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Implementation of E-learning in the organizations of secondary education

In article questions of realization of electronic training in the organizations of secondary education of various countries are considered. In world practice electronic training became an integral part of modern education. Authors showed the purposes of electronic training in schools of Kazakhstan. In detail features of implementation of the Kazakhstan project of introduction of system of electronic training in the organizations of secondary education reveal. Now on the basis of updating of structure and the maintenance of system of electronic training at comprehensive schools hold events for granting opportunities of information and telecommunication technologies for educational process.

Key words: E-learning, secondary education, school students, state programs, the format of training and teaching, educational services and resources, digital educational resource.

In the Republic of Kazakhstan (RK) education is recognized as one of the most important priorities of long-term Strategy «Kazakhstan – 2050». The common aim of educational reforms in Kazakhstan is the adaptation of its education system to the new social and economic environment, international educational standards.

The e-learning technology allows productively combine both of traditional and innovative methods of implementation of the educational process. In the current moment the educational paradigm of our country is changing. In the current moment the educational paradigm of our country is changing.

The appearance of e-learning (E-learning) became inevitable in connection with the increasing needs of society and industry for the continuous professional development of employees. The first this technology was applied in the industry and only then began to use it at first in higher education institutions, and then and at schools. The European commission defines the e-learning (EL) as «use of new technologies of a multimedia and Internet for improvement of quality of training due to improving of a remote exchange of knowledge and collaboration [1].

In world practice e-learning became an integral part of the modern education. It is interesting to analyze the international tendencies of the development of e-learning [2].

In Europe the European School Network project (European Schoolnet) which integrates 24 countries works. This project implies collaboration of school students within all network by means of the European Schoolnet portal which supports many languages. On a portal the materials created by teachers from the different countries are placed.

In Great Britain the Connected Educational Community project functions. The main principle of this program – to help school students to depart with the study from the classical teacher pupil model. One of components of the project is a new model of training by means of ICT. The e-Learning Toolkit tool kit («A set for e-learning») supports teachers when using the information technologies (IT) in classes, giving the chance to school students to study in a new way. The long-term project task consists in that in five years any person could be connected to system from any place.

The government of Poland founded the program under the name «Interkl@sa Project» which connects the Polish school students to other school students of Europe and is a part of the general plan on more widespread introduction of ICT at schools of the country. Main goals of the project are to acquaint school students with new information technologies and teach them to live in global information society, using ICT in training and the solution of tasks.

In the USA the concept of e-Learning in which five main national objectives of educational technologies are provided functions:

1. All pupils and teachers will have access to IT in the audiences, schools, collectives and houses.
2. All teachers will effectively apply technology to help pupils to reach the highest level of educational standards.

3. All pupils will possess literacy and skills in the field of IT.

4. The next generation of IT applications for tasks of teaching and training will allow to enhance researches and the analysis of IT.

5. Transformation of processes of teaching and training.

The initiative purpose «Electronic Mexico» (e-Mexico) — simultaneous training of school students and adults to use of IT by means of several advanced programs. The Mexican school program of remote learning which is directed on providing new courses to that pupils it is difficult for them to be present personally at lessons is interesting. Within the project local training and information centers work, training in skills of operation in collective and training of parents is made. E-Mexico initiative also assumes creation of local training centers where any person in the territory of all Mexico could have access to learning courses and information. Among other successful projects within e-Mexico initiative — the program Edusat, RedEscolar («A school network»), National educational video library and Enciclomedia.

Pupils of China, as a rule, receive electronic information from special training centers through lines of satellite communication. Such centers are necessary as most of pupils have no from the house of access to channels with necessary throughput.

In the Electronic Russia program the task till 2010 to create the uniform information and education environment keeping all shape of education including school [3] was set.

On e-learning distribution level Kazakhstan lags behind world leaders in this area (the USA, Finland, Singapore, South Korea, Canada, Australia, New Zealand) for some years. Thus the created educational models of these countries which are economic leaders as well, successfully work for achievement of a strategic objective — the increase of competitiveness of the country.

E-learning is in the Republic of Kazakhstan at a stage of implementation, approbation. The perspective of the use of e-learning technologies is presented in the form of an optimum combination of traditional and innovative methods of implementation of educational process. At this stage the educational paradigm changes. The mechanism of transition to a new paradigm of training offers e-learning on the basis of integration pedagogical and information communication technologies [4].

The most part of the state programs of education development determines priorities by the creation of the uniform information educational environment and the system of the implementation of e-learning «E-learning». The main goal of e-learning is the increase of accessibility to fundamental bases of knowledge, opportunity for professional growth and increase of competitiveness of the expert ready to communication with experts of the whole world oriented on world achievements in the field of science, economy and technologies, formation of infocommunication culture of students and teachers on the basis of universal and national values.

The informatization of education system at the present stage allows to move to a new level of the use of information communication technologies in establishments of education. For system of the secondary general education the State program of informatization was introduced in 1997 for the first time. For this period e-learning is fixed as the most important mechanism of implementation of the state educational policy in the strategic document to the State program of a development of education of the Republic of Kazakhstan for 2011–2020 [5]. In this program requirements about the system implementation of E-learning on all education levels are especially selected. In 2012, according to this program, additions are made to GOSO of the higher, technical and professional education regarding preparation of pedagogical frames for operation in system of e-learning, in GOSO of secondary education — regarding mandatory use of system of e-learning. By 2015 e-learning it is planned to envelop 50%, and by 2020 — 90% of the organizations of education.

E-learning is the format of training and teaching based on application of educational content electronically with use of electronic means, such as the computer, the mobile phone, a communicator, learning management systems (LMS) and interactive learning platforms. The main goal of e-learning in the organizations of the secondary general education: formation of the infocommunication identity of school students which principle shall be «a training through all life» on the basis of mobile infocommunication interaction in open information and education space [6].

The main objectives of e-learning in the organizations of the secondary general education in Kazakhstan are as follows:

- the support of equal access for all participants of educational process to the best educational resources and technologies directed on mass quality education;
- the creation of full-fledged educational space and support of complex attending of personal development of each school student;

- the technologization of educational process providing mass quality education;
- the automation of management system secondary general education;
- development of infocommunication culture of school students and teachers.

Select with the general components which provide the base of e-learning: infrastructure and telecommunication support, the content support, staffing — presence of the teachers ready to effective use of system of e-learning.

The infrastructure of e-learning is oriented on use in the organizations of formation of the computer equipment of new generation: portable personal computers, electronic virtual classes — classmates, interactive boards of Interactive whiteboard and multimedia projectors, etc. The main subjects of e-learning in the organizations of the secondary general education are direct participants of educational process and control.

The Ministry of Education and Science of the Republic of Kazakhstan in pursuance of point of the Plan of measures for 2011–2015 on implementation of the State program of education development of the Republic of Kazakhstan for 2011–2020 (the I stage) enables project implementation «The e-learning system implementation in the organizations of secondary, technical and professional education». The project objective is the support of equal conditions of access for all participants of educational process to high-quality educational services and resources on the basis of the use of information communication technologies.

So far the project is implemented in 581 organizations of secondary, technical and professional education of 12 areas, the cities of Astana and Almaty. E-learning includes the following IT infrastructure: wireless Wi-Fi of a network, the modern personal computers, notebooks, multimedia projectors and digital podiums. Sets of the equipment consider 5 different types of the organizations of education: initial, main, rural, city schools, colleges.

Today it is delivered computer and office equipment for equipment of teacher's rooms, computer classes and workplaces of teachers, mounting of the structured cable networks of the organizations of education is made. On Internet Data-Center site of JSC Kazakhtelekom the server equipment of central node of System of e-learning is torn.

Within the project components of an information system of e-learning are implemented. All components are brought into trial operation. The platform of an information system of e-learning allows to automate administrative processes of education by the organization: educational process, operation with personnel composition and the contingent trained, record keeping and the reporting of the organization of education [7]. 7043 units of digital educational resources, thus 5069 are developed for secondary education in 6 general education subjects and 1974 for technical and professional education in the Kazakh and Russian languages. Each digital educational resource represents a complex of educational objects with a multimedia explanation of materials, interactive jobs and tests.

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Орта білім беру мекемелерінде электронды оқытуды жүзеге асыру

Мақалада әр түрлі мемлекеттердегі орта білім беру мекемелерінде электронды оқытуды жүзеге асыру сұрақтары қарастырылған. Әлемдік тәжірибесінде электрондық оқыту қазіргі білім беру жүйесінің негізгі бөлігі болып саналады. Қазақстан мектептеріндегі электронды оқытудың мақсаты көрсетілген. Орта білім беру мекемелерінде электронды оқытудың жүйесін енгізудің қазақстандық жобасының ерекшеліктері толығымен қарастырылған. Қазіргі уақытта электрондық оқыту жүйесінің негізінде құрылымы мен мазмұны өзгертіліп, жалпы білім беруде оқу процесінде ақпараттық-телекоммуникациялық технологиялардың мүмкіндіктері бойынша әр түрлі жұмыс шарттары өткізілетіндігі жайлы айтылған.

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Реализация электронного обучения в организациях среднего образования

В статье рассматриваются вопросы реализации электронного обучения в организациях среднего образования различных стран. В мировой практике электронное обучение стало неотъемлемой частью современного образования. Авторами показаны цели электронного обучения в школах Казахстана. Подробно раскрываются особенности реализации казахстанского проекта внедрения системы электронного обучения в организациях среднего образования. Отмечено, что в настоящее время на основе обновления структуры и содержания системы электронного обучения в общеобразовательных школах проводят мероприятия по предоставлению возможностей информационно-телекоммуникационных технологий для учебного процесса.

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