
MULTIMEDIA-ELECTRONIC TEXTBOOKS FOR SELF-STUDY

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ANNOTATION:

The purpose of this article is to share experiences on the creation of multimedia electronic textbooks designed for self-study by distance learning students.

Keywords: Multimedia electronic textbook, subject of the educational process, educational information, educational technologies, information technologies, hypertext, hypermedia, multimedia.

INTRODUCTION:

The development of multimedia electronic textbooks (MET) is today the leading direction of the activities of universities that master distance education. Meanwhile, the lack of a theory of such training data leads to a number of serious shortcomings. So there is no definition of "electronic textbook", the principles of its creation and use in the educational process have not been developed. We consider this article as a modest contribution to the development of these theoretical problems. Our views are based on practical experience in the creation of MET, analysis of literary sources and the experience of our colleagues.

By definition of UNESCO, distance education is a new organization of the educational process, based on the principles of individual and independent student learning. The most effective implementation of these requirements is possible by creating a didactic system based on the use of computer tools and technologies in training. These include e-mail, newsgroups, digital libraries, databases, electronic textbooks, video and audio materials, and others.

Moscow colleagues evaluate METs according to the following criteria: the technologies uptime is wide, the complexity and cost of wide implementation are average. Compared to other tools and technologies, this is the highest rating (1).

We consider MET as part of a didactic system that includes the following components: subjects of the educational process, teacher, organizer of the educational environment, consultant, controller; the learner is the constructor of his own knowledge; educational information; educational technology; information Technology.

An electronic textbook is a combination of educational information and information technology, while being one of the means of organizing interaction between the subjects of the educational process (teacher, student) based on educational technologies.

Educational information is the knowledge that must be transferred to the student so that he can competently carry out one or another activity. In the disciplinary model of instruction inherent in the full-time education system, the teacher is the interpreter of knowledge. With the remote form, the interpreter more of a student himself and therefore higher requirements must be made to the quality of the educational information and the methods for presenting it. First of all, this applies to the MET and teaching aids being created, as well as to information bases and knowledge banks, reference and expert systems used for training purposes. Our experience shows that the information presented in them should have an organization and structure that is significantly different from printing. This is due to both the psychophysiological features of the perception

of information from the monitor, and the technology of access to it.

In connection with the foregoing, it is obvious that the creation of MET is a difficult didactic task. Modern computer technologies provide real opportunities for its solution, while the following requirements must be observed: presentation of the course as a set of sections (topics); modularite and free access to fragments of content; inclusion in the module of the system of educational activities; use of various types of information; adaptation of the content of educational material to the characteristics of the trainees.

The development of educational content involves taking into account individual educational characteristics of different categories of students. What information is presented, how teaching methods are used, how they are built-all this should be determined depending on individual characterize a particular learning process. Using the opportunities presented by new information technologies leads to overcoming many fundamental problems in the development of educational content related to the sharp increase in the volume of taught material, its updating, difficulties in preparing educational texts and the development of the educational environment. A new technological level of development of educational content provides a new qualite of education.

Educational technology is a set of didactic methods and techniques used to transfer educational information from its source to the consumer and depending on the forms of its presentation. Among educational technologies that use computers of didactic tools, the greatest B. quality is recognized among specialists as the method of information resource, associative teaching method, computer modeling method. Among the methods of education developed on the basis of new information technologies, the method of

computer modeling has significant educational value, as admittedly by experts. The above methods make it possible to fully implement one of the basic requirements of modern didactics, which consists in the maximum activation of the student.

Summing up, we note that MET are a mens of training in the pedagogical system of distance education, which includes elements inherent in any didactic system. Currently, electronic textbooks are an additional tool in the organization of the educational process in the framework of the traditional educational system. However, over time, their functions will specialize in connection with the development of methods of distance education itself, which will lead to the development of new technologies in the process of their creation.

Today not only economy or policy, but also education as completely objective process paying much attention to the globalization traditions. This is achieved through the wide popularization and practice of new information technologies. But, educational globalization has to solve the issue of the absence of single "teaching language". Thus, there are special projects developed on coordinating various educational institutions within the framework of one concept.

Among them I am going to elucidate the structure and content of multimedia electronic textbook as example. Electronic textbooks, manuals on measuring the content of multimedia electronic textbook and methodological, programming and technical requirements of its organizers are comprehensively developed at present. Textbook which includes folloving is considered respectively comprehensive:

- Annotation which shortly includes information about its publication, for whom it is designed, and what is about the textbook in general;

- Working plan; it should be developed on the basis of State Educational Standards and pattern program on this subject (if such exists).

Working plan of respective subject in general shall cover following parts:

- Goals and tasks of the subject, its theoretical and practical parts content, tests and course papers, assignments, the list of questions for final exam (test or written report), educational-methodological provision of the subject;
- Monitoring the subject's learning (methodological workbooks on independent task), and it covers learning theoretical materials independently, guide and recommendations on fulfillment of practical tasks, materials of full electronic educational-methodological complex on the proper technology of learning the given material, guides for students on the proper usage of fundamental and additional literature;
- Student's guide; it includes the theoretical and practical materials of the subject. It shall meet the working program and methodological restrictions limits (modules, parts, teaching units);
- It should be designed for strengthening the knowledge obtained from practical work and students guide and cover the analysis of the mistakes which we see on most students' works;
- Tests, monitor over students results on doing theoretical and practical assignments;
- Handbook which includes schemes, notes on subjects and dictionary;
- Electronic library of the course which might include audio, video materials, reading book enriched with teaching internet-resources.

These are connected with programming-technical and methodological difficulties. In order to prevent these types of difficulties

information of educational environment is carried out as shown in following scheme.

Practice shows that while forming career skills and abilities interactive, didactic games and simulators give efficient results in teaching process. Interactive games allow modeling career qualities and abilities with simulating problems faced by people in real working conditions. But the creation of didactic games and simulators make many difficulties in creating electronic educational-methodological complex.

During working with simulators and during games action development's following main steps can be highlighted: selecting model; selecting the simulator's operating mode (level of difficulty); influence to model; object's reaction; monitoring of object's state.

Concluding from work experiences I can say that there are 3 levels of approach to the application of simulators and didactic games: first level provides introduction to subject and computer shows to user the mistakes and improves them by itself; second level covers learning process, skills and abilities, operation. Here, computer shows the mistake in solution and leaves the problem's right solution for user; in this third level user implements the task from the beginning to end by himself and computer does not help him.

Below I want to discuss the requirements put before to creating technologies of educational-methodological complex and electronic teaching systems.

In internet with the help of educational portals it is possible to create not only electronic data courses, but also electronic teaching systems which have several advantages such as traditional teaching.

Student can get access to course after inserting their login and password provided by administrator. Then student can see course schedule and planned appointments during the course in calendar. In schedule student can find

materials of lectures and have tests on previous themes.

Student can get access to next lecture themes in accordance with the testing results; also he can note his test results in electronic "test book". Student can post the question on forum or e-mail it teacher directly. Teacher can monitor the learning process of student within the framework of course.

Everyone knows the problems of creating electronic textbooks, especially problems connected with the elder generation of teachers. The educational-methodological complex is created to solve these problems. And this, in turn, will serve as foundation for the creation of electronic teaching systems.

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