

Innovative Development of the Education System in the Republic of Kazakhstan

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Abstract: Effective functioning of an education system is one of the actively discussed topics with regard to social and economic development of a country in the modern world. The study provides an all-round overview of the current state of the education system in the Republic of Kazakhstan and its growth perspectives. It also has outlined managerial and administrative processes taking place in the educational system given the positions of local universities in international rankings. Moreover, the researcher have forwarded the conception of facilitating competitiveness of the Kazakhstan educational system and developed the methodological model for professional training forecasting based on their researcher findings. The researcher have also provided evidences for the urgent need in innovative instruments to upgrade the educational system and given the description of the processes of demand formation for highly-qualified specialists. And, finally, the study researcher have comprehensively investigated in the issue of innovative potential growth of local universities.

Key words: Education, education management, competitiveness, international ranking, young specialists, methodology model

INTRODUCTION

The current state of the education system sensitive to market relations reveals the need in new approaches to addressing the issues related to university graduates' training and employment and acquisition of more resilient professions that get higher demand on the labour market.

The need arises to concentrate on efforts to elaborate the type of education that on the one hand, faster responses to changes in demand and, on the other hand, encourages people to make independent speculations and to adapt to changing market conditions.

It is commonly known that a country status in the modern world is determined by its intellectual and educational potential. The level of professionals' qualification today is one of the most significant factors contributing to a country's economic development.

Professional training depends on a number of factors including such as predictions for science and technology development, perspectives for certain economy sectors growth, changes in demographic situation, economic and financial capacity of a state, social implications of massive training of specialists. The ground for making estimations of demand for specialists is estimation of industries and

regions growth: calculations should rely on correspondent growth indicators such as production volume, transportation, labour performance and on data regarding expansion of operating enterprises and organizations, demand for human resources along with expected changes in quality composition of specialists and their qualifications.

Currently, the economy of Kazakhstan suffers from the lack of a generally accepted indicator that would provide data concerning shortage or excess of highly qualified specialists in some specific industry. The need rises for scientifically rationalized definition of demand for highly-qualified specialists in economy and social sphere, based on a definite calculation methodology. The above allows us to make a conclusion of how vitally important the suggested research is the findings of which are presented in the given study.

Literature review: The revision of publications in the field of education showed us that education as a sphere of an economic activity and its role and significance in social and economic development of a country are investigated in the researches of the following scholars, Adambekova and Amankeldi (2015) and Shalabaeva

(2012) and etc., who conducted their researches in order to detect key features of the current development tendencies in the higher professional education system of Kazakhstan and factors detrimental for educational services quality.

Economist scholars in the Foreign countries have deeply and comprehensively explored the modern system of educational services supply. For instance, Zgalat-Lozynska (2015) considers the necessity to improve the work on professional orientation in Ukraine after comparing it with the USA system, suggesting taking into account the organizational and legal framework. Shah *et al.* (2015) and Sharma *et al.* (2012) are involved in the research work in the area of innovative development of a community on the regional scale. The questions of labour resources in Russia are discussed in the works of Russian scholars Suharev (2016), Pavlov (2015), etc.

Despite the rich theoretical and methodological material available for us, the problem of the systematic effectiveness and competitiveness improvement of the educational system of Kazakhstan is still poorly studied and there are still wide possibilities for copyright innovations, theoretical insights and methodological elaborations.

In this view, the goal of the given study is to investigate the current state of the educational system of the Republic of Kazakhstan and to produce recommendations for effective development of the sector.

MATERIALS AND METHODS

The model of professional training forecasting techniques: Innovative orientation of the strategy and tactics for education development underlie the qualitative changes taking place in today's education industry. Changes in factors affecting education development are expressed through the growth of the intellectual and information constituents. These trends are closely linked to the transformation of forms and methods used to organize and to manage educational institutions and their activities.

Modern educational institution gets a leading role in providing scientific and technological progress, upgrading knowledge and educational technology. It is an educational institution that in the first place maintains the concentration of educational, creative, scientific, social and human resources in one place.

The need for innovative development of the educational industry imposes new requirements on the content, organization, forms and methods of administrative activity within the education system.

Extensive realization of the innovational component in education stimulates production of highly qualified specialists. Innovative approach here does not only enable to introduce long-term systemic changes in the educational environment but also to identify priority sectors of the national economy.

The majority of projects implemented in the sphere of education are innovative in accordance with the main function of education—"accumulation, distribution and use of practically applicable knowledge" European Commission (2010). Under the proposed methodology the forecast for young specialists training is carried out by taking into account of the demand for professionals in terms of territory, industry and professional area.

Training is determined by many factors, including estimations for science and technology development, growth prospective for certain economic sectors, changing demographics, economic and financial capabilities of the state, social implications of mass training. The ground for estimations on the need in specialists will be the forecast for industries and regions development. The relevant calculations should be grounded on appropriate development indicators, particularly, volume of production, transportation, labor productivity as well as on possible expansion of operating entities and organizations labour force and expected changes in the quality of specialists and their qualifications.

The method requires considerable organizational and profoundly analytical work that should be carried out on the regional scale and involve a wide circle of specialists and stakeholders, authorized bodies on issues of employment, university rectors, scientists, government officials, statistics experts, employers irrespective of their entity ownership forms, be it a national company, public and private company or a company with foreign shareholders, government agencies that directly responsible for producing medium and long-term forecast for the demand pattern in the labor market for specialists with higher qualifications, generate its ideology, identify the main directions for further activities, work stages and appoint appropriate person in charge of a certain Programme section and set concrete timelines. They as well should coordinate collection and processing statistics data and research findings.

The next step is to carry out analytical and estimation work. This step includes providing information support in order to fulfill calculations concerning expected demand for specialists in regions which includes a comprehensive analysis and forecasting socio-economic situation in the region grounded on its programs of economic development.

The analysis will permit to obtain an objective estimation of situation in the labor market and its needs and as a result, to achieve a quantitative balance between the supply of specialists with higher education and demand on the labor market through training them in response to the government order. It will also permit to determine the ratio between supply and demand for specialists with higher education in terms of professional qualification and to identify the priority professions that are in highest demand in the labor market.

In this context, universities must provide the authorized agencies in charge of employment issues with full details concerning the list of vocations on which professional training is available in accordance with the classifier of training areas and specialties in higher professional education of the Republic of Kazakhstan and concerning the situation around teaching facilities of the Republic of Kazakhstan and training facilities in the region.

The particular importance is attached to the information support of this process reflecting the overall demand for specialists with higher education by professional groups.

Following this stage, the demand pattern for specialists with higher education is immediately elaborated. The assessment is made of the perspectives for development of the most dominant sectors shaping out the regional economy features, development areas of the goods and services that are most competitive in the local and foreign market as well as the future employment possibilities and its specificities the region.

The above provides the ground needed to perceive the indicative scale of potential unemployment, its expected types (features), e.g., natural, artificial or imposed one and preliminary assumptions regarding the labour force capacity. Particular attention should be paid to the industries or entities which are in a catastrophic situation, i.e., those witnessing massive personnel retrenchment.

The analytical part of the allocated target number of professional composition which presumably apply to the authorized employment agencies for employment, what is the forecast of their employment, including in the non-state actors. Finally, the databank on the current and future needs for qualified personnel and the register of educational services on specific professions and occupations is produced basing on the results of the survey conducted in the regions.

Particular attention should be paid to potential opportunities to be provided by training centers for the preparation of a market economy. Under the current

conditions, estimating the needs for specialists with higher education should be recommended to carry out by the ministry of health and social development which will try to address this problem jointly with the ministry of education and science and the ministry of culture and sport, the committee on statistics, the ministry of national economy, ministry of industry and development, ministry of defense with subordinate agencies on the regional scale. The coordinated action network of these bodies is illustrated in the following chart (Fig. 1).

Understanding of demand for employees with high professional qualifications starts from the flow of information. Regional information databanks are submitted to superior bodies, accordingly to the Ministry of Health and Social Development (MofHSD), Ministry of National Economy (MofNE), Ministry of Education and Science (MofES), Ministry of Culture and Sports (MofCS), committee on statistics, Ministry of Defence. Along with this the estimation of demand for specialists is carried out with the help of the method. The final estimation of demand for specialists is sent to the MofES and MofCS which on the basis of the provided information produce the state educational order.

Application of the Method of estimation of the needs of our country economy in specialists may raise certain challenges due to the difficulty of forecasting the expected labour productivity and local industries output. Forecasting can be complicated by unreliability and poor quality of information as well as inadequate forecasting methods, etc.

When preparing a forecast researchers need to collect baseline information, in particular, related to the employment structure in different professional sectors, the overview of which should be carried out at least every 3 years and not once in 10 years as it is practiced now a days. This will permit to appeal to more recent data. The complexity of this method can be explained by the fact that the forecast method is used for economies with stable development where industries have comparatively high technological level and well established development cycle.

The calculations are grounded on the information obtained through the analysis and forecast of the list of professions which qualified specialists are trained to and which are included in the correspondent educational standards. It acquired the special value due to the way it helps to clarify the estimations on those students who were accepted earlier for the study period from 2-5 years as well as on those ones who have been accepted in the current year and who are expected to graduate universities later in future. In the latter case, there is a real opportunity to influence the composition of professions

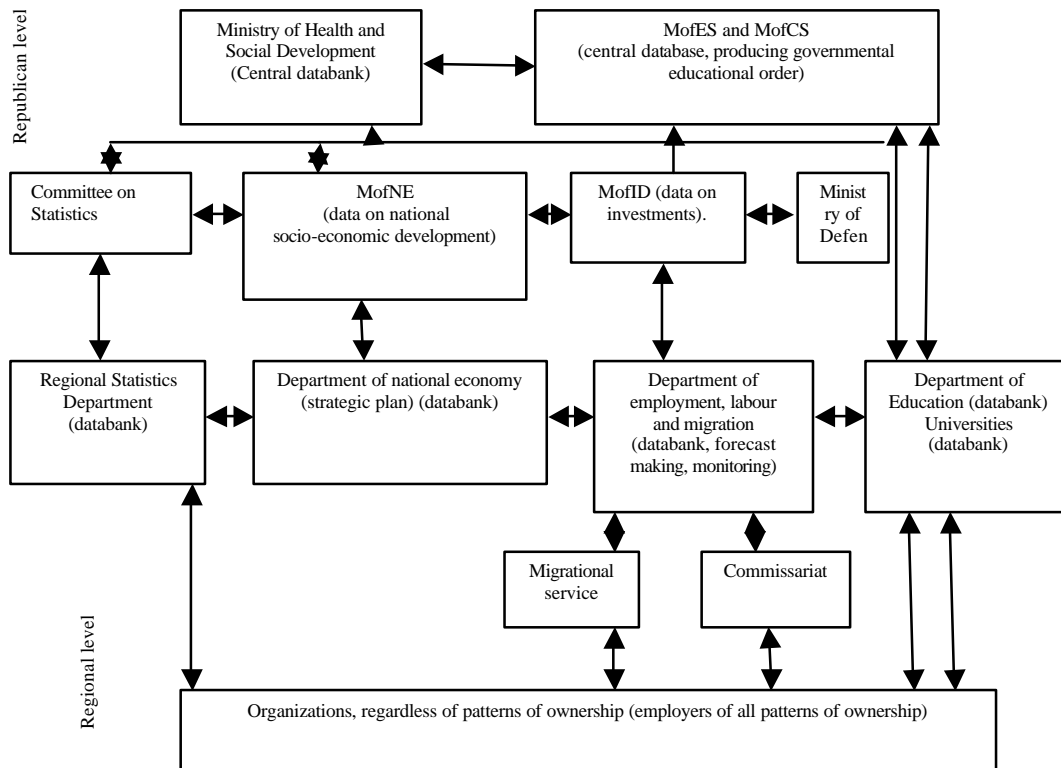


Fig. 1: The network of government order for training specialists with high professional qualification

in order to harmonize it with the real future market demand for the certain profession and to make decisions with regard to diversification or reorientation of universities' activities.

The balance model of supply and demand for specialists with higher education in each specialty in the regional market (*j* is the index of a regional unit) over the forecast year (*t* is the index of a considered year) is taken as the baseline for the calculation. Further on, in the process of the model recording, the indices *j* and *t* are dropped in order to ease up the formula.

The balance model of demand *S_i* and supply *P_i* specialists with Higher Education (HE) of the specialty *i* in the regional labor market over the forecast year looks as follows:

$$S_i = P_i \pm X_i \tag{1}$$

Where:

- +X = Is pent-up demand; when $S_i > P_i$;
- X_i = Is unrealized supply; when $S_i < P_i$

The need for specialists with HE of the specialty *i* consists of two components:

$$S_i = S_{iB} + S_{iZ}$$

where, *S_{iB}* is demand for professionals with HE for vacant job places or newly created jobs. The forecast for vacant positions is made by organizations irrespective of their ownership forms through the analysis of perspectives for production development, planned introduction of innovation technologies, updating of already operating production entities, improvement of organizational management schemes and other. *S_{iZ}* is demand for professionals with HE needed to replace specialists with HE leaving their jobs for various reasons (in total, without detailing the reasons).

This indicator of the forecast perspectives is calculated through a number of employed specialists in the *i* sphere and coefficient of specialists leaving their jobs:

$$S_i = N_{iZ} * I,$$

Where:

- N_{iZ}* = A number of a number of employed specialists in the *i* sphere
- I* = A coefficient of specialists leaving their jobs

It is defined on the basis of an economic forecast of the method of extrapolation. Supply of specialists with HE in *i* sphere *P_i* is composed of the following summands:

$$P_i = M_i + N_i + F_i + L_i + L_i' + K_i + K_i' + B_i$$

Where:

- M_i = young specialists who just graduated from universities in i sphere by government order, including those with scholarships and educational loans (1st higher education)
- N_i = Unemployed specialists with HE in i sphere
- F_i = Self-employed specialists with HE in i sphere who are willing to find a job in their professional sphere
- L_i = A mechanical inflow of specialists with HE in i sphere
- L_i' = Specialists with HE in i sphere who left their jobs for various reasons, including those who left their jobs on their own accord
- K_i = Those specialists with HE who quit their service in the military forces of the RK
- K_i' = Young specialists with HE drafted for military service
- B_i = Those specialists who acquired second higher education in i sphere

Indicators of L_i and K_i logically are not related to the category of supply. However, their exclusion from the right column of the balance will enable to have more precise records in both right and left (M_i) columns of the balance. Respective ministries, departments and agencies that have access to data needed for the balance calculation will provide necessary information.

The initial data is preliminary processed in order to test its relevance for the balance formula and afterwards is entered in the correspondent charts. Then, summary tables are constructed that contain the general data concerning demand and supply on each taken specialty in the country, the number of such tables is equal to the number of specialties. Finally, the general summary table is produced that represents the general situation in the labour market in the RK.

The principle development goals of the RK are pursued with reliance on innovative economic and social principles and embrace such areas as economic diversification, human capital upgrading, improvement of demographics, stable employment policies.

Human capital upgrading plays the strategic role for Kazakhstan growth. It is predetermined by requirements of the 21st century where apart from supply base and production capacities human capital resources including creative workforce potential, high performance knowledge and skills, intellectual capital and innovative technologies in all life and economy spheres are commonly recognized as the decisive factors of a country development along with life quality. In other words, they are all those factors that in combination ensure a country's competitiveness growth under the globalization conditions.

The issue of the youth employment stems from a number of reasons, namely, lack of professional experience, misbalance between supply and demand in the labour market, disability of young people to build effective work relations in particular with an employer during interviews and last, absence of interaction between the higher education system and labour market.

Timely assistance given to young people in job finding can be organized by the education administrators. This is a complex problem the solution of which requires interaction and collaboration between different agencies and entities, e.g., state bodies, employment services, education departments and youth committees. One of the activity directions aims at providing the youth with additional vocational trainings in profile clubs or centers of additional education. In order to prevent rise of the unemployed, it is necessary to introduce career guidance for applicants which may encourage them to choose an appropriate profession given the needs and potential of an applicant as well as the situation in the labour market.

The proposed estimation method of the innovative activity of a university permits to gradually improve the tools of assessment of the research subject on the stage by stage basis.

Stage 1: Application of the formal approach to the assessment of an innovative activity. At this stage one can decide if a university belong to the group of innovatively active universities and outline typical characteristics of its innovative activity.

Stage 2: Application of the resource consuming approach to the assessment of innovative activity of a university by the means of the following criteria:

- A share of the academic faculty and research fellows with academic degrees and involved in innovative activity
- Costs share of the major reserves, exploited in the process of innovative activity
- Share of expenditures on innovation in the total revenue from educational services
- Expenditures on innovation as calculated per a university employee
- Employment rate of a university graduates in the first year after graduation

This stage will help to obtain a general portrait of the expenditures on reserves for innovative activity and permits to assess innovative activity of universities that have not received any incomes from their activities yet.

Stage 3: Application of a productive approach to innovative activity assessment. Depending on the type of

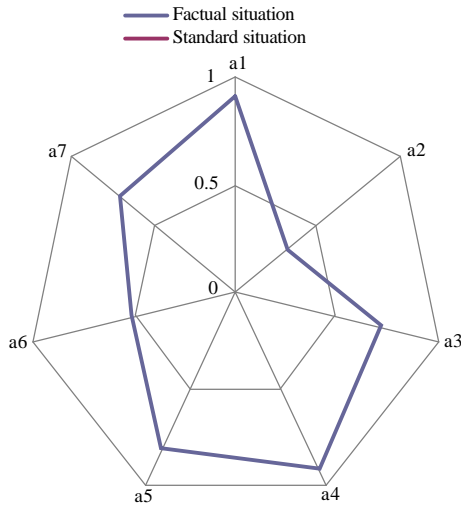


Fig. 2: The chart method of integral calculation

introduced innovations one can assess the total costs of such sides of innovative activity as expenses cut and investments in the market price of the business.

If the goal of the research is a comparative analysis of several universities' innovative activities, an additional 4th stage can be introduced in the method which is a comprehensive assessment of innovative activity.

There are various methods used to carry out a comprehensive assessment. We propose to use the graph method for assessing a university's innovative activity. In the graph method an integral indicator is defined as a total area of a polygon whose apexes are correspondent to the number of properties involved in the calculation.

Let us set $X_{i\text{fact}}$ as particular properties of innovative activity, $X_{i\text{standard}}$ as normalized values of particular properties where standard values correspond to the highest value among the researched universities or set by expertise:

$$X = \frac{x_{i\text{ fact}}}{x_{i\text{ standard}}}$$

Changes in normalized values happen in the range of [0.....1]. Value of 1 corresponds to the high intensity of innovative activity, 0 means that a university is inactive. On the ground of normalized values the radar chart is constructed which is an equivalent to the graph in the polar coordinates system and illustrates spread of values in relation to the beginning of the coordinates. The example of such chart is given in Fig. 2.

The area of the given polygon expresses the current intensity level of a university innovative activity. The final formula to be used for defining an integral indicator of innovative activity looks as follows.

The chart interpretation of the integral indicator helps to better perceive heterogeneous characteristics defining

intensity of a university's innovative activity and its peculiarities. Having access to similar data on competitive universities one can carry out a comparative analysis by detecting changes over a number of contiguous periods and assess the dynamics of their innovative activities.

Any changes in an organization are caused by problems related to its development and future expectations which is impossible to have without reliable perception of the current potential.

The notion of "potential" the way, it is understood today means possibilities and opportunities, available capacity, reserves, means that can be used for certain accomplishments. So, innovative potential of a university embraces all resources that can be used in its innovative activity.

University is an innovation oriented unit of a national innovational system. It underlies the nature of its product as in its turn, this product will contribute to innovative development in all its spheres of its activity. As an educational institute, a university produces new specialists for various areas of the national economy; being a research and science center it elaborates and creates novel technological produces to be introduced in the production sector. So, it should be acknowledged that a university is obliged to grasp considerable Innovative potential otherwise it will not be able to function to its utmost.

The question of employment and career building must be in a student's agenda from the moment he or she enters a university. To this end, a university administrators should think of a specialized facility purposefully designed to deal with students' internship, involvement of future employers in the educational process, etc.

Currently, 25.5% of the Kazakhstan population at the age of 25 and older have higher education diplomas. In this category Kazakhstan takes positions in the middle of the list among other countries. In the UK and Denmark people with higher education account for 31.5%, in South Korea this figure is 31.6% while in the USA it is 38.6%, in Canada it is 43.3%. In the Russian Federation 54.8% of the population studied in universities. In Kazakhstan, out of 10,000 people only 374 are students. In Turkey and Malaysia, the ratio is 399 students, in Sweden there are 405 students. In Denmark the ratio is 409 students. In the UK and USA, it is 414 and 633, respectively. South Korea has the highest ratio of 665 students. The growth tendency in the share of people with higher education will continue in future in many countries as a result of knowledge-based society and innovative economic principles. By quantitative indicators in the sphere of higher education Kazakhstan is on the 60th position in the world competitiveness index, however by qualitative indicators it takes the 101st place among 144 countries and by its innovative potential it takes the 90th

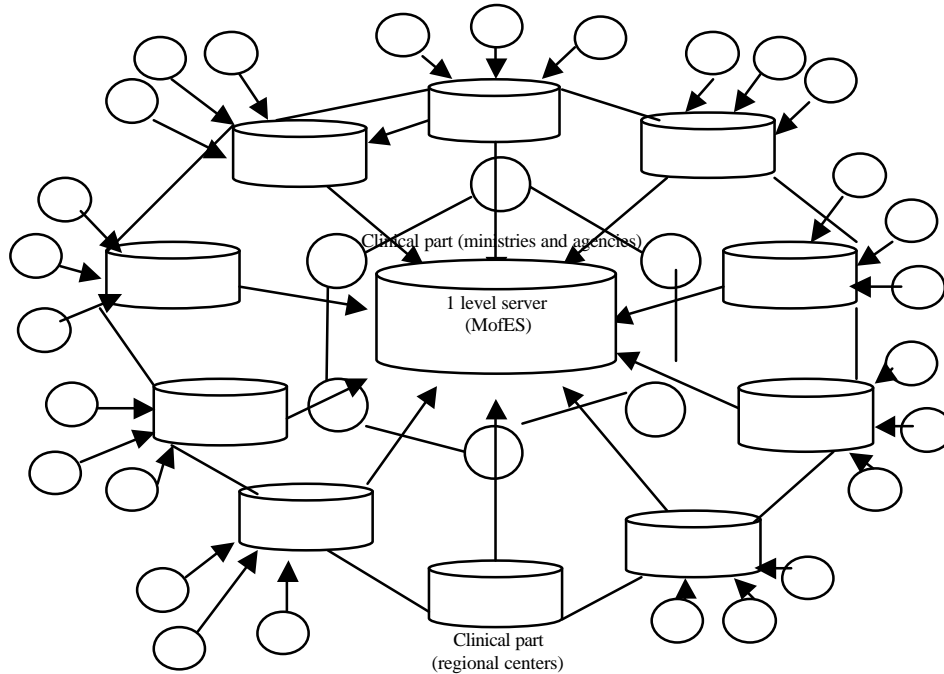


Fig. 3: Design of the data storage architecture

place. Increasingly quick growth of the number of universities and students has resulted in sharp decline of the educational quality in the country. Such growth irrelevant of the labour market preferences has also brought to excessive production of specialists in certain professional areas and unbalanced demand and supply correlation both on the regional and state scales.

Development and spread of software for a university innovative potential realization: Innovative potential of a university can be positively evaluated in case if its produce is enjoying high demand among consumers. The lower the level of demand is the lower the level of innovative development is believed to be. Academic and technological produce that is not in demand does not change innovative potential of a university. This can fully be related to a university graduates.

The academic value of the proposed work will lay in the possible solution provision for a wide range of academic and technological issues related to the need in a unified data stock and they include the following:

- Development of regulative framework and elaboration of informational and analytical system
- Development of scientific rationale and specific methods for a unified data storage establishment
- Formulation and recognition of principles of organization, functioning and development of client-server technologies

- Development and reproduction of methodological materials, programmes, courses and their backups
- Improvement of the communicational infrastructure in order to build a single informational space
 - Subsystem of information administration and protection to keep all needed systemic data
 - Subsystem of reports provision
 - Subsystem of exporting and importing all data
 - Subsystem of analysis and forecast making

The supposed volume of the software will be around 5500 lines. Labour consumption is calculated in three steps:

- Setting a nominal labour consumption rate
- Specification of labour consumption rate
- Designing the work schedule

Today, so called n-level or n-chain architecture is used for designing informational and analytical systems. In this model processing is distributed between a client and a server and the business logics is concentrated on the middle level (Fig. 3). Most systems carry out the following functions correspondent to 3 levels of an n-level model:

- Realization of a user's interface
- Realization of business-logics
- Realization of the access to resources

A user's interface is the level that encloses all work options. This level does not only provide the graphic interface allowing a user to work with the application, enter the data and to check the inquiry results but also administers processing and operating the entered data.

Business-logics is the logics that fixes the rules of data processing through the application, build the "bridge" between a user and data. The functions fixed by the rules simulate everyday business problems. The problems may be simulated in singular or in subsequence.

Outside resources are the data storages that are connected to the application. One application can use services of one or more data storages. Figure 3 represents the design of the data storage architecture:

- Instruments needed to interactively construct or change automated records at a user's level
- Dynamic multilingual support of databases, user's interface and produced reports including Kazakh in compliance with the language standards for author developments
- Support of technologies for databases access with the mechanism of data transmission, both automated and manual

The method of a university's innovative potential assessment is grounded on understanding innovative components in all activity areas.

A university innovative potential assessment is carried out in order to reveal if a university possesses sufficient financial and economic resources for innovative and everyday activity. This is closely connected with a capability to generate a stock of assets and turnover funds as well to attract investments and loans. In the practice of the financial analysis such capacity of a university is assessed in terms of stable sources of capital (turnover funds, long-term and short-term loans) a university has access to.

A university's innovative potential assessment is primarily connected with the analysis of its financial stability and its ability to carry out innovative activities.

Generalizing estimation of a university's innovative potential is a comprehensive and multi-level process and should be grounded on the indicators, representing university's features and its activity properties. The issues which are faced with by the youth in the labour market are as follows:

- Disproportion between supply and demand in the local labour markets
- Low professional competitiveness of the youth due to lack of professional experience, adequate qualification and work skills

- Absence of a unified database revealing the situation around supply and demand at the labour market
- Absence of information of measures undertaken by the government with regard to employment issues settlement under the regional programmes and social projects
- Low prestige of manual professions among the youth
- Uncontrolled migration of the youth from rural areas to cities

High level of the youth unemployment is not only a result of social and economic problems but of poorly organized local system of higher education. Another important reason is misalignment of the work of the education system, employers and the government.

The education system must be strongly oriented to supply the country and regional labour markets. There is an urgent need to unify the aspects of professional training and employment. In order to ensure the human capital involvement, we have to introduce a systemic approach to education on the part of the government, business and citizens which will allow to produce competitive specialists and contribute to the country's development to strengthen its economy and to enhance Kazakhstan's position in the international community.

In modern concepts of the higher education modernization, the emphasis is made on training competitive specialists. The positive effects of the relevant assessment of a university activity will be successful employment and career of its graduates.

On the one hand, the processes of professional training are regulated by the requirements of the state educational standards of the higher professional education, by regional and university requirements to training content and, on the other hand, requirements and expectations of the potential employers are to be taken into consideration as well. All together, it leads to better comprehension of the fact that the main goal of the academic and educational work of universities is production of competitive graduates that can meet the current and future requirements of the labour market.

Increasing graduates' competitiveness is a result of efforts made by universities to improve their work and that will establish the foundations for more effective mechanism of interaction between the higher education and the labour market and create conditions for better qualified specialists highly competitive and demanded.

We have proposed the programme-based approach to realize regional policy of the youth employment as well as to organizational measures increasing competitiveness of out graduates in the labour market.

The solution of the problem of graduates' competitiveness increase should be provided not only through educational activities improvement of universities as it is impossible to tackle this problem from one side but through changes introduced to regional policies of executive bodies, self-government bodies which will infuse administrative and managerial actions in the regulation norms and to legal framework on work relations and employment of the youth as well as to goal-oriented programmes and projects.

New conditions of the state economic and social politics have brought some changes in the higher education system. The modern labour market also is setting its requirements to the level of competitiveness of universities' graduates who enter the labour market in order to be employed as independent individuals. However, under high competition without sufficient social and professional experience they turn out into unprotected group and face challenges related to job finding.

Raising competitiveness of universities' graduates is a comprehensive problem that calls for programme target approach. The organizational aspect of the programme approach may embrace the following directions:

- Target regional policy related to the youth employment
- Improvement of universities' activity
- Social partnership of those responsible for graduates' competitiveness increase

RESULTS AND DISCUSSION

Administrative processes in the educational system:

The role of a state competitiveness is constantly increasing in the context of the global openness and national economies integration in the world economy. Competitive advantages of a country and trends in its social and economic growth being the factors influencing a state's place in international leadership rankings are determined by a set of qualitative and quantitative indicators and rates comparable on the global scale. International estimation of principle development factors carried out independently of a country enables to understand precise effects of specific social and economic indicators and general index of a country's competitiveness rate.

The International Institute for Management Development (IMD) and the Center of World Competitiveness for >25 years have systematically studied social and economic development indicators of >60 countries and published their findings in the Annual

Competitiveness Yearbook. Social and economic indicators of the Republic of Kazakhstan were first included in the global expert outlook in 2008.

All the indicators featuring social and economic development of a country are grouped by IMD in 20 criteria which in their turn, are united in 4 major groups: "economic activity", "government performance", "business performance", "infrastructure".

The facet of education is one of the criteria grouped around "infrastructure". The comparative analysis findings show that there are shifts in our country's place in the ranking.

The comparative analysis of 11 statistical data related to education demonstrates a stable leading position of the country during the last 5 years, from 2009 till 2013, in the category of "level of adult literacy". At the same time, Kazakhstan's position in "Teacher\Pupil Correlation (Secondary School)" has noticeably moved up. We can observe a slight growth in such categories as "number of students in secondary school in percentage ratio to the correspondent age group, getting secondary education" and "number of getting higher education in percentage ratio to the population who got higher education at the age of 25-34".

Along with the above, the country still keeps low positions in the category of overall budget allocation to education both in percentage ratio to GDP and in per capita ratio. Kazakhstan being a youngest member of the Bologna Process still remains a least attractive destination for foreign students. So, the republic takes the 43rd place out of 60 in the quantity of foreign students studying in local universities. Therefore, the findings received during the surveys conducted among the population can be used as target indicators as well as a benchmark for strategic documents not only in the education sector. The level of such indicators may help to outline clear-cut objectives which may require deep analysis and unbiased interpretation of any economic field. Besides, issues concerning informational literacy and culture level of the population are among the most pressing ones. Active participation of respondents in social surveys as well as the systematic work on timely dissemination of relevant information by state agencies will be one of the conditions needed for pushing local education institutions to higher positions in international rankings.

In 2013, the Global Competitiveness Index developed by the World Economic Forum (WEF) introduced new criteria in the category of Labour Market Efficiency, namely, Effect of Taxation on Incentives to Work, Country's Capacity to Retain Talent, and Country's Capacity to Attract Talent. All 114 indicators out of which 32 are based on statistical data, 82 are based on interview

results of country's medium and big-size enterprises leaders, determines 12 factors of world countries' competitiveness.

In the GCI ranking in 2013 Kazakhstan took 40th place out of 148 countries. This position is the best ever taken by Kazakhstan since its first inclusion in the ranking in 2005. Thus, the national mission to enter 50 top most competitive world countries was accomplished. In 2013 the Kazakhstan's position was visibly improved in such categories as extent of staff training, internet access in schools, quality of the educational system, university-industry collaboration in R and D. It should also be noted that there are positive shifts in the category of Quality of mathematics and sciences education. The latter is confirmed by 2012 results of the internationally acclaimed PISA test where 15-year-old Kazakhstan students participated. The international consortium of OECD also paid attention to the Kazakhstan's progress in students' literacy in the subjects of mathematics and science. The country's positive achievements in the pillars of higher and secondary education within the GCI ranking can be recognized as a result of the joint work by the Ministry of Education of the Republic of Kazakhstan and UNESCO Institute of Statistics directed at aligning estimations grounded on statistical data that disclose the range of population with secondary and higher education. We also need to highlight that as those of one of the world's most recognized rankings reflecting the world countries welfare, the figures disclosed by the GCI are the target indicators for strategic documents designed by the Kazakhstan government with the view of the educational system enhancement. Monitoring of how well the intended parameters are being achieved is carried out not only by the Ministry of Education and Science of the Republic of Kazakhstan but by local executive bodies in the regions.

Since, the Republic of Kazakhstan was established as a sovereign state, social and economic reforms conducted in the country and expansion of market relations have predetermined the necessity to switch to new managerial instruments in the educational system. The new instruments, mainly, imply termination of the state bodies' monopoly and their excessive administrative authority and turning away from directive or prescriptive regulation of educational institutions activities. Management of the educational system is expected to gain an transparent and public character.

The Constitution of the Republic of Kazakhstan in paragraph 1 of article 30 states that "citizens are guaranteed free secondary and higher education in state educational institutions" in other words every citizen of the Republic of Kazakhstan has the right to education and it is a constitutionally stipulated right (1995).

The State Program of Education Development of the Republic of Kazakhstan for 2011-2020 sets out the basic priorities and strategic objectives of the country's educational policy in concern with formation of the intellectual nation and building of strong competitiveness on the global scale (2010).

Enhancing the education system competitiveness brings out a number of long-term and short-term goals which will deal with the education quality improvement, from the pre-school education to the higher post-graduate education. Education is a purposeful cognitive activity people are involved in to acquire knowledge and skills or to upgrade them.

The golden rule of education runs that "an educated person in the information age is the one who understands and knows where and how to find what he does not know."

Education is the process and result of a human being's introduction with the world knowledge, values and experience gained by previous generations.

The education system is believed to not only transmit knowledge but also vital skills as well as to constantly introduce the latest methods of learning and to actively use the state-of-the-art technology.

The socio-economic indicators are the determining factor in the development of the human capital of a country. In Kazakhstan the GDP as one of the key quantitative indicators used to define the pace and level of economic development is characterized by positive dynamics in nominal terms. Investing in the sphere of education brings significant economic benefits which undoubtedly are several times higher than the expenses.

Education management is a well-organized activity undertaken by central and local executive powers to ensure effective maintenance, functioning and development of the education system.

In order to realize life-long learning, we should be able to respond to structural changes in the labor market and to build an effective system of technical and vocational education. In order to adapt the higher education to the needs of the knowledge-based economy it is necessary to facilitate the process of integration between universities, science and industry. The main objective is to ensure that every educational level is capable to generate knowledge and skills that are vitally important for both economic growth and everyday life.

The qualitative potential of the human capital of the country defines the competitiveness capacity of the state and largely depends on the efficiency of the higher and postgraduate education system.

Higher education is the level of education where professional training is provided in compliance with educational curricula adopted for the higher education.

Postgraduate education is the highest level of continuing education system aimed at upgrading academia and teaching staff through Master and Doctorate Programmes.

The higher education system is represented by the national universities, public universities, private universities and universities owned by other states. The major feature of higher and postgraduate education development is that compared to other levels of education where accomplishment both of quantitative and qualitative indicators is equally important, the system of higher and postgraduate education is primarily concentrated on qualitative parameters.

In the global educational space, those countries which spend the most on the development of their education happen to take the highest positions in education quality rankings. Such economically successful countries in Southeast Asia as South Korea, Singapore and Japan can serve as examples. One more convincing example is provided by Germany where it is legislatively regulated that the public expenditure on education should not be below 10% of their GDP.

In 2013-2014, the general list of QS ranking covered 800 top universities in 76 countries. The league of the world's top universities was led by Massachusetts Institute of Technology, Harvard University and Cambridge University. They are followed by University College of London, Imperial College London, Oxford, Stanford and Yale Universities, University of Chicago, California Institute of Technology and Princeton University.

The list of top 800 best world universities by the version of the British agency, QS, also includes eight best Kazakhstan universities, L.N. Gumilev Eurasian National University, Al-Farabi Kazakh National University, Kazakh-British Technical University, M.Auezov South Kazakhstan State University, Ablai Khan KazUIR&WL, Abay Kazakh National Pedagogical University, K. Satpaev Kazakh National Technical University and S. Seifullin KazATU.

It should be noted that over the last several years a positive upwards trend in the QS ranking has been demonstrated by L.N. Gumilyov Eurasian National University and Al-Farabi Kazakh National University. Thus, the Kazakh national universities have confirmed high level of their educational activities in compliance with the criteria and approaches internationally accepted by experts for assessing the quality of higher education.

The tenth edition of the universities ranking QS World University Rankings is the largest and most

extensive tool used to assess the quality of education. Kazakh universities for the first time entered the top 300 QS rankings, having significantly improved their performance in terms of a number of international rating indicators. Our national universities achieved high positions in the criterion of ratio of academic faculty to students. Highly enough free index permitted L.N. Gumilev Eurasian National University to occupy the 26th place in the ranking of 2013.

One reason, explaining the low results in the category of Citation index is poor command of English by universities' academic faculty. In addition, the disappointing results in the category of number of Foreign students are due to insufficiency of educational courses delivered in English, the fact which prevents more foreign students to apply for Kazakhstan universities. Most foreign students come to study in Kazakhstan universities in the framework of bilateral exchange programmes jointly implemented with such post-Soviet countries as Russia, China, Kyrgyzstan and Tajikistan.

Vast amount of work is awaiting the policymakers and stakeholders in the sphere of higher education of Kazakhstan related to effectiveness rising of measures taken to improve the quality of education and to foster international recognition of higher education institutions in the global educational market. The rankings results, to some extent, serve as key reference points for further social and economic development of the state.

CONCLUSION

In modern world, rational social and economic development is possible in the community which has created all necessary conditions for the effective education system and in this view we can come to following conclusions as a result of the conducted research:

- Comparatively high level of competitiveness of the Republic of Kazakhstan in the latest years speaks about the country's transition to the group with a relatively high level of economic development where factors reflecting the market potential, labour productivity and innovations play a vital role
- Despite the significant achievements in the category of labour market effectiveness, the sphere of higher education is still failing to completely satisfy employers expectations, particularly, those concerning graduates' professionalism and qualification

- There is a strong need to concentrate the best intellectual and human resources within the structural research facility

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