HERB

Higher Education in Russia and Beyond

Making Way to Global University Rankings: Russian Master Plan

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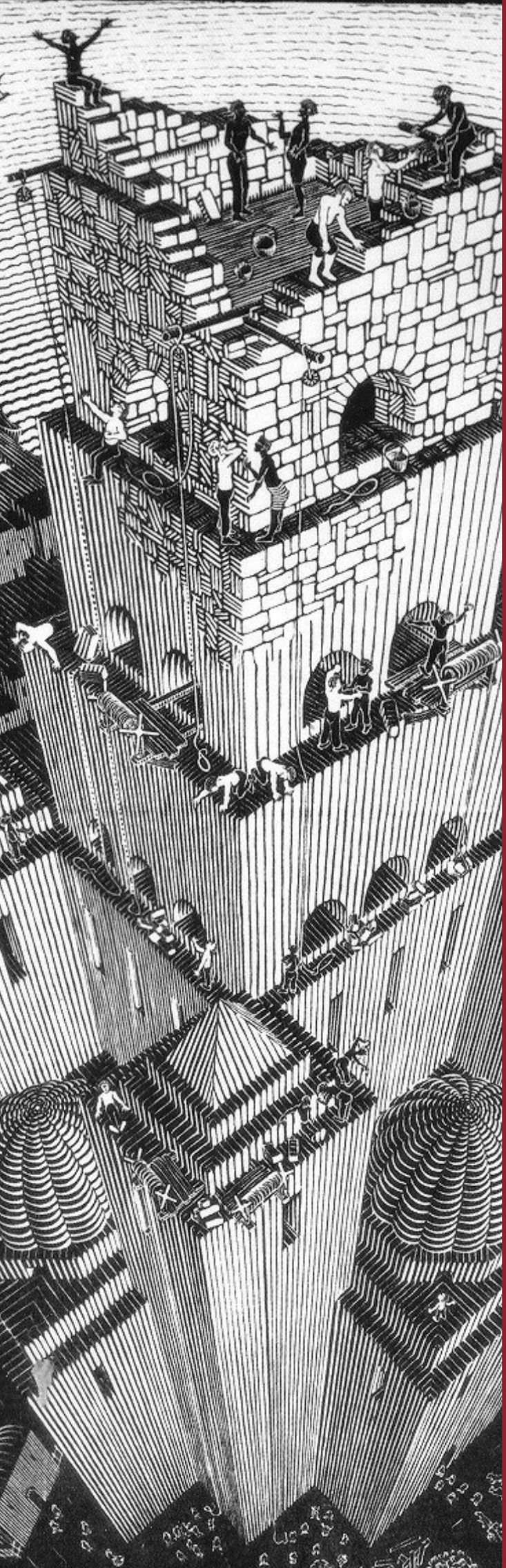


Dear colleagues,

You are now reading the very first issue of 'Higher Education in Russia and Beyond' — a new bulletin that is aimed at bringing current Russian, Central Asian and Eastern European educational trends to the attention of the international higher education research community. This is a region undergoing spectacular changes in terms of higher education systems. On the whole, they coincide with global dynamics and are definitely part of a wider international context. We believe that different views on current transformations need to be represented. The articles published in HERB are brief position papers produced by major regional stakeholders in the sphere of higher education, such as experts and analysts (with background in economics, sociology, psychology, law, etc.), university leaders, and state officials. We believe they can provide broad coverage of the issue, offer a multidimensional view on local changes and problems arising in higher education, and share the region's best practices.

Each HERB issue will be dedicated to a specific topic and will contain both analytics and independent expert opinions, enabling the readers to learn about the developments in the region and to form their own judgement based on the data and opinions presented.

The first issue is focused on the major Russian 'excellence initiative' — the Global Competitiveness of Leading Russian Universities Program, which is aimed at making Russian universities world-class research universities.

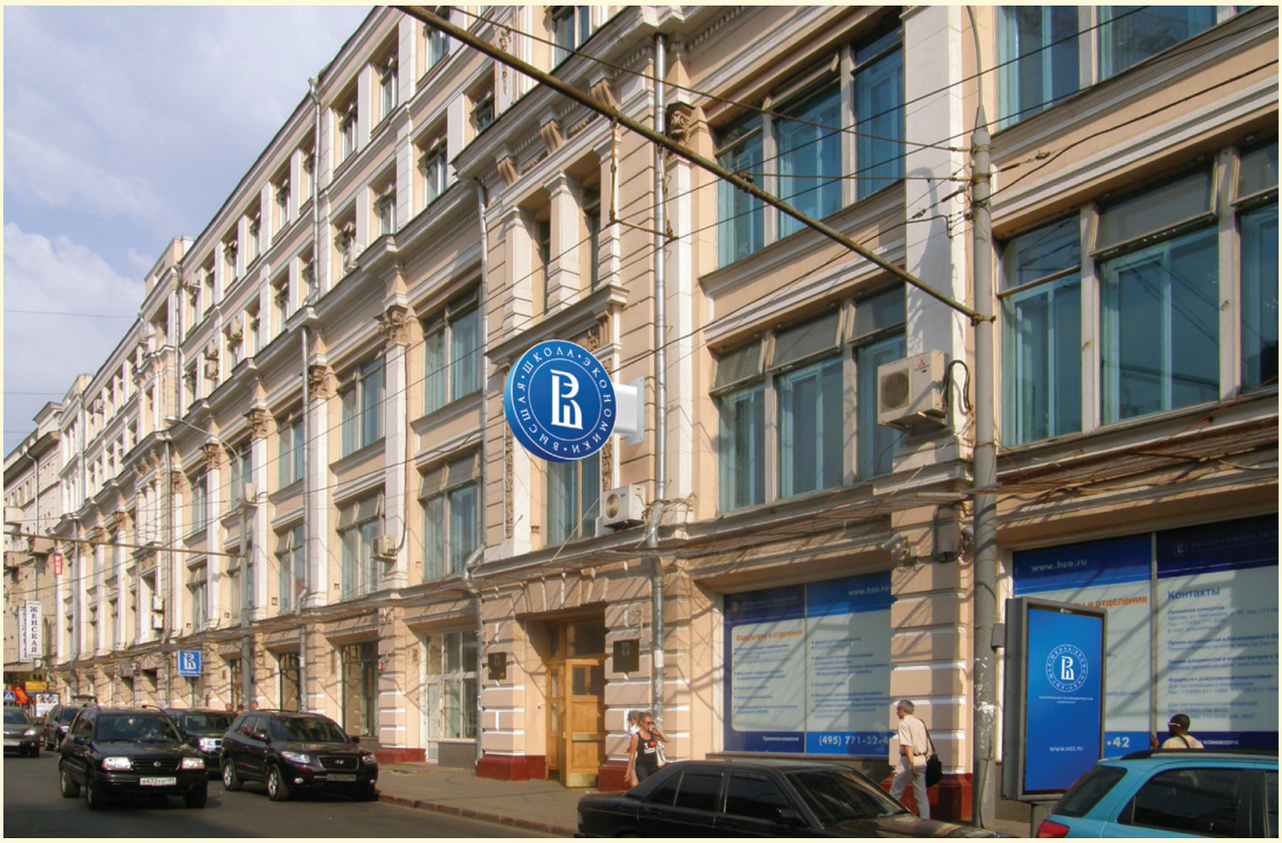
This issue is divided into three parts: in the first one, you will learn about the program, its goals and aims, and how it is being implemented. It is written by the members of the program's international ex-pert board and representatives of the Russian Ministry for Education and Science.

In the second part, institutional background of the Global Competitiveness Program is analyzed and participating universities' 'take-off positions' are compared. The authors talk about the challenges Russian universities are about to face in their quest for recognition in the global academia.

Four cases are analyzed in the third part, where you can learn about strategic views and particular practices of four specific universities that participate in the program.

We hope that HERB develops into an expert discussion platform dedicated to the issues of higher education in post-socialist countries.

'Higher Education in Russia and Beyond'
editorial team



HSE

National Research University Higher School of Economics is the largest center of socio-economic studies and one of the top-ranked higher education institutions in Eastern Europe. The University efficiently carries out fundamental and applied research projects in such fields as management, sociology, political science, philosophy, international relations, mathematics, Oriental studies, and journalism, which all come together on grounds of basic principles of modern economics.

HSE professors and researchers contribute to the elaboration of social and economic reforms in Russia as experts. The University transmits up-to-date economic knowledge to the government, business community and civil society through system analysis and complex interdisciplinary research.

Higher School of Economics incorporates 49 research centers and 14 international laboratories, which are involved in fundamental and applied research. Higher education studies are one of the University's key priorities. This research field consolidates intellectual efforts of several research groups, whose work fully complies highest world standards. Experts in economics, sociology, psychology and management from Russia and other countries work together on comparative projects. The main research spheres include: analysis of global and Russian higher education system development, transformation of the academic profession, effective contract in higher education, developing educational standards and HEI evaluation models, etc.

CInSt

The Center for Institutional Studies is one of HSE's research centers. CInSt focuses on fundamental and applied interdisciplinary researches in the field of institutional analysis, economics and sociology of science and higher education. Researchers working in the center strictly adhere to the world's top academic standards.

The Center for Institutional Studies is integrated into international higher education research networks. The center cooperates with foreign experts through joint comparative projects that cover the problems of higher education development and education policy. As part of our long-term cooperation with the Boston College Center of International Higher Education, CInSt has taken up the publication of the Russian version of the "International Higher Education" newsletter.

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Issue 1, Spring, 2014
Making Way to Global University Rankings: Russian Master Plan

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First Steps of Russian Universities to Top-100 Global University Rankings

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In this paper we will briefly talk about the governmental initiative dedicated to enhancing Russian universities' global competitiveness, also known as the 5/100 initiative: the goal of the project is to enable 5 Russian universities to enter top-100 in world university rankings by 2020.

The project was announced by presidential decree of May 7, 2012. A special Council On Global Competitiveness Enhancement of Russian Universities was established; it consists of 12 members, 6 representing Russia and the other 6 representing international academic community. The project did not start from scratch: a higher education reform aimed at bridging the gap between Russian universities and global leaders had already been going on for 10 years.

What was done in those 10 years? First of all, a number of federal universities — a kind of 'umbrella organizations' for regional higher education — were created. Second, some universities were given national research university status. Third, the government announced new academic mobility grants, particularly targeting leading foreign researchers in order to bring them to Russia. As a result, famous scientists of Russian origin and internationally-acknowledged, oft-cited foreigners started coming to Russia. Thus higher education in the country began to its way to internationalization.

A number of universities launched innovative research projects in partnership with the industry, opened their first R&D departments sponsored by commercial organizations, started deeper integration with the Russian Academy of Sciences research institutes, established new labs for fundamental and applied research. Many universities now have prototyping centers and fab labs; they also pay much more attention to foreign languages, so that lectures by foreign professors can be given in English. More and more universities now have supervisory boards presided by influential members of the society and have started building endowments.

The goal announced by the president in 2012 seems more than ambitious but very exciting. In order to implement the 5/100 project, several bodies have been established. The project is supervised by the Ministry for Education and Science, which is also responsible for state funds management. The Council On Global Competitiveness Enhancement of Russian Universities, where I work too, is also chaired by the minister, Dmitry Livanov. As the description of the project published on the ministry's website says, 'The Council's task is to help leading Russian universities maximize their competitive capacity in the global academic environment and ensure that at least 5 of them enter top-100 in world university rankings by 2020'. According to Mr. Livanov, however, 'Entering international rankings can't be a goal in itself. We understand that the rankings only provide a rough evaluation of university performance'. A special expert group provides the Council with their support and gives feedback on the documents provided by universities that participate in the program. It is also important to recognize the role of SKOLKOVO Moscow School of Management, where most trainings and workshops are held.

Universities are working on their roadmaps for development, and a special roadmap implementation monitoring system is being devised. Most of the universities have hired Russian and international experts that help them define the roadmaps and prepare all the documentation required by the Ministry for Education and Science.

This is how the project is carried out:

- Stage 1. July 2013. Participating universities were selected on a competitive basis.
- Stage 2. October 2013. Each university is working on its roadmap for development.
- Stage 3. December 2013. Roadmap implementation starts; performance evaluation will follow (to be done annually in 2014-2018) and may result in roadmap amendments.

Meanwhile, starting April 2013, project supervisors also organize institutional or general events (e.g. workshops), which will go on every year till the end of 2018, and submit annual data required by global rankings publishers (first results were evaluated in October 2013).

So far, the international advisory council has had four meetings. The first one was dedicated to general issues related to the 5/100 project and the Council's role in it. During the second meeting, Council members examined all the 36 application from Russian universities that wanted to participate in the project. The Council's main criterion was feasibility, so in the end, only 15 universities were allowed to submit their roadmaps for assessment. They were awarded special grants for roadmap development and advised to invite external experts.

The Council sits twice a year. The third meetings, which took place nearly 6 months after the second one, was dedicated to the evaluation of the roadmaps the universities had submitted. Unfortunately, many participants failed to explain in their roadmaps what was so unique about them and their suggested strategy for development, so members of the Council had to spend quite some time trying to understand the peculiarities of each particular application. They were particularly interested in what would be the resources that could ensure a significant performance gain in terms of both education and research.

Participating university represent different regions: four are situated in Moscow (a city of over 12mln inhabitants), three in St Petersburg (second largest city in Russia; more

than 5mln inhabitants), two in Siberia (cities of Tomsk, nearly 0.6mln people, and Novosibirsk, over 1.5mln), one in Kazan (1.2mln), one in Samara (also 1.2mln), one in Ekaterinburg (1.4mln), one in Nizhny Novgorod (nearly 1.3mln), and one in Vladivostok (nearly 0.6mln). Each of these cities has its own academic environment; they also differ in terms of living standards and their appeal. There are 3 federal universities and 11 national research universities among them.

The Council was also paying attention to the participants' baseline: some were in their extensive phase (i.e. in the process of merging with other HEIs), others were trying to diversify their areas of research or, vice versa, strengthen their traditional specialization. Participating universities differ significantly in terms of enrollment count, infrastructure, etc. (some of them have newly built campuses, others are only starting construction works).

The universities still need to regain their balance; their senior leaders are trying to engage the most creative and active administrators, faculty and students into the process, which is not easy. We believe that gathering such people together is essential for the project on the whole and is of key importance at the current stage. We do not yet have specific criteria to measure sufficient 'commitment rate' among students and university employees, but research in the corporate sphere suggests that 20-25% of the employees is enough for ensuring sustainable performance and dynamic development. According to the universities' own estimations, commitment rate among their employees is still not high enough. We believe it's important to monitor the level of commitment among university employees, since it has direct impact on the enhancement of institutional competitiveness.

Participating universities have already gained both substantial financial support and reputational bonuses. Yet, members of the Council believe that positive stimulation is not enough, therefore participants with inadequate performance, diverting from their roadmaps, will be expelled from the program. The Council is now considering the possibility of inviting new participants, instead of those expelled, in case the former show significant progress in global rankings independently.

HEIs seem to be genuinely interested in the project. First, they improve their positions at the national level. Second, they gain more attention from the regional authorities and other stakeholders. Third, the project offers significant new incentives for students and faculty members. We should also remember that all the participating universities receive extra funds in the amount of 10-40% of their budget, therefore being expelled from the program would cause severe financial loss.

The Council's fourth meeting, which took place in early 2014, has shown that participants' performance evaluation should take into account the current stage of the program. It has also become clear that the program can be divided into three phases: a) first, universities have to reach a certain level of commitment to transformations among students and employees; b) then, they have to build up and maintain high capacity growth (success stories); c) they advance in the rankings (general and by subject) and improve their reputation. As a result of the meeting, one university was expelled from the program.

In 2014, members of the Council also started field trips to participating universities; therefore their work consists of two parts now: studying the situation on site and evaluating roadmap implementation. We are now the crossroads where we need to choose between the well-known road of formalities — and the path to new soft-power mechanisms. The Council is inclined to take the latter way, which is of course more difficult but also more exciting.

The Value of the "Top 100" Program

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The "Top 100" program has several key goals—to help Russian universities improve so that some of them can compete successfully in the global rankings, and much more important, to take their place among the best universities in the world, and also to significantly reform. On the reform agenda is governance and internationalization—both absolutely necessary if Russian higher education is to improve.

Russia is a somewhat unique case. Its university and academy sector generally underperform when compared to top universities elsewhere. Yet, there is a tremendous amount of talent among both students and the academic profession. Further, Russia has a distinguished academic tradition.

The limitations of the Soviet system and the financial and other problems of the immediate post-Soviet era seriously weakened the system. Separating research from teaching through the academy system has further harmed Russian science. These and other challenges have been recognized, and the "Top 100" program is one of the efforts to improve Russian higher education. In part, it is a way to provide additional resources to the top of the higher education sector—additional resources are of course needed throughout the system—since Russia spends less per capita on higher education and research than most developed countries. Just as important, the program is attempting to squeeze new ideas and innovative projects out of universities that have largely been rather traditional in their approach to academic development.

While significant funds are being allocation through the program, the amounts provided are not "transformative"—that is, the funds can help to support change but are not enough to ensure systemic change. Thus, the institutions themselves will need to use the funds strategically.

A number of countries have implemented various kinds of "excellence initiatives" as the Germans call their program with aims similar to the "Top 100" program. Germany was concerned that its quite good universities were losing out to their counterparts in the United States, the United Kingdom, and even to the Netherlands because of traditionalism and complacency. An open competition supported by significant funds resulted in the selection of universities that promised major innovation. Just like in Russia, the German funds were not transformative. Slowly, a number of more research-intensive universities that may be able to compete with global top institutions are emerging in Germany.

Probably the most successful program has been in China, where the government identified about 100 universities and infused large amounts of money—transformative funding—to strengthen these institutions and turn them into internationally competitive research universities. These programs, named the 985 and 211 initiatives, have succeeded in creating research universities, but only a few have become globally competitive. Now, a new program, the "C9" program aims to create a Chinese "Ivy League" of nine universities that can quickly become truly world class. It is not clear whether this effort will succeed.

Like in Germany, the Russian program has included several international experts on the selection and monitoring committee. The idea is that international experience can help to inform decisions and suggest international "best practices". The international committee members recognize, of course, that any improvements must take into account Russian realities, but that international perspectives can be useful, perhaps especially for a higher education system that has for a long time been mired in tradition and unable to change. The five international members come from four countries or regions, China, Hong Kong, the United Kingdom, and the United States. All but one are or have been distinguished university leaders. The international members are able to bring a global view to the project and point to innovative ideas from the rest of the world. This may be particularly valuable in the Russian context, where higher education thinking has been rather insular for a long time. In addition, an outsider perspective can also help to maintain an objective evaluation of complex issues and choices.

Lessons From The National Excellence Initiatives in Russia

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The article discusses the measures the Russian government takes to enhance global competitive ability of Russian universities. The Federal Universities program and National Research Universities program are analyzed. Nine important conclusions for further policy actions are suggested for consideration.

First publications of the results of the international university rankings in early 2000 became a shock for the Russian policy makers and professional community. They had always assumed that the leading Russian universities were highly competitive but only Moscow State University and Saint-Petersburg State University appeared in the international rankings.

The Russian government has taken measures to increase universities' role in knowledge production and innovations and to make Russian universities competitive at the global level.

The first step was to legally grant Moscow State University and Saint-Petersburg State University special status. They have been also provided with significant resources for infrastructure development.

The network of regional federal universities has been developed substantially with the aim of letting them take leading positions in national higher education. Nine such universities were created through the mergers of the existing higher education institutions. This process started in 2006 but these universities are still in search for a development strategy that would lead them to achieving international competitiveness.

A network of 29 national research universities was established in 2008; this has become a fun-damental step towards a deep institutional reconstruction of the higher education system. The universities chosen on a competitive basis have got significant financial support. Together they represent a relatively new type of Russian higher education institutes, which are aimed at producing knowledge and innovation.

During the last four years there have also been other major efforts to support the model of re-search university in Russia and to enhance global competitiveness of the universities that have earned such a status. For example, the '220 Project'[1] involved spending USD 400 mln. directly on the develop-ment of world class laboratories at Russian

universities over a three-year period (2010-2012). This measure enabled not only the growth of research quality but also stimulated Russian universities to be more open to international knowledge circulation.

Federal universities have been around for five years now; the first stage of the National Research Universities program was completed in 2013, while the first phase of the international laboratories established within the framework of 'Project 220' is still one. However, all of these initiatives require in-depth analysis in terms of their successes and failures; optimal solutions for the future need to be found. Such analysis would allow us to draw important lessons for further policy actions in the 'race to the top'.

The first lesson is about the role of pre-project stage. The development of strategic plans for federal and national research universities happened too quickly and lacked proper external evaluation and corrections. The universities had neither time nor desire to do proper preliminary analysis of different opportunities and to engage external stakeholders into the discussion of possible goals and means to achieve them. They set unrealistic expectations that have made project outcomes practically unattainable.

The second lesson is about financial flexibility. Severe restrictions on the use of allocated funds were set at the stage of program development and approval. The universities couldn't spend the funds they had received on supporting research and were forced to spend all money allocated for the particular year. All this led to inefficiencies and the lack of long-term project-based funding and planning.

The third lesson is about the flexibility in implementation. The program performance evaluation indicators were established for a 10-year period, which is too long a perspective, because many of originally planned actions have already proven to be considerably outdated and unrealistic.

The fourth lesson is about the role of openness and transparency in institutional development, especially in improving learning. As a rule, materials produced by universities are out of reach for independent peer/expert reviews, which make it difficult to get wide public acclaim on both national or international levels.

The fifth lesson is about the importance of focus. Universities have largely underestimated the importance of comparative evaluation/benchmarking, falling short on building their institutional image globally as well as on proving their institutional development outcomes by achieving high ranking positions against the internationally acknowledged performance evaluation indicators.

The sixth lesson is about the importance of national partnerships. The implementation of the strategies showed that universities which had had strong links with the Academy of Sciences, successful companies or regional authorities managed to achieve the results faster. Partnership with the Academy of Sciences proved to be very efficient for the research productivity growth.

The seventh lesson is about the importance of courage in making real changes in the management structure, teaching and international cooperation. Those universities that created new units to perform new tasks and hired new people for these units showed better progress. Those universities that fully used their right to create their own educational standards (also improved teaching of English and opened programs in English) attracted better students and young professors. Those universities that opened new research units for bright researchers (including young and foreign) proved to be more productive.

The eights lesson is about timing. Even when key competencies are imported, the formation cycle of advanced research teams is at least 3 to 7 years. Therefore, the lack of Russian research universities' progress can be explained not only by their low zeal and irregular organization but rather by the fact that they lacked time to get any significant results.

The ninth lesson is about sufficient funding. The slow progress of Russian research universities can be simply explained by inadequate and poorly concentrated investments.

According to the Presidential decree № 599 of May 7, 2012, one of the country's national goal is to have at least five Russian universities in the top-100 of the world's leading universities according to international rankings by 2020. This new Russian excellence initiative is not devoid of simplifications and unrealistic expectations but some lessons could be drawn on the basis of previous experience in the struggle for creating world-class universities.

Notes

[1] Russian Federation Government Resolution №220 (April, 9, 2010) "On measures to bring leading international researchers into Russian universities"

Evolution of Higher Education Policy: From National Renovation Towards Global Competitiveness of Russian Universities

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In 2012 Russian Ministry of Education and Science launched the '5-100' project with an ambitious goal of enhancing global competitiveness of Russian universities. In this short note Gregory Androushchak, head of Strategic Department of the Ministry, sets this project into the context of post-Soviet evolution of higher education: that of preserving the academia in the 1990s, revitalizing the system in the 2000s and providing impulses for global competitiveness nowadays.

Contemporary Russian higher education system was shaped in the mid-1990s as a result of the economic turmoil of the last years of Perestroika. In the course of market reforms, which included the notorious, but rather inevitable privatization, liberalization of formerly centrally set prices and other measures of the 'Shock-therapy' economic policy, Russian universities found themselves completely disoriented. First, despite the fact that the government was still supporting universities (which retained their public status), due to huge budget deficits and hyperinflation the real revenues decreased dramatically. Second, though most of the sectors of the economy started to benefit from market activities, universities still could not sell their services: the legislation did not allow for that.

Only in 1992 — six years after the start of Perestroika — with the new law 'On education', universities were granted wide freedom for opening new educational programs and commercial services. Formally, that was done through the introduction of a dual-track tuition system: part of the students admitted on a competitive basis were exempt from tuition fees (they were funded by the state), others had to pay for their education themselves. Although the phenomenon of paid education was not widespread before 1998-2000, the dual-track tuition system became an extremely important instrument for the universities: because the authorities did not exercise as much control for funding that came from market activities as they did for public funding (those were centrally assigned to particular types of expenses and, figuratively, it was not uncommon those days that one had to mend the roof even if the roof was not leaking).

For almost 10 years there was a public perception that tuition-free education was profoundly better than that provided to students who paid tuition fees. Partly, that was a kind of post-Soviet delusion because both paying and non-paying students attended the same lectures and seminars, etc. However, until nowadays almost ⅔ of the paying students do various sorts of distance-learning or engage in part-time programs, which is less costly, but also still retains the air of the kind of second-rate education (online courses from top universities have not yet conquered the country mostly due to the language barrier). However, despite such a negative perception, the share of students who pay for higher education had jumped from zero to more than 50% by 2008, becoming an extremely important source of revenue for universities: self-funded students bring 2/5 of university revenues now actually.

Growing revenues from tuition were accompanied by growing per-student public spending. All that added up to a tremendous increase in the size of university-age population during the two decades starting 1990. Every year since 1993 universities were lucky to experience increases in revenues virtually regardless of their actions. Certainly, there were ultimate winners but overall there were plenty of opportunities to benefit staying rather inactive. Writing this I wouldn't want to say that most rectors did nothing for their universities. Their extremely important achievement was through piloting along the market-oriented transition to make sure the academia was still afloat.

Sadly enough, due to lack of resources and overall disorientation, several thousands of faculty, including the famous mathematicians, physicists, etc., moved abroad in the 1990s. A lot of those who stayed in the country had to abandon academia in favor of other, more promising — at least in terms of salaries — sectors of the economy. Both of these trends were a severe blow for the sector because they concerned the most active and promising scientists.

Russian Ministry of Education and Science acknowledged the negative effect of the 1990s on the academia and initiated a special 5-year program to provide research grants to prospective faculty in 2009. At the same time the Ministry provided special funding aimed particularly at supporting the development programs of 40 universities across the country, including the most well known Moscow Institute of Physics and Technology, Novosibirsk State University and others besides such giants as Moscow State University and Saint-Petersburg State University.

By 2012 the universities had improved their facilities, installed new equipment for instruction and re-search, developed new educational programs. Their faculty started to participate more intensively in international collaboration. However, it was felt that those processes were in a kind of embryonic phase.

A new impulse for university development came from President Putin shortly after his inauguration in 2012, when he issued a decree which addressed specifically the issue of international positioning of Russian universities. It set an ambitious goal of ensuring that at least 5 of them would make it into top-100 according to international university rankings. As a result, the Ministry formed a roadmap (the project is informally referred to as '5-100')

aiming at the internationalization of higher education by emphasizing the universities' role on the international academic market by introducing international educational programs, attracting faculty from international academic market, etc.

The '5-100' project targets a group of 15 Russian universities, all of which but one (Samara State Aero-space University) are among the 40 that participated in the previous program. They were selected based on the evaluation of their plans for internationalization against the '5-100' roadmap. An international board formed of renown international experts in higher education, rectors of American and British universities, and heads of Russian companies was responsible for the evaluation.

When summarizing the results of the two decades of post-Soviet higher education, it is worth noting that despite quite a substantial decrease in well-being, the academia retained its appeal: young people continue to show tremendous interest in getting into universities, as one can see from high enrollment rates. Russian labor market experts now frequently say that this signifies that the labor market often doesn't value the degree that this or that person has.

However, thinking about the interests of the employees, one gets slightly disillusioned about the actual role of the university sector that had, to some extent, lost the sense of belonging to the economy. Very few universities can boast that employees are headhunting their recent graduates and even fewer can boast doing research funded by private companies.

Ministerial initiatives of the last 5-7 years addressed those issues by supporting educational programs in several fields and also agreed to co-fund research projects done in collaboration with the industry. But we now feel that those and other initiatives should be set up as a systematic and focused policy rather than just be a handful of means to mosaically support universities. The 5-100 project is viewed as an instrumental model for such a policy.

Leading Russian Universities: A Scientometric Perspective

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Points to consider

The sphere of Russian science and humanities are a very specific object of scientometric analysis due to a unique history of their development. When using Web of Science or similar tools to evaluate Russian research performance, one must keep in mind several factors.

The most obvious distinction is that Russian science is actually still very Soviet. Inherited institutional and disciplinary structure of Russian R&D hasn't changed much in recent years and is at least partly geared to the needs of vanished planned economy of the Cold War era. R&D and higher education systems haven't fully updated themselves and aren't yet able to meet new demands of post-soviet business, which itself is not oriented towards technological innovations. Thus Russian R&D is largely disconnected from the nation's economy, and the share of businesses doing technological innovations is constantly very low (10.6% in 2000 and 9.9% in 2012 compared to 55% in 2012 in France).

One of the very important Soviet features is the gap between research and higher education: R&D was mostly done at research institutes, while teaching was left to universities. Lomonosov Moscow State University and Leningrad State University were virtually the only two HEIs doing large-scale in-house research. Nowadays Moscow University is the only Russian HEI constantly included in global rankings. The leading role in publications-oriented research (as opposed to industry-oriented applied research) used to belong to the Russian Academy of Sciences (RAS).

The other crucial trait of the Soviet legacy is a tradition of publishing in Russian-language journals, which came as a result of iron curtain politics and sheer size of Soviet and Russian science. Nowadays, officially there are more than 370 000 active researchers and more than 3500 Russian scientific journals. Only 170 of them are currently indexed in the Web of Science (WoS) but half of all Russian WoS-indexed articles are published in those 170 journals. According to the most recent edition of Journal Citation Reports, only 9 of those journals have Impact Factor above 1 and only 3 of them have IF above 2. According to WoS, Russian articles in Russian journals tend to be cited several times less often than Russian articles in foreign journals.

This localized publication pattern is much more prominent in social sciences and humanities, as well as medicine. By contrast, Russian physicists, mathematicians and chemists

are more interested and capable of publishing in top international English-language journals. More than two thirds of all Russian authors in the Web of Science who published at least 10 articles in 2008-2011 are physicists.

The last feature of Russian R&D worth mentioning is related to the shock of 1990s' economic downturn and forced transition to market economy. Almost complete lack of funding led to massive exodus of the most active researchers: they have left science, Russia or both. Current irrelevance of R&D for Russia's economy is also contributing to deficiency of active scientists. Scientific landscape in many areas is dominated by professionals in their 60s and 70s. While researcher salaries today are much higher than 10-15 years ago and there is a noticeable influx of young researchers, the most productive age cohort of 35-55-year-olds is still mostly lacking.

Macro-level

The situation causes nothing but concern. The Russian government seems to be aware of the existing structural problems and pursues a strategy of developing research universities, introducing competitive grant funding and contributing to overall westernization of Russian science and higher education. Bibliometric indicators based on WoS or Scopus are now widely used by Russian officials, including Vladimir Putin, as KPIs of the ongoing reforms. In 2012, the president announced two scientometric goals to be achieved by the Russian government:

- the share of Russian publications in the WoS should reach 2.44% by 2015,
- five Russian universities should enter top-100 international rankings by 2020 (the rankings, however, are not specified in Putin's decree, which leaves considerable room for interpretation).

These goals are almost impossible to achieve. Figure 1 clearly shows that the share of Russian publica-tions in the WoS is has been constantly declining for the last decades.

In 1999-2013, total number of articles and reviews in the WoS has grown by 80%. China has grown by 821%, Germany by 51% and Russia by only 6%. This is especially worrying given that the inflation-adjusted Russian government expenditures on civil R&D were raised more than four times during that period.

A sizeable part of these expenditures has been put into special government programs supporting leading higher education institutions that have been granted 'research university' status, not RAS. Russian Ministry of Education and Science has introduced a range of simple scientometric KPIs for universities, the most common being the number of WoS/Scopus publications for a given period. As a result of such a simplistic approach, these programs had no effect on Russia's total publication count but led to an increase in universities' publication output.

Figure 2 shows that this increase in publication output for 17 leading universities (15 members of the '5-100' initiative plus Moscow and St Petersburg state universities) is largely driven by their co-affiliation with the Academy of Sciences. University managers are persuading their part-time faculty from RAS to add university affiliations to their publications. This is rather easy because government money allows 5-100 universities to pay sizeable 'bonuses' for publications in the WoS — a practice very similar to that of China. One WoS publication could earn its author a lump sum of up to $50.000, provided he/she has clearly stated his/her university affiliation.

Universities of different level

The strategy of 'affiliation doubling' is especially effective for Moscow Institute of Physics and Technology and Novosibirsk State University because the majority of their faculty work part-time and do research in various RAS institutions. Universities lacking historical ties with the Academy tend to rely on foreign acquisitions (part-time international faculty) and organic growth. The former is supported by various government programs including 'megagrants' of $3-5 million each for attracting top-level researchers from other parts of the world. The megagrants program has been praised for its pioneering focus on international reviewing process, but so far it has had little or no impact on the country's publication output due to a low total number of awarded grants.

Table 1 shows different universities' varied success.

University	Number of articles and reviews in 2013	Growth 2008-2013, %	Share of 2013 articles and reviews with RAS affiliations	Share of 2013 articles and reviews in foreign journals	Leading WoS subject category by number of articles and reviews in 2008-2013
Moscow State U	3524	11,3	39,6	58,5	PHYSICSЯ MULTIDISCIPLINARY
St Petersburg State U	1205	34,0	31,9	63,8	CHEMISTRY PHYSICAL

University	Number of articles and reviews in 2013	Growth 2008-2013, %	Share of 2013 articles and reviews with RAS affiliations	Share of 2013 articles and reviews in foreign journals	Leading WoS subject category by number of articles and reviews in 2008-2013
Novosibirsk State U	919	158,9	92,5	68,7	CHEMISTRY PHYSICAL
Moscow Inst of Physics and Tech	713	326,9	67,7	63,0	PHYSICS MULTIDISCIPLINARY
Ural Federal U	594	101,4	37,4	46,6	PHYSICS CONDENSED MATTER
Moscow Inst of Engineering Physics	492	125,7	49,8	66,5	PHYSICS MULTIDISCIPLINARY
Kazan Federal U	395	49,6	32,9	57,2	CHEMISTRY MULTIDISCIPLINARY
Nizhni Novgorod State U	315	41,9	36,8	46,3	PHYSICS APPLIED
Tomsk State U	301	59,3	38,2	41,5	PHYSICS MULTIDISCIPLINARY
St Petersburg State Polytechnic U	275	23,9	46,9	51,3	PHYSICS APPLIED
Higher School of Economics	269	740,6	31,2	77,7	MATHEMATICS
Institute of Fine Mechanics and Optics	262	136,0	27,5	53,1	OPTICS
Far Eastern Federal U	248	335,1	71,4	53,6	MARINE FRESHWATER BIOLOGY
Tomsk Polytechnic U	226	46,8	35,4	58,0	PHYSICS APPLIED
Moscow Inst of Steel & Alloys	219	47,0	27,9	40,2	METALLURGY METALLURGICAL ENGINEERING
St Petersburg Electrotech U	89	48,3	37,1	38,2	PHYSICS APPLIED
Samara State Aerospace U	45	150,0	35,6	55,6	OPTICS

It is reasonable to expect continued growth of university-RAS publication counts and accelerated migration of researchers from RAS to top universities in the nearest future. This alone clearly won't lead to an increase in Russia's total publication output but could create a solid base for such a rise in the future.

Another positive trend is the growing share of university-affiliated publications in foreign journals (from 45% in 2008 to 56% in 2013). This enhances the impact and visibility of Russian science, which is crucial to attracting best researchers on the global level.

The biggest challenge, however, is not to increase bibliometric KPIs or help Russian universities enter global rankings but in to foster real mutually beneficial collaboration between R&D, business and higher education.

Figure 1. Total number and share of Russian articles and reviews in the Web of Science

(Whole-counting; SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, accessed on 20.03.2014. Data for 2013 is reliminary)

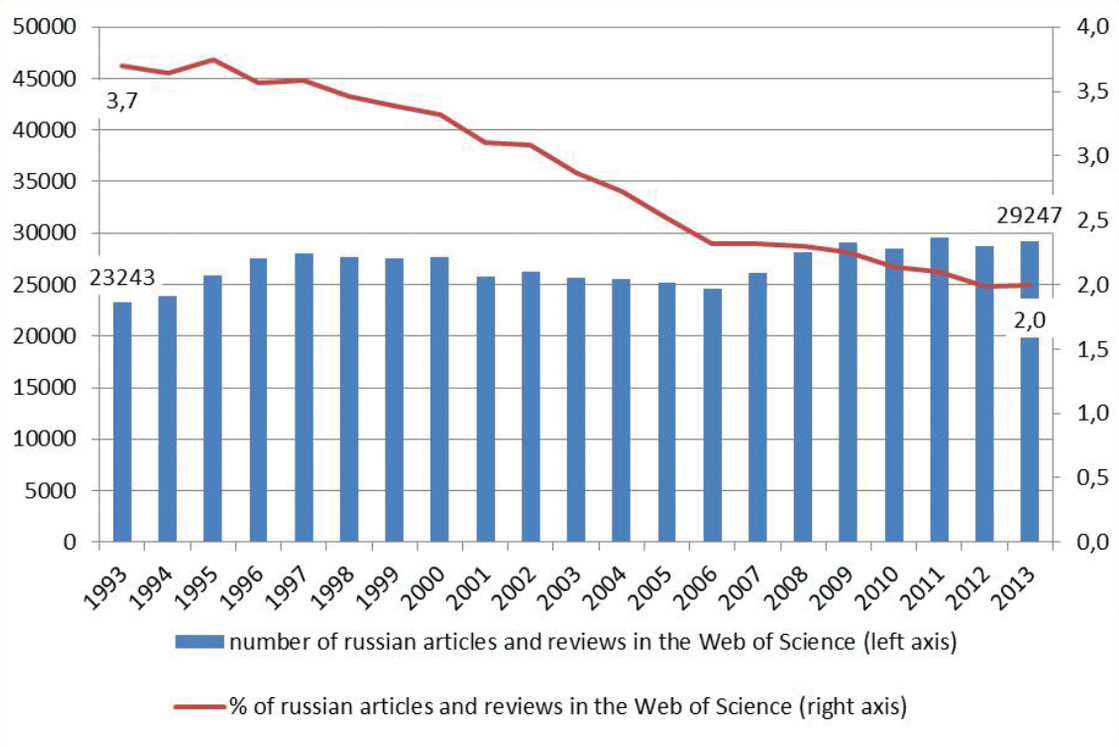
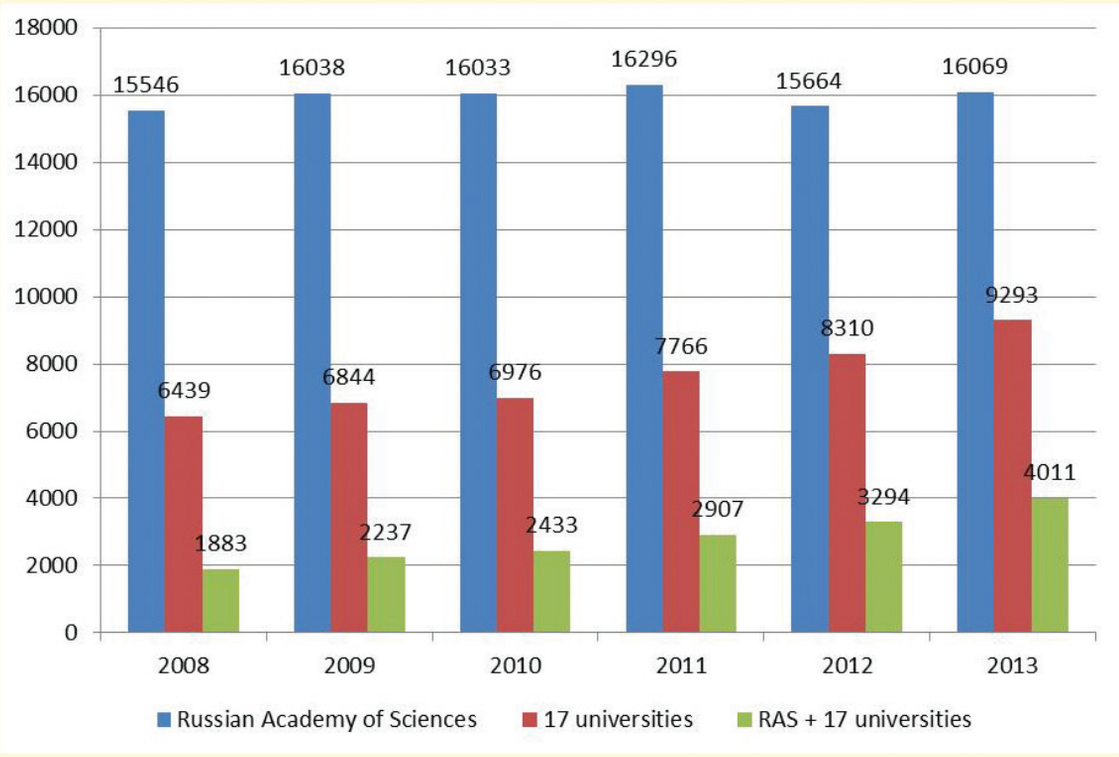


Figure 2. Total number of Russian articles and reviews in the Web of Science by researchers affiliated to the Russian Academy of Sciences, any of the 17 leading universities, or both universities and RAS.

(Whole-counting; SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, accessed on 20.03.2014. Data for 2013 is preliminary)



Russian Excellence Initiative in the Post-Soviet Context

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Russia has recently entered a 'club' of countries implementing their "excellence initiatives". Following China, France, Germany and many others, Russia has developed its "5-100" program aimed at pushing 15 Russian universities into global rankings. This initiative can be analyzed through a policy perspective.

At first sight, it is an obvious trendy move towards global market presence. Yet putting the "5-100" initiative in the post-Soviet context helps us see a whole range of approaches to managing higher education in the former Soviet countries.

The Soviet system worked as a perfect mechanism of manpower production. Burton Clark put the Soviet Union in the top corner of his famous triangle: the state determined the system entirely. It combined the supply-side and demand-side of higher education. In terms of mission differentiation approach, almost all the institutions were solely aimed at providing education, i.e. cultivating professionals for the state economy. After the collapse of the USSR, each of the countries set its own goals for its higher education system with due regard to the local economic and social contexts.

Post-Soviet policies

The way national systems developed generally depended on their size (number of HEIs), available state funds, and national economic and political strategy. Different conditions determined general educational strategies and how internationalization was handled in particular. In most of the countries, internationalization discourse was mostly concentrated on the need to harmonize the national system with global standards, especially European. The Bologna process was the main focus of discussions and reforms. The development of rankings put the issue of national participation in the global race on the table too.

The range of the state strategies lies between two poles. The first one could be called "environmental": the government focuses on enhancing mechanisms and improving opportunities for all HEIs. There are no huge investments in particular institutions, who have to follow their own internationalization strategies. This approach is most common in the Baltic States where it comes along with the basic European integration track. Giving HEIs greater autonomy alongside with abolishing national academies of sciences and stressing universities' research function contributed to a step-by-step transformation to stable European-style higher education systems. Moldova and Ukraine partially followed this approach too but they were less stable in terms of providing universities with financial support.

Another extreme is a "selective" approach, when the government voluntarily singles out one or two HEIs which seem most promising with regards to their competitive capacity. The distinctive case is Kazakhstan, where Nazarbayev University is considered to be a national higher education brand to be shown to a global community. Still, this greenfield project is not the only decisive factor to Kazakhstan's strategy. An imported university model (Nazarbaev University was established with significant foreign participation and expertise) is supplemented by the "Bolashak" program — state scholarships for education abroad. Uzbekistan seems to be implementing a similar "selective" approach with allowance for the state's investment capability (Westminster International University in Tashkent).

Other countries are not so close to the extremes and lie somewhere between those two. Belarus remains a special case, since internationalization there is not really on the agenda due to political reasons. In fact, the country has one of the largest flows of student going abroad and is third among post-Soviet countries in terms of the number of universities in regional rankings.

In late 2013, Interfax Information Services Group together with QS World University Rankings presented International University Rating for CIS, Georgia, Latvia, Lithuania, Estonia. It revealed the obvious correlation between the size of the system and its presence in rankings. In the first hundred, 65 HEIs represent Russia, 11 — Ukraine, 5 — Belarus – 5, 4 — Lithuania, 4 — Kazakhstan, 3 — Estonia, 2 — Latvia, 2 — Georgia, 1 — Armenia, 1 — Azerbaijan, 1 — Kyrgyzstan, 1 — Moldova.

The 5-100 initiative

It seems that the "5-100" initiative is closer to the selective model. 15 selected universities now are obliged to focus their efforts on getting higher in the rankings. They receive special funding targeted at enhancing their research performance and internationalization.

In a broader perspective, this excellence initiative is part of the general system segmentation policy that has been implemented in Russia since 2004. It started in 2004 when special status (implying a particular model of autonomy and funding) was assigned to Moscow State University and Saint Petersburg State University. Nine federal universities have been established by merging regional institutions since 2006. In 2006-2007, 62 HEIs received special funding for implementing their "innovative educational programs". The status of national research university was assigned to 29 HEIs in 2008-2009, and all of them were receiving special government funding till 2013. The 5-100 initiative continues the trend. Nevertheless, since 2010 the government has also been offering broader support to other HEIs too, which was distributed on a competitive basis. Large funds were allocated for the enhancement of university-industry cooperation (Decree #218), innovation

infrastructure support (Decree #219), and recruitment of leading international researchers (Decree #220). All these measures but the last one haven't changed the situation much: international laboratories where foreign talents came to work proved to be rather successful in many cases and set a new benchmark for research at some universities.

Although the number of HEIs involved decreases from one project to another, the general policy trend is clear: research university model is the most attractive, as it's believed to be the most efficient one. We have come to a conclusion that 38 out of 600 public HEIs try to behave according to this model. 3 federal universities and 11 national research universities have been selected to participate in the "5-100" program.

Another side of the segmentation policy is the national evaluation of higher education institutions ("efficiency monitoring") aimed at identifying a low-quality segment. This annual ministry-led procedure resulted in some institutions being merged in order to improve the level of education there. Both actions are designed to differentiate the policy regarding institutional diversity in Russian higher education.

Despite the fact that internationalization has been on the agenda of higher education reforms in several FSU countries, the 5-100 initiative is the first program aimed specifically at rankings and performance acceleration in such a pragmatic way. Other countries broadly aspiring to global markets don't act in such a straightforward way. Actually, most of them have very limited opportunities and are unlikely to launch a program similar to the Russian one. Quality of teaching, equal access to high-quality education, lack of competent staff, and unstable economic basis of higher education are considered to be more pressing issues in the countries of Central Asia, the Caucasus and even in the European part of the post-Soviet space.

The Russian Universities Competitiveness Enhancement Project: Evaluating Potential Impact on University Strategy

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It is not unreasonable to assume that universities receiving governmental funding for the purpose of enhancing their competitive position in international academic ranking system adjust their strategies in order to meet the newly set growth targets. To evaluate whether such an assumption is indeed reasonably, we analyzed the strategies which universities participating in the Russian Universities Competitiveness Enhancement project are going to use to improve their status in the world university rankings.

As a result of an open grant competition, fifteen higher education institutions were selected as project participants. They make a rather diverse group. Among them are eleven universities that participated in other academic excellence programs run by the government in the past, and were granted the status of national research universities. Three are federal universities, established recently by merging a number of large regional universities in order "to optimize regional education structures and to strengthen the ties between higher education institutions and economic & social sectors".[1] One of the selected universities has never received substantive federal funding.

Each participating university has designed its own set of strategic initiatives, based on its vision of the steps required for paving its way into the Top 100 league by the year 2020. The resulting roadmaps underline ambitious transformations that are deemed essential to make the participating schools more competitive against world-class universities. A roadmap contains annual and overall program target indicators that universities are expected to achieve. Each university has set its own indicators that are believed to be necessary for the achievement of strategic goals. Also, each university had to define its own performance targets for the obligatory indicators which had been specified in the tender documentation by the Russian Ministry of Education and Sciences. Such indicators are compatible with those included in major world rankings. They include:

- The number of publications per faculty member in journals indexed by Web of Science and Scopus;
- An average citation rate per faculty, based on unique publications in Web of Science and Scopus;
- The proportion of international faculty, including international PhD holders;
- The proportion of international students enrolled in fundamental university programs, including students from the Commonwealth of Independent States.

To evaluate the proposed changes, we have analyzed baseline indicator levels, which universities entered the program with in 2013, against the targets for 2020 they have set for themselves. As a result of our analysis, all the universities can be divided into two groups according to the increment of baseline indicator levels against target values.

The first group consists of five universities that aren't planning to change their overall strategy in order to become more competitive. The universities in this group are planning to put more emphasis on the areas that are already strong, to make them even stronger. The second group includes 10 universities, which appear to have changed their intents to a certain degree. In absolute terms, these universities have improved all the indicators . However, some of them got an extra boost as the program started, allowing

a number of universities to get higher in the rankings. It is not unreasonable to assume that for this group of schools, the striving for top world rankings incentivizes them to focus on areas which might have been less developed initially, but have been given higher priority within the new strategic vision. One of the universities in this group stands apart: the evaluation of its roadmap shows that this university is making fundamental changes in institutional development strategy in order to raise its positions in global university rankings.

Although it is impossible to draw any statistically significant conclusions from this limited sample, we suppose that the development of world university rankings and the pursuit of higher ranking positions make an impact on Russian universities' development strategies.

It is important to note that across both groups, universities with weaker baseline indicator levels proposed much more ambitious targets, attempting to at least catch up with stronger competitors if not leapfrog them. In some cases they even planned out absolute growth of all target indicators, sometimes as much as 100 times.

However, not all of these aspirations always looks realistic, such as the intent to increase the number of foreign lecturers and researchers from the current 0.1 percent to 10 percent (an internationalization rate typical of leading world universities), even though it might seem feasible at first. Yet, if there is no other source of information than roadmap data, one can neither determine the scale of transformations in the university structure and policies necessary to achieve these results nor assess institutional readiness for such drastic changes. Similar logic can be applied to other indicators. Thus, one might assume that once the roadmaps are about to be implemented, universities will come to realize that their scheduled reforms require far bigger financial, human and time resources than they had anticipated, and will have to amend their target indicators and the roadmaps themselves.

It is too early to state yet that participation in the Russian Universities Competitiveness En-hancement project alters the strategies of participating institutions, but it is already clear that world university rankings do have an impact on what universities believe to be important, as they have already tried to adjust some of the indicators that were not especially important prior to joining the program. The project discussed here is scheduled to be implemented through the year 2020, so dynamic analysis of the transformations that are happening in each participating university can shed more light on the actual impact of the program on both universities' strategies and their true-life results.

Notes

[1] *RF Ministry of Education and Sciences, Federal Universities Project http://tinyurl.com/obcedg8 (accessed March 20th 2014)*

How Can a University Find Its Own Path to Excellence?

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Defining the Mission

Nowadays there are many different excellence initiatives promoted in the countries that aspire to play an important role in science and education, such as China, Brazil, the United Arab Emirates, Malaysia, and Russia. Although they may use different wording, they do share the same vision of a world-class university: it is a combination of highly-qualified professors and researchers, talented students, successful graduates, creative and friendly atmosphere, and ample resources. However, if we look deeper, we see that each world-class university has been following its unique path, developing a specific strategy, organizational culture and external partner network. Therefore, a university aiming to join the 'elite' should focus on tailoring an individual strategy to build its own specific resources, history and partner links. Thus, we believe that in the context of internalization, the best and most efficient way to create such uniqueness is to clearly define university mission.

It was decided that the mission of Ural Federal University (further UrFU) should be based on the industrial character of its home region. The Urals and Western Siberia are the largest manufacturing centres in the country, producing 40% of Russian steel and rolled metal, 45% of refined copper, 16% of mechanical engineering products, 68% of crude oil, and 92% of gas. The economy of the region generates an effective demand for education, innovative developments, and technologies that rise to the level of the world's highest standards. Therefore, UrFU mission is **to enhance competitiveness and enable re-industrialization in Russia, build up human, scientific and technological capacity, upgrade the existing sectors of Russian economy and help develop post-industrial sectors in a balanced manner, in particular within the Urals macroeconomic area.**

Looking for Our Own Strategy

Universities functioning in the countries mentioned above tend to use standard and typical mechanisms, strategies and programs — most of them but not all: if we take a closer look at those that have significantly improved their positions in international rankings recently, we have to admit that success at global level comes to those pursuing their own individual way to academic excellence. For instance, rich budgets allow universities in the Arab countries to massively attract leading professors. This approach is, however, unsuitable for UrFU as funding is incomparable. So, what is the right route for UrFU?

First of all, the university is far from the capital — Moscow. It is quite large, with over 25.000 students and 3.400 academic staff. It offers a huge variety of programs: from arts and linguistics to astronomy and engineering. UrFU leaders firmly believe that the best organizational strategy for UrFU is to develop Centers of Excellence, which will help the university to become more successful. Focusing on Centers of Excellence is not a new idea as such. What is important here is a 5-step algorithm we apply to develop such Centers.

Five Steps to Excellence in Education

In addition to standard activities (i.e. attracting international students, recruiting renowned professors), UrFU has elaborated its own "strategy for success", which includes 5 consecutive steps.

Step 1: Attracting talented Russian students.

Step 2: Creating business-partner network, linking globally successful Russian and foreign companies searching for talented graduates.

Step 3: Establishing academic partnership programs involving world best universities and research organizations attracted by UrFU business-partner network (Step 2) and talented students (Step 1) and pursuing research goals together.

Step 4: Attaining teaching excellence through the recruitment of world recognized professors and graduates from top universities; academic partnership programs (Step 3), business-partner networks (Step 2) and talented students (Step 1) being their motivation.

Step 5 (final stage, targeted at the most 'demanding' participants): Attracting talented international students pulled in by high quality teaching (Step 4), academic partnership programs (Step 3), business-partner networks (Step 2), and talented Russian peers (Step 1).

This strategy will assumingly take 5-7 years to implement, given that 5-10 programs based on the above algorithm will be accomplished every year.

Striving for Success in Research

First, we believe that correctly defined priorities are key to success in science and research. We analyzed the priorities set by UrFU competitors and world class, benchmark universities and were surprised to find out that leaders and potential leaders have a similar focus, which leaves no room for differentiation. Moreover, we hold that in the future, numerous individual in-house centers will be substituted by an integrated research network. Thus, joining an international research network is much more efficient than attempting to motivate international experts to work and live in the Urals. Here are some ideas how to achieve this.

One of them is to create favourable working conditions for talented academic staff and researchers. In our view there are three main hurdles which pull science back at Russian universities: bureaucracy, huge teaching load (500-800 academic hours a year per person), and inadequate salary. In order to overcome these issues, UrFU launched a Motivation Program that directly supports researchers who manage to publish articles indexed by Web of Science and Scopus, insuring that no money leaks along the bureaucratic ladder. This approach has helped UrFU double the number of internationally published papers within the last 3 years and to improve their quality.

Nevertheless we should not stop. Unfortunately, sustainable development cannot rely on individual researchers only, so UrFU moves on to creating laboratories or dynamic research groups that would be capable of working in line with international standards. It may all occasionally resemble partisan warfare but it's worth it. We are sure that concentrating resources and efforts on the development of such groups and labs is a successful strategy.

So, UrFU strategy is similar to that of a typical business strategy used by international companies: achieving global competitiveness basing on the national market and that of neighbouring countries. Business environment has proven that such a strategy can be quite efficient.

Higher Education Institutions On The Way Towards Multidisciplinarity

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In the article, the authors present their original classification of universities based on the level of development of their educational and research activities.

There has been heated debate about the quality of higher education in Russia lately. As a result of a monitoring conducted by the Ministry for Education and Science in 2012-2013, Russian higher education institutions were divided into two groups: 'efficient' and 'non-efficient' ones. Prior to that, in 2006-2011, the quest for quality higher education led to the creation of the system of federal universities by merging the best regional universities together. In the end, nine federal universities were established. We believe this important to remember when talking about further development of the Russian higher education system.

Federal universities were originally meant to become large multidisciplinary centers for education and research

aimed at fostering innovations and human talent necessary for the development of their respective regions and federal districts. That is why all kinds of different HEIs were merged together into federal universities. The latter had to perform a 'seamless' integration, which also involved merging or dissolving similar departments and schools. We can now say that the primary stage of the process is already over.

However, structural and organizational integration is just the first step towards building a com-prehensive system for education and research.

Obviously, university departments differ not only by their study fields but also by their profes-sional profile: some of them focus solely on research; others are mostly occupied with teaching. Some institutes and departments are research-oriented: they work either for the state or for the industry, and have high publication rates in top peer-reviewed journals. Other, education-oriented departments aren't striving to engage students into research. This doesn't mean of course that the former aren't in any way involved in education and vice versa.

Taking this into account, we believe universities can be divided into groups according to the way they balance research and education. There are four types of universities in this model:

- Balanced universities: active in research, active in education;
- Professionally oriented universities: not active in research, active in education;
- Research-oriented universities: active in research, not active in education;
- Problematic universities: not active in research, not active in education.

Figure 1. University classification based on how they balance research and education

Active in research, not active in education *Research-oriented universities*	**Active in research, active in education** *Balanced universities*
Not active in research, not active in education *Problematic universities*	**Not active in research, active in education** *Professionally oriented universities*

What are the criteria for ascribing particular institutions to this or that category? We believe they should include the number of publications per faculty member and the students' average score on the Uniform State Exam (obligatory college admission test taken by all high school graduated). USE average scores actually show that the most talented high school graduates with top scores go for the most popular professions on the labour market and not for science, i.e. they usually choose 'professionally oriented' universities.

This classification was used in analyzing Kazan Federal University's schools and departments in 2012-2013. It turned out that in 2012; there were 6 'balanced', 10 'professionally oriented' and 1 'problematic' department at KFU. The latter improved its performance by 2013 and moved to the 'professionally oriented' category, thus making KFU a university with 6 'balanced' and 11 'professionally oriented' departments. This came as a result of higher USE scores among 2013 freshmen, which became possible due to KFU's closer work with high schools (providing career guidance to high school students and organizing academic contests for talented young people). A number of institutes within KFU improved their research performance indicators by winning research grants or doing more work for the industry.

It is important to note that KFU's 'balanced' departments are mostly natural sciences (physics, chemistry, biology, mathematics), while arts & social sciences departments (history, languages, economics, sociology, pedagogics) are usually 'professionally oriented'.

Our classification is applicable both to specific university departments and HEIs in general and may become essential in the coming years since we are definitely going to witness more mergers in the Russian higher education. Weaker HEIs will be re-organized and merged with stronger ones.

This model was also used for analyzing the Russian higher education system on the whole, based on the Ministry for Education and Science monitoring data. The monitoring covered 809 public and private HEIs from all over the country.

The results were the following:

- Group 1 ('balanced' HEIs: high USE average scores, high publication rate) — 12% of the total;
- Group 2 ('professionally oriented' HEIs: high USE average scores, low publication rate) — 20.8%;
- Group 3 ('research-oriented' HEIs: low USE average scores, high publication rate) — 21.2%;
- Group 4 ('problematic' HEIs: low USE average scores, low publication rate) — 46%.

As we can see, nearly half of all HEIs are 'problematic'. We also noticed that most of the HEIs performed better in education than in science: 52.8% enrolled students with USE scores above national average but only 26.2% could boast publication rates above national average.

As we mentioned above, the ministry's university merger strategy proved to successful and will most probably be implemented in the future as well. The HEIs deemed inefficient as a result of the monitoring will be merged with stronger ones specializing in the same area. However, it is clear that a merger itself cannot guarantee better performance.

Our findings show that universities and departments specializing in natural sciences tend to be 'research-oriented'; in arts & social sciences — 'professionally oriented', in pedagogics — 'problematic'. So the question is, how can we make 'research-oriented' departments more 'professionally oriented', 'professionally oriented' departments — more 'research-oriented', and improve the performance of the 'problematic' ones in general?

We believe this can be done through intensified intramural cooperation, e.g. joint research. In other words, universities should invest more in inter- and multidisciplinary research. It is also essential that universities situated in one region or federal district cooperate more too. We suggest that 'research-oriented' universities seek for 'professionally oriented' universities as their primary partners.

Change Management in the Context of Transformation of Classical University

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The context of change management at Tomsk State University (TSU).

Founded in 1888, Tomsk Imperial University was initially meant to be a center of education, science, and culture on the huge territory of Northern Eurasia. Today the scientific and educational landscape of Siberia and the Far East is to a large extent shaped by the university's alumni and staff. Incorporating a full range of academic disciplines that define a classical university as well as three large research institutes, TSU has historically been focused on combining education and research. Therefore it is no coincidence that as a result of an open competition, the university was granted a status of a "national research" university in 2010, and in 2013 it was awarded extra state support for implementing the Global Competitiveness Enhancement of Russian Universities Program.

The university's competitive potential is based on the traditions of leading research teams (more than 40 of which have state awards and the status of Presidential Schools of Though), large international projects (more than 20 Tempus projects), network communities (e.g. 'Interact' and a network of noospheric stations), international joint labs (five such labs were opened through mega-grants awarded by the Russian government). Major breakthroughs achieved at TSU are concentrated in the following fields (mainly in interdisciplinary areas): new materials and technologies (semiconductors and nanotechnologies), high technologies in medicine, theoretical physics, biota, climate & landscape, and cognitive research. 80% of TSU students come from other regions of Russia, another 10% are foreigners (including those from the former Soviet countries).

Rapid growth and intensive increase of global competitiveness demanded not only a serious re-view but also transformation of TSU's current management structure and approach. TSU began working on its Road Map for Development till 2020. The need to identify new tasks coincided with the change of the management team (elections of the rector); a new target 'model of a classical university in nonclassical time' needed to be developed. But first of all, it was necessary to define the strategy of change management. It proclaimed the new management team's orientation towards engaging a considerable number of the university staff (more than 800 people) into further elaboration and implementation of the Program.

Our approach to studying change management is based on case and phenomenological analysis. On the one hand, such an approach allows us to fully understand all the aspects of change management in a certain place because it focuses on the reconstruction of local experience (i.e. change management at TSU in our case). On the other hand, it provides an analytical basis for defining and validating change management trends.

When launching the project to support Russia's leading universities, Ministry of Education and Science had to take into account these two major issues:

1) Policymakers were aware that the situation that had developed in Russian higher education was critical. The process of education became a manifest of a silent 'contract of noninvolvement' between students and lecturers. As a result, students' educational experience that is being formed does not meet the demands of modern economy, though they are generally satisfied with the conditions and the quality of education and do not seek to use free extra educational services provided in higher education institutions;

2) The society believes that there is no internal potential for development within higher education institutions, so in order to change the situation, it is necessary to use 'project mechanisms that involve external forces' (I.D. Froumin, M.S. Dobryakova). Such a perception of the ini-

tial situation in education is supported by the fact that the development of target models and indicators that would increase competitiveness requires universities to analyse both international university ratings and of world class universities' managerial experience.

It is for this reason that leading consulting groups (PricewaterhouseCoopers, Skolkovo Moscow School of Management and Higher School of Economics) were invited to work on the TSU Road Map for Development. The analysts studied best practices from the world's top universities, compared certain indicators with those at TSU and made their suggestions about the potential courses of change.

The development of the Road Map made it clear that changes and transformations would affect all the aspects of life at a classical university. The includes the need to discover a organizational identity in the transit from the classical university model to research university model. Hence, considering an acute shortage of resources (in terms of staff, time, finance), the goal to increase TSU's competitive ability can only be achieved by combining two strategies. The first strategy involves searching for and engaging talented scholars and professors from the international labor market. In the last year only TSU already attracted over 100 researchers from abroad.

The second one is giving TSU staff an opportunity to participate in change management, which includes defining a new organizational identity, building organizational capacity, incentivizing professors to improve their competencies and adopt best practices from abroad. In addition, data analysis has shown that TSU's main results, as measured by university ratings such as QS (where TSU is currently below 550), are propelled by only 20-25% of the staff. Thus if this figure were to double, it would allow the university to improve its positions dramatically. But Russian science has traditionally been very isolationist, many scholars and schools of thought have never made it to the international academic context. That's why it order to increase competitiveness, first of all, it is necessary to create such conditions that university staff would develop competencies allowing them to work in the global educational environment. This is difficult to achieve unless university employees are involved into change management: after all, only when all the members of staff understand and participate in setting and resolving strategic tasks, one can be sure that each employee will perceive the tasks of development of the organization as his or her vital and professional reference points (J. Howden). The study conducted to evaluate whether the university staff are ready for changes has shown that more than 60% of academic staff assessed TSU's course of changes positively. Therefore together with traditional mechanisms of international recruitment, development of a new model of competencies, introduction of a system of KPIs, i.e. target-specific management (management by objectives), it is important to pay special attention to establishing an innovation-active environment that facilitates broad involvement of employees in change management. A separate chapter of the Road Map directed at activating employees' initiatives and forming the culture of everyday organization improvements devoted to it.

For instance, the first element of an innovation-active environment was an open seminar where all university staff was invited. During the seminar the participants learnt about the experience of world's leading universities, analyzed the present situation with science and education at TSU, and discussed challenges and development trends of modern universities.

Encouraging grassroots initiatives is also crucial for the development and implementation of the Program. Different forms have been used for this purpose: all the university employees received an introductory letter, they were updated daily about what was happening at the university, they participated in public discussions, they were asked to submit their own projects (on a competitive basis) that were evaluated by experts. Also, School of Project Leadership was established and a new pay system aimed at endorsing staff participation was developed. The management system of university development has been changed completely – it has become a matrix. The position of Vice-Rector for Development Programs has been introduced. The Management Committee and the Office of Strategic Development, which manage over 70 TSU projects for change, have been created. Projects are initiated either within the framework of the Road Map or by university staff. A database of project initiatives (already over 100) has been set up. The tasks carried out by project teams are streamlining and stabilizing the process of changes. Later the process supervision will be handed over to the key vice-rectors (e.g. Vice-Rector for Academic Affairs, Vice-Rector for Research).

TSU strategic priorities are currently being outlined at strategic sessions where leading experts are invited to participate. The implementation of more than 70 projects of changes has begun. Over 1000 lecturers and students are involved. A new matrix management structure (that would include the Office of Strategic Development) is being shaped. The underlying concept of the new system of change management is the following: it is important to create sustainable mechanisms of managing organization's self-development (in contrast to the model of an academic hierarchy typical of classical universities).

The task of staff participation in solving organizational development and change management problems is not novel in management theory and practice. However, as we mentioned above, reference conditions set for TSU predetermined the use of a widespread approach to change management, i.e. target- or result-specific management (management by objectives), when attention is paid to defining target indicators and gaps between observed and expected results. In this case, staff participation in change management is minimum and generally limited: employees are only informed about ongoing changes and new KPIs for all types of professional activity. Such an approach is necessary but not quite sufficient for addressing a profound transformation of a university, because defining targets

and results on the basis of "patterns" means aspiring for institutional isomorphism (DiMaggio), when an increase in an organization's efficiency is reached through making it compliant with international practices. Such managerial approach does not take into account special conditions and circumstances characteristic of the organization that seeks to achieve a "model" state. But the most important feature of such an approach is that opportunities and forms of staff participation in management are extremely reduced: employees are assigned with operational tasks and are expected to reach certain functional indicators.

Intensified staff participation contributes not only to developing the Program, but also to creating value added (I. Adizes) along the way. It serves as a basis for long-term organizational development. First of all, in our estimation, value added, which is produced when involving staff in defining and completing strategic development tasks, manifests itself in an improved organizational form. It may be said that staff participation in change management gives an opportunity and even forces them to perceive their organization as an object of design and management. Secondly, staff participation in change management is a precondition for creating such value added as intangible assets of the organization. According to H. Itami, these are reputation and organizational culture. For TSU, emerging adhocracy is one of such intangible assets. Thirdly, staff participation in change management results in establishing an innovative (educational) community of active participants of the university transformation. It guarantees the sustainability of change.

While the university was undergoing a transformation from a classical into a research one, it became clear that administrative groups often resisted changes. However, the source of resistance is not the people but the system. Thus, it is hard to overcome the paradoxical situation when the management system is an obstacle to implementing organizational changes. Therefore, today, in the period of transition to the new model of a research university, supervisory boards, boards of trustees, commissions, and committees are established at TSU along with existing administrative groups. But fundamental changes are possible not only through changing the level of different stakeholders' involvement in change management but also by expanding staff members' spheres of responsibilities and delegating more authority to initiative project teams. Necessary foundations for an effective introduction of shared governance are being laid now. They allow involving big groups of employees in decision-making, simultaneously moving towards a more professional university management.

On the whole, the TSU case demonstrates that a priority goal of change management is not to overcome the employees' resistance to changes as it is often stated (E. Flamholtz). The goal is to create conditions for transforming the intellectual potential of the organization into a resource for innovative development and transformation of the classical university into a world class research university.

Call for papers

The 5th International Conference **«Managing Differentiation in Rapidly Changing Higher Education Systems: Challenges and Opportunities»** will be held in Moscow **in October, 16-18, 2014.** The conference is organized by the Russian Association of Higher Education Researchers.

You can apply online at ***http://educonf.hse.ru/en/2014***. Applications will be processed by the Conference Steering Committee by June 1, 2014. An application should include the speaker's name, place of work and position, contact information (address, telephone/fax and e-mail), title of the proposed paper. You should also submit an abstract of no more than 150 words (in English, attached as a PDF file) and an outline of no more than 500 words.

We welcome original research or case study carried out in accordance with the highest academic standards. The participants will have 15-20 minutes for presentation.

We also encourage session proposals and individual papers dedicated to the issue of differentiation in rapidly changing higher education to be emailed directly to ***raher.conf@gmail.com*** (please include the title of session you are suggesting, names of presenters alongside with the titles of their papers, and the name of the suggested chairperson and their contact information). A session can take no more than 90 minutes for presentations and discussion.

Both Russian and English are working languages of the Conference. Simultaneous translation will be available during all plenary sessions and most parallel sessions.

Decisions on session proposals will be announced by July 15, 2014, following peer review by independent experts.

About HERB

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