



**Proceedings of the
17th European Conference on
e-Learning**
Co-hosted by the
University of West Attica, Greece
and Hellenic Air Force Academy (HAFA)
1-2 November 2018



**Edited by
Prof. Klimis Ntalianis
Prof. Antonios Andreatos
Prof. Cleo Sgouropoulou**

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Preface

These proceedings represent the work of contributors to the 17th European Conference on e- Learning (ECEL 2018), Co-hosted by: the University of West Attica, Greece and Hellenic Air Force Academy (HAFA) on 1-2 November 2018. The Conference Chair is Prof. Klimis Ntalianis from West Attica University and the Programme Co-Chairs are Prof. Antonios Andreatos from the Hellenic Air Force Academy and Prof Cleo Sgouropoulou from West Attica University.

ECEL is a well-established event on the academic research conference calendar and now in its 17th year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics that fall into this important and ever-growing area of research. For the 4th year the conference has also played host to the final round of the International e-Learning Excellence Awards.

The opening keynote presentation is given by Prof. Michalis Xenos from the University of Patras who will address the topic of Everything is blended learning. Then an afternoon keynote will be given by Carlos Delgado Kloos from the Universidad Carlos III de Madrid, Spain on the subject Education is too Important to still Teach like we're in the Middle Ages. The second day of the conference will open with an address by Dr. Anastasios (Tassos) Mikropoulos from the The Educational Approaches to Virtual Reality Lab, University of Ioannina, Greece who will talk about the Learning Affordances of Virtual Reality.

With an initial submission of 188 abstracts, after the double blind, peer review process there are 77 Academic research papers, 9 PhD research papers, 1 Masters Research paper and 4 work-in-progress papers published in these Conference Proceedings. These papers represent research from Argentina, Australia, Austria, Bahrain, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iran, Ireland, Italy, Japan, Kazakhstan, Malaysia, the Netherlands, Nigeria, Norway, the Philippines, Portugal, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Taiwan, Turkey, the UK, the UAE, Uganda, the USA and Vietnam.

We hope you enjoy the conference.

Prof. Klimis Ntalianis
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October 2018

E-Learning in Al-Farabi Kazakh National University (KazNU): Experience, Problems, Development Prospects

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Abstract: This paper is devoted to study the e-learning practice at Al-Farabi Kazakh National University. KazNU is the leading university of the Republic of Kazakhstan. According to results of the survey of the international rating agency QS (UK) World University Rankings, in 2017 academic year KazNU has ranked 236th among the 800 best universities of the world. It is emphasized that in the QS University Rankings for Eastern Europe and Central Asia (QS University Rankings EECA 2016), KazNU took the 10th place out of 200. According to international organization "GreatValueColleges" KazNU was among the 50 most technologically advanced universities of the world, ranked 31st in the rating. This article reveals the experience of implementing e-learning at KazNU. The specifics of the application of the following technologies are disclosed: access to electronic materials, preparation and use of electronic textbooks, distance learning aids, electronic journals, training web resources, web seminars. The article reveals the experience of preparing of mass open online courses. Online communication between participants in the distance learning process in KazNU is carried out through a modern system of online video conferences Adobe Connect. The article emphasizes the availability of distance learning process at any time and regardless of the location of students and teachers. In the article the following problems are analyzed: the quality problem of electronic courses; legal problems related to the protection of intellectual property; financial problems related to the costs of preparing e-courses and updating them; staffing problems associated with the training of teachers who are able and willing to develop and constantly update such courses. The following scientific results were obtained: 1 Continuing professional development of teachers using e-learning technologies is necessary. The experience of expert teachers should be applied while preparation of e-courses. 2 It is necessary to develop e-learning, to create in Kazakhstan an inter-university Center for the evaluation of the quality of e-courses and training of teachers. 3 The involvement of IT companies is considered necessary for solving the problems of complex informatisation of universities. 4 Being as an e-learning flagship, we believe it necessary to disseminate the experience of KazNU to all universities in Kazakhstan and Central Asia.

Keywords: e-learning, e-courses, mass online courses, international rating, teacher

1. Introduction

List of Abbreviations

MOOC - mass open online courses

DET - distance educational technologies

IDL - Institute of Distance Learning

CMOOC - Center for Mass Open Online Courses

SRI - Scientific Research Institute

DL - Distance Learning

There are 122 universities in the Republic of Kazakhstan. The largest number is concentrated in Almaty (44 universities), Astana (13) and South Kazakhstan region (12). One of the issues is the transparency problem in the management of education. Transparency means lucidity, openness, accessibility, accountability, state authorities' responsibility to civil society. We considered the concept of transparency in public administration in the article «Problems in the Implementation of the Transparency Principle in the Activities of the Public Authority Bodies of Kazakhstan» (Ibrayeva et al. 2016).

The principle of transparency in the field of education is exercised in the system of distance learning. As an example, let us refer to the experience of Al-Farabi KazNU. Al-Farabi Kazakh National University is the leading multidisciplinary higher educational institution in Kazakhstan. The multi-level system of education of KazNU includes: higher basic education (bachelor's degree), higher professional education, master degree and PhD

degree. Admission to KazNU is carried out on state educational grants and on a contractual basis. Training of specialists is carried out on more than 180 specialties.

KazNU has sixteen faculties, college, institute of advanced studies, seven research institutes, and eleven scientific centers. There are more than 20,000 students at KazNU, which comprise undergraduates, masters and PhD students. The teaching staff of KazNU consists of more than three thousand people (Udartsev 2010).

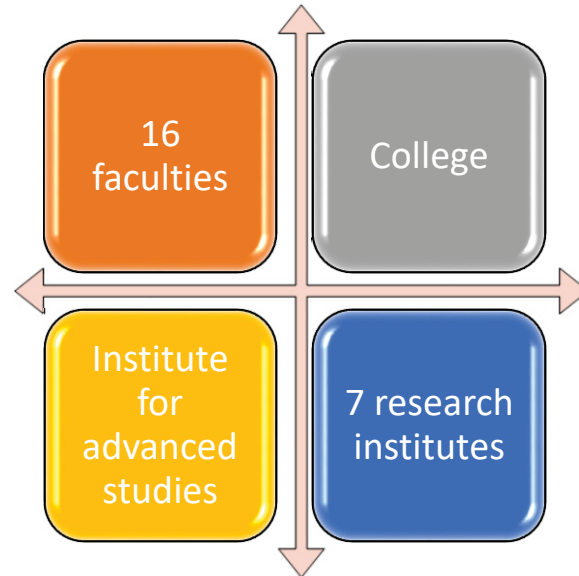


Figure 1: Structure of KazNU

2. From Al-Farabi KazNU development history

KazNU was opened on January 15, 1934 as a part of the Faculty of Biology, Physics and Mathematics, where 54 students were studying 25 lecturers worked (among them 5 professors and 10 associate professors).

The Universities in Moscow, Leningrad, Kazan, and Ukraine helped in the formation of KazNU. During the Great Patriotic War, 287 students and employees (including 135 volunteers) went to the front. The student A.G. Popov was awarded the title of Hero of the Soviet Union.

After gaining independence of the Republic of Kazakhstan in 1991, Kazakh State University was given the name of the great scientist, thinker and encyclopedist, "The Second Teacher" of the East - Abu Nasr al-Farabi. The name of al-Farabi has become firmly established in the history of world science and culture. His works had a great influence not only on the development of Turkic and Kazakh philosophy, but also became a bridge for the rapprochement of cultures of the West and East.

Currently, the university is a large intellectual corporation. The modern scientific and innovation infrastructure is functioning here, consisting of 8 scientific research institutes and a scientific and technological park, 5 institutes and 30 scientific centers of social and humanitarian profile. There is an integration with 10 scientific research institutes "Horde of Science". The university is opening joint international research laboratories with leading foreign universities. The university creates centers of Al-Farabi in foreign organizations of science and education. The European quality mark has been awarded to a number of University programs. The complex structural modernization and system transformations were carried out - a result-oriented management system, process management and rating of achievements were introduced, international cooperation and internationalization were actively developed, infrastructure was being improved (Mutanov G. 2017).

3. Achievements of KazNU

KazNU faculties such as Faculty of Law, Geography and Environmental Sciences, International Relations, Philosophy and Political Science, Higher school economics and business have been accredited and evaluated with high level of quality by the European Accreditation Agency FIBAA. In the prestigious global rating "UI Green Metric Ranking of World Universities - 2017" KazNU took part for the first time and entered to the Top 200 of the "ecological" universities of the world. This demonstrates the high achievements and huge potential of the national university in "green development".

Al-Farabi KazNU entered the top 10 best universities of the developing countries in Europe and Central Asia by QS ranking (EECA - Emerging Europe & Central Asia). According to the results of the study of the international rating agency QS (UK), KazNU entered the top 250 universities in 2017, leading 236th place among the 800 best universities of the world (Agachi 2017). According to the results of an independent assessment made by QS in 2018, KazNU became the first university in Kazakhstan and the only one in the Central Asian region that received the "Four stars" excellence in the international rating "QS Stars Development Road map".

Al-Farabi KazNU topped the rating of the best sites of Kazakhstani universities. University position in the ranking of Webometrics is 1st place in Kazakhstan in 2016 (2001st place in the world). KazNU is today the first and only HEI in the educational system of the Republic of Kazakhstan, which is awarded a special diploma of the authoritative international agency Thomson Reuters "For outstanding achievements in field of science in 2011". Based on the study results of the famous international organization "GreatValueColleges", Al-Farabi KazNU became one of the 50 most technologically advanced universities in the world, ranking 31st place in the rating. It should be noted that in the rating the Kazakhstani University is not only representative of the CIS countries, but also Eastern and Central Europe, along with Singapore and Japan it represents of the entire Asian continent.

On the basis of Al-Farabi KazNU, in accordance with the UNITWIN program proposed by UNESCO, the UNESCO Central Asian Regional Hub for Sustainable Development was established. The UNESCO Chair on Sustainable Development was opened. The university is the leader in the Republic of Kazakhstan on participation in the EU programs - TEMPUS, ERASMUS MUNDUS, which allows fully adapt the basic principles of the Bologna process and bring the academic policy of the university closer to European standards. These are 9 projects of TEMPUS, 7 projects of Erasmus Mundus, in 3 projects KazNU acts as a co-coordinator.

The University, in cooperation with international partners, implements a number of large international scientific and educational projects, such as the "Green Bridge through Generation", which has its own interactive platform www.greenbridgework.kaznu.kz. In January 2014, KazNU was trusted to lead the global United Nations Academic Impact (UN Academic Impact) hub on sustainable development.

Within the framework of the International Consortium UNIFORM Project in conjunction with the University of Tokyo, a unique project is being implemented to create and launch the first national Nanosatellite in the history of Kazakhstan. This development along with other projects was presented at Expo-2017.

KazNU actively cooperates with the state bodies of the Republic of Kazakhstan (Ibrayeva et al. 2017).

4. Experience of implementing e-learning at KazNU

Mass open online courses at KazNU

Mass open online courses (MOOC) – is a modern trend of distance learning (Willis 1993).

Al-Farabi Kazakh National University is the leader among Kazakhstani universities in the implementation of MOOC on the open platform OpenEdx. It is appropriate to mention the advantages of MOOC – the mass character - participation of hundreds and thousands of students in one course; openness - all courses are presented in an open mode; online mode - all can participate, regardless of location; comfort - everyone chooses their own mode and pace of training (Doris & Bolliger 2009).

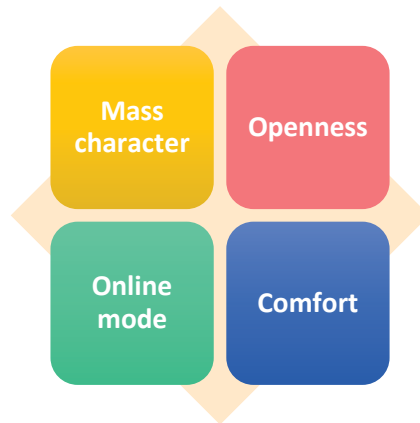


Figure 2: Advantages of MOOC

Since 2014-2015 academic year Center for Distance Education of Al-Farabi KazNU together with the faculty staff members has started the activity on the creation of the MOOC. The advantages of MOOC are mentioned in the Figure 2. Currently, on the Internet address <http://open.kaznu.kz> the University's own MOOC platform operates based on the Open edX system. On October 1, 2015, the first open courses were launched from leading lecturers of al-Farabi KazNU on the subjects "Theory of Probability" and "Physical Tasks with Associate Professor V. Kashkarov". KazNU established the Institute of Distance Learning (IDL), which included the creation of a center for mass open online courses (CMOOC). Presently, 42 mass open online courses have been developed. 35 MOOC were launched out of them, two courses were launched twice in 2016-2017 academic year, seven courses are being conducted to create a full-fledged MOOC.

Currently, the work is aimed at creating qualitative courses. Today, the lecturers are being trained by familiarizing them with the market of the MOOC and the process of their creation. The most recorded students are noticed in the course "Constitutional Law of the Republic of Kazakhstan". The issue of creating MOOC is of copious interest to many lecturers of domestic education. The possibility of their use in the educational process, the art of shooting video lectures, the use of modern technologies and many other issues were discussed at the advanced training course on the topic "Development of mass open online courses (MOOC)". The refresher course was held twice in June 2016: for the faculty of KazNU, and for employees of other universities of the Republic of Kazakhstan. Totally, the courses were attended by lecturers from five universities: Almaty Technological University, Kazakhstan State Women's Pedagogical University, M.Auezov South Kazakhstan State University, Kazakh University of Economics, Finance and International Trade, Kazakh State Law University. Detailed information about the share of each university is given in the Figure 3.

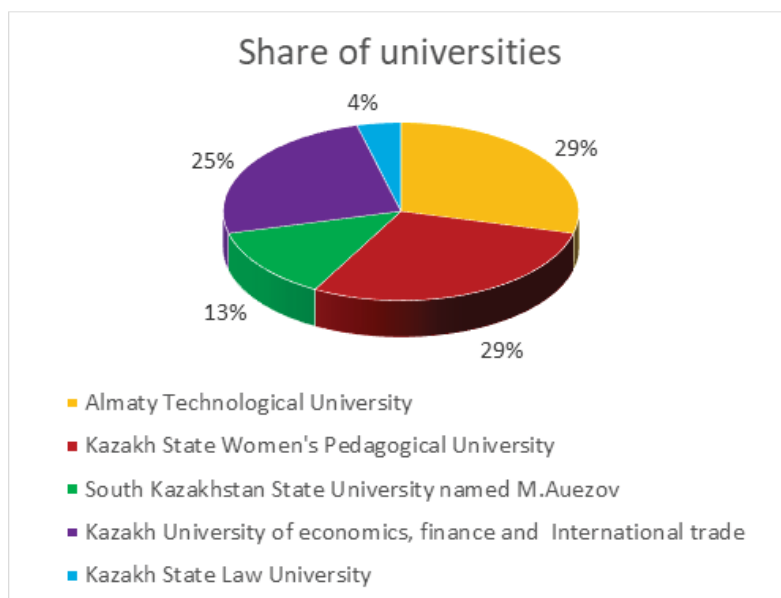


Figure 3: Share of universities

5. International experience of implementing the MOOC

Massive Open Online Courses (MOOCs) are a relatively new learning phenomenon where learners access freely available online educational multimedia materials, and connect with large numbers of other learners via social engagement tools such as discussion forums. Online educational materials, such as videos, glossaries, public repositories, images, and timelines serve as pedagogical tools within a structured course platform, and assessment is conducted via formative quizzes, peer review, essays, and responses to open questions. MOOCs have been hosted on a wide variety of different commercial platforms that allow for open resources and course teaching to be structured in one location (e.g., Coursera, edX, and Futurelearn). These platforms facilitate discussion forums used by learners to comment on course content and share knowledge with one another, and by educators to support social learning, foster community, and promote learner retention (Gallagher & Wallace 2018).

Comparing MOOCs with textbooks makes little sense to me, as textbooks are copyrighted and faculty maintain some semblance of compensation for their intellectual work their academic labor. This is less clear when it comes to the world of the MOOC, but of course for anyone concerned about faculty being adequately rewarded for their intellectual contributions (such as the American Association of University Professors), it supports the position that professors need to maintain high levels of control over MOOCs as intellectual property. In my book, I actually highlight how two democratic ideals sometimes clash within the context of the MOOC movement: the ideals associated with the “knowledge commons” (that knowledge and information should be readily available, including courses and course materials), and the ideal that laborers ought to be justly compensated for their work in this case, academic laborers and their development and delivery of courses (Rhoads 2018).

Distance education and training provision has expanded dramatically over the past few years. Keegan investigated five main aspects of these definitions and used them to form a comprehensive definition of distance education:

- The separation of teacher and learner throughout the length of the learning process
- The influence of an educational organization in planning and preparing learning materials
- The use of technical media - print, audio, video, or computer - to connect teacher and learner and carry the content of the course
- The provision of two-way communication so that the student may have advantages or even initiate dialogue
- The absence of the learning group throughout the learning and studying process so that people are usually taught as individuals and not in groups, with the possibility of occasional meetings for both didactic and socialization purposes (Keegan 2013).

For Moore, distance education is composed of two parts, each of which can be measured. First is the provision for two-way communication. Some international systems offer greater two-way communication than others. Second is the extent to which a course is responsive to the needs of the individual student. Some programs are too structured, while others are very responsive to the needs and aims of the individual learner (Moore & Kearsley 2012).

We should expand the role and importance of distance education from international perspective. For example, The United States Distance Learning Association is a professional organization of those involved in distance education. Turkish Anadolu University reached over 500,000 distance education students, which made it the largest university on Earth, according to the World Bank in 2000. The Open University of Hong Kong opened in 1989 to serve residents of that huge metropolitan area. Recently, the university has begun to market itself to learners in China and Southeast Asia. Open University of the United Kingdom, a degree-giving distance teaching university offering full degree programs, sophisticated courses, and the innovative use of media (Simonson et al. 2008), (Moore et al. 2011).

6. Distance learning

In the educational process of Al-Farabi KazNU, distance educational technologies (DET) are applied for students of correspondence courses and people with disabilities, as well as for students who have left the country for exchange programs, academic internships and academic mobility (Tussupova et al. 2018).

Training takes place remotely in a learning management system <http://dl.kaznu.kz/>. The duration of one semester is 8 weeks. After the end of the academic term during the examination session (10-12 days) the student must appear at Al-Farabi KazNU. All materials (lecture notes, video lectures, presentations), assignments (tests, written assignments, collective discussions) are provided to the student in electronic form and the possibility of online consultation (chat, audio-video conferences) and offline (correspondence, discussion forum) .

During the academic term, the student, by completing assignments in the distance learning system, can score a maximum of 100 points out of 200 possible, for each discipline. At the end of the academic semester, at the set dates, the student must appear at al-Farabi KazNU for passing the examination session, which can score the remaining 100 points for each discipline.

We will point out the advantages of teaching with the use of distance educational technologies. So, the student does not have to pay for the journey, accommodation, and in the case of foreign universities does not need to spend on a visa and passport. That is why distance learning is less expensive. In US, 51% of educational services are carried out via the Internet. And all students of American universities are required to undergo at least one course using Internet technologies. According to Fletcher's research, e-learning saves from 35 to 40% of the time compared to conventional schooling (Karr et al. 2007).

A student who studies remotely can independently decide when and how much time during the semester he concentrates on studying the material. Students do not need to worry about distance from their classmates remotely. You can always return to the study of more complex issues, watch video lectures several times, read the correspondence with the lecturer, and you can skip already known topics. The main thing is to successfully pass the intermediate and final attestations. With traditional training, it is rather difficult for the lecturer to devote the necessary amount of attention to all the students in the group, to adjust to the pace of each work. The use of remote technologies individualizes the work of the lecturer with each student (Barron et al. 1994), (Drysdale et al. 2013).

We will point out the advantages of teaching with the use of distance educational technologies. Financial issue - financial costs are less than classroom training. Saving time - the student independently disposes of his time. The ability to learn at your own pace - the main thing is to successfully pass the intermediate and final attestations. Individual approach - the instructor works with each student individually. Please see the Figure 4 below.

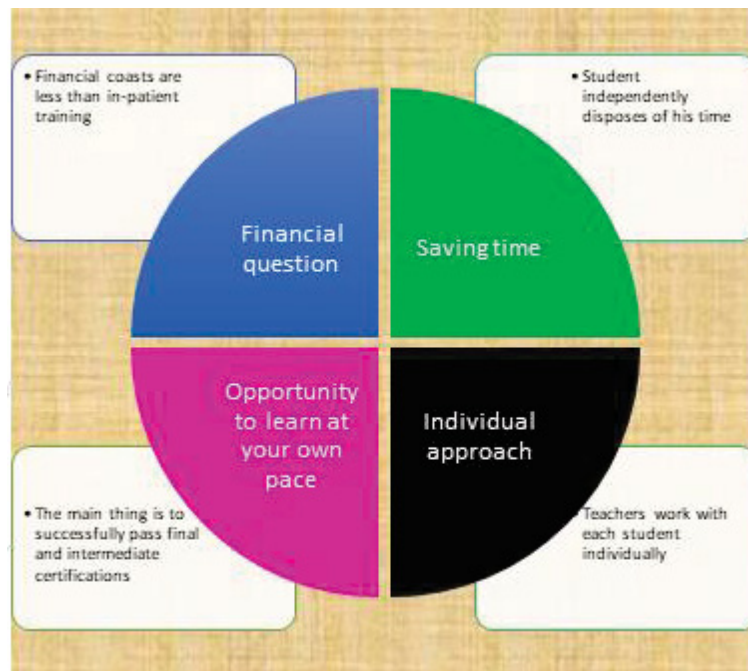


Figure 4: The advantages of learning with the use of distance learning technologies

7. International experience in implementing distance learning

Face-to-face contact teaching is one of the student learning support services often provided by distance teaching institutions (DTIs). This involves formal meetings of teachers and learners for the purpose of teaching-learning interactivity which may include formal teaching, tutorials, seminars, and group discussions, usually for remedial purposes, and practical or laboratory work. On some occasions, students may meet to take part in teleconferencing or teletutorials. During these contact sessions, students are also able to enjoy both group and individual social interactions. Thus, face-to-face contact sessions obviate one of the main criticisms that distance learning gives only instruction and not education. The contact sessions also mitigate the isolation syndrome of distance learning (Wedell 1970).

However, the premium placed on contact sessions varies between institutions. Practices indicate that this depends on three main factors: the size of the institution (student population), the organisational/management structure, and the nature and types of courses being taught by the institution. These factors, to a great extent, determine the role assigned to and the reliance placed on contact sessions. The provision therefore varies from none at all to a strong component (Agboola 1992).

University distance education exists in two principal forms: either a university offers a distance education program in addition to traditional classroom teaching or it is an institution solely devoted to teaching at a distance. Over the twenty years since the open universities were created, there has been much discussion about the differences and similarities, the strengths and weaknesses of the two types of institutions. We must first, however, understand the foundations of the university in the late twentieth century. Its values and traditions will help us determine if distance education is compatible with the university, for the same values and traditions are claimed to form the foundation for open universities (Croft 1992).

8. Problems

In the course of studying the introduction of e-learning at al-Farabi Kazakh National University, the following problems were identified.

First, the current state of the online education industry is new to the education market in Kazakhstan, and accordingly not all universities keep track of this system of education. In this regard, Kazakhstani universities need to be taught how to plan, develop, start and restart their MOOCs. Al-Farabi KazNU through special training programs can promote the advantages of MOOC and teach universities how to create effective online courses and apply them in various forms and approaches of training;

Secondly, the main problem is the problem of electronic courses' quality. The first courses of the MOOC revealed a number of problems related to quality. It is necessary to use more widely infographic, video games, etc.

Thirdly, there are legal problems associated with the protection of intellectual property. In this regard, it is necessary to establish the authorship of the courses on a legal basis. It can be highlighted the personnel problems associated with the training of teachers who are capable and willing to develop and constantly update such courses.

Fourthly, there are also financial problems related to the costs of preparing electronic courses for their updating.

In fifth, the largest number of issues to persistence associated with the psychological and sociological nature of the student. These problems consist of: (1) uncertainty of an educational or professional aim, (2) stress of multiple roles of learner (school, work, home), (3) time management problems, (4) problems related to learning style differences, (5) technical problems, and (6) overachievement or fear of failure. The statistics pointed to the individualness of learning, whether at a distance or in a traditional setting (Phipps 1999).

9. Conclusions and suggestions

1 It is necessary to constantly improve the skills of lecturers using e-learning technologies. For the preparation of e-courses, the experience of expert instructors should be used.

2 It is necessary to develop e-learning, create an inter-university Center for the evaluation of the quality of e-courses in Kazakhstan, the training of lecturers.

3 It is necessary to involve companies operating in the information technology market to solve problems of complex informatization of universities.

4 We believe that KazNU is the flagship of launching e-learning in Kazakhstan. In this regard, it necessary to disseminate the experience of KazNU for all universities in Kazakhstan and Central Asia.

5 In summary, distance education can be as effective as any other category of instruction. Distance Learning occurs and knowledge is retained. Students internationally report that they have learned and that they feel their distance learning experiences are as successful as more traditional education. The keys to successful distance education and learning are in the design, development, and delivery of instruction, and are not related to geography or time. Teaching at a distance is a challenge. The teacher needs to be creative and imaginative in the design and structure of the course. One rule of thumb is that good interactive learning course that work in a traditional classroom may be adaptable to the distance learning environment. But they may require more than just some changes to the visuals or the handouts – they may require inventiveness and innovation in the modern era.

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