

THEORETICAL AND PRACTICAL PRINCIPLES OF CREATING LEARNING SYSTEMS ON THE MOODLE LMS PLATFORM

Akhmadaliyev Shakhobidin Sharipovich,
Senior teacher of Kokan State Pedagogical Institute, Department of Informatics
E-mail:mr.shahobiddin@gmail.com

The formation and development of the system of information provision of education by our government, the reform of the system of higher education institutions in accordance with the requirements of the "National Personnel Training Program", the creation and introduction of appropriate state education standards in this regard, educational institutions are necessary. A number of things are being done, such as attracting scientists and highly qualified specialists to provide textbooks and literature, training and improving the qualifications of pedagogues in leading educational institutions in developed countries. Among these, issues of increasing the efficiency of teaching "Informatics and information technologies" and improving educational and methodological support in the training of programmers in technical educational institutions are also included.

The use of information technologies to increase the effectiveness of the educational process is still an urgent issue, in particular, the development of automated training systems, programs, electronic textbooks, and expert educational systems has not lost its importance today.

The following problems in teaching the science of "Informatics and information technologies":

- obtaining necessary materials, new literature from the Internet, and updating scientific information;
- developing the software of the teaching system for teaching the subject, taking into account the updating of the materials;
- the creation of electronic textbooks, electronic manuals, and electronic educational-methodological complexes for teaching science;
- it can be solved by developing the methodology of using new pedagogical and information technologies in the conduct of laboratory, practical, and independent training in science.

It is necessary to solve the above-mentioned issues of using educational systems for the training of engineers in the field of "Informatics and Information Technologies" in today's technical educational institutions. The solution to these issues will allow future engineers to improve their mastery of sciences, to train knowledgeable engineer personnel who will be creative in solving every problem and can work independently in their future activities.

The widespread use of computers in various spheres of social life and production has seriously changed the way of thinking of most specialists. Experts began to feel the urgency of the problem of computerization of education more than ever. Currently, there are not enough teaching programs in practice, specialist scientists are not widely involved in the creation of training systems for teaching (UTS), there are few recommendations on program tools and

technologies for their use, the technology for creating UUT is pedagogical, methodical, psychological not fully researched and scientifically based. Therefore, the time has come to increase attention to computerization, to create UMUTs that can meet the needs of the times.

"The computerization of education cannot be stopped, the use of computers in education," wrote Ye.I. Mashbits, "is an irreversible process." This does not mean that it will happen by itself. Its action depends more on scientists, teachers, and creators of new computing techniques and software, who are directly or indirectly related to the educational system.

UMUT as a didactic tool is designed to automate the educational process (partially or completely) with the help of computer technology, which includes:

- computer programs designed for didactic purposes in teaching one or another academic subject;
- methodological and technical documents on the use of the program in the educational process;
- it is possible to include auxiliary tools (electronic manuals, textbooks and presentations) used in the educational process.

A number of works on the creation of electronic textbooks are being carried out in our republic. In particular, N.I.Taylakov's research work on the topic "Pedagogical foundations of creating a new generation of educational literature for the continuing education system" provides ideas on creating a new generation of educational literature. A.A. Abdukadirov talks about the means and methods of organizing the use of computers in the professional training of teachers. The results of the theoretical analysis of the given problem provide a wide view of the problem of improving and accelerating the educational process based on the use of modern computer technology by physics-mathematics teachers, that is, the use of educational, control, modeling, and other software tools. allows to solve in lam.

Providing quality education in a short time is the duty of every pedagogue. It is known that there are very few electronic textbooks and manuals created and used in educational institutions, and most of them are not up to the level of demand. Each pedagogue can perfectly know the subject he teaches, but he may not be able to create an electronic textbook and manual from this subject, or create an automated teaching system, organize a distance education course, or create a test system program. In addition, the pedagogue must spend months and years developing modern programming languages, programming skills, and developing the program. This is difficult for many pedagogues. Currently, a number of such problems make it necessary to create a teaching system that allows pedagogues to implement electronic textbooks and manuals, distance learning courses, virtual laboratories, and testing.

There are two ways to create a training system for teaching: software tools designed to work autonomously and software tools designed to work in the Internet environment. The first type of software tools are similar to hypertext editors and have their own special editing tools. The second type of training systems are:

- user of specialized programs for course editing and management;
- in editing and managing the course, the web is divided into software tools that use standard tools.

Currently, the creation of electronic textbooks (UMUT) is carried out in two ways. In the first round, UMUTs based on web technology from all subjects are being created in collaboration with pedagogues, pedagogues and programmers. The second type of UMUT is created using software shells. UMUT preparation software shells are being implemented in Russian universities, foreign countries and universities of our republic. For example: Moscow State University of Economics, Statistics and Informatics (<http://www.ido.ru>), Tashkent University of Information Technologies (<http://www.tuit.uz>), as well as companies creating instrumental software shells Oracle, Lotus (<http://dlc/miem/edu/ru>) IBM, Maris Multimedia (<http://edugen.com>) and others. Nowadays, there are software tools that prepare distance learning courses and EDs. Below we will provide information about some of them: "ePublisher 300", "Nastavnik-M", "Macromedia AutoWare", "KADIS" programs, (<http://www.intuit.ru>) university of distance education, « e-Lesson" multimedia distance learning programs.

The programs mentioned above are designed to create distance learning courses, EDs and manuals, most of these programs are paid and require powerful hardware and software to use. The analysis of the creation of educational systems shows that in the development and implementation of ED and manuals, software tools that create educational systems, technical and software should be considered as a "social order".

It should be possible to easily update the developed software over time. Such a feature of the software shell allows to update both simple and network-oriented tests in a timely manner based on the requirements of the time, both in content and form. This, in turn, ensures a much longer "life cycle" of the software designed for teaching.

It is worth noting that educational and training electronic resources serve as a means of increasing the capabilities of pedagogues, but it is natural that they cannot replace a pedagogue. It is known that in pedagogical research, more attention is paid to didactics, that is, to the justification of the content of the educational material, to the organizational forms and methods of teaching. The teaching process is based on didactic principles - consistency and systematicity, visuality, comprehensibility, scientificity of the educational material. Electronic education and training resources are also created based on the mentioned principles. They do not deny the sequence and consistency of traditional educational activities, but supplement its content on the basis of modern computer technologies. For this reason, the process of introducing information technology tools into the educational and educational system of educational institutions has an integrative nature.

Based on the above-mentioned ideas, the use of information technologies in the educational management system of educational institutions, on the one hand, increases the mastery of resources from trainers, and on the other hand, the spiritual and moral qualities of students,

their moral It creates opportunities such as obtaining information about the level of maturity, monitoring their dynamics, making predictions, and making corrections if necessary. All these are tools aimed at improving the educational system of the educational institution and increasing its efficiency.

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