

Investigation of E-Learning in the Pedagogical System of Kazakhstan

Adil Kossumov

Department of Higher Education, Center for life sciences, Nazarbayev University, Astana, Kazakhstan

ABSTRACT — today, the goal of employing the electronic learning system into educational system by 2020 is a significant preference in recognizing the State program of educational extension in the Republic of Kazakhstan. The investigation on E-learning organization in the system of education as issue is based on the comparative analysis of present experience across the world and in Kazakhstan. The situation is progressed by Internet access because of the modern technologies in this domain in this country. In the field of pedagogical education the positive dynamics is observed in developing of digital educational resource. The expansion of digital educational resources on school educational subjects for electronic learning organization at comprehensive schools is conducted in conducting the measure plan in the State program of the educational development for 2011-2015 (stage first) in this country. It is necessary to begin outlining a plan and educational production on study programs to introduce and implement E-learning to educational process comprehensively. In addition, it is also necessary to create training workshops and courses for preparation and retraining academic personnel is able to work successfully, professionally and competently under the conditions of E-learning system. E-learning introduces in the system of comprehensive school of education in this country more successfully. The organization of E-learning in the system of Higher Pedagogical Education is conducted without elaboration; mainly it is limited by the organization of distance education in the higher educational pedagogical organizations.

KEYWORDS: *E-learning; Kazakhstan; pedagogical education, the information and communication technologies (ICT); digital educational resources.*

Introduction

Fast access to the modern progress in science and technology have had a dramatic effect on the procedure, methods, technologies and courses of training at all levels of education. The initial purpose of e-Learning technology is to ensure same access to the best educational resources and technologies for all partakers in the educational stages. During last years the problems of e-Learning researchers began to study actively in Kazakhstan, particularly before and after the accepting the official program of e-learning implementation in the country. The recent investigations carried out in the field of education in formalization. In accordance with Artikbayeva E.V. (2010): "We need to look for new ways and methods to resolve the problem of information and communication culture for teacher and pupil; also we need to develop the software application of educational environment. The technological development of e-Learning based on different theories of learning. E-Learning realizes through educational portals, virtual schools and etc." As for Akhmetova O.S., Issayev S.A. (2012): "E-Learning at schools and universities is knowledge-based learning integrated the use of digital technology in setting up learning environments. An e-Learning environment is one where the educational practices are partly or totally based on information and communication technology. There can be a combination of presentable and distance learning, online and offline, solitary and group learning". Mukazhanov E.B. Telebayev E.E., Takenova G.D. (2012) consider: "An important condition for the functioning of e-Learning is to ensure transparency and openness of the educational process, in accordance with best international practices and the need for the positioning of Kazakhstan in the international education rankings TIMSS, PISA, conducted the International Association for Evaluation of educational achievement". Sapargaliyev D. (2013) remarks that "We need to invite the world's leading experts for consultations and recommendations for the phase introduction of e-Learning in the educational system. Also important to note, that the successful implementation of national e-Learning project can significantly improve the quality of education in the next 10 years". It is apriority task of widespread-Learning introduction in the educational process by 2020 according to the State Program of Education Development of the Republic of Kazakhstan for 2011-2020(Akorda (2011).

Tasks of e-Learning implementing in Kazakhstan:

- Defining standards of computerization and internalization;
- Organizing an open and distance learning;
- Development, testing and dissemination of digital educational resources;
- Establishment of Kazakhstani part in the Internet;
- Organizing the technical and pedagogical support of infrastructure and software training.

The concept of E-Learning in Kazakhstan: inpre-school education- computer learning games, in secondary schools-electronic textbooks, in colleges – virtual trainers, in universities- electronic research laboratories. (G.K. Nurgalieva, (2012).The main participants in the organization of e-Learning in Kazakhstan are the association "KazRENA" (Kazakhstan Research & Education Networking Association), JSC"National Center of Informatization", JSC" National Information Technologies". The association "KazRENA" is an association of scientific and educational network users of our Republic. This association specializes in the development and delivery of online information services for all members of the research and educational environment in Kazakhstan. "KazRENA" provides high speed Internet access to scientific and educational institutions of the Republic. The National Center of Informatization (NCI) is an operator of the Ministry of Sciences and Education of the Republic of Kazakhstan in the area of education informatization. The core functions of the NCI:The informational and resource support of education informatization, the creation of national digital interactive multimedia educational resources (DIMER), the scientific basis for the design of e-Learning educational technologies' textbooks for all levels of education and their development;

- The training of teachers to the profession in terms of information;
- The monitoring of teachers in use of e-Learning editions in the learning process.

The joint stock company "National Information Technologies "develops plat form for "e-Learning» and supply an equipment, and then national training centre of teachers «Orleu» trains teachers to use e-Learning systems. The implementation of national E-Learning project is provided in two stages (first stage - 2011-2015 and the second -2016-2020).

E-learning for the secondary education

As noted by Akhmetova O.S., Issayev S.A. (2012) e-Learning at schools in Kazakhstan includes:

- Automated working place of the teacher (e-journals, diary, planning, teachers' common e-room, SMS notifications of parents);
- Online access of each student and teacher to the best world educational resources in any time;
- Digital educational resources – libraries, portals, etc. (e-textbooks, games, virtual trainers, laboratories);
- Automated management system;
- Automated collection of initial statistical information.
- The e-Learning introduction at Kazakhstani schools is planned in two stages:
- The first stage (2011-2015):
- More than 50% organizations will receive broadband access to the Internet (over 4-10 Mb/c);
- More than 50% education organizations will have LAN (free access to educational content), Wi-Fi, and Wi-Max;
- More than 50% education organizations will be provided with e-libraries;
- Not more than 10 students at 1 PC.
- The second stage (2016-2020):
- More than 90% organizations will receive broadband access to the Internet (over 4-10 Mb/c);
- More than 90% education organizations will have LAN (free access to educational content), Wi-Fi, and Wi-Max;
- More than 90% education organizations will be provided with e-libraries;
- Not more than 1 student at 1 PC.

In accordance with the State Program of Education Development in Kazakhstan for 2011-2020: the introduction of e-Learning in 4135 educational organizations is planned till the end of 2015: in 2011 – 44, in 2012 - 537, in 2013 - 926, in 2014 - 1317, and in 2015 - 1311 establishments. Moreover, the project considers the creation of digital educational resources (DER). DER is a digital interactive training system with multimedia explanations of the educational content and testing pupils' educational achievements. 468 digital educational resources on the subject "History of Kazakhstan" in Kazakh and Russian languages for 5th-to11th grades were developed by the team of NCI with the pedagogical staff of History faculty of KazNPU named after Abai and Sarsen Amanzholov East Kazakhstan State University in 2011 year. These digital resources are available online <http://lms.nci.kz/history>. By the head of National Centre of Informatization of Kazakhstan, Nurgaliyeva G.K. (2012): "The effectiveness of using DER is evident: at the beginning of studying only 1304 of the students were A-grade students, and now they are 2369; the number of B-grades is at the same level, because of the C-grades' students, which joined to them. So, C-grades' students are only 435 opposed to 1104 at the start of the project. It is really wonderful achievement!" There were 7043 e-resources in 6 school subjects and 38 subjects for 8 college specialties in 2012. The inclusion of DER to Chemistry, Mathematics, Physics, and Kazakh language for 2nd-to11th grades started during 2013-2014 school year. These DER-s are used at schools, where there is technical equipment for e-Learning in accordance with the State Program of Education Development of the Ministry of Science and Education of the Republic of Kazakhstan. The portal «e-Learning in Kazakhstan" is a large project, contributing to the development of electronic and interactive learning in Kazakhstanat the national level. The E-Learning portal of Kazakhstan (<http://elp.kz/>) places on its website the schedule of online lessons from the leading teachers of Kazakhstani schools on various school subjects. This portal promotes cooperation between teachers in the field of -Learning. Since 2014theimplementation of e-Learning at remote rural schools is going to begin by the Ministry of Education and Science in order to reduce the gap in the quality of education in urban and rural areas.

3. E-learning in the teaching of the higher pedagogical education

Dalayeva T.T. (2013) distinguishes the following steps for e-Learning in higher education institutions of the Republic:

- the creating of own sites in order to provide diverse information for consumers, including training for - students,
- teachers and employers, which increase the number of portals on their websites;
- the development and creation of electronic educational resources on disciplines for all specialties;
- the creation of own digital libraries, connecting to existing Internet digital libraries;

- The organizing distance learning, as one of the form of e-Learning;
- The creating electronic research laboratories on the basic disciplines of all specialties.

We stopped on the subtotal feature of e-Learning in higher education institutions of Kazakhstan. The Kazakhstani universities' websites are diverse in content with interesting design of information for the educational process organization. However, by the beginning of 2013/2014 academic year the access to sites of some universities and institutes was restricted, or they are under renovation. With regard to the creation of electronic educational resources, today almost all higher education institutions developed their modules on disciplines, but not all of them represent in the mode of free access for students via the Internet or Intranet. Many universities have available electronic training materials (curricula, syllabus, abstracts of lectures, and methodical recommendations on subjects) on the portals of their own libraries. Some of the universities connect to the Republican inter-high school electronic library (RIHSEL) in the absence of their own electronic libraries, as well as offering a connection to other digital libraries represented in the Internet-space. The interuniversity electronic library (RIHSEL) was created by the association "KazRENA" in cooperation with the association of universities of Kazakhstan in 2009. The association of universities of Kazakhstan and the association "KazRENA" with a support of the Ministry of Science and Education will create the national portal "Bilimger" via the consolidation of university electronic resources (www.e-bilimger.kz). The electronic infrastructure of teaching must be created to conduct classes in a modern format at pedagogical higher education of Kazakhstan. The portals of Kazakhstani universities should be similar to the leading foreign universities' portals according to the public policy of education informatization by 2015. Today, it is necessary to create virtual research laboratories for research and training processes at universities for various specialties on the base of cooperation between specialists in the field of IT-technologies and university professors. The one of important technical condition for realization of e-Learning is the access to broadband Internet, therefore the universities' aim of Kazakhstan is to ensure 100 percent access to broadband Internet by 2020.

Conclusion

The creating of e-Learning system is one of the main area and the aim of achievement of the State Education Development Program. In January 2013 new State Program "Information in Kazakhstan – 2020" was approved by government (Central Communications Service for the President of Kazakhstan (2013). The main purpose of the Program is creation of conditions for transition to the information society. And E-Learning is one of the ways for realization this program too. But, today we have some mistakes in the organization of e-Learning. Teachers of the e-Learning experimental school complain about double filling the documentation: the electronic journal and the school journal. We need not only the provision of computer technologies to schools, but also we need the teachers who can provide the methods and approaches to e-Learning in order to achieve the stated goals. For realization of this project, eight thousands of e-Learning system users have passed special courses at the National Institute of Professional Development for Management Personnel of Education System and Regional Institutes of Professional Development of Kazakhstan. According to Senator Baktiyaruly M. (2012) there are 7698 schools and 292,000 teachers in Kazakhstan at the beginning of December 2012. Out of it - 8 000 teachers, who specially were trained to work with e-Learning, and it is only 2,7% of the total number of teachers. Today in Kazakhstan, the preparation of digital educational resources (DER) for school subjects is managed centrally for management e-Learning at secondary schools. The implementation of the state policy on the organization of e-Learning system at higher pedagogical education develops on the basis of own resources of each institution. It is important to start creation the teaching products - the educational programs for e-Learning implementation in the teacher professional education. It is necessary to develop courses and disciplines for training and retraining of pedagogical staff of higher pedagogical education, able to work competently in a professional environment of e-Learning system. The e-Learning is the new format of the educational process the use of digital technology, but it is not the Mainway of learning. The establishing of e-Learning system in Kazakhstan does not only give the access to global educational resources, but it also develops its own educational content.

References

1. Artikbayeva, E.V. (2010). Theory and technology of e-Learning in secondary school.
2. Akhmetova, O.S., Issayev S.A. (2012). Perspectives of e-Learning development at schools of Kazakhstan.
3. Mukazhanov, E.B., Telebayev, E.E., Takenova, G.D. (2012). E-Learning - base upgrade educational services.
4. Sapargaliyev, D. (2013). The future of e-Learning in Kazakhstan.
5. Akorda (2011). The State program of Education Development in the Republic of Kazakhstan for 2011 – 2020.
6. Nurgalieva, G.K. (2012). Model of Kazakhstan e-Learning System. Retrieved from <http://www.nci.kz/en/content/e-learning>
7. Dalayeva, T.T. (2013). The e-Learning trends of higher education in Kazakhstan.
8. Central Communications service for the President of Kazakhstan (2013). The state program "Information Kazakhstan – 2020.
9. Baktiyaruly, M. (2012). Ussupova A. V. senate vystupili za uvelichenie kolichestva pedagogov mujchin v shkolah.