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THEORETICAL METHODOLOGICAL BASIS OF USING WEB TECHNOLOGIES IN CREATING EDUCATIONAL PLATFORMS IN UZBEKISTAN

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Abstract
The use of distance learning systems and web platforms in the educational process is becoming increasingly important. The article discusses the main tasks of managing the process of teaching students of higher education institutions through remote web platforms to improve the educational process. The current tasks are considered as - creating models for assessing the quality and quantity of management based on modern models of training on remote web platforms and the use of their algorithms and software in the educational process.

Keywords: Web technologies, web platforms, assessment models, algorithms, software, distance learning, educational, electronic and digital resources

Introduction

The creation of web technologies has greatly increased the possibilities of obtaining information on various materials quickly and easily for everyone, from ordinary users to large organizations. State institutions, scientific and educational institutions, commercial enterprises and individuals began to process, send and store information in electronic form. This environment has created great conveniences compared to the previous physical storage: storage is very compact, and the transfer is instantaneous, and the possibilities of accessing the existing database through the network have opened a very wide path. The possibilities of effective use of information have led to a rapid increase in the amount of information. The business sector today considers information to be its most valuable asset in many of its commercial areas. Of course, this is a very positive process when it comes to public information and public information. But along with convenience, Internet technologies have created new problems for hidden (confidential) and secret information flows. The threat to information security in the Internet environment has increased dramatically:

- Information theft;
- Violating the content of information, changing it without permission from the owner;
- Intrusion into the network and servers;

In our republic, special attention is being paid to providing convenient service and improving the quality of the educational process with the wide use of ICT opportunities. In the Strategy of Actions for further development of the Republic of Uzbekistan in 2017-2021, including "...improving the electronic government system, improving the efficiency and quality of public services, introducing international standards for evaluating the quality of education and training, The tasks of ``increasing the quality and efficiency of the activities of educational institutions..." [1]are defined. Fulfillment of these tasks, including the use of modern software tools for the introduction of e-learning aimed at increasing the quality of education, increasing the efficiency of e-learning by evaluating the e-learning resources of higher educational institutions is one of the urgent issues of today.

Decree of the President of the Republic of Uzbekistan No. PF-4947 of February 7, 2017 "On the Strategy of Actions for Further Development of the Republic of Uzbekistan", PQ No. 2909 of April 20, 2017 "Higher Education System "Decision on further development measures", dated April 16, 2012 No. PQ-1740 Cabinet of Ministers No. 930 of November 21, 2017 "On the establishment of the national network of "Electronic education" in the Republic of Uzbekistan "Part-time (special correspondence) and evening (shift) at a higher educational institution Decision of the President of the Republic of Uzbekistan dated June 5, 2018 This graduation work serves to a certain extent in the implementation of the tasks defined in the decision PQ-3775 and other regulatory legal documents related to this activity. The President of the Republic of Uzbekistan Shavkat Mirziyoev visited the Surkhandarya region on January 19 in order to familiarize himself with the progress of socio-economic reforms and the implementation of previously defined tasks . was entrusted with the tasks of organizing the use.

As part of the implementation of tasks in this direction, the Ministry of Information Technologies and Communications Development launched a video conferencing system based on optical communication networks in a short period of time.

"Uzbektelecom" JSC has developed a set of necessary software and organizational resources for a fast and high-quality Internet-based videoconferencing system. Also, the current system allows for rapid delivery of new knowledge and experiences, connection and exchange of experience with other universities, increasing the economic efficiency of education, wide use of audio-video, animation, graphics in the educational process, comparison of theory with practice, and short specializations allows to organize courses.

Through the distance education system, it is possible to improve the quality of personnel training, create opportunities for distance training of students, and bring different interactive forms of education closer to each other. Today, it is possible to learn from home based on a personal plan from distance education abroad, to use video lessons prepared by the university,

[1] Uzbekistan Republic No. PF-4947 of the President of February 7 , 2017 " Uzbekistan Republic of more development according to Actions strategy "about". Decree

to study without separation from production, as well as to simultaneously receive additional education in other areas and personal the experience of increasing the potential of interests is being widely applied. The infrastructure of information and communication technologies, which is being implemented in the educational institutions of our country, will also serve to use such opportunities in the future.[2]

A few years ago, many web developers were only concerned with statistics. Web pages are made up of HTML files that a user can launch and read in their browser. Gradually, forms for communication with users were created on the web network, search functions and opportunities for mutual information exchange began to be created, but the statistical information for the page visitor was given in the same form as before. The most attention-grabbing part is the emergence of network magazines , and the production of programs that implement trading issues on the basis of this network has begun. In recent days, software for creating web pages has become one of the most basic tools. Computer users have their own personal work schedules, and perform tasks such as checking e-mail, organizing viewing schedules, etc. on this page. Even some special information is transmitted over the network in the form of a small page to display to the client.

Nowadays, the modern stage of the development of society is characterized by the transition to innovative models of the development of science, technology and technology. In this case, computer, information and telecommunication technologies will be of great importance. In such conditions, the problem of improving the educational process and increasing its efficiency is considered one of the important and urgent issues.

One of such issues is the creation of a methodology for the wide use of modern teaching technologies in order to improve the educational process.

Nowadays, the use of teaching technologies, distance learning system, and web platforms is becoming important in the educational process. The main task of managing the process of teaching students of higher educational institutions through remote web platforms is to improve the educational process and increase its efficiency according to the indicators characterizing this process. One of the urgent tasks of today is to create evaluation models of qualitative and quantitative indicators of management based on modern models of teaching on remote web platforms and to apply their algorithms and software tools to the educational process.

The analysis of the conducted scientific and methodical studies shows that public online open courses are a very new field (the term public online open course was introduced for the first time in 2008) and have been little studied. D. Comer, S. Downs, KG Skripkin, L. Breslow, DE Pritchard, J. DeBoer, A. McAuley, B. Stewart, G. Siemens, D. Cormier, L. Pappano, S. Mack, R. Williams, J. Mackness, and D. Siemens. The author of the article V. Hamidov conducted research on the topic of process organization. From the results of the analysis, it became clear that the problems of organizing the educational process and the process of improving the qualifications of professors and teachers using public online open courses in

[2] https://mitc.uz/uz/news/507

the higher education system have not yet been sufficiently studied. It is emphasized that the organization of the center of electronic educational resources is important in automating the organization and management of the educational process in the scientific research works focused on the methodological and software support of the educational system.

According to AP Tikhomirov, VI Soldatkin, the analysis of the processes taking place in the education system of foreign countries showed that the education system has an evolutionary nature, and distance or computer education technology has changed from classic education to virtual education. 'tate.

Also, in the studies, it is justified that the use of distance learning technologies in the educational process can significantly increase the educational efficiency and reduce the teaching time.

The development of modern information technologies increases the possibilities of remote organization, management, and control of the educational process. As a result, distance education began to take the leading status of computer-based education.

A number of scientific studies have been carried out on distance learning, electronic training courses and the use of information and communication technologies and systems, digitization of the educational system. Bulaga A. Parpiev, A. Marakhimov, R. Hamdamov, U. Begimkulov, M. Bekmuradov, N. Taylokov, VS Khamidov, AA Abduqadirov, GSTurdiyeva, MNIsmoilova, Dyatlov V. A, Shohnazarova D.Sh and other scientists. work can be shown as an example [3].

A number of great scientists of our republic, who worked in this direction, were widely covered in the scientific research and works of B.Yu.Khodiyev, A.T.Kenjabaev, B.A.Begalov, R.X.Alimov, Q.A.Alimov, A.N.Aripov, A.Abdug'affarov, T.F.Bekmuradov, R.X.Alimov, M.Aripov, L.I.Shibarshova and others. It is not an exaggeration to say that it is noteworthy that the ICT sector is undergoing radical changes in our country and is being implemented in all sectors of the economy in these studies.

Uzbekistan, like other countries of the Commonwealth of Independent States, is making a lot of efforts to bring its education sector up to world standards. The size of the territory of our country and the presence of regions geographically distant from the center are the main reason for the development of electronic education, which gives it great importance. In the current period of financial scarcity, this type of education should be widely used. The origin

[3]Electronic University. Distance education technologies. For higher education institutions. A. Parpiev, A. Marakhimov, R. Hamdamov, U. Begimkulov, M. Bekmuradov, N. Taylakov. UzME State Scientific Publishing House.- T.: 2008. 196 p.; Khamidov VS Analysis of free and open source LMS systems, infocom.uz magazine #7,8. 14 pages, 2013; Abdukadirov AA Theory and practice of distance education. Monograph Publishing House, 2009; GSTurdiyeva MNIsmoilova ―Working in the Moodle system of distance education. BukhSU 2014; Dyatlov V. A. Distance professional noe obuchenie – M. 1997. 12; Shohnazarova D.Sh ―Use of Moodle system in electronic education and its possibilities‖ article BukhDU ―Tafakkur va taqin magazine Bukhara 2018; Jalolov OI Shohnazarova D.Sh article ―UTILIZING MODULAR SYSTEM IN DISTANCE LEARNING at the ―INTERNATIONAL SCIENCE-PRACTICAL CONFERENCE LONDON‖ London 28.02.2019;

of some problems related to the introduction of this type of education is natural. These are mainly the lack of funds, technical support, qualified engineers and pedagogues in this field, but we need to solve these problems as much as possible, because it is clear that the organization of distance education in the conditions of Uzbekistan will have a great effect.

Methods and analysis

Currently, many presidential decrees and decisions of the Supreme Council have been issued on the computerization of the education and production spheres and the development of information technologies in these spheres. As a result, many great things have been done in the Republic in the last five years. For example, Tashkent University of Information Technologies was established in 2002, and since this year, this university has been training specialists needed in the field of computers and communications, radiotelephony and information networks, software and electronic commerce . These and other higher education institutions are creating new programs and e-books related to many fields of education.

At the same time, the "Internet Use and Education" program, which has been working in our country since 2000, was organized by the **US** Department of State's Bureau of Educational and Cultural Affairs **(ECA**) and the International Scientific Research and Exchange Council **(IREX).** "Teaching program" (**http://www.iatp.uz**) and "Internet in Uzbekistan schools" (**http://www.connect.uz**) programs must The main task of these programs is the development of the Internet and its services in our Republic and its widespread use among the population . As a result of these programs, it can be said that "Free Internet access" centers, which have served the population in 16 cities of our Republic, and Internet centers established in 60 schools of 6 regions of our Republic.

At the same time, we believe that it is necessary to mention the development of the Internet in Uzbek and the emergence of special sites related to the field of education. Internet in the first quarter of 2004 the number of users reached approximately 511,000 (275,000 at the beginning of 2003). At the same time, compared to the beginning of 2003, the number of Internet providers and operators was 263 (94.8% increase), the number of websites in the UZ zone exceeded 2600 (188.4% increase), the number of state enterprises connected to the Internet was 470 (an increase of 63.6%), the number of legal entities is 8,600 (an increase of 68.9%), the number of public Internet access points is 228 (increase was equal to 115.1%). IATP was established as a result of Internet grants of the program and has been operating since 2002 "Distance Education Portal" (http://dl.freenet.uz) or "Distance education courses" organized by many Universities and Institutes of our Republic on their web pages (for example http://nuu.uz O` courses organized on the website of the National University of Uzbekistan). Many useful and interesting websites related to the field of education are being created (http://www.bilim.uz, http://www.bilimdon.uz, http://www.ilm.uz, http:// www.student.uz, http://www.study.uz etc.). The most gratifying thing is that not only universities, institutes, colleges and academic lyceums, but also schools have their own web pages on the Internet.

The virtual education system was developed on the open-source MOODLE platform and is intended for the organization and management of distance education. The virtual education portal consists of 493 structures. In addition to academic regulations

for one subject, each structure includes lecture notes, practical training guidelines, terminology, bibliography, test questions, handouts, assessment criteria, training requirements for organizing and managing the process and similar information are located. Currently, structures are created from 40 subjects taught at the university, and they are used in the educational process.

Virtual university distance education system . This system is designed for distance learning of students. Through this system, students can use available electronic resources, read, receive assignments and suggestions from the teacher at any time and in any place. The teacher can constantly update the resources and monitor the attendance and progress of his students. Tasks are assigned using tests created by the teacher or by the type of laboratory work. Working on the platform is simple and meets world standards.

The Estudy distance learning system is a system created for providing education to students of academic lyceums and colleges, students of higher educational institutions in an offline mode. Currently, through the system, physics and mathematics are conducted interactively for students of TATU and students of academic lyceums under TATU. We all know that every university or educational institution tries to create its own virtual information learning environment based on modern technologies to manage its educational process. Nowadays, there is no need to create a virtual information learning environment, because various types of software packages adapted to the Web environment are available as a result of the cooperation of enthusiastic programmers and employees working in the field of education, as well as the support of educational funds. free and open-source software is created.

In this educational module, an analysis of a set of free and open-source programs is presented, which provides the opportunity to organize the distance education process. The analysis of software packages presented in the training module is written as a result of many years of scientific research.

The use of information and communication technologies in the educational process (in particular, the distance learning process) is mainly carried out in two ways. The first condition is technical equipment, and the second condition is the provision of special software.

1. Provision of technical equipment: computers, network devices, high-speed Internet networks, video conferencing equipment and hakazo.
2. Software: Includes a suite of software designed for the industry, from software that uses existing devices.

In recent years, the type of electronic education through the Internet or Internet network, which is used in the management of the educational system in the West, has come under the term Elearning (electronic education).

Electronic education is a broad concept that means various forms of education based on information and communication technologies.

Among the many sources of e-learning organization, the following can be indicated:

- Authoring software products (Authoring tools);
- Virtual educational process management systems LMS (Learning Management Systems);
- Internal content management systems CMS (Content Management Systems).

LMS/LCMS systems include the basic functions of organizing e-learning (distance learning process). Such functions of students registration (of teachers, pedagogues who create courses and those in other roles), exclude users from educational courses, create an environment for independent learning of students, individual and/or group interactions between students and teachers organization of cooperation (using Web2 elements), creation of groups and their management, organization of intermediate, current and final controls and creation of electronic control types (closed type test, open type control, related to finding a match, including the correct placement of the sequence, filling in the blank, and other types), organization of various types of social surveys, monitoring of students' knowledge level, certificates (diplomas) possibility to provide, organization of electronic information resources (electronic libraries), possibilities of export/import of electronic educational resources, system users (students, teachers (tutors), pedagogues creating courses) when and for how long familiarization with the educational content, through which I' address was accessed (which helps to determine from which country the system was accessed), browser and which operating system was accessed, the ability to monitor the activity of users in the system through special graphics, teacher (tutor) (or pedagogues who create e-courses) create e-learning resources, upload e-learning resources created on the basis of SCORM, TinCan or other standards in authoring tools, students' other organization of communication with students/teachers (via chat, Forum, video conference, general electronic boards or internal/external message exchange module of the system), availability of modules that send mass messages to all users of news about the educational process, economic and marketing operations management and other capabilities can be listed.

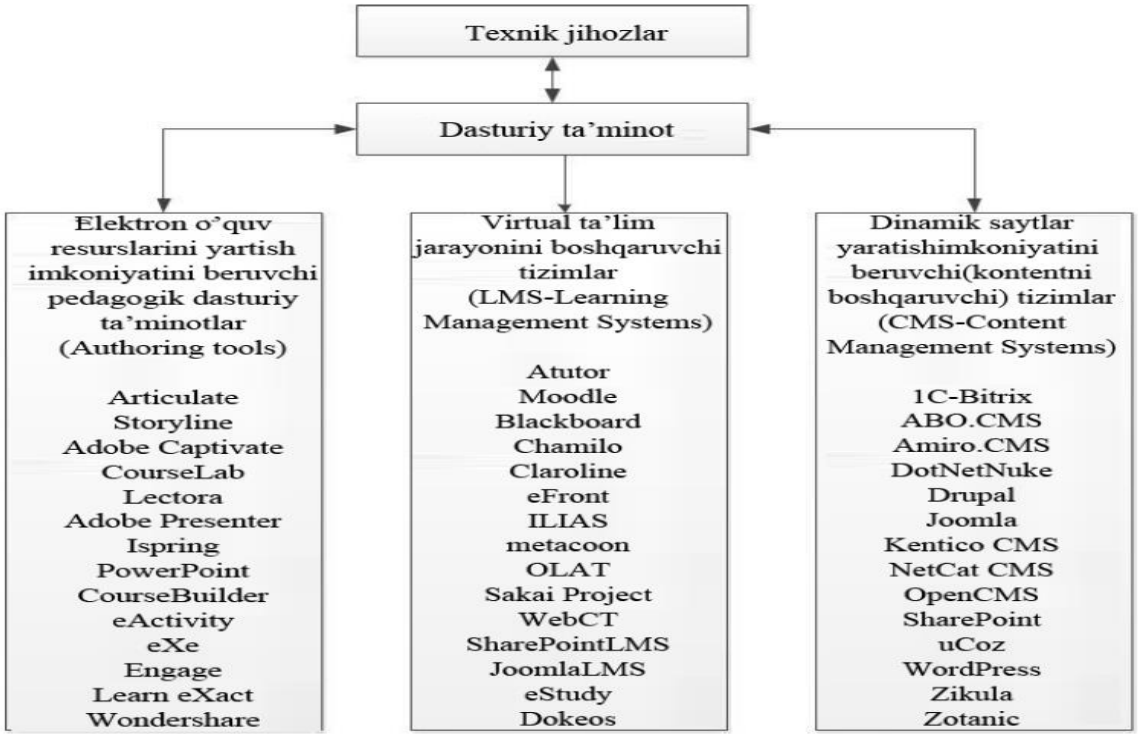

Figure 1. The structure of the software used in the organization of electronic education

Analysis of LMS systems

Below we will describe the names of free and open source LMS software packages and their main capabilities, which provide the opportunity to organize the distance learning process. **Claroline** is a free and open-source web-based software package that allows you to organize distance learning courses. The system was created at the Institute of Pedagogy and Multimedia of the Catholic University of Louvain (Belgium) . The use of the software is based on the GNU (General Public License), which means it can be used for free. PHP/MySQL/Apache are required to be installed on the server for the system to work.

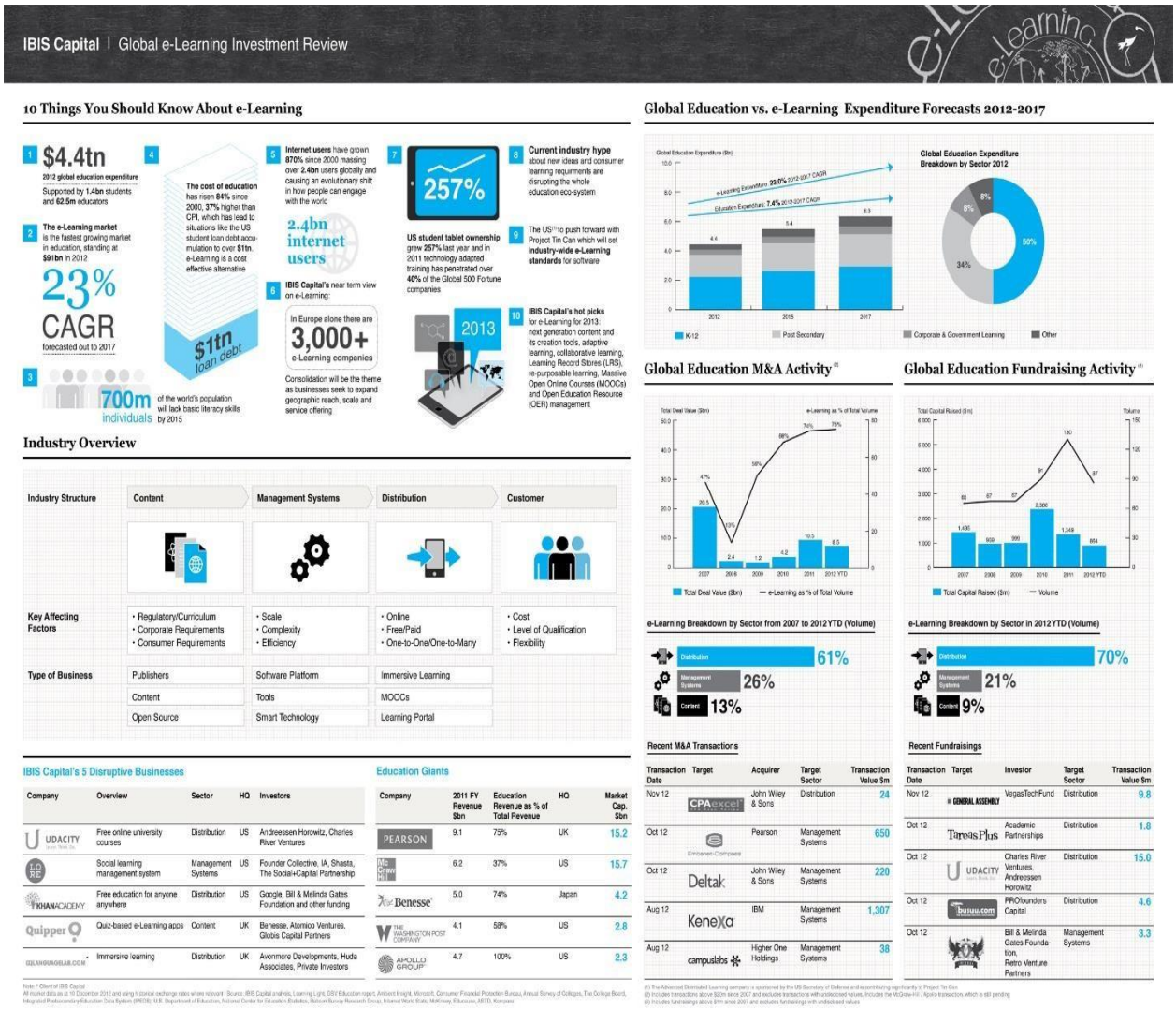

Figure 2. Basic functions of LMS systems[4]

The system was tested on EasyPHP installed on Windows 98 and NT, Mandrake Linux8.1 environment. Claroline software complex is used in more than 80 countries and translated into more than 30 languages (program interface). The system can accommodate more than 2000 students simultaneously. The Claroline software complex meets all the requirements for organizing the distance education process, in particular, registering users, defining the

[4] http://uz.infocom.uz/wp-content/uploads/erkin_14_10_2013_2.jpg

roles of users (teacher, student and guest) in the system by the administrator, creating training courses, their the ability to edit content, control student knowledge, conduct monitoring, analyze control results, use and manage communication elements (chat, forum, short message sending modules) between users within the system gives The system has the following training modules, like other LMSs: Forums, Materials, Messenger, Chat, Exercises, Group work, Student tracking, Calendar, Wiki and other modules. Like other LMSs, IMS and SCORM support standards. The capabilities of the Claroline software complex can be seen using the demo mode, for this http://demo.claroline.net/ referring to the link, he can access the system in various roles (administrator, subject teacher, student) and familiarize himself with the possibilities of the system.

At the time of writing the training module, the stable version of the system is Claroline. The official web address of the system is: http://www.claroline.net

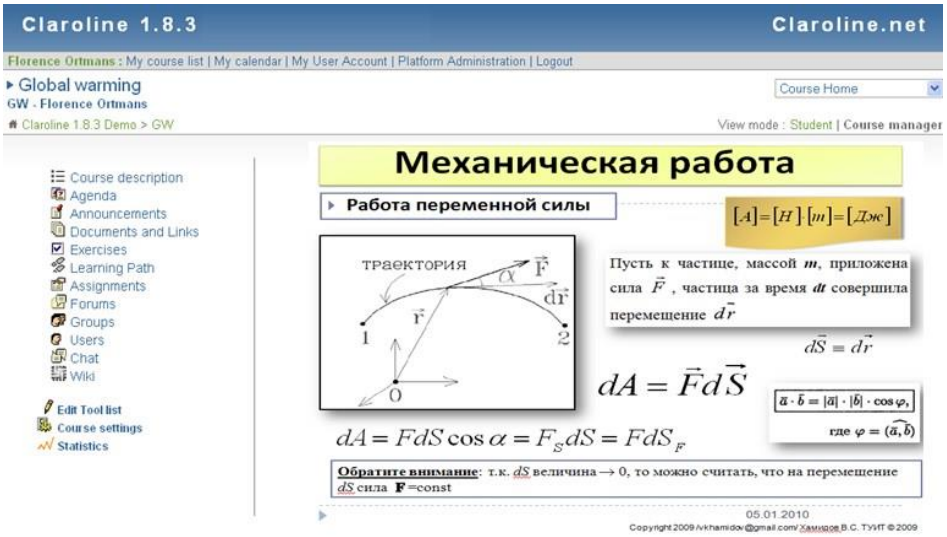

Figure 3. General interface of the Claroline system[5]

Figure 4. General interface of the Claroline system[6]

[5] http://uz.infocom.uz/wp-content/uploads/erkin_14_10_2013_4.jpg

[6] http://uz.infocom.uz/wp-content/uploads/erkin_14_10_2013_4_1.jpg

Dokeos is a new software package released from version 1.4.2 of Claroline.

Dokeos is the work product of several members of the original working group that developed the Claroline platform, which they aimed to adapt to the working staff of public enterprises, unlike Claroline, which was created for educational institutions.

If you visit the official website of the Dokeos software complex, there you will be offered to download 2 versions of the program: Dokeos FREE - free and Dokeos PRO - a non-free software package with additional modules. But the Dokeos FREE version, in our opinion, has all the educational modules you need to organize the educational process.

Conclusion

The following results were obtained during the scientific research:

Creating study groups and attaching subjects to them;

Smart University works seamlessly across all types of devices;

Separate sections for the administrator, teacher, student and parent;

Export report data in PDF format;

Super easy management of student fees;

Attach and download training documents;

A parent monitors all activities of their child;

Management of all dormitories and their rooms;

Systematic management of all library books;

Admin can send private messages to teacher, student and parent;

It is possible to easily backup, restore the entire database;

Track student fees and expenses in one place;

Receive information about student grades and events through SMS-notifications;

Management of the educational process online;

Creating a statistical report on students attached to courses.

Get reports on the activity of courses from the time they were created and from the time they were created .

Creating statistical reports on the educational process.

Creating a statistical report of the process of connecting users to the system.

Our results can now be submitted to the management apparatus of educational institutions for monitoring and analysis through the "Smart University" platform.

Nowadays, distance learning systems are becoming more and more accessible to everyone, which is actually developing and improving all over the world. That is why this system is more convenient and easier to develop control methods, all control works are carried out automatically by applying the developed methods.

Our result, presented in this thesis work, is a generalization of the University's remote platforms into a single platform, management of the quality of education about all users, their activity and inactivity. Automating the process of creating statistical reports on the educational process will also ensure that its results are reliable and accurate. Based on the above-mentioned points, we came to the conclusion that we can control, analyze and give a conclusion on the distance learning process by applying these control systems, control of the learning process to distance learning systems.

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