

# Quality Assurance as Internal Mechanism of Increasing the Competitiveness of the Higher Education Institution in the Context of International Integration

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## Abstract

**Background/Objectives:** The objective of this study is to demonstrate that international independent assessment of education quality supports the internal mechanism of improving the competitiveness of educational institutions in the Baikal Region. **Methods:** Theoretical and methodological basis of research is represented by methods of independent expert assessment of education quality (certification, auditing, accreditation, ranking); identifying strategic perspective directions and technologies based on the Foresight methodology (scenario approach, expert panels, technological road mapping of the transition from the current state to the stages of development, bibliometric analysis of the database on the quality of education). **Findings:** The process of consistent regulation and standardization of higher education in Russia is an important component of international harmonization of educational systems. Ensuring higher education specialist training at the level appropriate for future needs of domestic and international labor market predetermines the ever-increasing interest in the educational process quality not only on the part of the state but also on the part of society as a whole. The development of competition in the education market and increased requirements to the quality of education in the labor market place new demands on educational organization management and determine the need for independent evaluation. The basic approaches to an independent evaluation of the quality of educational programs, which give proof of the graduates' readiness for independent activity in the professional field, are: assessment of higher educational establishment quality of conformity with international management standards through external audit carried out by independent experts; professional public accreditation of educational programs; expert scenario planning of strategic directions to improve the quality of education at the university. **Applications/Improvements:** The study will help organize, assess and improve educational processes to meet the new requirements set by competition in the modern labor market.

**Keywords:** External Audit, Independent Assessment of Education Quality, Information Support, Public-professional Accreditation, Strategic Scenario Planning, Transboundary Institutional Mobility

## 1. Introduction

Currently, the key resources that predetermine the efficient development of economy and society are knowledge, information and education systems. Intensive development of these factors determines the quality and standards of living of the population, the standings

and competitive positions of countries in the global technology markets.

To make sure that the level of specialist higher education training meets current and future needs of domestic and international labor markets the quality of educational processes has to be ensured not only by the state but also by society as a whole.

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Developing competition in the education market, severe requirements to the quality of education on the part of the labor market set forth new demands to the management of higher education institutions under the conditions of international integration, predetermine the need for independent evaluation of educational services. Basic approaches to independent evaluation of educational programs quality that help prove the graduates' qualifications for independent professional activity are as follows: assessment of the conformity of the institution quality with international management standards through external audit carried out by independent experts; professional-public accreditation of educational programs; expert scenario planning of strategic directions to improve the education quality in the higher education institution.

The process of consistent regulation and standardization of higher education in Russia is an important component of international harmonization of education systems in terms of the objective process of integration occurring at a qualitatively new level of the entire system of economic relations in the world<sup>1</sup>. International harmonization of educational systems at the level of individual countries and, respectively, at the level of specific universities is considered as the development of common understanding of the requirements to the quality standards and to quality assurance practices in higher education institutions at the international level, with which national educational standards and guidelines harmonize<sup>2,3</sup>; adaptation of internal legal documents of educational organizations to the criteria and requirements, to specific standards and guidelines is undertaken at both national and international levels<sup>4,5</sup>.

Yu.P. Pokholkov, President of the Accreditation Center for Engineering Education Association, suggests that the concept of professional-public accreditation of educational programs is "the result of the recognition of the quality of specialist education and training on the part of the professional community, and it is the process aimed at improving the quality of Russian engineering education"<sup>6</sup>.

Chairman of the Association of Lawyers of Russia V.V. Blazhev defines professional-public accreditation of educational institutions that provide higher education services for future lawyers as a "permanent system of public and professional recognition of the level of the higher education institution activity"<sup>7</sup>.

The National Accreditation centre website provides the following definition of professional-public accreditation of programs: "Assessment and recognition of the high

quality of program implementation and specialist training by branches of industry, economy, culture and social services confirming the capability to meet the accreditation standards set out in accordance with European standards for education quality assurance ESG-ENQA"<sup>8</sup>.

Studying the international context of an independent quality assessment of education as product and service in terms of changes in the higher education sector implies the analysis and implementation of international practical experience, including such methods as assessment, audit, accreditation, ranking<sup>9-11</sup>. Education quality assessment is performed in the course of Quality Management System (QMS) certification of higher education institutions to confirm their compliance with the requirements of standard ISO 9001:2008. In the course of the competition held by the Ministry of Education and Science and called "Quality system for preparing graduates of educational institutions for professional education" the external audit is carried out to evaluate strengths and weaknesses of the higher education institutions and to determine their compliance with the requirements of the Model of the European Foundation for Quality Management (EFQM)<sup>12</sup> and with the standards and directives of European Association for Quality Assurance in Higher Education (ENQA)<sup>13</sup>. Accreditation as the method of independent education quality assessment is applied in the course of public accreditation of higher education institutions and within the framework of professional-public accreditation of educational programs. According to the requirements of ENQA, professional-public accreditation either recognizes or does not recognize that the quality and the educational level of the graduates meet the requirements of the organization in terms of the educational program or whether the educational activities of the establishment meet the relevant international requirements and standards. Ranking (rating) represents the element of independent assessment which implies comparison of the results obtained for particular subjects, programs, and educational institutions. To identify their weaknesses and strengths the higher education institutions voluntarily participate in the process of testing the model ranking methodology carried out for Russian higher education institutions by National Training Foundation.

The ministers of the European countries who signed the Bologna Declaration define education as social good<sup>14,15</sup>, and this has been recorded in Federal Law "On Education in the Russian Federation" dated December, 29, 2012<sup>16</sup>. Education cannot be acquired in the same way

as product or service without direct engagement of the consumers of educational services. The quality of education as social good depends on the initial capabilities of the accumulated potential of education. This fact predetermines different objective of independent higher education quality assessment: it is not to identify deviations from the required standards or to collect consumer claims, but it is to search for the methods of evaluating the opportunities for continuous education quality improvement in line with ever-growing expectations of man and society. The methods of studying the opportunities of quality of education as social good are associated with the methods of identifying new strategically promising areas and technologies in educational practices based on Foresight methodology: scenario approach, expert model, technological roadmapping of education transition from the current state to other stages of its development, and bibliometric analysis of the database on education quality (most frequently quoted publications in some particular sphere) <sup>17,18</sup>.

The problem of the investigation comes from the need for the objective reflection of higher education quality in the institutions and for its assessment from the perspectives of education interpreted by international standard ISO as product and service and also from the perspectives of the ministers of education who signed the Bologna Declaration and who interpret the notion of education as social good. This fact predetermines the search for the methods of independent education quality assessment in higher education institutions in the context of interpreting education as product and service and also as social good.

*The objective of the study* is to model and to prove experimentally that the international context of independent education quality assessment is the factor of quality assurance and represents the internal mechanism for improving competitive power of the higher education institutions in the Baikal Region under transboundary conditions.

*The hypothesis of the study* is as follows: international context of independent education quality assessment in the higher education institutions performed for the institution itself and for the educational programs implemented by it in conformity with international standards and requirements will represent a factor of the competitive power of the near-border educational institutions under the conditions of international integration in the trans-border region (Russia, Mongolia, China) if the following organizational and pedagogical preconditions are duly justified and implemented:

- substantiation of the type of expert evaluation (assessment, accreditation, audit, ranking) that predetermines revealing the information on the quality of education as product and service;
- selection of the modern quality management models for the higher education institution;
- actualization of expert activities (scenario planning, roadmapping, expert panels) revealing the initial capabilities and prospective potential for improving the quality of personnel and education as social good.

*Tasks of the investigation:*

1. Analysis of the cross-border mobility of higher education institutions.
2. Introduction of modern quality management models in higher education institutions.
3. Expert identification of the areas for education quality improvement in higher education institutions based on Foresight methodology.

## 2. Method

The methods of the investigation of independent education quality assessment that reflect the changes in the sphere of education have been correlated by the authors of this study with the interpretation of “education” from the perspectives of ISO standards series 9000 as “product” or “service”, and also with the interpretation according to Federal Law “On Education in the Russian Federation” as of December, 29, 2012, No. 273-Φ3<sup>16</sup> which reads that education is a single dedicated process of upbringing and learning that is a worthwhile benefit.

## 3. Results

### 3.1 Analysis of Cross-border Institutional Mobility of Higher Education Institutions

In Russia and abroad there is a need for implementing the efficient integrative models of advanced and interdisciplinary training for highly qualified personnel that will determine the modernization processes of society as a whole. There is an urgent task to educate young specialists who would be capable of creating new technical devices and technological processes from the idea up to the science-driven production, capable of promoting the new

designs among customers, of evaluating the technological horizons of the market taking into account its dynamics. The solutions to these problems directly involve the development of the local growth models and training techniques founded on the integration of education and production processes.

The most common form for the implementation of this type of transboundary education is observed when the universities establish their foreign (offshore) campuses or training centers through the expediency of the local educational service suppliers. This type of mobility also covers establishment of new educational institutions and education abroad, either partially or in full.

The trends of transboundary institutional mobility:

1. Creating offshore campuses in regional clusters: hosting foreign institutions is considered within the framework of regional strategy for innovative development or in the context of building the knowledge economy. Examples: “Knowledge Village” in Dubai, “Education City” in Qatar.
2. Changing the model of funding the university campuses abroad. Transition from self-financing to being funded at the costs of local partnerships (governments or industrial companies) that provide areas for the campuses or even grant subsidies.
3. Propagating institutional mobility to cover doctorate and research programs.

University partnerships are also a form of international program-related and institutional mobility.

Today transboundary commercial education plays a significant role in the development of Asia-Pacific Region where it mostly takes the form of franchising or final network. In this case the local service provider is authorized by the foreign institution to offer all or part of its educational programs in line with the provisions of the contract. Within the framework of the final network the students are enrolled into the foreign higher education institution (educational service supplier) and are taught according to foreign Principal Professional Educational Programs (PPEP); partially, education is provided in the native country of the student and is accomplished in the country of the institution that provides educational services. This type of transboundary education implies program-related and academic mobility. Table 1 shows principal strategies for education internationalization described in the available literature<sup>19–22</sup>.

The analysis of the presented strategies for education internalization made it possible to identify three future scenarios for transboundary higher education development.

#### ***Scenario 1: sustainably diverse internationalization***

According to this scenario, the existing internationalization of higher education will continue preserving simultaneously the diversity of the systems of higher education from the perspectives of institutional autonomy, foreign students admission practices, funding, quality assurance, educational offers and internationalization strategies. Higher education institutions will proceed pursuing different objectives for participating (or refusing to participate) in the expansion of educational boundaries. In almost all countries there will be national quality assurance systems that would play the key role in the process of coordination of international mobility of the students and highly qualified personnel. The countries will continue using national certification systems and their own criteria for recognizing qualifications ostentatiously preserving their national specifics in terms of the contents and structures of programs and qualifications.

#### ***Scenario 2: convergence toward liberal model***

Within the framework of this scenario the higher education becomes a service industry founded on the principles of trade. Competition to attract foreign students who would pay market prices for their education becomes ever more obvious; thereat, the majority of the developed and a number of developing countries liberalize their markets for foreign students allowing the higher education institutions to set the tuitions for foreign students at their own discretion. Many countries will consider educational sector as an export-oriented industry and will enter into the binding agreements about the access to their markets of educational services and about the national regime in educational services sector. As a consequence, many new educational service providers including private companies will enter the higher education market probably often in partnership with traditional universities.

Under this scenario, national systems of quality assurance as well as diploma and qualification recognition systems will be established in almost every country. Assisted by these systems it will be possible to compare national indicators and procedures for quality assessment with international principles. Agencies or special authorities will be entitled to recognize higher education diplomas and professional qualifications at supranational level.

**Table 1.** Principal modern strategies of education internationalization

<i>Education internationalization strategy</i>	<i>Strategy objectives</i>	<i>Strategy characteristics</i>	<i>Strategy disadvantages</i>	<i>Source of support</i>
Coordinated approach	Pursues political cultural, scientific objectives to facilitate development. The efforts of the strategy are primarily focused on promotion and on national geostrategic priorities.	Encourages international mobility of national and foreign students, teachers and researchers	Does not consider the issues of foreign students' engagement; the strategy is focused on small groups of national and foreign students.	Developing systems of grants, academic exchange programs, partnerships between higher education institutions.
Engaging qualified workforce	Pursues the same objectives that the coordinated approach strategy does but additionally includes more active and selective approach to recruit foreign students	Engages talented students and scientists who could become the intellectual foundation of the host country's economy by improving quality and competitive power of its research and higher education sectors	Leads to greater number of foreign students in the host country but does not have any real (commercial) payback from the perspectives of program-related and institutional mobility. Lack of incentives for students and researchers' mobility	System of grants supported by active promotion of national higher education sector abroad (advertising campaigns, participation in international exhibitions, etc.), by lower visa restrictions, more flexible immigration rules for principal participants of mobility program
Revenue generation	Principal objective is focused on commercial tasks expressed through developing export of educational services	Provides educational services to foreign students who (as a rule) enjoy governmental support in purchasing higher education services in the open market	The relevant authorities and higher education institutions face the problem of balancing geographical distribution of foreign students not only from economic perspectives but also from the perspectives of migration policy	The funds of the foreign students who pay the full costs of education themselves; development of commercially feasible educational programs and institutional mobility
Enhanced opportunities	Principal objective is to develop the potential. It is achieved due to the support and development of educational programs abroad and by means of establishing foreign higher education institutions in the territory of the host country. The strategy is focused on import of educational services.	It ensures that the national systems of quality assurance will also cover foreign programs and higher education institutions, and thus, the activities will be in conformity with the national objectives and tasks in terms of higher education development.	Mobility is mostly to be controlled by governmental regulations. National migration policy supports short-term professional mobility and prevents massive "brain drain".	Grant programs to support international mobility of civil servants, teachers, researchers and students, incentives for foreign higher education institutions, for their educational programs and researches to promote their educational services in the territory of the host country, probably, in partnership with local higher education service providers

### **Scenario 3: triumph of (former) developing economies**

Within the framework of this scenario, the strategic approach to human capital and knowledge development will help the former “developing economies” achieve the required economic growth and high competitive power of their higher education systems both in terms of quality and in terms of education costs. Many higher education institutions and other higher education service providers from former “developing economies” will establish partnerships with institutions and companies in the developed countries to improve the level of their own competence. Establishing flexible but strict quality assurance and accreditation systems these countries will guarantee the minimal level of quality of international and internal educational programs at the local level. As a result, the quality of higher education in these countries will improve considerably, thus making it possible to retain the students after they accomplish their education abroad and also, or, probably, in the first place, to attract more students from the developing countries.

## **3.2 Introducing Modern Quality Management Models in Higher Education Institutions**

Internationalization as a key instrument of higher education modernization, the fact that Russia joined the Bologna Convention and the existing trends in the educational services market make universities improve intensively (sometimes even by introducing “break-through” solutions) the efficiency of their educational and awareness-developing processes as the principal activity of an educational institution, develop and implement Quality Management Systems (QMS). QMS development and implementation in higher education institutions in cross-border territories is regarded as an opportunity to establish and to structure the relationships; it helps avoid uncertainties in terms of responsibility and in the context of the interactions between higher educational institutions and international partners. Structuring will help perceive the irrational connections or inefficient resource utilization. The harmonization established upon QMS introduction helps higher educational institution streamline management of its all functions and create such structure of educational-brining-up process that would at minimal costs ensure the high quality of the provided professional higher education services, would most comprehensively satisfy the needs of a personality, of society

and of the state, would create the preconditions for sustainable positions of the university in the educational services market in the transboundary region.

Standards ISO 9000:2000, ISO 9001:2008, 9004:2000 are in the English language; there were some difficulties and disputes in the course of implementation of these standards in Russia and there are still a lot of problems faced by those who use these documents in practice.

The abovementioned standards cover all types of activities and all organizations that produce any types of products or render any types of services; however, in their wording and terminology these standards are rather industrial. In this regard, when these standards are applied to the sphere of that or another service, educational services including, some certain issues raise inevitably. Undoubtedly, educational organizations were greatly helped by two documents initially written in English and translated into Russian. These are the reference book prepared in Australia and issued in Russia “Guidelines on applying ISO 9001:2000 in services”<sup>23</sup> and another document which represents the agreement of the international team ISO/IWA2:2004 “Quality Management System. Guidelines on applying ISO 9001:2001 in education”<sup>24</sup>.

Principal type of activity of higher educational institution is to provide educational services. The results of providing educational services (products of higher educational institutions) are represented by the graduates of that or another educational program who possess professional qualifications that meet the relevant requirements, who are ready to occupy their positions in life and whose general human values have already been formed. According to standards ISO 9001:2008<sup>25</sup>, higher education institutions, based on the requirements of the employers, have to develop, to document, to implement and to support active QMS; a higher education institution does not just develop a system of documents but it creates a documented system. QMS is a component part of the integrated organization (university) management system. All functions and responsibilities, as well as all interconnection and interrelations are regulated by the internal normative documents, which provisions do not contradict to legislation or other federal and regional normative acts. According to ISO standards, higher education institutions co-operate with the stakeholders, with organizations of public-private partnership and manage the module professional education programs based on the principles as follows<sup>26</sup>: focus on customers; leadership of the manager; employee engagement; process

approach; systemic approach to management; continuous improvement; fact-based decision making; mutually beneficial relations with suppliers.

Well-defined and transparent organizational structure and the rules of interaction between all links makes the system manageable, enhances the opportunities for continuous improvements streamlining the activities and costs based on the criteria of performance and efficiency throughout the educational-bringing-up activities, and, consequently, it actually represents the quality management system. QMS of higher education institutions in transboundary regions can be *certified* by the associations of higher education institutions that are recognized in their countries.

Thus, for example in the People's Republic of China principal participants of public and professional education quality assessment are represented by public-professional communities, higher education institutions, students and graduates, employers, rating agencies and quality assurance agencies that carry out educational audit. The infrastructure of the public-professional system of higher education quality assurance in China include over 200 structures that are either private or included in the public system of higher education, such as, for instance, Shanghai Research Academy of Education Assessment, Jiangsu Research Academy of Education Assessment, Schonchin Research Center of Education Assessment, Shandong Research Center of Education Assessment, Education Assessment Agency in Beijing, All-China Educational Institutions Rating Center, Education Assessment Center "Huaxi", Education Assessment Center "Konzi", etc.

Higher education institutions of the Baikal Region took part in the competition held by the Ministry of Education and Science of the Russian Federation called "Quality system for preparing graduates of educational institutions for professional education". This competition took into account the requirements specified in the documents: the Model of the European Foundation for Quality Management (EFQM),<sup>12</sup> standards and directives to ensure higher education quality developed by European Network (Association) for Quality Assurance in Higher Education (ENQA),<sup>13</sup> and quality management standards series ISO 9001:2008<sup>25</sup>.

External audit of strengths and weaknesses of quality of the provided services was performed according to this model based on two groups of criteria: how does the organization achieve the results in the sphere of graduate education – what is done for this purpose

(opportunities – 550 points), and what has actually been achieved (results – 450 points). The assessment based on the criteria group "opportunities" was performed in two aspects: perfection of the approach and comprehensiveness of the approach. Perfection of the approach is characterized by such criteria as justification and integration. Comprehensiveness of the approach is characterized by such criteria as implementation (the approach has been implemented) and systemic nature. The assessment based on the criteria group "results" was carried out using the values of the achieved indicators and taking into account the coverage of these indicators encompassing different processes of educational activity of higher education institution.

Model methodology of Russian higher education institution rating was tested with 103 Russian universities (including the institutions of the Baikal Region). Based on the results of the monitoring for each higher educational institution a profile was formed featuring the results of 6 types of ranking which highlighted the strengths and weaknesses of this particular institution in line with the results obtained for each of 6 areas of ranking; a brief conclusion has been formulated to describe the competitive advantages of this educational institution within its category. For example, within the total sample Transbaikal State University, according to the profile of the university, occupied middle positions in such areas of activity as "Knowledge transfer" and "Scientific and research activity". These positions have been predetermined by the middle values of the indicators in both general ranking of 103 higher education institutions and in the ranking of 35 institutions included in group "Other" in terms of such indicators as: "Share of incomes from non-budgetary sources"; "Ratio of full-time students who took part in Research and Development activities"; "Ratio of teaching staff possessing doctor and candidate degrees". As for the area called "Interaction with the region" it was stated that this higher education institution is assessed with high value of such indicator as "Percentage of the graduates working in the region" both in the ranking among 103 institutions and in the ranking among the group "Other". To improve its rating in this area of activity this higher education institution was recommended to enhance partnerships with regional organizations. Further on in the course of planning prospective development measures Transbaikal State University took into account its profile ratings in such areas as "Learning and teaching" and "International activity".

Assessment of educational activities in the higher education institutions in the Baikal Region in conformity with the requirements of the international standards was performed based on the external comprehensive audit carried out by independent experts in the course QMS certification within the framework of the competition held by Federal Education and Science Supervision Service in the process of model methodology rating assessment which provides the foundations for proving the quality of educational services and for determining the competitive power of the higher education institutions in this transboundary region.

The new legislative and normative foundations of state policy of the Russian Federation in the sector of higher education that have been established by Federal Law "On Education in the Russian Federation", No. 273-ФЗ dd. 12.29.2012, have predetermined such form of education quality assessment as professional-public accreditation of educational programs which represents "the recognition of the quality and the level of education of the graduates who accomplished this educational program that meets the requirements of the labor market" (Article 96, item 4), and which specifies "the procedure for carrying out professional-public accreditation of professional educational programs, the forms and the methods of assessment of such educational program (Article 96, item 6).<sup>16</sup> Professional-public accreditation not only predetermines the procedure of the interaction between higher education institutions and employers and the contents of the professional educational programs, but it also highlights the responsibility of the scientific and teaching staff for the implementation of the educational program.

Professional-public accreditation performed by authorized organizations facilitates the following: *first*, eliminating the risks of lagging behind the current international requirements to the quality of higher education; *second*, ensuring the improvement of the structure of educational programs; *third*, developing higher education staff potential. Preparation of higher education institutions for the accreditation by international standards and rules<sup>26</sup> together with the prolonged period of internal self-examination represent powerful incentives for the development of all participants of educational process.

For instance, in Transbaikal State University the independent education quality assessment was carried out by AKKORK for educational programs as follows: Sociology, Design, Service, Info-communication technologies and communication systems, Pedagogical education (profile

"Geography teaching"), Mining engineering. In 2012 the law education programs (Bachelor, Specialist, Master) were accredited as those that are in conformity with the approved professional standards by All-Russia Public Organization "Association of Russian Lawyers".

Criteria of Association for Engineering Education of Russia (AEER) imply a single approach to professional-public accreditation of educational programs of different levels which stimulates the consistency and the succession of educational programs helping create in Russia a single space of engineering and technical education that would correspond to the world practices.

AEER professional-public accreditation has been carried out in Transbaikal State University for specialist education programs "Mining engineering" and "Construction of unique buildings and structures" that were awarded with "European quality mark" by European Network for Accreditation of Engineering Education ENAEE<sup>27</sup>.

Given the fact that AEER is a member of such authoritative international organizations for accreditation of engineering educational programs as International Engineering Alliance and ENAEE, the accreditation of educational programs performed by AEER is regarded as international and is recognized by all countries that signed the relevant agreements (<http://www.ieagrements.org>, <http://www.enaee.eu>); the graduates of the educational programs accredited by the criteria that are in conformity with the international standards have prospective opportunities for passing the registration procedure in international registers as follows: International Engineering Technicians Register (graduates qualified as technicians), International Engineering Technologists Register (graduates qualified as Bachelors of applied sciences), APEC Engineer Register and International Professional Engineers Register (graduates qualified as Bachelors/Specialists).

### 3.3 Expert Identification of the Areas for Further Education Quality Improvement in Higher Education Institutions based on Foresight Methodology

Strategic areas for education quality improvement imply the selection of some currently important and promising areas of activities of the higher education institution based on the cooperation with the leading experts of the

country in the sphere of higher education in the course development and implementation of expert and analytical projects in this higher education institution<sup>28</sup>.

In the course of strategic scenario planning based on Foresight methodology<sup>17,18</sup> different potential ways for developing some certain areas of education quality improvement are identified. The scenarios were suggested by the experts either “from bottom to top” or “top down” and were founded on the analysis of future alternative trajectories of education quality improvement in the higher education institution. Education quality improvement scenario analysis was aimed to develop normative implementations within the wide spectrum of subject matters associated with fundamental and applied investigations, with techniques for managing educational processes and personnel, with the development of material and technical base and infrastructure of the higher education institution.

In the process of *scenario development* at the *training platforms* arranged in the Baikal Region by Higher School of Economics - National Research University, Federal State Autonomous Establishment - Federal Institute of Education Development, Russian State Social University, National Training Foundation, Inter-Regional Association of Professional Education of Siberia the strategic areas for education quality improvement have been identified as follows: “Developing institutions for independent higher education quality assessment”; “Developing cluster approach to the implementation of strategic partnership in higher education institution”, multi-standard approach to the independent education quality assessment, public-professional accreditation of educational organizations and educational programs. *Project sessions* within the framework of educational forum “Modernization of professional education in Russia, China and Mongolia” made it possible to consider “Prospective development of professional education in the Transboundary region (Russia, China, Mongolia) under conditions of joining WTO.

The session of strategic scenario planning held with the Agency for Quality Assurance in Higher Education and career Development (AKKORK) studied the “Conditions for long-term partnership in the Baikal Region between corporations to establish mining and power generation education clusters” and the prospects of professional-public accreditation of educational programs engaging Autonomous Non-Governmental Organization “Shiffers Institute of Advanced Studies”.

Implementation of the strategic areas of education quality improvement implies that this empirical investigation should apply the methods of Foresight (scenario development, technological roadmaps, bibliometric analysis) that are focused at increasing social and economic goods.

Scenario development envisaged creation of the scenarios of potential development of professional education of personnel for that or another technological areas based on the analysis of future opportunities and alternative trajectories of their development under the conditions of cluster interaction.

*Expert panels* practiced by National Training Foundation are regarded as fundamental method of Foresight methodology and they ensure that the information on Foresight practices would be accessible for all subjects of educational process. Principal advantage of this method is represented by the interaction between the representatives of different scientific disciplines and spheres of activities which would be difficult to arrange under any different conditions. In the process of independent education quality assessment the experts from domestic associations and agencies were engaged as well as the representatives of international European quality assessment agencies who apply the multi-standard approach.

*Technological roadmap* as Foresight method envisages the identification of the scope of the problems and participants of Foresight project in the education sector and in the organization i.e. in higher education institution. “Roadmap” illustrates the stages of the transition from the current stage to the stages of its development. Principal application area of this method in this investigation is represented by identification of the principal elements of higher education quality development that could turn from recessive into dominant ones.

The scenarios suggested by the experts assume that Foresight methods should be applied together with other methods as follows: SWOT-analysis (assessment of strengths, weaknesses, opportunities and threats), brainstorming and bibliometric analysis. The bibliometric analysis of the independent higher education quality assessment testifies of the insufficient attention paid to such method as meta-assessment that is widely applied by Chinese scientists in the process of independent estimation of higher education quality in China<sup>29-31</sup>.

The term “meta-assessment” was initially presented by Michael Scriven in 1969 in his work called “The educational products report”. Van Chanchun suggested that this

concept should be applied to the evaluation of educational product assessment system<sup>29</sup>.

According to Scriven, meta-assessment is “the assessment of the assessment”. Scientists Straw and Cook considered the significance of the quality of the assessment methods and of the conclusions of the assessment activities; they highlighted the need for systemic checks to determine the quality of their performance and results.

Chelimsky distinguishes three principal objectives of meta-assessment: formative, summarizing and one more objective associated with knowledge. Straw and Cook also emphasize such objectives of meta-assessment as improvement of the authenticity of the results and information awareness about the most important parameters of meta-assessment<sup>30</sup>.

Bibliometric analysis of meta-assessment of higher education quality in China demonstrates that this material has not been widely adopted by the theory and methodology of professional education in the Russian Federation. Due to this fact, for the purposes of studying the meta-assessment practices in China the educational schedule has been developed for additional professional education of teaching and managing staff in higher education institutions<sup>31</sup>.

## 4. Discussion

Independent education quality assessment in higher education institution according to international standards and requirements made it necessary to select the model among the existing ones taking into account their specifics and disadvantages.

The model of the standards series ISO 9001: 2008 does not describe all types of the activities of higher education institutions. There are some certain difficulties associated with designation (identification) and consistent correlation of these specific types of activities with some definite groups of the adopted classification and with definite clauses of ISO 9001: 2008. For example, licensing and accreditation, QMS certification, external audits and examinations providing society with information, international activities.

In standards and directives of ENQA, there is only Part 1; Parts 2 and 3 of this document have not been implemented yet (requirements to the bodies that accredit educational institutions, and the requirements to the authorities that accredit these bodies).

Other problems in implementing standards and directives of ENQA are that they predominantly cover educational activities and do not set any requirements to management of higher education institutions, science and innovations. In this regard it is deemed more appropriate that the complex model of independent education quality assessment should be applied within the framework of the competition held by Federal Education and Science Supervision Service of the Ministry of Education and Science of the Russian Federation “Quality system for preparing graduates of educational institutions for professional education”. Apart from ENQA model, this model also took into account the requirements set forth in the documents of Model of the European Foundation for Quality Management (EFQM).

Specific features of QMS development and implementation in Transbaikal State University are associated with internal quality assurance and with external higher education quality control. To develop internal quality assurance, the model of the system has to be selected.

Developing competition in the market of educational services at regional, national and international levels that includes more demanding requirements to education quality on the part of the market and other stakeholders sets new challenges to organization and management of educational institutions under the conditions of the transition toward efficient contracts.

Selecting the method to assess the conformity with the requirements of the international standards of quality management system in higher education institution by holding external audit with independent experts it is necessary to justify the methods of investigation that would be applied in the course of this independent quality assessment of education as product or service; and these methods include accreditation, audit, ranking. The practical experience of implementing the methods of independent education quality assessment in higher education institutions revealed both strengths and weaknesses.

Professional-public accreditation of educational programs in conformity with the standard and regulatory guidelines for quality assurance in European higher education institutions not only predetermines the procedure of the interactions between the institution and the employer and the contents of the professional educational programs but it also establishes stronger responsibility of scientific and teaching personnel for development and implementation of the educational program which aims to streamline and to improve the efficiency of state higher

education organization, to upgrade its structure, to boost the quality of higher professional education.

The principal idea of independent assessment of educational program quality is to confirm the fact that the graduates of the accredited program are ready for independent activities in accordance with the modern requirements set for these specialists in professional sphere.

## 5. Conclusion

Scenario planning of strategic areas for education quality improvement in higher education institutions was founded on specifically developed expert and analytical projects for the institutions in line with the existing expert positions (National Training Foundation, Federal Institute of Education Development, leading higher education institutions, Russian State Social University, State Pedagogical University of Russia, Higher School of Economics – National Research University, agencies and associations) which makes it possible to outline the most important trajectories for education quality improvement in higher education institutions.

The results of the independent assessment of quality assurance mechanisms demonstrated the opportunities for overcoming the risks in transboundary higher education and helped consider independent education quality assessment as a factor of improving university competitive power under the conditions of international integration.

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