

## CHALLENGES FOR KAZAKHSTAN UNIVERSITY EDUCATION

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### ABSTRACT

University education throughout the world undergoes a fundamental transformation in terms of its role in society, the system of functioning, economic structure, and value. At present, many countries observe and discuss the crisis of universities. There is an opinion that The University from a purely educational institution is transformed into a business structure with all its specific rules and goals for achieving a commercial result.

The main trends could be traced based on numerous analyzes, both internal and external, carried out in many countries and regions of the world. These analytical projects allow highlighting the most common development trends in this area and the challenges that some universities, perhaps even the most successful ones are already facing, but almost all other educational institutes will inevitably feel them in the near future.

Is Kazakhstan's higher education system ready for these global changes? Is there a basis that will allow the universities of our country to withstand the onslaught of new demands and tests that will require new generations of young people as consumers and clients of educational services? Can Kazakh citizens count on domestic education in the future competition in the labor market? All these and other issues are of strategic importance because the social, economic and political development of our country directly depends on the answers.

We chose five parameters from many others to analyze the development trends of modern higher education in Kazakhstan in local and global dimensions.

1. The democratization of access to knowledge
2. The content of educational markets and financing
3. Digital technologies
4. Global mobility
5. Integration with industry

These are the main trends that, according to experts, will determine the progressive development of universities around the world in the next 10-15 years.

Understanding of the challenges and the need for reforms aimed at radical restructuring of the existing system, awareness of responsibility to the citizens of the country - these factors are present, hence the constant desire for reforms, steps forward, sometimes throwing in search of creative solutions. On the other hand, inadequate funding, weak management, reluctance to move away from traditional and therefore convenient ways, often negates many of the positive impulses and plans of the Ministry of Education and Science, which does not want to let the stirrups of power out of their hands, thus limiting the vital independence of

universities in decision-making. However, there is still a hope for the survival of Kazakhstan universities in the new models.

**Keywords:** *Kazakhstan, education, development, university, reform*

## **INTRODUCTION**

The university sector is crucial for any country. It is there that new ideas and knowledge are created, political and economic leaders and entrepreneurs of the future are brought up, opportunities are given for students of all social groups to raise their social status. However, at the turn of the 20th and 21st centuries, it became clear that the most successful universities would be those that would build new dynamic, modern and promising business models.

Is Kazakhstan's higher education system ready for these global changes? Is there a basis that will allow the universities of the country to withstand the onslaught of new demands and tests that will require new generations of young people as consumers and clients of educational services? Can Kazakh citizens count on domestic education in the future competition in the labor market? All these and other issues are of strategic importance because the social, economic and political development of the Republic of Kazakhstan (RK) directly depends on the answers.

## **MATERIAL AND METHODS**

The main trends are traced based on numerous analyzes, both internal and external, carried out in many countries and regions of the world. These analytical projects allow highlighting the most common development trends in this area and the challenges that some universities, perhaps even the most successful ones are already facing. We selected five parameters from many others to trace the development trends of modern higher education in global and local dimensions and compare, where possible, the situation of Kazakhstani universities and the education system as a whole.

## **RESULTS AND DISCUSSION**

### **1. The democratization of access to knowledge**

Increasing the availability of "knowledge" online and the massive expansion of access to university education in both developed and emerging markets represent a fundamental change in the role of universities as the creators and keepers of knowledge. Formerly, a modest part of the society in developed countries - 20-30% of secondary school leavers - and a very narrow stratum of society in developing countries, usually elites, have traditionally been able to access university education. Today, access expands in developed markets, and even to a greater extent in emerging markets. For example, the Chinese level of participation in education has increased more than threefold from 8.0% to 25.9% in the first decade of this century and is likely to double in the next 10-15 years [1]. The speed of coverage is rapidly growing in many other countries and regions: Latin America, ASEAN, the Middle East and North Africa.

This expanded access will lead to a global "education revolution" on an unprecedented scale, the society's transformation by creating opportunities for millions of people improve their standard of living. For universities, this will lead to new approaches in teaching and learning, creating opportunities for entering new markets and new global partnerships, stimulating new tools for disseminating knowledge, and creating new sources of competition.

The higher education in Kazakhstan enjoys the high status among the young people and the number of students in different years after independence changed significantly, which was due to the opening of a large number of private universities. However, in general, gross enrollment in tertiary education of the population of typical age (18-22 years) in the last five years has decreased from 53.14% in 2011 to 51.14% in 2016. The contingent of higher education institutions declined from 629,507 students in 2011 to 496,209 in 2017. The decrease in this indicator is associated with a significant decrease in the contingent of the paid department (from 498,440 students in 2011 - to 263,005 in 2017, i.e. by 47%). Thus, there is a steady tendency to reduce the student body of Kazakhstan universities. The ratio of the number of students in public and private institutions is changing in favor of the latter. In 2011, the difference in the contingent of public and private universities was 0.4%, in 2017 - 7% [2]. However, a common understanding of access to higher education, as the possibility of admission to colleges and full-time education is no longer sufficient, especially in conditions of constant reform process of admission to higher education institutions in Kazakhstan, and in particular in light of recent changes in 2017. Availability problem includes financial issues, and the pool of potential students, including vulnerable groups, which should be in focus of social policy (students from low-income families, single parent and large families, orphans, the disabled) and the older people who wish to receive an additional or completely different education. Although the accessibility of education is affected by the mechanism of admission to universities.

According to the RK legislation, applicants are given the opportunity of entering the university at their own expense (charge), or by government order (grants). The right to receive a grant, except for citizens of Kazakhstan, is also provided to persons of the Kazakh nationality who are not RK citizens (repatriates) and permanently residing stateless persons. The legislation provides benefits in the form of quotas for certain categories of citizens.

Every year, secondary school graduates pass the Unified National Test (UNT), which was introduced in 2004. Since 2017, some changes were introduced again into the system. Graduates will pass separately examinations in schools (for obtaining a certificate of secondary education) and UNT, which will now serve as the test for admission to higher education institutions and accounted for in the allocation of government grants. In case of unsuccessful delivery, it will be possible to re-take UNT on a fee basis.

## 2. The content of educational markets and financing

Governments around the world face challenges of budget financing of public universities, while there is increasing demand of students for education. Universities will have to compete in the race for students and simultaneously for state funds, like never before.

There are 122 HEIs in the country: 47 state universities, including 5 national ones, and 75 private universities. Financing higher education system in Kazakhstan is based on the diversification of funding sources. In the GDP structure, the costs for higher and postgraduate education are at the level of 0.3%. In financing higher and postgraduate education, the Ministry of Education and Science (MES) allocates funds in two ways: to improve their material and technical base (only for state universities) and through so-called public contracts (grants) for training specialists. MES sets the minimum grant size and their number. This type of funding is directed at higher education institutions and their purposeful use is strictly controlled. The volume of the state order for the training of personnel in the 2017-2018 academic year amounted to 38, 983 grants, a master's program – 10,046, PhD – 1,279 (in the 2013-2014 academic year: bachelor's degree - 35,053 grants, magistracy - 6,959, PhD – 520). In 2018, the average cost of an educational grant established by the government at the bachelor's level is 635,8 thousand tenge in national universities (about 1,644 euros) and 443,3 thousand tenge in other universities (about 1,147 euros) [3]. It should be noted that private universities have more freedom in matters of financing, improving the material and technical base.

Access to government grants is open to both public and private universities, which have passed the accreditation procedure. State educational institutions are also entitled to admit students on a fee basis - they are 40 to 50% of the revenue earned from paid educational services. In private universities, this share is from 70% - in some to 99% of income. The income level of research, innovation and other activities in universities is low. Since 2014 the state also allocates funds on the basis of program-target approach to the educational grant under the program "Serpik - 2050" to reduce unemployment in the southern regions and filling a shortage of personnel in the western, eastern and northern regions of the country for educational, technical and agricultural specialties. During the project implementation period from 2014 to 2016, 12,462 educational grants were allocated, including 9,212 - for training in higher education institutions and 3,250 - for training in vocational and technical schools. For the 2017-2018 academic year, another 5,000 grants were awarded. Nevertheless, it should be noted that the share of government spending on education from GDP in Kazakhstan has increased over the past two years insignificantly: 2015 - 2,8%, 2016 – 3,0% [4]. The Incheon Declaration adopted at the World Education Forum in May 2015 by the Ministers of Education of 120 countries, which formulated the developmental concept of education for the next 15 years, recommends allocation for education of at least 4-6% of gross domestic product and / or at least 15 -20% of total public expenditure [5]. It is clear that the lack of financing is one of the most serious obstacles in the successful development of the education system.

### 3. Digital technologies

Digital technologies have found the widest application in the media, business, and many other industries. The same thing is happening in higher education. Campuses will remain, but digital technologies will transform the way of delivery of education and access to it. Online education as a form of introduction of new technologies has existed since the 1990s, but over the past few years, the rate of its use rapidly accelerated. The so-called Massive Open Online Courses (MOOCs) are an interesting example of finding new models. Some of these models create significant economic value. Cloud technology can offer administrators benefits in terms of cost savings, while in the classroom provide students with easier access to a wider range of educational resources. The best solution in the future will obviously be the combination of traditional universities with powerful online models and capabilities. For universities, innovation is a well-worn path. In Kazakhstan, there is an understanding that in today's world, digital technology plays an increasingly important role in the development. Nevertheless, today's students in Kazakhstan, as well as in other countries, are much ahead of some of their teachers in computer literacy. New generation that grew up in this digital world, prefer to access object information on the Internet, where it is more accessible and more relevant. Knowledge and technology becomes obsolete very quickly. The government has created the program "Digital Kazakhstan" in order to improve the quality of life through the progressive development of the digital ecosystem and the competitiveness of the economy of RK. The implementation of the Program will be held in four key areas: the development of a reliable, affordable, high-speed and secure digital infrastructure; the development of competencies and skills for the digital economy, the upgrading of digital literacy, ICT training specialists for industries; the widespread introduction of digital technologies to increase the competitiveness of various sectors of the economy; the formation of a "proactive digital government" [6].

It is important that among other dividends, a significant improvement in the quality of education is expected. In the educational process of certain universities distance, educational technologies are used for students in correspondence courses and people with disabilities, as well as for students who have left the country for exchange programs, academic internships, and academic mobility. MOOCs are implemented on the open platform OpenEdx. Since the 2014-2015 academic year, at the Al-Farabi Kazakh National University the Center for Distance Education began work on the creation of these courses, and now the MOOC-based platform operates on the Internet address <http://open.kaznu.kz> on the basis of the Open edX system. On October 1, 2015, the first open courses "Probability Theory" and "Physical Problems with Associate Professor V. Kashkarov" were launched, with about 250 and 500 listeners from different regions of Kazakhstan enrolled, respectively. The analysis of the data showed a great interest in these courses, which give an incentive for the university staff to continue working in this direction. In connection with this, the question arose of the teachers' training, their acquaintance with the market of the MOOC and the process of their creation.

#### 4. Global mobility

Student, academic, and university global mobility will grow. This factor not only strengthens competition but also creates opportunities for a much deeper international partnership and wider access to education of a high international level for talented youth.

In order to determine the national policy for the development of academic mobility, the MES approved the "Strategy for Academic Mobility in Kazakhstan 2012-2020" [7]. Among other documents regulating academic mobility and processes of internationalization there are «Rules of international cooperation for educational institutions», "Rules for the organization of the educational process in accordance with credit technology", "Rules for sending students for study abroad, including academic mobility", "The concept of academic mobility for the university in the Republic of Kazakhstan".

The presidential program "Bolashak scholarship" is an important source of financing outgoing mobility for citizens of Kazakhstan. For more than 20 years, 13,000 people have had the opportunity to study at the top 200 universities in the world. Other Academic Mobility programs are funded from the state budget, as well as alternative sources such as university funds, scholarships from partner universities, international grants, student self-sufficiency, etc. The MES annually allocates funds for outgoing credit mobility. Within the framework of the program over five years, more than 3 thousand Kazakhstani students were trained in the universities of Europe, the USA and South-East Asia for one semester in such priority areas as education, humanities and technical sciences and technology, agricultural sciences, veterinary science. MES also plans to increase the number of foreign students in RK 3.5 times, bringing their number to 50 thousand people in the next four years [8]. The largest share is from the CIS countries, as well as China, India, Mongolia. The main areas of study are engineering science and technology, health and social welfare (medicine) and social sciences, economics, and business.

With regard to the mobility of academic staff, in 2009 the Ministry of Education and Science began funding the "Invited Professorship" program so that universities could invite the most prominent experts in their fields to lecture, consult and collaborate in research. The grant covers accommodation, transportation costs, cost of living and fees. Since the beginning of the program, about 7,000 professors from Europe, the United States, Asia and Russia visited Kazakhstan and taught at universities. During this period, 209 joint research projects were launched and 86 units of educational, scientific and methodological literature were jointly published. The Erasmus + (E +) program and its predecessors (Tempus and Erasmus Mundus) made a great contribution to strengthening ties between the universities of Kazakhstan and Europe. The participants were acquainted with the European experience in developing programs based on competencies, strengthening interaction with the world of work, improving management of universities. Within the framework of Erasmus Mundus, over 700 Kazakhstani students and teachers passed short-term training or received a master's degree and PhD in European universities. Evidence of interest and recognition of the significance of the E + Program's

activities can be a large number of projects in which universities of Kazakhstan participate. The "Newton-Al-Farabi" partnership program was initiated in 2014 by the governments of Great Britain and Kazakhstan for a period of five years with a total budget of 20 million pounds sterling with parity financing of the two countries. The program aims to build scientific capacity, exchange personnel and establish joint research centers in six priority areas: Energy, Health and Welfare, Agricultural Technology, Disaster Recovery, Ecology and the Environment, Food and Water.

The University of the Shanghai Cooperation Organization (SCO) - an analogue of the system of the Single European Educational Space - functions as a network of already existing universities in the SCO member states. Such organizations as German Academic Exchange Service (DAAD), Mevlana, the Agency of Francophone Universities (AUF), as well as embassies, consulates and cultural centers of foreign countries, also contribute to the development of cooperation between Kazakhstan and foreign universities. In accordance with the National Strategy for the Development of Education, Kazakhstani universities are actively promoting international cooperation.

### **5. Integration with industry**

The higher education sector is changing and deepening its ties with the industry, which plays several roles: as a client and partner of higher education institutions and, as a competitor. For universities to survive and thrive, they will need to establish a much deeper relationship with the industry in the next decade. The scale and depth of training and internships, for example, will become an increasingly important source of competitive advantage for those universities with a partnership branch.

One of the most important functions of the higher education system in Kazakhstan is to produce graduates who meet the requirements of the economy. This involves a dialogue between the higher education sector and the organizations that employ graduates. This partnership is gradually improving. HEIs have databases on the employability of graduates to monitor their career paths, maintain liaison with former graduates and inform job-seeking graduates about vacancies. Regular communication is maintained with enterprises to obtain information on the need for specialists. However, there is still potential in the field of involving employers and professional associations in developing the core content of university courses, improving the teaching and learning process, influencing policies and planning. There are many examples of efficient bilateral cooperation between certain universities, enterprises, and employers' organizations - some have such agreements with more than 50 enterprises, institutions, and organizations. Annually the state educational order for universities of labour-deficit regions is provided for the training of cadres from the youth of labour-surplus regions with their subsequent employment in the place of training. Measures will be taken to coordinate the actions of the interested state and local executive bodies in ensuring the employability of graduates in some places, including in rural areas, taking into account labour market needs.

A number of steps are planned:

- development of educational programs focused on the results of training and giving the trainees competences, corresponding to the expectations of employers, including together with foreign partner universities and scientific centres;
- strengthening and expanding ties with employers on the employment of graduates in conjunction with state and local executive bodies;
- conducting information campaigns on the preparation of competent personnel.

Unfortunately, we have to admit that the employers have no formal involvement in the higher education quality assurance system or in assessment. Research links between HEIs and employers are not well developed either.

These are the main trends that, according to experts, will determine the progressive development of universities around the world in the next 10-15 years.

## CONCLUSION

The amount of these changes will lead to significant differences in the higher education industry in the world and, as we expect, in Kazakhstan as well. It is obvious that Kazakhstani universities should be ready for the following challenges:

- As competition in the educational services market of Kazakhstan increases, universities will be forced to create new, more compact business models. It may not be the best model, but the most urgent today.
- Universities will have to work increasingly as a knowledge-selling corporation. Today, universities should pay much more attention to branding and marketing than they did in previous years. In recent years, branding, marketing, and recruitment in higher education have shifted towards online and digital strategies.
- It may be necessary for Kazakhstani universities to consider whether they will be able to continue to maintain a competitive position - domestically and internationally - in a wide range of programs or will be more advantageous concentrate resources on a smaller spectrum of programs.
- Kazakhstani universities did not set the task of developing a clear strategy and implementation around targeted student segments and their specific needs and preferences. However, it is obvious that eventually, this issue will become relevant in their strategy. Today, most universities, at best, rely on graduates of schools. Universities that do not become more focused on different segments will be exposed to competitors with targeted students' offers.
- Channels for entering the market - universities will be necessary to rethink the role of digital channels and third-party partnerships in recruiting students and providing training and research programs.

Thus, it is possible to answer questions about the readiness of the system of university education in Kazakhstan, put at the beginning of the article, - yes and



no. Understanding of the challenges and the need for reforms aimed at a radical restructuring of the existing system, awareness of responsibility to the citizens of the country - these factors are present, hence the constant desire for reforms, steps forward, sometimes throwing in search of creative solutions. On the other hand, inadequate funding, weak management, reluctance to move away from traditional and therefore convenient ways, often negates many of the positive impulses and plans of the Ministry of Education and Science, which does not want to let the stirrups of power out of their hands, thus limiting the vital independence of universities in decision-making. However, there is still a hope for the survival of Kazakhstan universities in the new models.

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