



## Monitoring the Performance of Educational Institutions: A Spur for the Implementation of Systemic Changes in Higher Education

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## **Monitoring the Performance of Educational Institutions: A Spur for the Implementation of Systemic Changes in Higher Education**

### Part One

*The article discusses the deployment of a comprehensive reporting and monitoring framework used to evaluate the performance of state and private higher education institutions in Russia. By referring to diversified indicators including organizational,*

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Color versions of one or more of the figures in the article can be found online at [www.tandfonline.com/mres](http://www.tandfonline.com/mres).

*financial and economic, training, research, graduate employment, and other metrics, the authors spotlight key developments taking place in the Russian higher education system as well as areas where reorganization/optimization measures are required.*

### **Structural changes in the Russian system of higher education**

According to the Russian Federation State Statistics Committee of Russia, during the 1990–91 academic year there were 514 institutions of higher education in Russia, none of which were private [4]. They were training 2,824,500 students, or 190 students for every 10,000 inhabitants of the country.

By the 2000–01 academic year, the situation had changed dramatically: the number of higher education institutions in Russia almost doubled. There were 965 universities, of which 358 were private, accounting for over one-third of the country's higher education institutions. A total of 4,741,400 students were enrolled at these institutions, of which 470,600, or about 10 percent, were enrolled in private universities. For every 10,000 inhabitants, there were 324 university students, of which 32 were educated at private universities.

By 2011, the growth rate of the number of new institutions had tapered off compared to the previous decade, although by then there were already 1,080 universities, which represents 10 percent increase. Most of these new institutions were private universities, which had increased in number over the previous decade to 446. The total student headcount was 6,490,000, of which a third, 1,036,100, studied at private educational institutions. There were 454 students for every 10,000 inhabitants, of which 72 were educated at private universities (Figure 1).

These data show that the branch campus network of the Russian higher education system has doubled in the space of 20 years mainly due to the emergence of private educational institutions, where every sixth student in the country studied. In 2012, over one-third (37 percent) of students at public

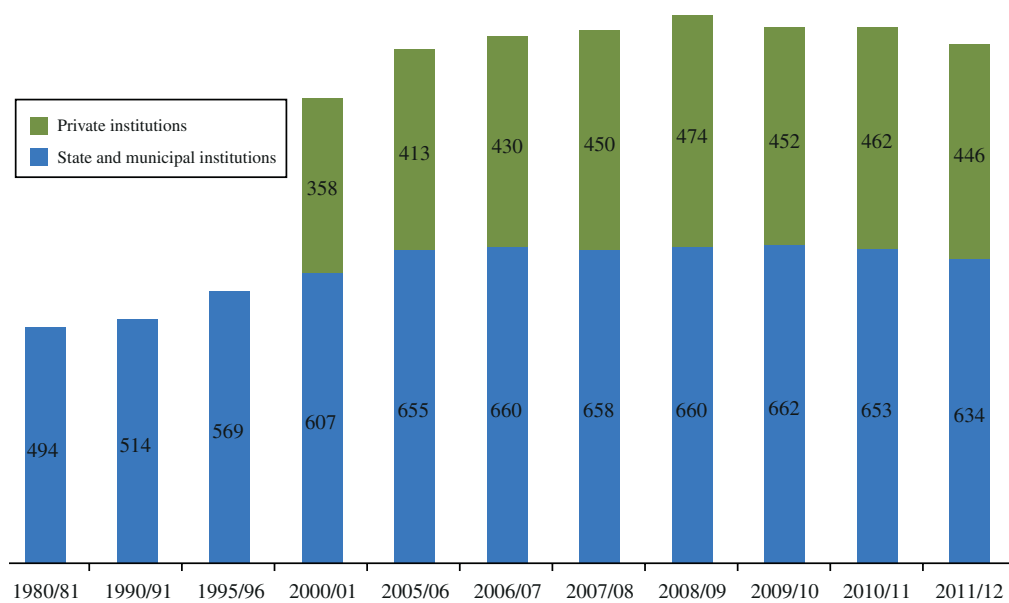


Figure 1. Structure of the Russian system of higher education

universities majored in the fields of economics, management, and law, whereas the corresponding figure at private universities was 81 percent of students. A total of 59 percent and 89 percent of students were enrolled in these programs at the main campuses and branch campuses, respectively, of private universities (Figures 2 and 3). These data were taken from the monitoring study conducted in 2013.

It is noteworthy that in 2011 significant changes were made to the university licensing procedure. Licenses became perpetual,

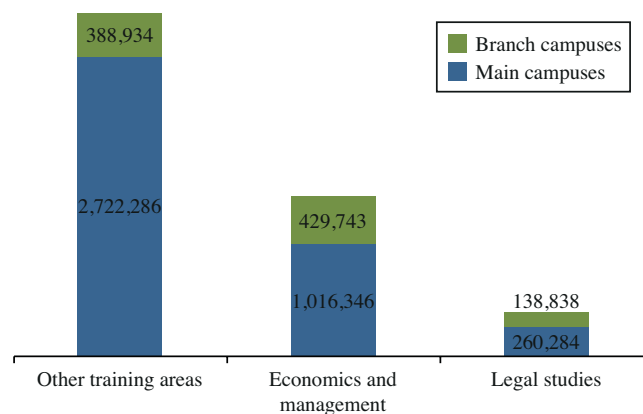


Figure 2. Student training structure at public institutions of higher education in 2012

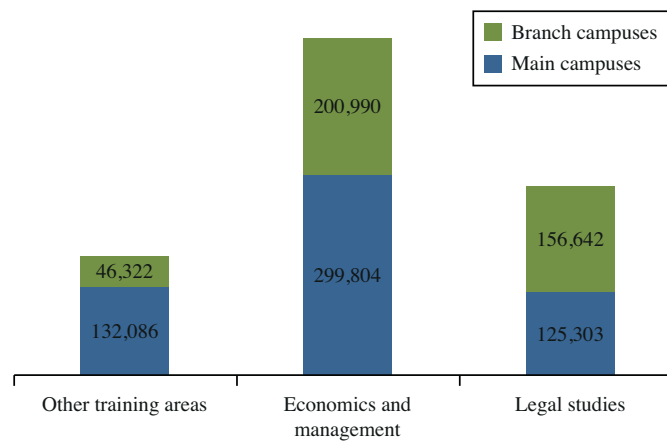


Figure 3. Student training structure at private institutions of higher education in 2012

and the initial licensing procedure was simplified and acquired a more declarative character. When bureaucratic procedures are simplified, formal control and supervision over compliance with regulations in the field of education and procedures to assess the quality of education are not carried out at the proper level. Between 2010 and 2012, under two percent of all submitted applications were rejected by the state accreditation system, and during the same period only four licenses were revoked according to the results of supervisory and monitoring measures.

In recent years, a network of educational institutions has been established in the Russian Federation, a significant part of which is made up of the branch campuses of public (Moscow and major regional) and private universities. A large share of students, especially at branch campuses, are enrolled in distance education programs in the fields of economics, law, management, and sociology. This suggests that the structure of the Russian higher education system does not correspond to international practice, and this undermines the efforts to maintain required quality standards in higher education.

The procedures that were used by the Russian Federal Education and Science Supervision Agency (Rosobrnadzor) in the past have failed to ensure an adequate quality of training for this segment of the educational network. The methods that have been used to collect statistical information have not ensured the

required level of openness for experts involved in monitoring and supervisory procedures, and have not been accompanied by analytical tools for making administrative decisions.

The processes associated with restructuring the higher education system have been subjected to monitoring in recent years in a number of countries that are implementing systemic changes in their higher education systems. For example, Kazakhstan adopted a law that actually prohibits the implementation of educational programs in higher education at university branch campuses. The number of universities in that country between 2000 and 2012 fell by 12 percent, although the number of students increased by 40 percent, meaning there were 343 students per 10,000 citizens [5].

In China, the number of universities increased by 8 percent between 2000 and 2012, while the number of enrolled students increased almost 1.5 times, reaching 233 students per 10,000 residents of the country [6]. In this country one can observe a trend where the most talented Chinese youth are seeking higher education abroad, mainly at universities in the United States. Measures aimed at improving the quality of higher education at Chinese universities, where most universities are following the model of American universities, are being adopted.

For comparison, we are able to cite data on changes in the number of institutions of higher education in the United States, where the population continues to prefer private institutions (according to the U.S. National Center for Education Statistics, Digest of Education Statistics, annual and unpublished data) [7; 8]. For example, between 1995 and 2010 the number of American universities increased by 21 percent to 4,495 in 2009. Of these institutions, private ones accounted for just over half: 2,823. The number of students enrolled in universities reached 20,428,000, of whom 5,617,000 studied at private universities. In other words, a fourth of all students in the United State were enrolled in private institutions, which account for half of all universities. There were 563 students per 10,000 members of the population in 2012. The main trend in the American system of higher education that has been observed in recent years is the

effort to maintain America's recognized high standing while continuing to optimize all processes involved in the operation of universities.

### **The bases for conducting monitoring studies**

By Decree of President of the Russian Federation Vladimir Putin dated May 7, 2012, No. 599, the Government of the Russian Federation was instructed to carry out a number of measures in the field of higher education aimed at improving the performance of this area [9]. These measures include "conducting monitoring studies of the activities of public educational institutions in order to assess their performance before the end of December 2012 and restructuring inefficient state educational institutions."

To achieve this goal, the following interrelated objectives must be achieved: the development of a data collection indicator system; the creation of an information system for collecting statistical information based on objective and measurable data, and the synchronization of these data with existing systems for federal and agency statistical reporting; the drafting of management decision-making criteria; and the development of the regulatory framework and organizational decision-making frameworks to either reorganize or optimize educational institutions.

The proposals and initiatives to address these challenges have been made by experts from both the academic community as well as from the Ministry of Education and Science of the Russian Federation. All these proposals have been widely discussed at meetings of the Association of the Leading Universities, the Russian Council of Rectors, the Association of Private Universities, as well as expert working groups. An initial set of about 500 parameters and dozens of criteria that take into account various aspects of the university's operations, analyzed for consistency, completeness, and their ability to elicit objective and verifiable information, have been proposed to assess the activities of educational institutions. As a result of the analysis and on the

basis of the views of the expert community a monitoring study scheme based on a group of 50 selected indicators, where five indicators would be used to make administrative decisions, was eventually implemented.

### **Monitoring studies: Do they monitor performance or are they a rating?**

Monitoring studies of universities are frequently compared with ratings. However, this is a problematic comparison. Monitoring studies and ratings differ fundamentally from each other in terms of their content, and they are subject to widely divergent interpretation methodologies [1]. Here are the generally accepted definitions of these concepts that have been proposed in widely used dictionaries.

A rating is understood to be a collection of objects or phenomena that have been ranked according to a numeric indicator that reflects the importance, significance, prevalence, popularity, and other similar qualities of an object or phenomenon as well as the methodology of the ranking. In other words, it is a numerical indicator that characterizes the preference for the assessed object over others [10]. As a rule, the rating is a conditional integral indicator that is based on a set of individual traits. As an evaluation method it requires a tool that is used to take measurements [2]. This tool, obviously, should consist of groups of criteria, corresponding quantitative data and a mathematical model used to determine the score, place, and position of the object (educational institution, educational program, etc.) relative to other similar objects.

By contrast, a monitoring study is understood to be a system for the collection/recording, storage, and analysis of a small number of key (express or implied) attributes/parameters of an object that make it possible to issue a judgment about the behavior/status of the object as a whole, that is, for making a judgment about the object as a whole by analyzing a small number of its characterizing features [11].



The Decree of the President of the Russian Federation addresses monitoring studies of the performance of institutions of higher education. This is understood not so much as a data acquisition system but rather as a mechanism for the development of recommendations for making administrative decisions.

Thus, monitoring the performance of educational institutions does not imply a ranking or comparison of objects on the basis of an integral parameter. It is not an independent supervisory system but rather a mechanism for systematic collection of data on various aspects of higher education that allow judgments to be made about their performance on the basis of agreed and approved criteria. These, in turn, are linked to the achievement of threshold values for a small number of simple and reliable measurable indicators.

These factors constitute the essence of a monitoring study as it is used to assess the performance of higher education institutions. Let us examine its methodology.

The purpose of performance monitoring is to generate statistical and analytical materials using the information about institutions of higher education and indicators that are used to measure their performance for subsequent decision making about higher education institutions and their branch campuses that have been placed into the “at risk” group on the basis of agreed and approved criteria.

The subjects of performance monitoring studies are institutions of higher education in the Russian Federation (universities and university branches), including both state and private institutions.

Performance monitoring is carried out separately for a group of university main and branch campuses (beginning in 2013, private universities started to participate in the monitoring study).

The basic principles used to monitor performance include:

- Openness and publicity of measures and data;
- Continuity and comparability of indicators;
- Accounting for the specific nature of educational institutions when generating monitoring study indicators;
- Ability to provide documentary confirmation of data provided by the organizations themselves;

—Ability to receive data about educational institutions from external sources.

### **General indicators used in monitoring studies of the status of the main/branch campuses of universities**

The three-level system of indicators forms the basis for performance monitoring studies: indicators, threshold values, and criteria used to determine at-risk institutions.

A total of 50 indicators distributed across five areas of operations at educational institutions as represented in the table below are used as the basic parameters for the observation of educational institutions: educational activity (12 indicators), research activity (17), international activities (9), financial and economic activities (5), and infrastructure (6) [see [Table 1](#)].

These indicators are designed to provide a uniform and general cross section of the operations of educational institutions without considering their relative ranking to each other.

The first six indicators of the “Educational activities” section characterize the structure and the quality of admissions at an institution of higher education, and the following four indicators characterize the cohort of students and how attractive the educational organization seems to them. The remaining two indicators reflect the quality of the teaching staff responsible for conducting the institution’s educational activities. This set of indicators does not allow for a qualitative assessment of educational programs and the actual content of education. However, it provides data that make it possible to identify the types of educational programs offered at the institution.

The first six indicators in the “Research activities” section characterize the publication activity of faculty members at educational institutions, and the next five indicators characterize the revenues from research activities, the activity of faculty members to secure research projects for their educational institution. Two indicators are designed to assess the marketability of research activities, two indicators characterize the

Table 1

**List of Indicators Used in the Russian System of Evaluating the Performance of Higher Education Institutions [3]**

No. in order A	Indicators B	Unit of measurement C
<b>1.</b>	<b>Educational activities</b>	
1.1	Average Unified State Exam [USE] score earned by students who have been accepted on the basis of this test result or arts examination results (scored on a 100-point scale) into full-time bachelor's and specialist training programs on a state-supported scholarship basis as funded by the state budgetary system of the Russian Federation	Score
1.2	Average USE score earned by students who have been accepted on the basis of this test result into full-time bachelor's and specialist training programs with tuition payments covered by individuals or legal entities	Score
1.3	Average minimum USE score achieved in represented fields (specializations) by students accepted into full-time bachelor's and specialist training programs on the basis of test results	Score
1.4	Number of first-year students admitted to full-time bachelor's and specialist training programs without having taken entrance examinations: the winners of the final stage of the Russian National Academic Olympics	People
1.5	Share of students enrolled in full-time bachelor's and specialist training programs by virtue of having participated in specialized academic competitions: the winners of the Academic Olympics, members of Russian national teams participating in the international Academic Olympics in general subjects determined according to the manner prescribed by the Ministry of Education and Science of the Russian Federation, the total number of students admitted as freshmen in full-time bachelor's and specialist training programs	%

(Continued)

Table 1  
(Continued)

No. in order	Indicators	Unit of measurement
A	B	C
1.6	Share of first-year students enrolled on the basis of the result of targeted admission policies in full-time bachelor's and specialist training programs, out of the total number of students who were accepted as freshmen in full-time bachelor's and specialist training programs	%
1.7	Share of students (adjusted headcount) enrolled in master's programs, out of the total number of students enrolled in basic programs of higher education (adjusted headcount)	%
1.8	Share of students (adjusted headcount) who have received higher professional education at other universities, out of the total number of students who have been accepted into master's programs at the university (adjusted headcount)	%
1.9	Number of graduate students per 100 students (adjusted headcount) at the university	Units
1.10	Share of students from outside institutions, out of the total number of student's who enrolled in continuing education or retraining programs at the university	%
1.11	Share of teaching and research faculty members (hereafter faculty members) with a candidate of sciences degree, out of the total faculty	%
1.12	Share of faculty members with a doctor of sciences degree, out of the total faculty	%
<b>2.</b>	<b>Academic and research activities</b>	
2.1	Number of citations in the Web of Science (international database) per 100 faculty members	Units
2.2	Number of citations in Scopus (international database) per 100 faculty members	Units
2.3	Number of citations in the Russian Science Citation Index (RSCI) per 100 faculty members	Units
2.4	Number of publications in the Web of Science per 100 faculty members	Units

(Continued)

Table 1  
(Continued)

No. in order	Indicators	Unit of measurement
A	B	C
2.5	Number of publications in the Scopus per 100 faculty members	Units
2.6	Number of publications in the RSCI per 100 faculty members	Units
2.7	Total number of research and development projects (R&D)	Thousands of rubles
2.8	R&D spending per faculty member	Thousands of rubles
2.9	Share of R&D revenues out of the university's total revenues	%
2.10	Share of R&D carried out at the institution (without the involvement of subcontractors)	%
2.11	Revenues from research and development (with the exception of funding grants from public budgets making up the Russian state budget system and state research support funds) per faculty member	Thousands of rubles
2.12	Number of license agreements	Units
2.13	Share of funds allocated to the university from the intellectual property administrative office, out of the university's total revenues	%
2.14	Share of young academics (without a degree, under 30 years old; with a candidate of sciences degree, under 35 years old; with a doctor of sciences degree, under 40 years old), out of the total faculty	%
2.15	Number of graduate students, doctoral students and university staff who have defended candidate and doctoral theses in the past three years, per 100 faculty members	Units
2.16	Number of research journals, including electronic ones, published by the university	Units
2.17	Number of secured Russian and foreign grants per 100 faculty members over the past three years	Units
<b>3.</b>	<b>International activity</b>	
3.1	Share of foreign students (except for students from the Commonwealth of Independent States (CIS)) who have completed basic higher educational programs, out of the total number of students (adjusted headcount)	%

(Continued)

Table 1  
(Continued)

No. in order	Indicators	Unit of measurement
A	B	C
3.2	Share of foreign students from the CIS countries who have completed basic higher educational programs, out of the total number of students (adjusted headcount)	%
3.3	Share of foreign nationals among faculty members (including those working under fixed-term contracts), out of the total faculty	%
3.4	Share of university students enrolled in full-time training programs who studied abroad for at least a semester (trimester)	%
3.5	Number of foreign university students who completed full-time basic training programs in higher professional education for at least a semester (trimester), per 100 students (adjusted headcount)	Units
3.6	Share of foreign graduate students (excluding from the CIS) out of the total number of graduate students at the university	%
3.7	Share of foreign graduate students from the CIS, out of the total number of graduate students at the university	%
3.8	University revenues from foreign sources generated by conducting R&D, per faculty member	Thousands of rubles
3.9	University revenues from foreign sources generated from educational activities, per faculty member	Thousands of rubles
<b>4.</b>	<b>Financial and economic activities</b>	
4.1	University revenues from all sources per faculty member	Thousands of rubles
4.2	University revenues from revenue-generating activities per faculty member	Thousands of rubles
4.3	Ratio of the average salary of each faculty member (from all sources) to the region's average wage	%
4.4	University revenues from all sources based on the number of students (adjusted headcount)	Thousands of rubles

(Continued)

Table 1  
(Continued)

No. in order	Indicators	Unit of measurement
A	B	C
4.5	University revenues, with the exception of revenues from core activity and rent, per faculty member	Thousands of rubles
<b>5.</b>	<b>Infrastructure</b>	
5.1	The total area of teaching and research facilities per student (adjusted headcount), including:	sq.m.
5.1.1	space in freehold tenure	sq.m.
5.1.2	space under management and operation	sq.m.
5.1.3	space in leasehold tenure and under free use	sq.m.
5.2	Number of personal computers per student (adjusted headcount)	Units
5.3	Share of the book value of modern machinery and equipment (that is less than 5 years old) at the university, out of the total book value of machinery and equipment	%
5.4	Number of copies of educational literature and textbooks, out of the total library holdings at the institution, which are recorded in the catalog, per individual student (adjusted headcount)	Units

quality of research staff, and the last two indicators in this section assess the status of researchers in the Russian and foreign research community. This set of indicators does not make it possible to provide a qualitative assessment of the spectrum of research carried out at institutions of higher education.

Indicators in the “International activities” section provide additional metrics that characterize the educational institution in the areas of education and research activities. Thus, six of the indicators characterize the international dimension of educational activities, including the training of graduate students, and they describe the attractiveness and accessibility of the university’s education opportunities for foreigners as well as the degree of the institution’s focus on the international market (according to the

amended Federal Law “On Education in the Russian Federation,” graduate studies represent one of the levels of education).

Three indicators describe the level of recognition of the research excellence of the educational institution in the eyes of foreign funders and the institution’s attractiveness for foreign researchers.

The “Financial and economic activities” and “Infrastructure” sections of the indicators in the Russian National system for Evaluating the Performance of Institutions of Higher Education give a corresponding idea of the general state of the operations of the educational institution in terms of its financial resources as broken down by the structure of its revenues and the share of these revenues per student and per member of the research and teaching staff, as well as the funding required to support the sustainable development of educational and research processes through the funding of facilities and the purchase of research and laboratory equipment, computers, and library resources.

In general, professionals in higher education exhibit a positive attitude to this set of presented indicators, since when taken together they provide a particular conception about the institution of higher education’s status. We must consider that in order to obtain these 50 observed parameters the institution must fill out the Monitoring-1 data collection form (by Order of the Ministry of Education and Science of the Russian Federation dated August 3, 2012, No. 583), which includes about 10,000 absolute values about the individual institution of higher education that are submitted to the Russian Federal State Statistics Service on an annual basis. These data are submitted using the following federal statistical data collection forms: VPO-1, VPO-2, 1-NK, and 2-Nauka, which are designed to collect 7,000 absolute values that characterize the various metrics about the institution’s individual educational programs.

The need to consider the specific nature of the institution of higher education when drafting monitoring indicators was taken under advisement during the review of the 2013 monitoring study of educational institutions after special consultations with the



representatives of the ministries and agencies on the results of the 2012 monitoring study.

The criterion that is used to classify institutions of higher education that offer specialized training states that at least 60 percent of their applicants matriculating as freshmen during the reporting year must be enrolled in a predetermined group of majors and training areas in order for the institution to qualify.

By using this criterion, we have identified the following groups of universities offering specialized training programs for which separate invariant figures have been changed and divergent indicators have been added:

- Military, security agency, and police;
- Medical;
- Fine arts;
- Transport;
- Agricultural;
- Sports.

The analysis based on this criterion has shown that not all higher education institutions affiliated with a particular agency are in fact specialist institutions. Universities within the Russian Ministries of Sports, Health, and Culture most clearly demonstrate this point. Only one-third of the educational institutions within the Russian Ministry of Agriculture are agricultural establishments (32 out of 91, and only 22 main campuses out of 59), and only a third of the institutes within the Ministry of Transport of Russia are transport establishments (48 out of 141, and only three main campus out of 19).

### **Monitoring study indicators underlying the criterion used to determine the status of institutions of higher education**

Exactly one key indicator, which is not correlated with other indicators within this group that makes up its own set of metrics, was selected for each group. This set was taken as the basis for making judgments about the activities of the institutions of higher

education (both the main and branch campuses of universities). It consists of both an invariant (mandatory for all university main and branch campuses) and a variable part (determining indicators related to the specific activity of the educational institution).

It should be noted that representatives of the academic and professional community have approved the selected set of indicators. They have received support from the Russian Union of Rectors, the Association of Leading Universities, the Association of Private Universities, and other professional organizations.

The invariant set of indicators characterizing university activity includes the following indicators.

1. Educational activities: average Unified State Exam score earned by students who have been accepted on the basis of this test results into full-time bachelor's and specialist training programs on a state-supported scholarship basis as funded by the state budgetary system of the Russian Federation or with tuition payments covered by individuals or legal entities (weighted average). This indicator has been in use since 2012.

Modified indicators taking into account the specific nature of the educational institutions. These indicators have been in use since 2013.

For military, security agency, and police educational institutions: average Unified State Exam score earned by students who have been accepted on the basis of this test result or professional examination results (scored on a 100-point scale) into full-time bachelor's and specialist training programs on a state-supported scholarship or for-fee basis.

For institutes of fine arts: average Unified State Exam score earned by students who have been accepted on the basis of this test result or arts examination results (scored on a 100-point scale) into full-time bachelor's and specialist training programs on a state-supported scholarship or for-fee basis.

For sports educational establishments: average Unified State Exam score earned by students who have been accepted

on the basis of this test result or professional examination results (scored on a 100-point scale) into full-time bachelor's and specialist training programs on a state-supported scholarship or for-fee basis.

2. Research activities: the amount of research and development work per faculty member. This indicator has been used since 2012.

For institutes of fine arts: the amount of research and development activities and funds allocated to creative projects per faculty member. A modified indicator has been used since 2013.

3. International activities: the share of foreign students who have completed basic programs in professional higher education, out of the total number of graduating students (adjusted headcount). This indicator was only used in 2012.

The share of foreign students enrolled in basic programs in professional higher education, out of the total number of students (adjusted headcount). This indicator has been used since 2013.

4. Financial and economic activities: the amount of revenue from all sources calculated per faculty member. This indicator has been used since 2012.
5. Infrastructure: the total area of teaching and laboratory buildings per student (adjusted headcount) available at the university main campus/branch campus and owned and operated by that institution. This indicator has been used since 2012.
6. Employment of graduates: the share of full-time graduates that have applied to the institution's employment services for assistance in finding a job during the first year after graduation. This indicator has been used since 2013, and it is considered only for the university main campus.
7. Human resources: total faculty members (as adjusted in line with the faculty actual academic loads) holding the academic degree of candidate and doctor of sciences per 100 students. This indicator has been used since 2014 for comprehensive universities.

Another three indicators that additionally characterize the functions of branch campuses have been added to the set of invariant indicators used in university performance evaluation:

- Adjusted student headcount;
- The tenured faculty’s share of candidates and doctors of sciences (excluding part-time faculty members and those working under civil law contracts);
- The share of tenured faculty (excluding part-time faculty members and those working under civil law contracts) in total faculty.

The variable set of indicators describing the performance of educational institutions includes the following indicators, which are used for educational institutions that have been classified as specialist since 2013.

For military, security agency, and police educational establishments: the share of faculty members with specialized higher education with at least five years of work experience in the army (navy), military command posts, departments, military units, and organizations, with a military (special) rank of at least a major, as well as combat experience, including during relief efforts in response to natural and man-made disasters, and who have received state awards, state or service branch honorary titles or who have received state prizes.

For medical institutes: the share of tenured faculty members (as adjusted in line with the faculty actual academic loads) out of the total faculty, excluding part-time faculty members and those working under civil law contracts, who possess degrees of candidate or doctor of sciences that have been classified under section 14.00.00 “Titles of specializations of research and teaching faculty members.”

For institutes of fine arts: the share of tenured faculty members (as adjusted in line with the faculty actual academic loads) out of the total faculty (excluding part-time faculty members and those working under civil law contracts), who have been granted state

honors/awards and/or have won international and national competitions.

For sports institutes: the share of students who are candidates for the sports teams of the Russian Federation by type of sport in total student number.

For agricultural institutes: the share of tenured faculty members (as adjusted in line with the faculty actual academic loads) who possess the degrees of candidate or doctor of sciences that have been classified under specialization sections 03.00.00, 05.20.00, 06.00.00, and 25.00.00 “Titles of specializations of research and teaching faculty members” out of the total faculty (excluding part-time faculty members and those working under civil law contracts).

For transport institutes: the average annual number of students enrolled in specialized continuing education and professional training programs.

The model used to make recommendations about the status of the educational institution involves the set of analytical and administrative measures described below.

The choice of the so-called threshold values of indicators underlies the basis of the model. These are used to determine candidates for the “at-risk” group of educational institutions (Figure 4).

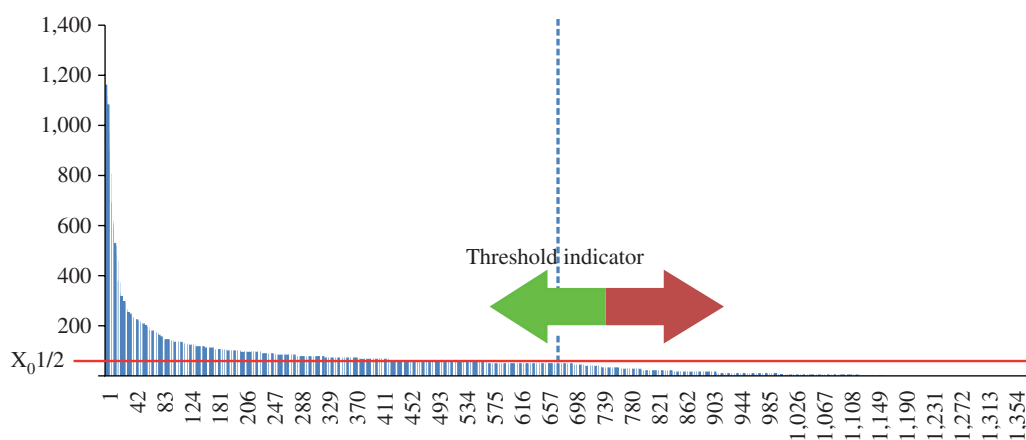


Figure 4. Setting the threshold value for the “Research Activities” Indicator in 2014

Median values are selected for each indicator corresponding to the value of the indicator for a particular educational institution that represents the median of the sample.

Thus, the indicator values of each educational institution may either not reach the threshold (red zone) or exceed it (green zone).

The above method of establishing threshold values not only ensures the necessary clarity and transparency of the resulting indicators, but it also helps during the annual review process when indicators are adjusted and updated.

The main criterion used to classify educational institutions in the “at-risk” category is the number of educational institutions that have failed to achieve thresholds for each indicator:

- The model implemented in 2012: if the institution has achieved values below the threshold ones for four or five indicators out of five and the branch campus has lower threshold values for five or more indicators out of eight, then it can be classified as an “at-risk” institution. In this case, the threshold values of the indicators can be determined separately for the main campus and the branch campuses;
- The model implemented in 2013: the educational institution (main campus or branch campus of the university) is classified in the “at-risk” group if it fails to meet thresholds for any three or more indicators. Decision-making criteria are applied uniformly to educational institutions (main and branch campuses of universities), regardless of whether they are classified as specialist institutions, where the threshold values are evaluated separately in the regional samples of the main and branch campuses of universities;
- The model implemented in 2014: the educational institution (main or branch campus of the university) is classified in the “at-risk group” if it fails to achieve thresholds for four or more indicators, regardless of their classification (main as well as branch campuses of universities).

An institution's decision-making process includes an annual cycle ensuring the consistent implementation of several stages of measures.

The first stage proposes the adoption of decisions by the Inter-Agency Commission for the Monitoring of the Performance of Higher Education Institutions, which is the supreme body in charge of decision-making on institutional approaches, criteria, indicators, and the road map for implementing monitoring studies during the current year [12]. The Interagency Commission includes representatives of the founders of educational institutions, ministries and agencies, regional and municipal authorities, and the university and academic community, including members of the university associations, regional councils of university rectors, officials at the Russian Ministry of Education and Science, and deputies of the State Duma of the Russian Federation. It includes a total of more than 40 people.

The second stage is the annual collection of data about the activities of institutions of higher education at a particular point in time using the Monitoring-1 form, which is similar to the federal statistical observation forms (VPO-1, VPO-2, 2-Nauka, etc.), since the Monitoring-1 form is modeled on these forms.

The third stage is the verification of these data using information from educational institutions that was previously collected from federal statistical observation forms as well as information that is available from public sources; when discrepancies are discovered, the Russian Ministry has the right to submit a request to the educational institution that first collected the information to confirm the correctness of the data that were provided.

The fourth stage is the analysis of these data using the invariant indicators for all educational institutions, as well as additional, variable indicators for selected groups of specialized educational institutions.

The fifth stage consists of expert discussions at the meetings of the working groups of the Interagency Commission on educational institutions that have been classified as "at-risk" on the basis of formal criteria. This commission decides on whether it is expedient to let these institutions continue to function. The discussions take

account of the views of the representatives of the regional authorities, regional councils of rectors, employers, and representatives of the Plenipotentiary of the President of the Russian Federation.

In concluding part one of this article, it should be noted that in the course of the monitoring study the activities of each educational institution were considered comprehensively and objectively, including the specific nature of their educational programs, the priorities of the socioeconomic development of the region where the institution is located, and the demand for employees in key industries. As a rule, the outcome of the analysis conducted by the working groups includes not just the recommendations made to the Interagency Commission concerning what decisions should be made, but also proposals for the regions to participate in the development of specific universities and their branch campuses. In the second part of this article, we will consider not only the monitoring data, but also the way the above-described performance monitoring framework has been facilitating the development of higher education institutions.

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