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**HOW KEY RUSSIAN UNIVERSITIES ADVANCE
TO BECOME LEADERS OF WORLDWIDE EDUCATION:
PROBLEM ANALYSIS AND SOLVING**

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**ПРОДВИЖЕНИЕ ВЕДУЩИХ РОССИЙСКИХ УНИВЕРСИТЕТОВ
В ЧИСЛО ЛИДЕРОВ МИРОВОГО ОБРАЗОВАНИЯ:
АНАЛИЗ ПРОБЛЕМЫ И ПУТИ РЕШЕНИЯ**

The paper studies in detail and analyze local rankings by faculty and by subject according to the QS World University Ranking. The paper also suggests a method to clearly display a university status by faculty and by subject. A comparative analysis of leading world universities' performance has been done by faculty and by subject. The ways to increase performance of national universities by faculty and by subject are looked into, as well as the ways for them to advance in the world rankings.

RANKING. COMPETITIVENESS. PERFORMANCE. UNIVERSITY. GLOBAL EDUCATION MARKET.

Подробно рассмотрены и проанализированы локальные рейтинги по отдельным научным направлениям (*by Faculty*) и предметам (*by Subject*) формируемые QS World University Ranking. Также в статье предложен метод наглядного отображения состояния дел в университете по направлениям и предметам. Проведен сравнительный анализ результативности отдельных направлений и предметов у ведущих университетов мира. Рассмотрены пути повышения результативности отечественных вузов университете по направлениям и предметам, а также продвижения в мировых рейтингах.

РЕЙТИНГ. КОНКУРЕНТОСПОСОБНОСТЬ. РЕЗУЛЬТАТИВНОСТЬ. УНИВЕРСИТЕТ. МИРОВОЙ РЫНОК ОБРАЗОВАНИЯ.

**International Prestige
of Russian Higher Education**

In recent years the President and Government of the Russian Federation have paid a lot of attention to what can be done in order to increase prestige of the Russian higher school, which has suffered considerable damage starting from 1990s. In Soviet time a lot of students came to study in Russian universities from socialistic European countries, such as Poland, Bulgaria, Eastern Germany, Czechoslovakia, etc., from the countries of Asian and African regions, such as China, Vietnam, India, Pakistan, Algeria and many others. Correspondingly, diplomas issued by Russian universities were recognized in these countries (and in some others as well!)

as a document confirming full-rate tertiary education.

Unfortunately, the reforms in 1990s, which were meant to establish market relations in the country and, above all, to ensure profitable economy, were also introduced in Russian science, including higher school. During the severe economic crisis which the country was experiencing and a dramatic decrease in funding, universities had to struggle for survival on their own. A wide-scale introduction of part-time learning on a commercial basis was one of the ways universities used to develop self-financing. This resulted in increased workload on the teaching staff and, correspondingly, poorer quality of education. An 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 existing. Consequently, by the early 21st century both Russian science and Russian higher school had lost their international prestige to a great extent.

Meanwhile, by that time educational services had grown into a very profitable activity for universities whereas university rankings, which had become more and more popular, turned into a powerful advertising tool.

Vertical Race: Ranking Advancement and Universities' Fight for Students

Nowadays, how the attractiveness of a university for students and prestige of its diplomas for employers largely depend on its ranking position. Best universities rankings are regularly worked out by various agencies and posted on the Internet, the most accessible information platform. 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 other western European countries and students turn to Russian universities only after rejecting other options.

Encouraged by the President and Government of the Russian Federation, the Ministry of Education and Science of the RF and the National Training Foundation have developed a draft 'The concept of the 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 the number of foreign students, but now Russia is ranked number nine in 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 % respectively. Moreover, a large number of students study in Australia (7 %), Canada (4 %), and Japan (4 %) [2].

The strategic goals of the national educational policy are listed below:

- to improve the attractiveness and competitiveness of the Russian educational system in the global and regional educational sphere;
- to ensure an 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 (quite a few of them!) in global rankings.

One of the most reputable rankings is the *QS World University Ranking*, which is given by the consulting company Quacquarelli Symonds (QS) since 2004. To be ranked 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. In 2007 619 universities were presented, in 2001 this figure was 724. In 2013 the ranking covered 834 universities from 76 countries. To select them from about 3000 universities who had applied, 62,094 opinions of scientists from various countries, and 27,957 views of employers were considered [5, 10].

Starting from 2005, five Russian universities took their positions in this ranking (Tab. 1).

It is obvious that there have been no considerable improvement in the ranking positions of the Russian universities although their number has increased to 8. This does not mean that our universities started to perform worse in the education and research field. It just reflects that universities in other countries tend to pay much more attention to their ranking indices and make more efforts to improve them.

Table 1

Russian universities in the QS World University Ranking 2005–2010

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

From the data of the QS World University Ranking [5].

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* increased considerably over the past three years (Tab. 2).

As Tab. 2 shows, the number of universities in the 2013 rankings 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 determined efforts of the Russian universities to improve their indices in the ranking will yield.

According to the Russian Federal State Statistics Service (*Federal'naya sluzhba gosudarstvennoi statistiki*), there are 1046 higher educational institutions in Russia [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 a 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 the Russian ones. Interestingly, 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 the 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 needs educated specialists in all fields of economy, and the projects designed for a considerable reduction in the number of 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 allow to analyze strengths and weaknesses of multidisciplinary universities. There is no need for additional research to design these rankings. The information basis is the data used for the key ranking, the *QS World University Ranking*. The local ranking is awarded by each faculty and includes 400 best universities. The assessment is conducted by a narrower range of indices: academic reputation, reputation by employers, number of citations per paper published, h-index. It is worth saying that, for each faculty, the weight of these indices is different (Tab. 3).

Tab. 3 shows that in local rankings for Art & Humanities and Social Sciences & Management, academic reputation is the most influential one, whereas the citation indices are notably less considerable. As for Life Sciences & Medicine, the influence of the citation indices becomes crucial for ranking.

Table 2

Russian universities in the QS World University Ranking 2011–2013

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

From the data of the QS World University Ranking [5].

Table 3

Ranking indices by faculty

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 4

Local ranking indices by faculty in 2013
(QS World University Ranking by Faculty 2013)

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

From the data of the QS World University Ranking [5].

It is visible achievements in these fields in an innovation economy that drive development, while publications in international scientific press strengthen the results obtained and provoke vivid feedback, which results in the intensive citing in these areas of activities. Thus, the combination of academic activities indices and scientific performance indices affects significantly 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 (Tab. 4). In our table, the USA

universities are represented by Massachusetts Institute of Technology (MIT), the absolute world leader according to QS. A 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 large number of Russian students study in Finnish educational institutions and subsequently they even find interesting jobs in that country. Moreover, Finland occupies the second place by the education index.

Table 5

Performance of Universities by Faculty

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 sup�rieure, Paris	0,73	0,00	0,00	0,66	0,82
Peking University	0,95	0,75	0,94	0,91	0,95
Technische Universitt M�nchen	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

According to the assessments of international experts, universities in the 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.

Tab. 4 shows a position of the university in the general ranking and the 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:

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

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 the performance of universities by faculty (Tab. 5).

The data presented in Tab. 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 harmoniously developed in 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 achievement. 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 shows how tough 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) among universities by the QS ranking.

Diagram 1 also shows two institutions whose achievements are concentrated in a 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 sup rieure, Paris, (28 position) and Technische Universitt M nchen (53 position). Good ranking positions have been reached due to high performance by the chosen faculties.

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, an honor to occupy the 120th position in the ranking, but to become a world educational leader and to achieve harmonious development by all faculties, our best university will have to do big system-based work.

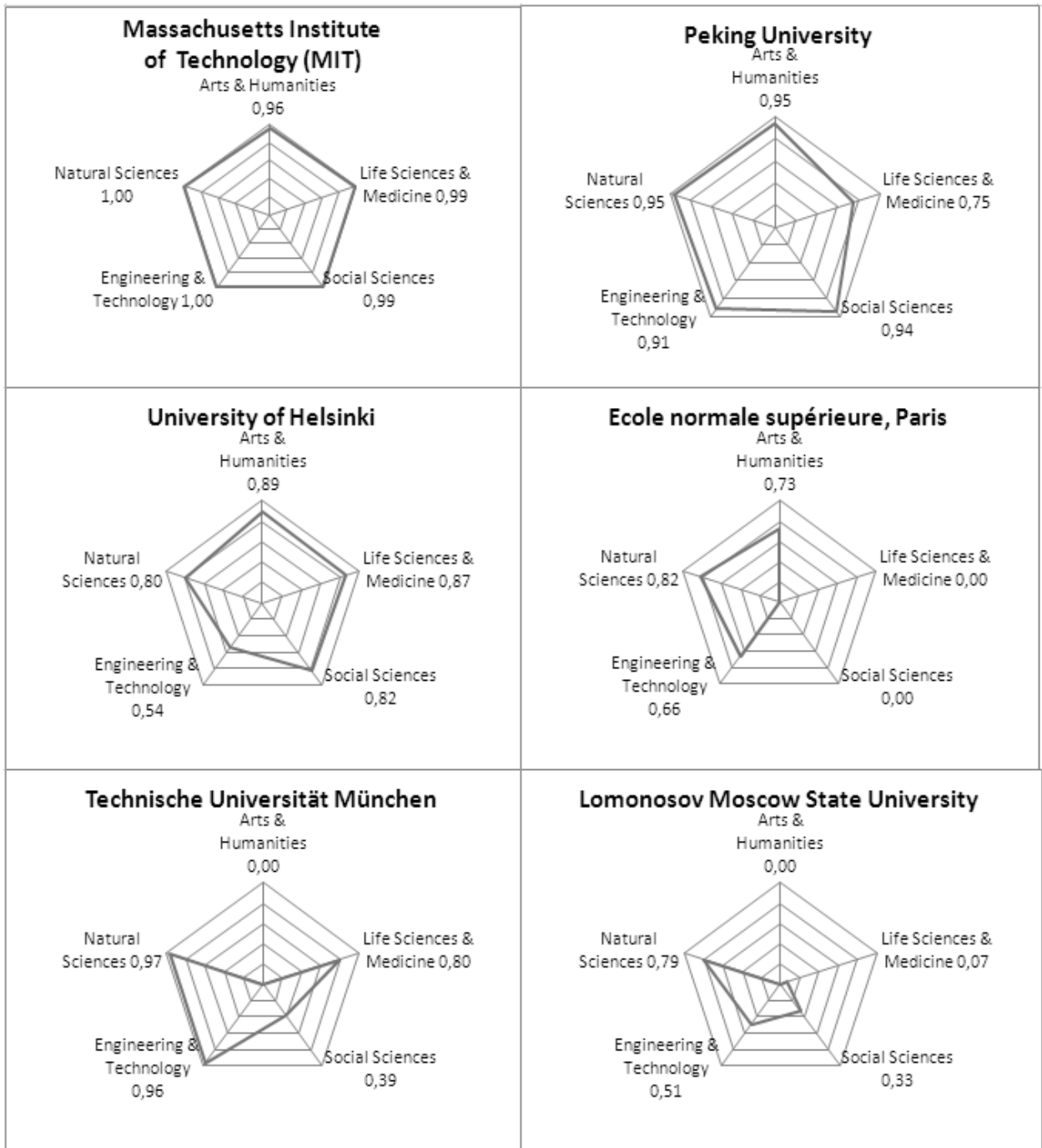


Diagram 1. University performance indices by faculty

The information available allowed *QS* not only to research the activities of universities by faculty, but also to 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 Tab. 6.

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.

Table 6

List of subjects for ranking by subject (QS World University Rankings by Subject)

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

From the data of the QS World University Ranking [5].

Classification by subject provides much more material for analysis and helps reveal advantages and drawbacks of scientific and educational activities of a university at large. Tab. 7 includes information about positions that the aforementioned universities occupy in local rankings by subject.

By using the aforementioned method, let us present the data from Tab. 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 areas. Even world education leaders show different performance in scientific and research work by individual subjects.

Let us look at 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 MIT's performance by

such subjects as Geography, Psychology, Pharmacy & Pharmacology, Agriculture & Forestry, Law and Legal Studies, Education is either rather low or absent. This implies that the university, even though it is a multidisciplinary one, has a clear strategy and is not trying to embrace unembracable, but focuses on the most promising fields and achieves perfect results on its way. These achievements not only cover <hollow> fields that we mention, but also ensure the first position of the university in the QS ranking.

Peking University, on the contrary, strives for the most complete harmonization of scientific and educational activities. The table and the 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

Table 7

Indices of universities in rankings by subject in 2013

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	–	–
Computer Science & Information Systems	1	55	35	42	140	163	–
Chemical Engineering	1	–	–	39	–	–	–
Civil & Structural Engineering	5	–	–	77	–	–	–
Electrical & Electronic Engineering	1	–	36	34	–	–	–
Mechanical, Aeronautical & Manufacturing Engineering	1	–	36	23	–	–	–
Physics & Astronomy	1	46	29	17	143	64	–
Mathematics	2	50	35	79	145	42	168
Environmental Sciences	3	–	39	124	88	–	–
Earth & Marine Sciences	3	104	69	171	188	109	–
Chemistry	1	–	15	24	142	108	–
Materials Sciences	1	–	20	76	–	168	–

From the data of the QS World University Ranking [5].

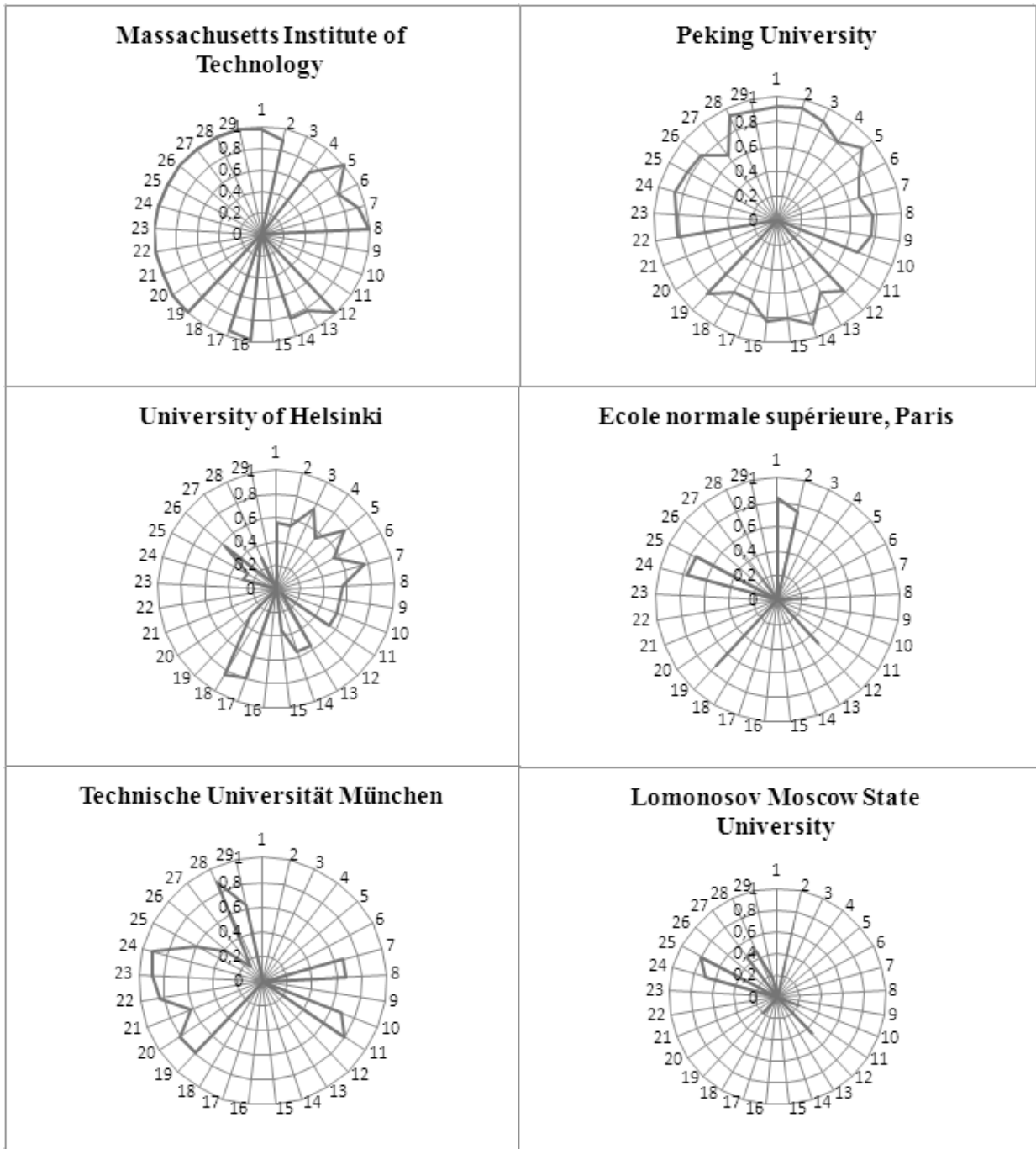


Diagram 2. Performance indices of universities by subject

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 9th position out of more than 60 countries whose rankings are provided 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 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 in many subjects, it was included into the 200 best universities in 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 Humanities, 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 limited range of subjects, which include both science and arts.

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 multidisciplinary 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 showed high results in only 8 subjects out of those 29 which are used to build rankings.

National Scale Problem is to Increase Russian Universities’ Ranking

This analysis is designed to reveal the «secrets» of the best world universities’ success and to help other educational institution, primarily Russian ones, develop a good strategy to mobilize efforts and increase their competitiveness, as well as to 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 turbulent circumstances 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, saying at least five Russian universities are to be included into the first hundred leading world universities according to the world university ranking by 2020’ [1].

There is hope to implement the goals articulated by the President and the Chairman of the Government of the Russian Federation and catch up with the best universities in the world, maintain and strengthen wonderful traditions of national science and education.

A systematic approach towards problem-solving will allow leading universities of the country to advance steadily and to improve in all areas of scientific thought and educational process. On this way, universities will need badly national support, which implies more than funding. A complex scheme has to be developed and implemented to revive university science by using government contract system and by stimulating 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 due 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 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 the 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 large share of responsibility. Since fight for a position in the world rankings has not only competitive component, but also an economic one – in terms of state financial support, flow of foreign



students, an opportunity to establish higher tuition fees without fearing that this will result, in lowering demand for the university services among students. For example, studies in Massachusetts Institute of Technology cost 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 an item of 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;

– using the item lists in Tab. 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, to create working groups including teaching staff, postgraduate students, and senior students;

– to create a special working group whose task will be to select papers for translation and publication;

– to publish selected papers in foreign peer-reviewed scientific journals, to 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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