

L.A. Nesterenkova, Associate Professor, Candidate of Physical-mathematical Sciences, Al-Farabi Kazakh National University (Almaty),
P.A. Nesterenkov, Master of Natural Sciences, Al-Farabi Kazakh National University (Almaty).

INFORMATIZATION OF THE EDUCATIONAL PROCESS IN COURSES OF REMOTE EDUCATION

Annotation. In the paper, the fundamental educational principles and tools for creating distance education courses in the modern innovative education system have been examined. The modular basis for courses constructing allows direct navigation from any structural unit to any other one, logically associated with it.

Keywords: interactive distance learning, motivation, modular basis, feedback, multimedia.

One of the conditions for an effective education system is the high mobility of educational curricula that has an ability to change flexibly in the process of the emergence of new production needs. To ensure that the level of intellectual and professional development of labor personnel meets modern requirements, innovative technologies, including interactive forms of training, are actively introduced into the process of mastering knowledge [1].

The essence of such education is a distance learning format, less conservative and more mobile in nature. Distance learning model is particularly in demand in the business environment. The user himself searches for distant e-learning programs and courses, determining the relevance of the future or already existing types of employments for successful work.

When creating a distance education course it is extremely important to take into account the features of the group for which this course is being created for and to choose the distance teaching methodology taking into account the use of innovative information support.

The conceptual pedagogical principles on which it is necessary to build a modern distance education course are [2]:

1. In the center of the learning process stands the independent cognitive activity of the learner (studying, not teaching).
2. It is important that the trainee to learn to acquire knowledge independently, using a variety of sources of information and to be able to work with this information, using various ways of cognitive activity and had the opportunity to work at a convenient time for him.
3. The independent acquisition of knowledge should not be passive; on the contrary, trainee must be involved from the very beginning in active cognitive activity, not limited to mastering knowledge, but necessarily providing for their application to solve various problems of the surrounding reality.
4. The organization of independent activity of trainees in the network assumes the use of the latest pedagogical technologies that are adequate to the specifics of this form of instruction, stimulating the disclosure of the internal reserves of each student and simultaneously contributing to the formation of social qualities of the individual. The most successful in this respect is learning in cooperation (for activating the cognitive activity of each student in networks), method of research projects (for creative integrated application of acquired knowledge).
5. Distance education should provide active interaction with both the instructor-coordinator of the course, and with other partners, cooperation in the process of various kinds of cognitive and creative activity. In this regard, the problems of socialization are very relevant for distance learning, and their timely solution should be given increased attention.
6. The monitoring system should be systematic and be built on the basis of prompt feedback (provided in the structure of the training material, prompt reference to the instructor or the course adviser at any time convenient for the student), automatic control (through testing systems), and deferred control (for example, in full-time testing).

When creating distance learning courses, the following requirements should be considered [2]:

Motivation. Motivation is an indispensable component of training, which must be maintained throughout the learning process. Of great importance is the clearly defined goal that is put before the student. Motivation is quickly reduced if the level of tasks assigned does not correspond to the level of student preparation.

Definition of educational objectives. A student from the very beginning should know what is required of him. Learning objectives should be clearly and clearly formulated.

Creation of prerequisites for the perception of educational material. To create the prerequisites for learning the material, auxiliary materials (manuals for students), included in the package of the final package or prepared by the teacher himself, can be useful. In this regard, it is possible to carry out preliminary tests.

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

Feedback. This criterion is key for the learner, less - in the testing program, more - in the training. The software of distance course should be able to provide feedback, and this assistance can be individual. One of the most important points in distance course is the organization of student-teacher-student communications. For these purposes it is recommended to organize the work of students in projects or "training in cooperation", discussions.

Evaluation. During the course, students should know how they cope with the training material. However, it is preferable not to specify the number of incorrect answers before finalizing the results. Most students, as a rule, stimulate a small number of remaining assignments, a large number of completed assignments stimulate less.

When creating distance learning courses, hypertext technologies and multimedia are widely used. The use of hyperlinks leads to a non-linear structure of the course, to the ability to move the learner according to his own learning strategy throughout the text of the course.

Hypertext capabilities provides teacher with the opportunity to split course into a number of fragments, linking them with hyperlinks into logical chains. The next step here can be the creation of "own" textbooks on the basis of the same material for each student, depending on his level of knowledge. Hyperlinks allow you to access external sources of information, make a course to be part of the Internet.

Nevertheless, the practical experience of using the WWW in the educational process suggests that this structure has many drawbacks. A huge amount of information on the Internet, the lack of a common structure makes it difficult to find information. The ability to be distracted by random stimuli such as side but very interesting references, the ability to perceive a huge amount of completely unnecessary information, the joy of the absence of a strict mentor behind your back - all this is much more suitable psychologically for training a monkey than an efficiently working mature specialist. The hard life experience of many countries shows that the student, left to himself and left without control, immediately begins to engage in collecting "bananas" - he goes to chats, anecdotes, toys, etc.

Both critics and online supporters agree that the quality of education does not improve simply because students are given access to new technologies. Quality depends on the methods by which these technologies are used in the learning process.

Something similar happens when using other Internet services in education. E-mail, Internet conferences and training forums are great ways to discuss the educational material and mutual help of students. But practice shows that without the teacher's control, they are either used for chit-chat, or are not used at all. Teachers of many American universities "revive" the Internet communication in a simple but effective way: they announce in advance before the beginning of the course that the student will receive 10-20 total points for the contribution to the discussions. For "seeding", the teacher usually offers his own questions, but also gives the opportunity to open his own topics for

discussion and to students. To organize discussions in the distance learning course, a Web conference (teleconference or forum) and a CHAT system are used.

Like any technical innovation, each of the Internet services, from e-mail to the WWW, has its niche of optimal application in the educational process and this niche has boundaries. Perhaps one of the most important decisions when creating a web-based course is the extent to which it can complement or replace the face-to-face course, to what extent it can and should take advantage of the advantages offered by other forms of training.

Modern distance educational courses are distinguished by a concise, abstractive presentation of the material, make it unessential to read the material in a continuous manner, allow you to build the learning process, depending on the level of preparation, the speed of mastering the material, the interests of the trainee, etc.

Multimedia is a complex of hardware and software that allows a person to communicate with a computer using a wide variety of natural environments: sound, video, graphics, texts, animation, etc. Multimedia - the richest possibilities of illustrating the phenomenon being studied. This increases the quality of education and helps to keep the learner's attention. If before the limit of dreams was a worn out black-and-white film, then modern technology allows you to create a much more spectacular study guide in the form of computer animation or even a games.

The use of multimedia tools and links to courses page allows to:

- Improve the presentation of educational material
- Organize large-scale discussions
- Provide a user-friendly interface

It is not enough to provide students with educational materials and to expect that they carry out the bulk of the assignments; or simply put the tests on the Internet and expect that students will learn from them without any pedagogical strategy and a minimum of interaction with the instructor-tutor.

When developing a distance learning course, one should take into account the isolation of a student studying remotely. Materials should be provided with the necessary explanations, be user friendly and attractive, all the difficulties of the learning process should be foreseen in advance by the authors. It is necessary that the material "inspire" students. The use of a variety of graphics, animation and simulation should help to increase the attractiveness of distance courses.

The use of Web technologies for the creation of electronic textbooks dictates specific rules and makes certain demands on approaches and methods of development.

First, if we want the textbook to be a Web site, it must organically enter into a common web, be "alive", linked through hyperlinks with the current current information of the network - mainly with real economic data that are material for practical tasks, as well as with a variety of theoretical information on relevant topics (in particular, with other teaching aids).

Secondly, like any Web site, such a textbook should be in progress, not be static. This approach allows developing the manual in stages; it will start with some "core", the basis of the course, then grow, increase quantitatively and change qualitatively, like a living being. Internet technologies allow you to get statistics on visiting each web-page of the course, get the most popular routes of trainees' movement through the web-pages of the course.

The advantage of distance courses is that you can easily change the content of the course posted on the website, enter the latest data, adjust the course based on the results of the training, quickly display the current progress of students, etc. Using search engines and news sites, include the latest materials in the training, make case studies on examples of events that are taking place at the moment.

The distance learning educational course should be divided into relatively small, logically closed parts. Hypertext allows to break up the text of a section into smaller structural units. Each section should have a title, and the section's occupations should be sub-headings. The distance learning course is developed on a modular basis: each module is a standard educational product, including a clearly defined volume of knowledge and skills, designed for studying for a certain time

or an academic unit, quality of the work is assessed by course and control works, as well as test and other examination tools.

The basic requirements for the construction of such a structure: the logical separation of each unit, its connection with the content of the section, the availability for the student of the possibility of direct navigation from any structural unit to any other logically connected with it, the ability to move from given section to another section of the course.

Methodical aids should be built in such a way that the trainee can move from activities carried out under the guidance of the teacher to activities organized independently, to the maximum replacement of teacher control by self-control. Therefore, they should contain a detailed description of the rational methods of the described activities, criteria for correctness of decisions, recommendations for the effective use of consultations.

Modern informatization provides a powerful set of tools that should be effectively used to achieve the goals of the learning process in distance learning, and allows to get a quality education in all areas that are in demand on the labor market.

REFERENCES

- 1 Abishev A.A. The main priorities of modernization of the economic education system in Kazakhstan. - (<http://kisi.kz/ru/categories/politicheskaya-modernizaciya/posts/osnovnye-prioritety-modernizacii-sistemy-kazahstanskogo>) (Retrieved 04.11.2017)
- 2 Perezhovskaya A.N. Continuous education: goals, objectives, content, functions, development prospects. Problems and perspectives of the development of education: materials VI International science Conference (Perm, April 2015) - Perm: Mercury, 2015. - P. 38-41 — (<https://moluch.ru/conf/ped/archive/149/7617/>) (Retrieved: 28.12.2017).