



Development of Distance Education in Kazakhstan

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1. Introduction

The development of distance education in Kazakhstan is one of the important ways in national education system. Ministry of Education and Science in cooperation with universities have developed the concepts and programs of distance education.

Distance education in Kazakhstan was formally defined as a form of learning in 1999, through the promulgation of a Government gazette entitled "The Law of RK on Education". The first distance education project was created in 1999 with co-authorship of Ministry of education of Russia and Ministry of education of Kazakhstan. This project was presented on the basis of Tomsk State University and Kazakh State Pedagogical Institute. The main goal of this project was elaboration and practical realization of forms and programs in training of specialists with higher education [1]. However, in these years, it was difficult to use of distance technology in education, because Kazakhstan has not developed technological infrastructure.

In 2000 Kirillova defined the existing poor communication infrastructure in Kazakhstan, including the lack of a cable or satellite educational television or videoconferencing network, the Internet approach seems more feasible. The rapid development of Internet technology also points in development of distance education [2].

Today, Kazakhstan has telecommunication network that was implemented through a large-scale state project called the National Information Super-Highway (NISH). The total length of the NISH is about 11,500 km, of which 9,600 km of optical fiber communication lines (OFCL) have been laid. Presently, all large cities of Kazakhstan are connected via digital channels [1].

During the last decade, the government actively engaged in developing the legal framework for the implementation of distance learning. The result of this work was the adoption of state standard for distance education. According to State Educational Standard of Kazakhstan: "Distance learning technologies (DLT) can be implemented in higher education institutions. These institutions need to have licenses for any educational activity in all educational programs where using of DLT is not prohibited" [3].

In this article we will review the main trends in development of distance education in Kazakhstan and teaching experience in the field of implementation of distance learning in higher education.

2. Pedagogical aspects of using distance technologies in education

Many scientists in Kazakhstan are studying the problems associated with the introduction and use of distance learning technologies in universities. For example Shakarimova and Mutanov represented the application experience of distance learning in East Kazakhstan State Technical D. Serikbayev University. Authors described architecture of University's educational portal, technologies used for creation of unified educational environment, tasks concerned with educational process which are solved using educational portal, and other innovative approaches to the education [4].

Bordiyanu conducted the research work in Kazakhstan-American Free University in the area of improving the organization of distance learning. Author systematized the experience of implementation of distance learning in higher education institutions of Kazakhstan and develops the distance learning organizational management mechanism that increases the quality of educational services by improving teaching methods and the use of modern technology and training tools [5].

Most Kazakhstani scientists have focused on the development of trends, concepts, models and systems of distance education. This is due to the need for understanding the pedagogical use of distance technologies in higher education. For example, Nurbekov identified the main trends in Kazakhstan distance education. The author has created a model of distance learning through student-centered approach. Nurbekov grounded theory of teachers' professional competence of in the field of distance learning. The author developed a method of distance learning, taking into account characteristics of the subject areas, information and communication technologies [6].

Sakaeva clarified the essence of distance education concept in Kazakhstan and the concept of quality of students' training in distance education. The author has identified characteristics of students' quality professional training in distance learning (criteria and indicators). Sakaeva developed organizational and pedagogical conditions of students' training [7].

Ibyshev showed features of students' professional training of economic specialties in Kazakhstan. The author has created the distance learning software and developed an innovative model of university and educational system of distance learning and credit technology [8].

Bidaybekov substantiated the combination of distance and credit technologies in learning students at technical universities. The author formed a system of mixed education in technical high school. This model involves the use of distance learning technologies in credit system and assuming the implementation of the principles of modularity, interactivity, and combination of individual, collective, real and virtual forms of learning [9].



The use of distance technologies in learning languages is very common in Kazakhstan education. For example, Janatasova analyzed the distance learning system of foreign languages learning in Kazakhstan. The author has substantiated and developed a theoretical model of readiness for future foreign language teachers to work in a distance learning system. Janatasova developed a teaching facility for ready formation foreign languages' teachers that use a distance learning system [10].

Zhamasheva developed a methodology for distance learning of students in clerical correspondence field. The author has identified effective ways of mastering the skills of clerical correspondence in Kazakh language by distance learning [11].

Asmatullaeva studied the use of distance learning technologies in foreign language education. The author has developed a model of reflexive-communicative competence of a student-interpreter. Asmatullaeva substantiated the principles and conditions of reflexive-communicative competence of students through distance learning technologies [12].

Some scientists consider the cognitive activity of students using distance technologies. For example, Alieva identified the theoretical basis for the formation of students' cognitive activity in distance learning. The author has developed the structural model in distance learning content of cognitive activity. Alieva has proven the effectiveness of methods and technologies for the formation of the students' cognitive activity in distance learning [13].

Dzhuzbayeva (2010) identified the theoretical basis for formation of cognitive activities of students on the basis of distance learning technologies in higher education. The author developed a method of forming the cognitive activity of students by using distance technologies [14].

In general, distance education in Kazakhstan has a good research base and requires further describe experience in using distance technology in the universities.

3. Distance education in higher schools

Every year more and more students are trained on distance technologies. Many universities offer a wide range of programs for distance learning. For example, distance learning program of Karaganda State Technical University was implemented by the Regional Center for Distance Education and Technology (RCDET), for the learning of students through remote terminals. Currently 1305 students are enrolled in the Centre. In South Kazakhstan State University named after M.Auezov, as many as 4,670 students are engaged in 26 specialties through distance learning. Distance learning is also used in studies involving specialized subjects like the development and exploitation of oil and gas fields, by the Institute for Advanced Studies in KazNTU named after K. Satpaev [15].

All of this was the result of a phased introduction of distance education in Kazakhstan. In recent years the government has developed and funded three major programs that have helped to create infrastructure for distance education. By these programs, teachers were trained by using new technologies in practice. The last program (2011-2020) is aimed at the total and the widespread use of distance technologies in education next 10 years (Table 1).

Table 1. Main stages of ICT implementation in education

| Government Programs | Years | Purposes | Expected Results |
|---|-----------|--|--|
| The Program of Secondary Education' Informatization | 1997-2001 | Creation of the united informational and educational space. | Majority of schools were equipped with a PC classroom and were accessed to Internet. |
| The Concept of Education System' Informatization | 2002-2004 | Creation of the united informational and educational environment. | It was created National united informational and educational system. |
| The State Program on Development of Education | 2005-2010 | Formation of the united informational and educational environment. | 75% of educational organizations were connected to Internet. 35 students per 1 PC. |
| The National Education Development Program | 2011-2020 | Improving of education's competitiveness and development of human capital. | 100% universities will be provided with access to broadband Internet. |

As it shown the process of implementation of distance and electronic technologies in education was carried out according to plans and supported by government and universities. According to Ministry of Education and Science of Kazakhstan in next 10 years government plans to allocate 1 billion USD for e-learning development. In 2011 the e-learning project was launched in 44 education institutions in a pilot mode [16].



4. Conclusion

The main obstacles for the further development of distance education in Kazakhstan are the low level of digital literacy of teachers, inadequate technical equipment in rural areas and non-system development of distance learning in universities. For eliminate these disadvantages are designed The National Education Development Program, that focuses on the union of all the educational resources into the national network and the gradual improvement of needed conditions for distance education development.

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