

Ways to improve the competitiveness of Russian higher education in the global education market

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Key words

University, Global education market, Competitiveness, Effectiveness.

Abstract

The paper looks into the status of Russian universities, their competitiveness and performance in the today's world educational market according to the global QS World University Ranking formed by the British company Quacquarelli Symonds. Within the framework of the research a method has been proposed for clear demonstration of successful performance of a university by faculty and by subject; a comparative indicator analysis has been made for separate divisions of the world universities which have leading positions according to the rankings. The conclusion includes ways to increase performance of Russian universities by separate faculties and subjects and considers opportunities to advance them in the world rankings.

Introduction

In the conditions of soaring demand for higher education, the global university rankings are becoming increasingly important as their results both allow assessing the quality of the higher education and influence it on the global scale. To be recognized at the international level proves to be more and more important for universities all over the world and for their competitiveness in the market of higher education.

In the context of these conditions, nowadays both the President and Government of the Russian Federation pay special attention to the problem related with increase of prestige of Russian higher education institutions at the international level in the conditions of constantly growing competition on the part of universities which represent countries with traditionally developed science (USA, Western Europe, Canada, Japan, Australia, New Zealand, Israel) and countries with rapidly growing science (China, Republic of Korea, Taiwan, Brazil, Turkey, Iran).

This matter has become important in the world community due to the fact, which determines dependence of prospective dynamic social and economic development of a country on its intellectual potential. Today the Russian Federation, unlike the Soviet Union, is an exporting country which sends those who want higher education to study abroad, which subsequently aggravates the problem of prospective development of the country.

In the Soviet period, Russian universities taught a lot of students from socialist European countries, such as Poland, Bulgaria, Eastern Germany, Czechoslovakia etc., as well as Asian and African countries – China, Vietnam, India, Pakistan and many others. Therefore, diplomas of Russian universities were recognized in these countries (and in some others, too) as a document on adequate higher education.

Unfortunately, the reforms in 1990s, which were meant to establish market relations in the country and, above all, to ensure profitable economy, also spread onto Russian science, including the higher school. In the conditions of severe economic crisis which the country was

experiencing and dramatic decrease in funding, universities had to struggle for survival on their own. Extensive introduction of part-time learning on commercial basis was one of the ways universities used to develop self-financing. This resulted in increased workload on the same teaching staff and, correspondingly, poorer quality of education.

The industrial production crisis destroyed contacts and connections between enterprises and university science and, therefore, scientific research sectors in Russian universities either reduced sharply in number or stopped to exist at all. This fact also affected the level of staff training and unbalance between the categories of specialists who were being trained and the market requirements. Moreover, we have to mention the fact, that as globalization processes gather pace, distinctions of Russian education are becoming more and more visible comparing to the global trends of development of educational systems which feature academic mobility of students and educational programs, customization of academic activities, commitment to freedom and personal enhancement needs, fair use of budget funds so as to provide equal conditions of access to higher education for all citizens.

Owing to these reasons, by the beginning of the 21st century both Russian science and Russian higher school have lost to a great extent the international prestige they used to have. Furthermore, by that time educational services had been bringing big revenues to universities whereas growingly important university ranking had turned into a powerful advertising tool. The aforementioned allows revealing the importance of the problem to advance Russian universities in the world educational market and makes it possible to stipulate the following research objectives: analysis of Russian universities' status in the world market; comparative performance analysis of divisions of the leading (according to the rankings) world universities; proposal of faculties for potentially productive development of Russian universities.

Vertical Race: Ranking Advancement and Universities' Fight for Students

Today how attractive a university is for students and how prestigious its diplomas are for employers largely depend on its ranking position. Rankings of the best world universities are regularly prepared by different agencies and posted on the Internet, which results in a healthier system of higher education on the whole [9]. Russian universities occupy fairly modest positions in these rankings. This contributes to the Russian higher education discredit both on a global and domestic scale. Thus, for instance, the survey, conducted by the Institution of Educational Sociology of the Russian Academy of Education (*Rus*: Institut sotsiologii obrazovania Rossiiskoi Akademii Obrazovania) among Moscow senior high school students, revealed that 46.3% of them would like to continue their education abroad, whereas 41.8% of teenagers dream of getting a job in a foreign country [4]. As for foreign students who study in Russian universities, they often choose to do so because of tuition costs or due to the fact that their score is not high enough to enter western universities. Thus, for example, in China they believe that the most prestigious education can be obtained in the USA, the UK and western European countries and students turn to Russian universities only after rejecting other options.

Following the careful attention on the part of the President and Government of the Russian Federation, the Ministry of Education and Science of the RF together with the National Training Foundation have developed the draft 'Concept of Russian Federation's Educational Service Export for 2011-2020', which reviews, in particular, the change dynamics in Russia's positions on the global market of educational services. The Soviet Union used to be ranked number two (after the USA) by number of foreign students, but now Russia is ranked number nine by this category. According to the Organization of Economic Co-operation and Development (OECD), in 2007 the total number of foreign students was 3 million. Russian

universities accounted for 2% of this number, whereas the share of the USA was 20% and that of the UK was 12%. Germany and France teach 9% and 8% correspondingly. Moreover, a lot of students study in Australia (7%), Canada (4%) and Japan (4%) [2].

The strategic goals of the national educational policy are:

- to improve attractiveness and competitiveness of the Russian educational system in the global and regional educational sphere;
- to ensure effective participation of Russia in the global and major regional processes of education development;
- to increase an export share of educational services in the GDP of Russia.

In order to achieve these goals it is essential, first of all, to advance our best universities (and there are quite a number of those!) in the global rankings.

One of the most reputable rankings is the *QS World University Ranking*, which is made by the consulting company Quacquarelli Symonds (QS) starting from 2004. To be ranged by this particular agency is not only prestigious but also promises large revenues from teaching foreign students. So universities strive for being noticed by the company QS. This trend is clearly seen in the dynamics of the constantly growing number of universities in the published rankings. If in 2007 619 universities were presented, in 2001 this figure was 724. In 2013 the ranking covered 834 from 76 countries of the world. To select them from about 3000 universities who had applied, 62094 opinions of scientists from various countries, and 27957 views of employers were considered [5;6]. Starting from 2005, five Russian universities took their positions in this ranking (Table 1).

Name of University	2005	2006	2007	2008	2009	2010
Lomonosov Moscow State University	93	93	231	183	101	93
St. Petersburg State University	164	164	239	224	168	210
Novosibirsk State University	346	346	440	401-500	312	375
Moscow State Institute of International Relations (MGIMO)					601+	601+
National Research University "Higher School of Economics"					501-600	451-500
Ural Federal University named after the first President of Russia B. N. Yeltsin					601+	501-550
Tomsk State University	269	269	466	401-500	401-500	401-500
Kazan (Volga region) Federal University	476	476	528	501+	501+	501-600

Table 1. Russian universities in the QS World University Ranking 2005-2010

As it is seen, there have been no considerable improvements in the ranking positions of Russian universities although their number has increased to 8. This does not mean that our universities started to work worse in the education and research field. It just reflects that universities in other countries tend to pay much more attention to their rankings indices and make more efforts to improve them. It is worth mentioning that the importance of being present in the international rankings is increasingly understood by the management of Russian universities. This is proved by the fact that the

number of national universities in the QS World University Ranking have risen considerably over the past three years (Table 2).

	Name of University		2011	2012	2013
1.	Lomonosov Moscow State University	Ranking	112	116	120
		Line	112	116	120
2.	St. Petersburg State University	Ranking	251	253	240
		Line	251	253	240
3.	Bauman Moscow State Technical University	Ranking	379	352	334
		Line	379	352	334
4.	Novosibirsk State University	Ranking	400	371	352
		Line	400	371	352
5.	Moscow State Institute of International Relations (MGIMO)	Ranking	389	367	386
		Line	389	367	386
6.	Moscow Institute of Physics and Technology (State University)	Ranking			441-460
		Line			443
7.	Saint Petersburg State Polytechnical University	Ranking			441-460
		Line			457
8.	The Peoples' Friendship University of Russia	Ranking	551-600	501-550	491-500
		Line	573	522	495
9.	National Research University "Higher School of Economics"	Ranking	551-600	501-550	501-550
		Line	537	550	518
10.	Ural Federal University named after the first President of Russia B. N. Yeltsin	Ranking		451-500	501-550
		Line		469	549
11.	Tomsk Polytechnic University	Ranking	551-600	601+	551-600
		Line	541	616	583
12.	Tomsk State University	Ranking	451-500	551-600	551-600
		Line	451	568	584
13.	Kazan (Volga region) Federal University	Ranking	601+	601+	601-650
		Line	648	697	612
14.	Southern Federal University	Ranking			601-650
		Line			626
15.	Far Eastern Federal University	Ranking		601+	701+
		Line		612	723
16.	N. I. Lobachevsky State University of Nizhny Novgorod	Ranking		601+	701+
		Line		646	740
17.	Plekhanov Russian University of Economics	Ranking		601+	701+
		Line		623	747
18.	Voronezh State University	Ranking			701+
		Line			832

Table 2. Russian universities in the QS World University Ranking 2011-2013

As table 2 shows, the number of universities in the 2013 rankings has more than doubled (from 8 to 18). Even though the positions of several universities are in the rearguard sector

(ranking 701+) and they can hardly be considered as stable ones, there is hope that conscious efforts of Russian universities to improve their indices in the ranking will yield. According to the Russian Federal State Statistics Service (*Federal'naya sluzhba gosudarstvennoi statistiki*) today, in Russia there are 1046 higher educational institutions [3]. So 1.7% of Russian universities are represented in the QS ranking. In contrast, according to the 2009 data there were 4352 higher educational institutions in the USA and the 2013 ranking comprises 144 universities, i.e. 3.3%. At first glance, our representation in the QS ranking is just twice as low as that of the USA, but we should not forget that the number of American universities ranged in the QS is 8 times as many as that of Russian ones. Remarkably, the USA population is only twice as big as the population of Russia, which means that higher education is much more accessible for the USA residents than for people who live in Russia. This statistics makes us believe that there is some inconsistency between the country's innovation development course, which has been proclaimed by the Government of the Russian Federation and which cries for educated specialists in all fields of economy, and the projects designed for considerable reduction of the national universities. Moreover, the universities we refer to are not private but state educational institutions.

Performance analysis of educational and scientific activities of universities is the basis for their harmonious development

University rankings by educational and scientific faculty developed by the British company «Quacquarelli Symonds» (QS) are very useful, as they let us analyze strengths and weaknesses of multidisciplinary universities. To design these rankings there is no need for additional research. The information basis is the data used for the key ranking, the QS World University Ranking. The local ranking is formed by each faculty and includes 400 best universities. Assessment is done by a narrower range of indices: academic reputation, reputation with employers, number of citations per paper published, h-index. It is worth saying that for each faculty the weight of these indices is different (Table 3).

Faculty Area	Academic Reputation	Employer Reputation	Citations per Paper	H-index Citations
Arts & Humanities	60%	20%	10%	10%
Engineering & Technology	40%	30%	15%	15%
Life Sciences & Medicine	40%	10%	25%	25%
Natural Sciences	40%	20%	20%	20%
Social Sciences & Management	50%	30%	10%	10%

Table 3. Indices for ranking by faculty

Table 3 shows that in local rankings for humanitarian faculties (Art & Humanities and Social Sciences & Management), academic reputation is the most influential one, whereas citation indices are notably less considerable. As for Life Sciences & Medicine, the influence of citation indices becomes crucial for ranking. It is visible achievements in these fields under conditions of innovation economy that drive development while publications in international scientific press cement the results obtained and provoke vivid feedback, which results in intensive citing in these areas of activities. Thus, the combination of academic activities indices and scientific performance indices conditions the position of the university by 70-90% in the ranking by faculty.

Only two universities represent Russia in these local rankings: Moscow State University and St. Petersburg State University. To make the picture complete, let us compare the local rankings of American, French, German, Finnish and Chinese universities, which occupy the best positions among universities of their countries in the major ranking, and the indices of our leading universities (Table 4). In our table the USA universities are represented by Massachusetts Institute of Technology (MIT), an absolute world leader according to QS. The French university with the highest position in the ranking is the École normale supérieure, the foremost technical university, whose prestige in France is even higher than that of the famous Sorbonne. One of the best German universities in the ranking is the Technische Universität München, which specializes in exact sciences. Although several European universities have higher positions in the ranking, for our survey we have chosen the University of Helsinki because our universities have been actively collaborating with Finnish ones for quite a while and a lot of Russian students study in Finnish educational institutions and subsequently they even find interesting jobs in this country. Moreover, Finland occupies the second place by education index.

According to assessments of international experts, universities in Asian region have been developing rapidly. We have taken Peking University as an example. It attracts attention because all its faculties and sciences have been developing harmoniously.

School Name	QS Rank	Rank by Faculty				
		Arts & Humanities	Life Sciences & Medicine	Social Sciences	Engineering & Technology	Natural Sciences
Massachusetts Institute of Technology (MIT)	1	18	6	7	1	2
Ecole normale supérieure, Paris	28	109	0	0	136	74
Peking University	46	23	101	25	38	21
Technische Universität München	53	0	83	246	17	15
University of Helsinki	69	46	55	75	186	82
Lomonosov Moscow State University	120	0	374	271	199	84
Saint-Petersburg State University	240	0	0	0	0	275

Table 4. Local ranking indicates by faculty in 2013

Table 4 shows the position of the university in the general ranking and number of the line the university occupies in the local ranking. These data prove that even the best universities have different performance by various scientific faculties. Normalized coefficients are always more demonstrative for comparison. To assess performance by faculty, a performance coefficient by faculty (C_{per}) can be proposed:

$$K_{res} = \frac{N-(m-1)}{N} \quad (1)$$

Where C_{per} – performance coefficient by faculty

N – number of universities in the local ranking;

m – number of the line the university takes in the ranking.

After the formula, proposed by the authors, have been applied (1), coefficients are obtained which reflect performance of universities by faculty (table 5).

School Name	Rank by Faculty				
	Arts & Humanities	Life Sciences & Medicine	Social Sciences	Engineering & Technology	Natural Sciences
Massachusetts Institute of Technology (MIT)	0,96	0,99	0,99	1,00	1,00
Ecole normale supérieure, Paris	0,73	0,00	0,00	0,66	0,82
Peking University	0,95	0,75	0,94	0,91	0,95
Technische Universität München	0,00	0,80	0,39	0,96	0,97
University of Helsinki	0,89	0,87	0,82	0,54	0,80
Lomonosov Moscow State University	0,00	0,07	0,33	0,51	0,79
Saint-Petersburg State University	0,00	0,00	0,00	0,00	0,32

Table 5. Performance of Universities by Faculty

The data represented in Table 5 are much more convenient both for further analysis and their graphic interpretation (diagram 1).

The leader of the QS ranking, Massachusetts Institute of Technology, is being harmoniously developed by all faculties, its performance coefficient by faculty (C_{per}) is within the range of 0.96 to 1.00, which is also shown in its graphic representation. Both Peking University and the University of Helsinki strive for the same harmonization of their activities. Peking University has C_{per} from 0.75 to 0.95. Having these high indices it takes just the 46th position in the ranking, which show how rigid the competition between leading universities is. The University of Helsinki has the performance indices (C_{per}) within the limits of 0.54 to 0.89. Comprising all faculties, it keeps its position in the first hundred (69 position) of universities by the QS ranking.

Diagram 1 also shows two institutions whose achievements are focused on the limited range of faculties. These are the institutions which are primarily famous for their success in the field of exact sciences and technology - Ecole normale supérieure, Paris, (28 position) and Technische Universität München (53 position). Good ranking positions have been reached due to high performance by the chosen faculties of educational and scientific activities. Although Lomonosov Moscow State University is a multidisciplinary university, the diagram clearly shows that its performance coefficient changes within broad limits: from 0.07 by life sciences & medicine to 0.74 by Natural sciences. It is, of course, honorary to occupy the 120th position in the ranking, but to become a world educational leader and achieve harmonious development by all faculties, our best university will still have to do big system-based work.

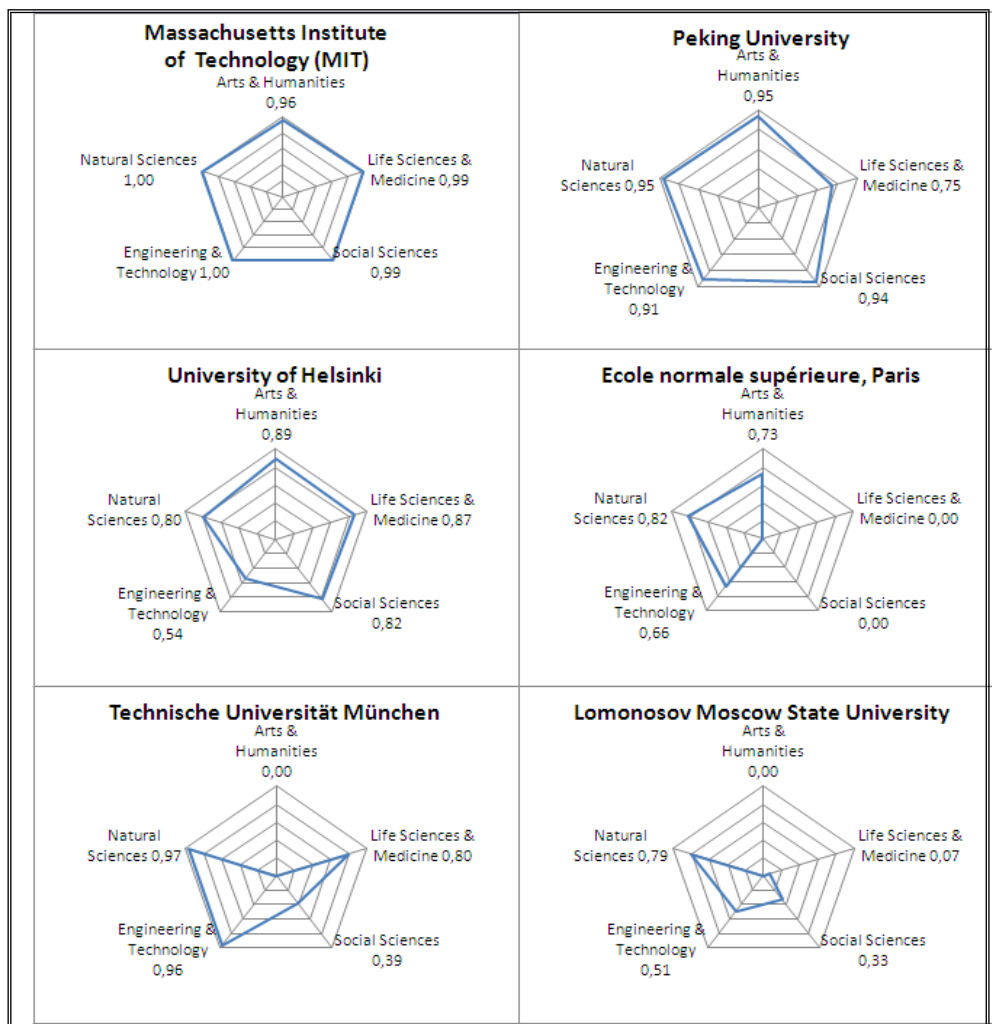


Diagram1. University performance indices by faculty.

The information available allowed QS not only to research the activities of universities by faculty, but also present details by subject. However, local rankings by subject include only 200 best universities. The list of subjects used in the rankings is given in table 6.

Number	Subject	Number	Subject
	Arts & Humanities		Law and Legal Studies
1	Philosophy	15	Economics & Econometrics
2	Modern Languages	16	Accounting & Finance
3	Geography	17	Communication & Media Studies
4	History and Archaeology	18	Education
5	Linguistics		Engineering & Technology
6	English Language & Literature	19	Computer Science & Information Systems
	Life Sciences & Medicine	20	Chemical Engineering
7	Medicine	21	Civil & Structural Engineering
8	Biological Sciences	22	Electrical & Electronic Engineering
9	Psychology	23	Mechanical, Aeronautical & Manufacturing Engineering
10	Pharmacy & Pharmacology		Natural Sciences

11	Agriculture & Forestry	24	Physics & Astronomy
	Social Sciences	25	Mathematics
12	Statistics & Operational Research	26	Environmental Sciences
13	Sociology	27	Earth & Marine Sciences
14	Politics & International Studies	28	Chemistry
		29	Materials Sciences

Table 6. List of subjects for ranking by subject.

The words 'subject' and 'discipline' are often used as synonyms, but in the current table the notion 'subject' is aggregated and comprises a number of disciplines, that are normally covered by a whole faculty of a Russian university. Detailing by subject provides much more material for analysis and helps reveal advantages and drawbacks of scientific and educational activities of a university at large. Table 7 includes information about positions that the aforementioned universities occupy in local rankings by subject.

Subjects	Massachusetts Institute of Technology (MIT)	Ecole normale supérieure, Paris	Peking University	Technische Universität München	University of Helsinki	Lomonosov Moscow State University	Saint-Petersburg State University
Philosophy	6	35	17	-	90	-	-
Modern Languages	21	53	13	-	93	63	-
Geography	-	-	25	-	51	-	-
History and Archaeology	57	-	41	-	92	-	-
Linguistics	2	-	20	-	49	-	-
English Language & Literature	40	-	50	-	92	-	-
Medicine	15	-	64	67	48	-	-
Biological Sciences	2	153	45	67	88	-	-
Psychology	-	-	47	-	92	-	-
Pharmacy & Pharmacology	-	-	60	65	91	162	-
Agriculture & Forestry	-	-	-	41	93	-	-
Statistics & Operational Research	2	106	44	-	190	112	-
Sociology	35	-	64	-	90	-	-
Politics & International Studies	37	-	22	-	89	-	-
Law and Legal Studies	-	-	41	-	132	-	-
Economics & Econometrics	2	-	37	-	185	-	-
Accounting & Finance	5	-	35	-	-	-	-
Communication & Media Studies	12	-	64	-	43	-	-
Education	-	-	65	-	33	-	-
<u>Computer Science & Information Systems</u>	1	55	35	42	140	163	-
<u>Chemical Engineering</u>	1	-	-	39	-	-	-
<u>Civil & Structural Engineering</u>	5	-	-	77	-	-	-
<u>Electrical & Electronic</u>	1	-	36	34	-	-	-

<u>Engineering</u>							
<u>Mechanical, Aeronautical & Manufacturing Engineering</u>	1	-	36	23	-	-	-
<u>Physics & Astronomy</u>	1	46	29	17	143	64	
<u>Mathematics</u>	2	50	35	79	145	42	168
<u>Environmental Sciences</u>	3	-	39	124	88	-	-
<u>Earth & Marine Sciences</u>	3	104	69	171	188	109	-
<u>Chemistry</u>	1	-	15	24	142	108	-
<u>Materials Sciences</u>	1	-	20	76	-	168	-

Table 7. Indices of universities in rankings by subject in 2013

By using the aforementioned method, let us present the data from table 7 in graphics (diagram 2). Diagram 2 clearly demonstrates that to be the first, one does not necessarily have to be the first in all things. Even world education leaders show different activeness in scientific and research work by separate subjects. Let us look into the diagrams of Massachusetts Institute of Technology. The diagram by faculty has a form of a practically regular pentagon (by number of faculties) and the worse result, 0.96 (!) by the Arts & Humanities faculty. The diagram by subject demonstrate that performance of MIT by such subjects as Geography, Psychology, Pharmacy & Pharmacology, Agriculture & Forestry, Law and Legal Studies, Education is either rather low or absent at all. This implies that the university, even though it is multidisciplinary one, has a clear strategy and is not trying to ‘tumble over itself’, but focuses on the most promising fields and achieves perfect results on its way. These successes not only cover ‘idle’ fields that we mention, but also ensure the first position of the university in the QS ranking.

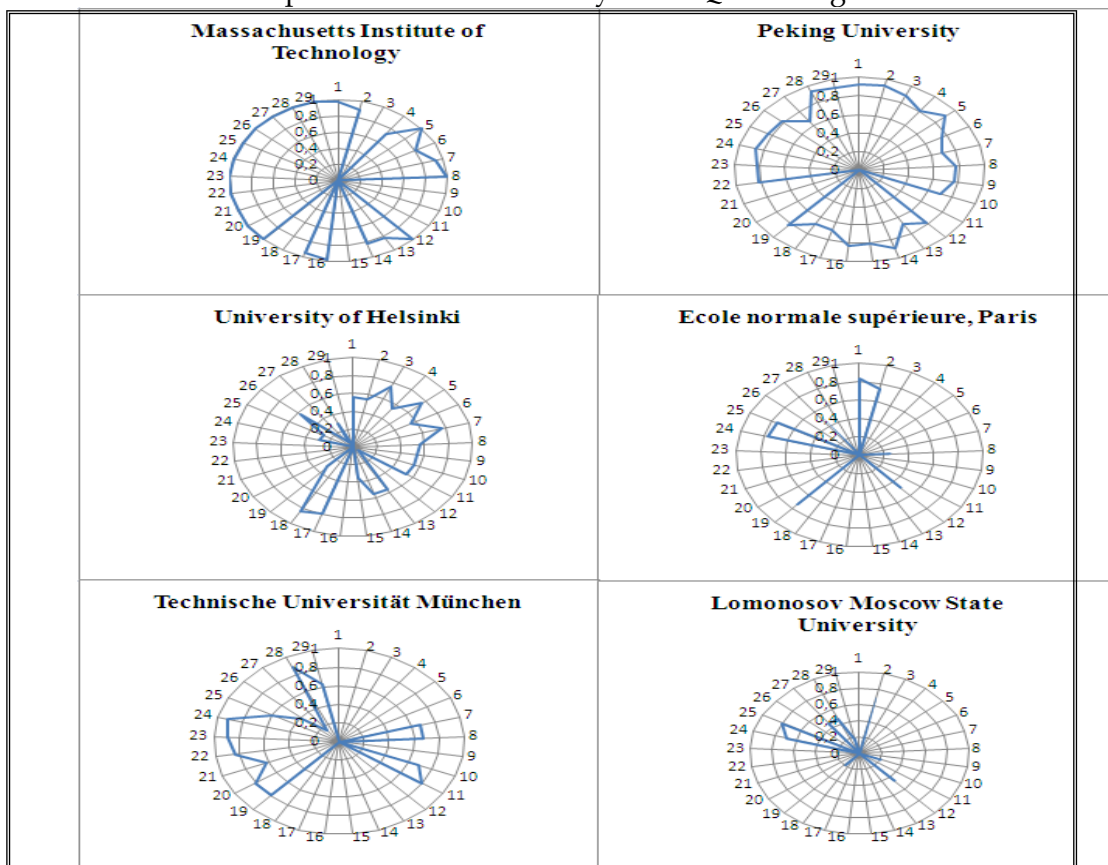


Diagram 2. Performance indices of universities by subject.

Peking University, on the contrary, strives for the most complete harmonization of scientific and educational activities. The table and diagram demonstrate good results by all subjects, excluding agrarian field, which is much less developed, chemical engineering and civil and structural engineering. Having determined its goal as to become the leader of the world development, China has been implementing this scheme in all areas, including education. In 2013 the number of Chinese universities in the QS ranking is as high as 25. By this index China takes the 9 position out of more than 60 countries whose rankings are reflected in the 2013 ranking.

It is reasonable to pay attention to the strategy of the University of Helsinki, which within the period of 2011-2013 has moved from the 89th to the 69th position in the ranking. Its performance coefficient by subject never goes above 0.8 level, but since the university improves its achievements by many subjects, it was included into 200 best universities by 23 subjects out of 29. Even though in local ranking its position by some subjects is rearguard, this has not prevented the university from taking a stable position in the first hundred best universities of the world. There is one more specific feature of this university: it has achieved most considerable progress in humanitarian field, whereas it has failed to reach ranking positions in exact sciences.

Another strategy has been chosen by the Ecole normale supérieure. Even though it is a multidisciplinary university it unlocks its highest potential in a quite limited range of subjects, which include both science and humanitarian fields. The Technische Universität München fully complies with its name. All scientific and educational activities here are focused on research and teaching in the field of engineering, technology and computer science, as well as such highly important areas as natural sciences, biology and medicine.

When comparing these universities in the ranking and revealing their, as it would seem, 'one-dimensional' activity, we come to a conclusion that good indices in the ranking can be reached not only by multi-disciplinary universities but also by specialized ones, which are highly efficient in their work by subjects. This is proved by a large number of scientific publications in peer-reviewed journals with high citation index. For example, so as to take the 28th position among the leading universities, the Ecole normale supérieure had to show high results only by 8 subjects out of those 29 which are used to build rankings.

Conclusion

The present detailed analysis is designed to reveal the secrets of the best world universities' success, help other educational institution, primarily Russian ones, develop a good strategy to mobilize efforts and increase their competitiveness, reach leading positions in the global education market.

Russian universities should strive for these ambitious goals, although their current positions and international prestige leave much to desire, which, of course, worry the executives of Russian education at all levels. Consequently, over the last decade our higher school has been permanently reformed. No doubt, change is necessary. But it is hard to stabilize academic work or improve it when regulations are constantly changing. In these rough seas only such a strong scientific and educational liner as Lomonosov Moscow State University, which took the 120th position in the 2013 ranking, keeps steady. This university is closest, comparing to all others, to reach the goal which the President has set, namely: 'not fewer than five Russian universities are to be included into the first hundred leading world universities according to the world university ranking by 2020' [1].

Even though these positions have fallen behind those of the world education leaders, there is hope to implement the goals articulated by the President and the Chairman of the Government of the Russian Federation and keep up with the best universities in the world, maintain and strengthen wonderful traditions of the national science and education.

A systematic approach towards problem-solving will allow leading universities of the country to advance steadily and improve in all areas of scientific thought and educational process. On this way universities will need badly national support and that implies more than funding. A complex scheme has to be developed and implemented to resurrect the university science with the use of government contract system and through stimulation of businesses so that they will come into agreements with universities and the latter can do actual science-driven research. The problem can be partially solved thanks to the grant system. But one should not forget that successful scientific work should not just end up in a handover act delivered to the customer or a completion report, but must be followed by one or several publications in well-established scientific journals, including the ones in English. In our opinion, a paper in a peer-assessed foreign journal should become a must for grant giving (in case open publication of materials does not threaten national security). Only then the world scientific community will know about achievements of Russian universities and relevant databases, used as a basis for international ranking of universities, will be updated, which will result in the growth of our scientists' personal status.

Moreover, universities will also have a big share of responsibility. Since fight for the position in the world rankings has not only competitive component, but also economic one - in terms of state financial support, flow of foreign students, opportunity to establish higher tuition fees without fearing that this will result in lessening demand for the university among students. For example, to study in Massachusetts Institute of Technology costs 42,000-44,000 USD per year, whereas this figure for Lomonosov Moscow State University is 8,000-10,000 USD. Since the percentage of foreign students is a ranking indicator, it becomes a subject for competition in the market of educational services. That is why some world universities charge foreign students much less than their own citizens.

Every Russian university needs a strategic scheme to advance in rankings. It has to contain:

- self-assessment of a university in order to reveal its strengths and weaknesses;
- with the use of item lists in table 6, to evaluate, which of these items approach the level of world education leaders;
- on the basis of the analysis conducted, to identify the most promising fields of scientific work;
- to elaborate measures to expand the area for scientific and research work, create working groups with participation of teaching staff, postgraduate students, senior students;
- to create a special working group whose task will be to select papers for translation and publication;
- to publish selected and translated papers in foreign scientific peer-reviewed journals, contact publishers;
- to develop a system of incentives for those who publish their papers in well-established Russian and foreign titles.

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