



The Future of E-Learning in Kazakhstan

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Abstract

The purpose of the article is a critical analysis of the situation on the implementation and development of e-Learning in Kazakhstan in the next 10 years. E-Learning is the main direction in the development of Kazakhstani education. Government approved national programs that support sustainable development of e-Learning (till 2020). E-learning is being implemented at all levels of the education system: from primary to high school. Over the past ten years, many scientists have tried to adopt a national vision for e-learning development. Kazakhstan has national center for informatisation of educational system and tries to create a unified electronic library. Implementation of national e-Learning project is provided in two stages (first stage 2011-2015 and the second 2016-2020). The project involves providing schools with digital educational resources, broadband Internet. Teachers and students will have access to the world's best educational resources and learning technologies. Over the past three years a number of experiments were conducted for introducing e-Learning in several cities of the country. However, not all implementation experience had positive results. We found some problems and barriers to the successful development of e-Learning in Kazakhstan. Although in general the process of implementing e-Learning has been successful and has shown readiness of the educational system to the introduction of electronic forms of learning.

1. Introduction

In modern Kazakhstan the role of education is constantly increasing. This is due to the fact that the government plans to improve the quality of educational system in the next 10 years.

Today Kazakhstan occupies 55th rank in Networked Readiness Index among 142 countries how it was described by Dutta and Bilbao-Osorio (2012) in their The Global Information Technology Report. Also according to this report the adult literacy rate of Kazakhstan is one of the highest worldwide. However, other indicators of educational system development remain very low. The report's indicator 'Internet access in schools' presented on 72nd rank, other indicator 'quality of educational system' showed on 112th position [1].

Nevertheless the government is trying to improve current situation in educational system. In the end of 2012, the President Nursultan Nazarbayev has presented Strategy of Kazakhstan till 2050 [2]. According to the Strategy, Kazakhstan needs in modernization of teaching methods and in actively developing online education system. Also Ministry of Education and Science will intensively introduce innovative methods, solutions and tools including the e-Learning.

Kazakhstan has some successes in use e-Learning system, which were marked by the world's leading experts. For example, former UK Education Secretary Charles Clarke (2011) points out that since 2007 over 40,000 Kazakhstani teachers have been trained on the use of new interactive classroom pedagogies and innovative interactive classroom technologies such as interactive whiteboards, student voting systems and scientific data logging kits. A suite of e-Learning content for Biology, Chemistry and Physics in Kazakh, Russian and English was specifically created for the first national e-Learning project. Also special portal (www.sabak.kz) was created as part of the project [3].

It should be noted that in 2011, the government initiates a national e-Learning project. Baymoldina and Jamankulova (2012) have identified that a number of leading universities in Kazakhstan launched work on the introduction of national e-Learning project. Today more than 16.000 personal computers in 700 computer classrooms connected and more than 140 thousand students have direct access to the Internet [4]. These indicators are growing up every year. For example, Baymagambetova (2013) suggested that in 2012 more than 580 educational organisations were linked to the e-Learning project, moreover in 2013, the project will be covered approximately 900 institutions. Then in 2014, e-Learning project will be introduced in 1300 educational organisations [5].

The head of Kazakhstani National Centre of Informatisation, Nurgaliyeva (2013) described in her report the new technological infrastructure for schools and colleges that will be created by 2015. This infrastructure involves the development of various control systems for school (SMS), class (CRMS),



learning (LMS), testing (TMS), social interaction (CMS), psycho-pedagogical monitoring (MPcMS) and methodical of knowledge (MMS). All of these systems will be linked to national education database [6]. Despite these major changes in the education system of Kazakhstan, there are a number of problems that can possibly interfere with the successful implementation of e-Learning.

2. Experience of implementation and problems in realisation

Some Kazakhstani scientists have successfully implemented e-Learning in their educational institutions. For example, Kenzhebeyev *et al.* (2012) described that in 2011 the research group from Kazakh National Pedagogical University started to develop and create the Electronic Research Laboratory on the history of Kazakhstan [7]. The Electronic Research Laboratory is, on the one hand, an information educational environment in the domain of knowledge for both teachers and students, on the other hand, it uses as interactive remote interface for national e-Learning project.

Alshanov *et al.* (2012) showed in their report that research group of Eurasian National University has developed information-didactic system for implementing e-Learning in higher education [8]. This system consists of didactic lecture materials, guidelines for laboratory work, tasks for independent student work and test tasks.

Mukazhanov (2012) explores the general terms for implementing a unified e-Learning system for colleges of Kazakhstan. The main goal of this system is development of quality e-Learning services and equal access for secondary, technical and vocational education [9].

However, there are still some problems in realisation of the national e-Learning project that should be resolved in the near future. Buribayeva and Sharipbayev (2012) have identified some barriers for e-Learning project [10]. The authors argue that in Kazakhstan, for the last 10 years have not been published textbooks for people with visual disabilities. In this connection there is the problem of creating voice-user interface and e-Learning content for individuals with low vision or limited mobility. Development of voice interface system allows people with limited visual capabilities to use computers for education more effectively.

Bidaybekov *et al.* (2013) suggested in their works the structure of information and communication competence of teachers, who will use e-Learning system. The authors demonstrate that for national e-Learning project needs to solve four main problems:

- to identify ways to integrate traditional and electronic learning system;
- to define the primary indicator of e-Learning through a comparative analysis of foreign and domestic experiments and pilot projects;
- to create a legal framework for the introduction of e-Learning;
- to establish a unified mechanism for electronic teacher training [11].

Perhaps the solutions of these problems include the systematic implementation of state programs for the development of education.

3. State programs for e-Learning

In the last 3 years the government of Kazakhstan has proposed two state programs that will help considerably in the development of e-Learning for the next 10 years. According to Akorda report (2013) in the end of 2010, government presented The State Education Development Program of Kazakhstan for 2011-2020 [12]. The main purpose of the program is to increase competitiveness of education and development of human capital through ensuring access to quality education for sustainable economic growth. One of main areas, ways of achievement of the program goals is creating e-Learning system. The aim of e-Learning system is the ensuring equal access for all participants of educational process to the best educational resources and technologies.

According to Central Communications Service (2013) in January 2013 new State Program "Information Kazakhstan – 2020" was approved by government. The main purpose of the Program is creation of conditions for transition to the information society. The key objectives of the Program are:

- Ensuring efficiency of the state administration system;
- Ensuring accessibility of information and communication infrastructure;
- Establishment of information environment necessary for social, economic and cultural development of society;
- Development of the national information space [13].



The government will implement the following measures for improve access to quality education through e-Learning system: 1) to create proposals for systematic development of digital scientific and educational resources using multimedia technologies;

- to make harmonization of national educational standards with international ones
- to develop of proposals for the concept of information culture in pre-school education;
- to implement training for teachers and administrators in e-Learning system;
- to establish of electronic laboratories at universities equipped with the necessary for scientific work;
- to translate all educational processes in an electronic format;
- to create training courses of practical use of the latest software solutions for a particular professional activity.

We suggest that the realisation of government programs will help to expand the implementation of e-Learning across the country.

4. Conclusion

The future of e-Learning in Kazakhstan depends primarily on the intention of teaching community and the government to implement new forms of learning in the national educational system. We see that the government is actively funding initiatives to implement e-Learning at all levels of education. Today educators have identified as positive results of the implementation of e-Learning, as well as shortcomings in the organisation of such form of learning. Kazakhstan should consider the experience of developed countries in this field, and try to avoid general mistakes in the implementation of e-Learning projects. We need to invite the world's leading experts for consultations and recommendations for the phased introduction of e-Learning in education 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.

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