *the article substantiates unresolved problems that hamper the mass introduction of multimedia technologies in professional education.*

Increasing demands on the part of society to prepare a critical person who is capable of continually renewing their knowledge, rapid retraining and changing the scope of their abilities, make it necessary to create new conditions and teaching methods that should become the basis for new educational technologies. It should also be noted the increasing role of self-training in the formation of a highly qualified specialist. Consequently, there is a growing need to create new forms of presentation of teaching material, methods of working with new teaching aids created on the basis of information - communication technology and ways to manage the independent cognitive activity of the learner. Hence, it is clear that the need for new learning technologies is relevant.

The analysis of domestic and foreign experience of using modern computers in teaching and, in particular, pedagogical software as means for automating the learning process led to a certain disappointment on the part of subject teachers (1, p. 3). Namely, when using a computer as a means of learning one way or another often uses the ideology of programmed instruction, and the reproductive and compound scheme of the knowledge transfer process built into it makes the creative thinking of students difficult. In addition to this work, the trainee is "closed" to the computer and this "learner-computer" interaction simulates the "learner-teacher" interaction, which is currently poorly understood, and inaccuracies and losses are inevitable in any modeling (1).

These difficulties can be overcome through the organization of a subject-oriented learning environment, where new knowledge is born not only in the interaction of the learner, but also in active collaboration with each other and with the teacher, where a modern personal computer provides a natural division of roles in this joint activity. In this case, the "learner-teacher" model is enriched, and the teacher, with the help of the pedagogical capabilities of computer networks, creates problem situations that facilitate the implementation of active and interactive dialogues. In addition, the teacher supervises the process of solving creative tasks and makes changes in the conditions of the learner's joint activity with the teacher. All this makes it possible to fully realize the pedagogical potential of a modern computer by treating them as an instrument of intellectual work, a partner, and the source of the formation of the learning environment. The considered approach of using computers is given preference, since the cognitive development of the learner is conditioned not only by his individual activity, but also by communication, joint activity with other trainees and the teacher. In addition, physiological-hygienic and ergonomic requirements for working behind the display screen are not violated, since working

with a computer is associated with a high emotional stress, which not always and not everyone can be useful. This model is significantly modified when using communication technologies in the educational process, changing the existing education paradigm, in the center of which the student and his needs for education are. Education should be accessible to any person, anywhere, anytime and in any specialty.

The large-scale introduction of computer technology in the educational process leads to the fact that although the student and the teacher can be divided in the educational process in space and time, nevertheless, there is a "sort of" direct didactic interaction between them. Different variants of the organization of this process can be united under the general name of Internet training, which can be defined as a purposeful, organizational process of interaction between learners and trainees, among themselves and with teaching aids.

A significant expansion of the functionality of the computer leads to the development and emergence of new technologies for the preparation and presentation of information on the computer screen using various technical means of preparing and presenting educational material (audio, video), which are then embedded in the computer itself. С позиции педагогики как науки можно предположить, что процесс виртуального обучения происходит в педагогической системе, элементами которой является цели, содержание обучающийся, обучающийся и технологическая подсистема интернет - обучения.

In the technological subsystem of virtual learning, four blocks can be distinguished:
1. Means of training.
2. Means of virtual pedagogical communication.
3. Organizational forms of conducting training sessions.
4. Methodical environment.

The scientifically substantiated use of elements of the technological system of virtual learning will lead not to perestroika, not to radical improvement, but to the establishment of a fundamentally new education system that can be called open.

At the present time, the multimedia system is one of the leading directions in the development of information technology (2).

By means of multimedia is usually understood a set of hardware and software tools that allow the user to communicate with the computer, using a variety of environments for him: graphics, hypertext, sound, animation, video. Multimedia systems are considered as a new kind of technical training means, integrating different kinds of information - sound, visual, and providing interactive interaction with the trainee.

The use of multimedia in education provides the opportunity to intensify learning and increase the motivation for learning through the use of modern methods of processing audiovisual information, such as: "manipulation" (imposition, movement) of visual information both in the limits of the field of this screen and in the margins of the subsequent screen field; contamination (mixing) of various audiovisual information; implementation of animation effects; deformation of visual information (increase or decrease of a certain linear parameter, stretching and

compressed images); discrete presentation of audiovisual information; image toning; image training; fixing the selected part of the visual information for its subsequent moving or viewing under the magnifying glass, multi-window presentation of audiovisual information on one screen with the ability to activate any part of the screen (for example, in one window, video films, and another text); demonstration of real processes, events in real time (3).

Interesting possibilities of multimedia technologies are used when creating electronic teaching aids and other teaching materials. Active use of multimedia technology opens a promising direction for the development of modern computer learning technologies.

Multimedia technologies fully fit into the concept of the development of computer learning technologies. It should be emphasized that multimedia technologies have the same theoretical basis as computer-based learning technologies. It is more correct to consider multimedia teaching technologies as a modern stage in the development of computer learning technologies using the didactic capabilities of a modern computer, new programming technologies and instrumental environments for the development of computer learning tools.

The analysis of existing multimedia products allows to distinguish their following possibilities: use of a database of audiovisual information with the possibility of selecting a frame from the bank of audiovisual programs and moving "inward" the selected frame; The choice of the line of plot development necessary for the user; imposition, movement of audiovisual information, presented in various forms; audio-visual information support; situational editing of text, graphic, video, diagram, animation information; change the form of the presented visual information by different parameters; implementation of animation effects; image of visual information in color; the isolation of the selected part of the visual information for its further detailed consideration; work with audiovisual information simultaneously in several windows; creation of educational video films; interactive dialogue of the learner with the program.

Pedagogical experience shows that the structuring of multimedia information in modern didactic teaching aids, the organization of navigation and hyperlinks, the use of automated means of representation and teaching of knowledge, can effectively organize the learning process.

Multimedia technology in conditions of interactive interaction between the trainee and information system, the simultaneous use of various means of providing information, based on a complex of means for searching, collecting, storing, processing and transmitting audiovisual, textual, graphic information.

At present, there are a number of significant positive factors that increase the effectiveness of training based on the use of multimedia technologies in education, namely; strengthening the motivation for learning, reducing training time, increasing the speed and strength of learning.

These effects are achieved by immersing the trainee and a fundamentally new information and technological environment that provides an enhanced interactive interaction that is as close as possible to the natural one. There are unsolved problems that hamper the massive introduction of multimedia into education:

1. Environmental - multimedia technology requires expensive technology.
2. Ideological - the gap between the hardware and software basis of multimedia and the lack of conceptual methodological research on the development of information "superstructure."
3. Psychologist - pedagogical - the dependence of development of creative abilities of trainees is not revealed.

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