

Introduction of Foreign Credit Transfer Systems in the Higher Education of Kazakhstan

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Abstract: *Kazakhstan system of higher technical education has been completely transformed over the years of independence. The linear learning technology was replaced with the credit one. Currently, there is developed a credit transfer system in the Republic of Kazakhstan, which is common in foreign higher educational institutions. However, principal shortcomings of Kazakh system in relation to American and European ones involve principles of learning organization, formation of student groups and departments and the possibilities of ensuring academic mobility. Foreign systems have no regulated standard terms of training, student groups are formed by signing up on their own volition and teacher's choice, learning process is organized in asynchronous mode with attracting scientists and specialists for reading specific courses. In the republic, learning process is agreed in time, there are standards for the groups and department formation. At the same time, Kazakhstan strategy in the field of higher education is focused on gradual resolution of these contradictions between national legislation and the Bologna principles.*

Keywords: *Republic of Kazakhstan: higher education reform; European Credit Transfer System (ECTS); transfer; academic hour*

1. Introduction

Kazakhstan system of higher technical education, which was still a part and a parcel of the Soviet higher technical education in 1991, has experienced radical transformations within the 26-year period of the Kazakh independence [1, 2].

It should be noted that by the time of the Soviet Union disintegration, in Kazakhstan there was rather a high level of education and literacy, but "in the following years the education level decreased sharply" because of reducing the share of GDP selected for education [2]. After independence establishment there began the process of degradation of universities because of insufficient resources, low wages of teachers and absence of demand for graduates owing to the crisis in economy and irrelevance of a number of specialties [3].

At that time, the content of educational programs was regularly subjected only to minor changes. Such programs used to be updated once in five years, all technical universities abided by

the identical curriculums as per chosen departments, and the period of study was five years.

Not least of all it was connected to the need of essential economy restructuring in the countries which were earlier in the structure of the USSR, within the period of transition from the centralized system to the market. It is known that a significant amount of the trained youth within the period of economy restructuring reduces pressure upon the labor market [4, 5].

At the same time it is also known that globalization of economy in the developed countries relied on the development of the human capital which indicators are the achievements in education as a basis of national prosperity and economic competitiveness of the country [6, 7].

Parallel to this there was developing the understanding of the fact that higher education is important for increasing the competitiveness of the countries with developing and transition economic systems including the countries earlier

entering the USSR, by the analogy with Brazil, China, Iran, Saudi Arabia [8- 10].

Later, the Bolashak Program enacted in 1993 has allowed financing from the national budget the studies of Kazakh students in the world's leading universities. During the years of its existence, several thousands of beneficiaries have studied in 23 different countries.

Parallel to the development of the Bolashak program there began the process of active reforming higher education in the Republic itself, oriented at the entrance of Kazakhstan higher education institutions in the uniform world educational space[1, 3].

Educational policy development in the system of higher education of the post-Soviet states is primarily related with their accession to the Bologna Process [11, 12]. The main difficulties faced by these states are the difficulties of transition from their own "traditional" educational systems to international ones. In particular, introduction of foreign credit transfer systems is the main problem.

Credit transfer is important, first of all, for academic mobility of students. In this regard, the purpose of this paper is to consider the main difficulties in introducing foreign credit transfer systems. In this case, we have to consider the following objectives:

- comparing the subjects studied in Kazakhstan with the subjects studied in foreign universities;
- characterizing different credit transfer systems.

Thus, achievement of this goal will have a positive impact not only on the educational system of Kazakhstan, but it also can serve as an example for other post-Soviet states.

2. Method

Methodological basis of the research involves the understanding of what is systematic and consistent learning, as well as the concept of IT support in learning and teaching.

We have used a complex of complementary research methods: analysis of special pedagogical and scientific methodological literature on the (doi:1444-8939.2018/5-1/MRR.32)

subject of the article; analysis of academic documentation, general theoretical methods of analysis and synthesis.

3. Data, Analysis, and Results

In Kazakhstan, Anglo-Saxon credit model of training was adapted to domestic educational system [13].

The reform enabled to switch over from linear educational technologies to credit ones aimed at stimulating creativeness and motivation in acquiring new knowledge.

Kazakhstan newly developed credit system includes the assessment, by way of credits, of the labour-intensiveness of each studied discipline and the educational system as a whole. The system is characterized by the effect of accumulation; it encourages students to progressive independent and classroom work during a term, and the final evaluation per discipline contains all the components of studies in a given term, including lab and practical assignments, the drafting of research papers (if any), essays and the examination. The mid-term evaluation is conducted twice in a term and its results account for 60 percent of the final evaluation for each discipline, while another 40 percent is provided by the exam. Academic results measured by the GPA help to determine whether a student will be given permission to study in the following year. The reform has also introduced the notion of 'contact hours' (one contact or academic hour is equal to 50 min), which are the same as academic hours for lectures as well as practical assignments and seminars but are equal to two study hours for lab assignments [1]. The whole volume of educational programs includes internships and the final national evaluation. However, a different set of methods is used to calculate credits for 'on-site' and 'pre-diploma' internships.

The number of credits per semester, a year and the entire period of study (4 years for a bachelor degree) is regulated. The entire regulatory framework, including the State Compulsory Educational Standard (SCES),

various rules and regulations, methodological and administrative documentation on educational programs and subjects, has been implemented with due account for the Kazakhstan credit system.

Educational programs at the Bachelor's level contain around 140 credits, including internships and the final national evaluation, while theoretical courses account for 128 credits or 5,760 academic hours.

It should be noted that lab assignments have a special role in technical programs: Their volume represents from 30 to 50 percent of classroom hours dedicated to the study of fundamental and core disciplines. Taking into account the fact that lab assignments provide for every academic hour's being equal to two contact hours (100 min), theoretical education is boosted by an extra 450-500 study hours. If internships and the final national evaluation (including diploma preparation) as well as the preparation and passage of the national exam are further considered, students' workload during the four years of study will represent around 6,500 study hours.

The abovementioned educational technologies and principles were introduced during the first stage of the reform that modified the form and content of educational programs in Kazakhstan higher technical education.

In Kazakhstan there was introduced the three-level education system (a bachelor's degree - a master's degree - a PhD's degree) according to the Bologna Process [11].

The main flow of students of a bachelor's degree which was earlier going to foreign higher education institutions is reoriented to Nazarbayev University. [7].

There began the process of the international specialized accreditation of educational programs by foreign agencies that promotes the extension of foreign relations including implementation of programs of students' and teachers' academic mobility and teachers. In the approved list of accreditation agencies of the National Register of Kazakhstan there are two Kazakhstan agencies –

NAAR and NAAOKE and four foreign agencies – ACQUIN, AQA, ABET and ASIIN [14].

Such a strategy will permit to develop the teachers' potential, the infrastructure and universities on the whole [7].

After its 2010 accession to the Bologna Convention (The Bologna Declaration of 19 June 1999 on the European Higher Education Area), Kazakhstan has clearly formulated the vector of its further policies aimed at integration with the pan-European educational space.

This tendency reflects the existing policy of harmonization of higher education systems in non-EU members within the Bologna process, as was noted by Voegtle, Knill and Dobbins [15]. Such a trend is also characteristic of Kazakhstan. The country's accession to the Bologna process has its prospects also because more than 20,000 Kazakh students are currently studying abroad in various places. And their majority, including those who study under mobility schemes abroad, plans to build their further careers in Kazakhstan. The beneficiaries of the Bolashak Program also fit into such statistics, because they have an obligation of working in Kazakhstan for five years.

Beyond any doubt, this is also important because the National Program for the development of higher education in Kazakhstan in 2011-2020 (2010)[12] provides for integration into the European higher education area by harmonizing the structure and content of higher education with Bologna standards. It is expected to enforce the principle of academic freedom in the structure of educational programs and to develop student mobility for periods not shorter than one academic year for the whole duration of studies, including within the framework of the Bolashak presidential scholarship.

For foreign universities, this means that the state will support mostly those Kazakh students who will be studying one or two terms abroad under a mobility scheme, contrary to what we see today when most beneficiaries of the Bolashak program are students admitted to the full Bachelor's cycle. The change in national policies related to the funding of higher education abroad

requires constant and efficient interaction between Kazakhstan and foreign universities in terms of coordination among educational programs.

Of course, this trend is all the more crucial, as the expansion of international contacts at the level of universities and researchers, as was noted by Smeby and Trondal [16], Segalàs, Ferrer-Balas and Svanström [17], is one of the manifestations of globalization.

Let us now define the tasks and problems connected to the possibility of implementation of the Bologna process in Kazakhstan and introduction of the European Credit Transfer System (ECTS), which is considered to be not only a tool for expanding academic mobility and rendering European education more attractive, but also as a multi-purpose instrument for organizing educational processes, as was demonstrated by Senashenko and Zhalnina [18].

Smirnov's analysis [19] shows that the ECTS may be used at two levels. Despite the fact that this analysis relates to Russia, its conclusions may all the same apply to Kazakhstan which uses similar principles for the establishment of its educational programs and the organization of learning in universities. The first level is the formal implementation of the ECTS implying the recalculation of classroom workloads into credit units. The second level is the organization of learning based on credits.

At present, Kazakhstan is working on problems of the first level, namely in terms of elaborating a local system of credit transfers (recalculation of credits obtained in foreign educational institutions), which should entail the recognition of Kazakh diplomas on the international labour market and increased student mobility for future Bachelors, Masters and PhDs by enabling them to make individual choices about educational programs.

One of the important goals is the conversion of Kazakhstan-earned credits into ECTS ones.

At this level, the labour-intensiveness of certain disciplines can be recalculated into credit units. However, even such a conversion may pose problems.

As was shown above, Bachelor students' workload during the four years of study is 6,500 study hours, and Kazakhstan's educational programs provide for around 140 credits. The ECTS system attributes for each term 30 academic credits and 60 ones for a year. In order to earn a Bachelor's degree, it is required to obtain not fewer than 240 credits during the four years of study, while the annual workload changes from 1,500 to 1,800 hours per year and one credit is generally considered equal to 25-30 hours. Therefore, total workload in Bachelor programs (four years) makes 6,000-7,200 hours, which is quite commensurate with students' workload in the Kazakhstan system.

At first glance, the 1.72 coefficient may be used to convert Kazakhstan-earned credits into ECTS ones. If this method is used, the number of Kazakh and European credits necessary for the completion of such educational programs, as that of Bachelors, varies insignificantly. However, the number of credits converted into study hours may vary depending on the university. Thus, those Bachelors who wish to further study abroad encounter problems with the mutual recognition of educational programs based on the compatibility of disciplines studied.

The transcript form used in Kazakhstan does not take into account the quantitative characteristics of disciplines in hours and does not allow evaluating the equivalence of disciplines, because the volume of disciplines studied is presented in credits. This complicates the process of harmonization of disciplines studied in Kazakhstan with those offered by foreign universities. This problem will be solved by 2020, when the compulsory and recommended Bologna specifications on academic mobility development will be fulfilled [20].

For graduates of Bachelor programs continuing their studies abroad or students wishing to obtain a double degree in national or foreign universities, it is required to provide supplementary papers specifying the volume of educational programs and disciplines in study hours. Moreover, it is necessary to provide the description of each discipline.

The process of nostrification of foreign diplomas requires the comparison of educational programs and disciplines studied equally in study hours in order to verify their compatibility with Kazakhstan's national standards.

As various countries and universities use different quantitative credit characteristics and the mutual recognition of educational programs and disciplines is practically resolved through the comparative analysis of their volumes in study hours in the course of interaction between universities, the credit-based comparison of educational programs and disciplines is incorrect. This approach may be used only at the stage of preliminary analysis of educational programs.

It should also be noted that Kazakhstan students are pursuing degrees not only in European universities, which use the ECTS system, but also in the United States, Asia, Australia and others European countries where different credit units are used. For instance, engineering degrees are being pursued in 33 countries, such as the USA, Canada, the UK, Germany, France, Sweden, Israel, New Zealand, Malaysia and others.

It is known that the Asian-Pacific higher education is actively developing in such places as Japan, South Korea, China, and Singapore that use models other than those practiced in North America, the Anglo-Saxon world or Europe, as was shown by Marginson [21]. These countries also host students from Kazakhstan.

Taking into account the wide geography of international contacts with Kazakhstan's higher education, the recalculation of Kazakh credit units into USCS (US Credit System) or ECTS ones, as well as British, Asian, Asian-Pacific or Russian credit units is to be carried out on the basis of study hours and disciplines, paying attention to the specificities of certain universities in such countries.

The harmonization of educational programs in Kazakhstan within the framework of the Shanghai Cooperation Organization's university dimension has been based precisely on these criteria. [22].

Such an approach allows preserving the already elaborated legislative base and methodological provisions while recalculating and equalizing educational programs and disciplines offered by national and foreign universities.

The proposed credit unit (study hour) allows taking into consideration all the aspects of students' and professors' work regardless of the credit system employed. At the same time, recalculation from any system used in a given country or university into credits remains easily doable.

Thus, a class period is actually a universal basic calculation unit applicable for comparability of foreign educational programs and disciplines with Kazakhstan ones.

Therefore, the issue of compatibility between disciplines on the basis of quantitative evaluations is a merely technical one and may be resolved without much difficulty under the Bologna process. A more serious problem is the implementation of the second level of the ECTS system linked with the organization of learning based on credits.

The ECTS system provides not so much for the calculation of students' workloads and the corresponding number of credits but rather, and in the first place, for a detailed description of educational programs and their disciplines with information about the content, prerequisites, methodology, evaluation tools as well as support to international students [13].

The Kazakh system of credit units represents a symbiosis between the US and European systems: The USCS has provided the idea of accompanying classroom hours with regulated independent work, while the ECTS has given the strict number of credits for academic periods.

The ECTS and Kazakh systems are constructed on the same principles and reflect the understanding of a credit as an integral system unit aimed at the final objective, the attainment of transparency and the elaboration of pan-European criteria for the mutual recognition of educational programs among universities.

The USCS also has the characteristics of an accumulative system, but it is not aimed at the mutual recognition of educational programs in different countries.

The principal feature of Kazakhstan higher education system is its centralization. Education in Kazakhstan is based on the nationally adopted compulsory standards developed for each program, and educational programs contain two components: the national component and an elective component. The national component equal to 50 percent of the whole volume of an educational program is obligatory and regulates the volume and content of each discipline. Periods of study and the order of disciplines studied are rigorously regulated.

On one hand, this provides nationally enforced controls over the form and structure of educational programs and facilitates the resolutions of academic mobility problems within the country. On the other, the absence of autonomy characteristic of European universities forms serious problems for the realization of academic mobility schemes abroad. This problem is probably most natural for countries with centralized systems of higher education.

The idea of the Bologna process aimed at overcoming academic disparities between European universities and developing common principles for European cooperation as well as ensuring quality, elaborating compatible criteria and educational methodologies, working out curricula, establishing institutional cooperation, double degree programs and mobility schemes, drastically differs from the existing ideology of the Kazakh and Russian educational systems.

Therefore, the main difference between the Kazakh and new Russian systems, on the one hand, and the American and European ones, on the other, consists in the principles of organizing the learning process, establishing student groups and chairs as well as providing academic mobility.

Foreign educational systems (except the Russian one) have no regulated periods of study, student groups are constituted on the basis of free enrolment and choice of professors, while the

learning process is organized asynchronously and is characterized by the involvement of prominent scientists and experts for special lectures. In Kazakhstan, the learning process is constructed synchronously and is based on regulations pertaining to the constitution of groups and chairs. There are specific indicators such as the minimum number of professors in each chair or the requirement of at least 70 percent of faculty and not less than 45 percent of PhDs. These requirements also complicate the implementation of academic freedoms.

The realization of academic mobility technologies in Kazakhstan is currently hampered by the rigid linkage between national component disciplines and concrete periods of study, so that students who have obtained an educational grant and left abroad for a term may be deprived of their grants for not having duly mastered established disciplines or respected the regulated periods of study.

There are no operational mechanisms of support to student mobility, including the support of international students. This problem can be solved by the accession of universities to the international program ERAMUS MUNDUS that gives students the opportunity to continue their study in European universities in order to get a bachelor, master, doctoral, post-doctoral degree or as teachers.

It should also be noted that the fundamental problems that need to be resolved under the Bologna process are the autonomy of universities, the implementation of new principles for the organization of learning and chairs as well as the support of academic mobility schemes.

In today's Kazakhstan, state-run universities or those with mixed forms of ownership provide the highest level of technical education. In virtue of the existing economic and financial capabilities, universities are still far from acquiring full autonomy.

A similar approach is applied in Malaysia where state-owned universities also much depend on budget funding and hence require centralized regulation and oversight.

4. Discussion

Contradictions between national legislations in the field of education in non-EU countries, for example in the CIS, where universities do not have autonomy and their educational programs are mostly regulated by the state, create certain difficulties for the harmonization of educational programs. This is to compare with European, American or Asian universities which are endowed with much autonomy in their operations. This factor is an obstacle to both the implementation of academic mobility schemes and the recognition of foreign diplomas in a home country.

According to Epp [23], the biggest chance to solve such problems exists in those countries where national educational policies are still not fully adopted. For example, in Kosovo where the University of Pristina factually wields full autonomy.

The current impossibility of fully implementing the Bologna process is characteristic not only of Kazakhstan.

Other countries, including those in Europe, have real political, economic and organizational restrictions based on their own specificities, which need to be considered in practice, as was shown by Swensson and Wihlborg [24].

At the same time, Kazakhstan's higher education strategy aims to gradually resolve the abovementioned contradictions between the national legislation and the principles of the Bologna process.

The National Program for the development of education in the Republic of Kazakhstan in 2011-2020[12] provides for progressive transfers of autonomy onto universities, starting in 2015.

Therefore, the implementation of Bologna technologies in Kazakhstan is expected to take place step by step, in order to preserve the already existing multi-vector experience of Kazakhstan's higher education. In practice, it will inevitably lead to the development and strengthening of international cooperation among universities. Meanwhile, the unnecessary acceleration of this process should be avoided.

This conclusion is confirmed by the European experience described by Amaral and Veiga [25] according to whom too rapid steps towards the implementation of the Bologna process, even in EU member states, lead to formal results without entailing any essential change.

This is all the more true in the case of Kazakhstan. That is why a progressive transfer towards new educational principles is the most reasonable approach which allows establishing efficient contacts between the state and universities, while the central figure of the learning process continues to be the student.

In our view, it makes more sense at the first stage of such implementation to test the tenets of academic mobility on Master, not Bachelor, programs where the coordination of curricula is easier due to shorter periods of study.

5. Conclusion

At present, Kazakhstan's system of higher technical education has mastered the technologies and principles of the accumulative credit system at its first formal level.

In accordance with the National Program, it is expected to carry out further reforms to diminish the impact of centralized regulation and supervision and to develop more autonomy and academic liberties in universities.

This will give way to drastic changes in the technology of the learning process and enable the creation of more flexible and mobile educational systems.

At the same time, taking into account the wide geography of international contacts in Kazakhstan's higher education system, it is reasonable to preserve the possibility of conversion of Kazakhstan's credit units into USCS, ECTS, British, Asian, Asian-Pacific and Russian ones. The conversion of credits is proposed on the basis of study hours and particular disciplines, bearing in mind the specificities of certain universities interacting with one another.

It is planned to gradually move from the currently existing educational technologies following the sequence "student – state – foreign

university” to the system of academic mobility as follows “university in Kazakhstan – student – foreign university” with financial support from the state.

A class period is actually a universal basic calculation unit applicable for comparability of foreign educational programs and disciplines with Kazakhstan ones.

The main problem in the assessment of comparability of disciplines and programs is the system decision connected to the organization and informative part of the educational process on the basis of credits.

At this, in connection with changing the state approaches to higher education there is supposed a step-by-step transition from the technologies of training existing now abroad according to the diagram: a Kazakhstan student – the state – a foreign university to the system of academic mobility: a Kazakhstan university – a student – a foreign university with financial support of the state.

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