

ST. PETERSBURG INTERNATIONAL ECONOMIC FORUM
JUNE 21–23, 2012

LEADING UNIVERSITIES

JUNE 23, 2012 — 12:00–13:15, Pavilion 8, Hall 8.3

St. Petersburg, Russia
2012

Moderator:

Isak Frumin, Academic Advisor, Institute for the Development of Education,
National Research University of the Higher School of Economics

Panelists:

Edward F. Crawley, President, Skolkovo Institute of Science and Technology

Oleg Kharkhordin, Rector, The European University in St. Petersburg

Yaroslav Kuzminov, Rector, National Research University of the Higher School of
Economics

Dmitry Livanov, Minister of Education and Science of the Russian Federation

Ilkka Pöyhönen, Rector, Lappeenranta University of Technology

Rafael Reif, President, Massachusetts Institute of Technology

Vladimir Vasilev, President, St. Petersburg National Research University of
Information Technologies, Mechanics and Optics

Andrei Volkov, Dean, Moscow School of Management SKOLKOVO

I. Frumin:

Good afternoon, colleagues. This will be the last panel discussion of the Forum for many of us, so it is very important that we all leave with a good impression of it, since the last impression is the most important when it comes to our experience of the Forum as a whole. We have a wonderful opportunity for having just such a discussion today. As someone who studies higher education, it is hard for me to imagine a more interesting group of panelists.

In addition, we selected the participants with a clear goal in mind. We had several suggestions to invite provosts and vice presidents from many universities, some of which are quite well known. However, we wanted to bring together university leaders, those brave souls who take upon themselves the responsibility of running a whole institution, those who take responsibility for hundreds and thousands of young people. Today we are fortunate to bring you just such a group. We have just over an hour for discussion of a very simple question: how have some universities become leaders, developing in such a dynamic way as to effect change not only within the higher education system, but also in society and the economy?

This raises several questions, which we will put to the panel. The discussion format will be fairly traditional. I will pose the first three questions, and ask each participant to respond. I will then pose the fourth question, and hopefully there will be time remaining for questions from the audience. I have just one request for my esteemed colleagues. The problem with leaders is that, first of all, they are hard to stop, and secondly, they tend to be too politically correct. I want to remind everyone once more that this is the final session. If you are politically correct, people will not have anything to take away from this panel. So I entreat you to speak radically, so that the idea becomes clear, and to argue with one another, if you find some cause for argument.

And so, I will pose the first group of questions. What is the secret to the success of your university? Why do others regard it as a leader? How do you know that your university is among the leaders in higher education?

The second question is a related one. Does your university play a leadership role outside of the education system, and do you see the role of your university as a driver of change in society and the economy?

The third question, I hope, will not be seen as a provocation. It will be especially well understood by our Russian participants. When I discussed it with our American panelist, at first he could not even hear the question for what it was. The question is this: if your university is changing so quickly and making such bold moves, why are hundreds of other universities not hurrying to follow you, competing with you, and copying your innovations? There we have the first group of questions: leading universities and their role.

I would like to begin with one of the hosts of the Forum, a St. Petersburg local, Oleg Kharkhordin, Rector of The European University at St. Petersburg. Oleg is rather young for a rector, and was recently elected to a second term. He is a graduate of the St. Petersburg State University, as well as UC Berkeley, and has taken upon himself the 'poisoned chalice' of leading a private humanities university in Russia. The very fact of his survival is already something of a puzzle. Could you start us off please, Oleg.

O. Kharkhordin:

Thank you. Shall I answer all three questions at once?

I. Frumin:

Yes, briefly.

O. Kharkhordin:

Great. How do we know that we are a leading university? The answer is simple: internationalization. We emerged as a university integrated into the international research market, and we try to hold on to these positions and take over new ones.

I can cite three indicators, all of which are probably rather simple. We are the first university in Russia to develop a PhD-level humanities programme jointly with the

Pan-European University. In addition to the European Parliament and the European Commission, there is a university which is funded by the education ministries of 17 European countries. We have the first programme that is above the baccalaureate and master's level, a joint PhD. This is a fairly ambitious venture: students study at both institutions, after which they defend their theses together before a joint dissertation committee.

Secondly, we already have three master's programmes which educate an international student body, although not in Russian language. We specifically do not teach that subject, though students can choose to study Russian as well, should they so wish. Our programmes are in political science, sociology, and cultural studies. The newest programme, which we started this year, is called Energy Politics in Eurasia. The tuition fee is USD 17,000, and the selection process resulted in an incoming class of 15 students. This is a very successful launch for a new programme. Among our students, about half are Americans who are attracted by the fact that our tuition fee is considerably lower than, say, MIT, while for Russia-related subjects we are probably better than MIT. We are therefore the obvious choice.

Let me now touch on what we do to improve society as a whole. I had this realization back in the autumn, when I noticed ideas about meritocracy spill over onto what was happening in the street. This is not part of our mission statement, and we are an academic institution which has for a long time occupied a position atop the 'ivory tower'. It generally gives no thought to wider society, and is focused on finding ways to develop research and produce a research product. But our very system of educating the people, which is seen as meritocratic, has a core value, a fundamental principle. It is a fair game in which it is possible for an individual to win on the basis of effort and talent. This notion of fair play becomes a very important element: we simply end up training honest people. This might seem a bit high-minded in the current society, which dislikes grand statements, and rightly so. But in a situation where the moral imperative is not often emphasized, the integrity of the scientific community transforms into integrity across all areas of life. The rise in

social activism between December and March of this year can in part be attributed to the fact that people do not want to see the rules of the game undermined or broken.

Our political scientists, to their own surprise, also suddenly came into high demand, and were forced for the first time to translate their dry scientific language into the public language of politics. For example, they published a couple of books, which have now become popular, explaining the current situation. Or take the man who believed himself to be among a group of urban whackos, working on researching the development of their group, which was getting nowhere with its predictably radical demands. He ended up inheriting 'The Living City', which in three years blocked the construction of the Gazprom Tower – or at least brought the issue to the attention of Putin and Medvedev, who ultimately made the decision.

So we do, in fact, do something to benefit society at large, and our leadership is not only in our internationalization, but in connecting internationalization with the city and the country in which one lives. Thank you.

I. Frumin:

Is it fair to say that the ways in which you exceed the limitations of simply being a university, and the fact that you do other things besides teaching well, is one of the drivers of your development?

O. Kharkhordin:

Honestly, I would not want to see it that way, because our mission truly is building a great university. If there are secondary functions, then they can be seen as unintended consequences.

I. Frumin:

There was a third question, which you forgot to answer. Maybe you could do so very briefly. The idea of having joint PhD programmes is fairly straightforward. Why,

then, are you the only ones doing it, or one of the very few? There does not seem to be anything all that tricky about it.

O. Kharkhordin:

First of all, the PhD does not exist as a degree in Russia, where we award the degrees of *kandidat* and *doktor*. Creating a joint programme therefore requires a requisite set of practices, such as those of American PhD programmes: two years of course work, a set of three exams within a discipline, the defence of a dissertation prospectus, two years in the field, all of which must be completed before one begins to present work to a dissertation committee.

In Europe, things move faster. At the European University Institute in Florence, with which we are collaborating, there is a four-year programme instead of the six or seven years that are standard in America. Two days ago I spoke with Ed Crawley, and it became clear that they will soon introduce the PhD degree because the market for their *kandidat* degrees has not been very friendly. When more universities implement educational practices that more closely resemble the structure of the PhD, perhaps then we could all be in the same boat. It is just that now we have them, and others do not.

I. Frumin:

Thank you. I will now put a similar set of questions to the president of one of the largest state universities. Vladimir Vasiliev has for seventeen years been at the helm of what, as I remember, used to be called the Leningrad Institute of Fine Mechanics and Optics, and was 'fine-tuned' for the high-tech defence industry. Mr. Vasiliev is probably tired of hearing this, but one of the calling cards of this university is the plain and simple fact that its students regularly and with uncanny doggedness achieve victories in international computer programming competitions. It is a large, developing university, which has managed to maintain its vitality and dynamism despite the general decline in interest in the engineering professions. How was this done? Mr. Vasiliev, please tell us about your university.

V. Vasiliev:

Unlike my friend and colleague Oleg, I run a truly technical university. We have none of the so-called in-demand specializations, such as jurisprudence, state and municipal governance, accountancy, etc. This means that on one hand we work in areas in which we have traditionally worked, but on the other hand our work in these areas is not very traditional.

I shall begin with the first question: in what do we see, or what do I imagine to be, the success of what is now called the St. Petersburg National Research University of Information Technologies, Mechanics, and Optics? We shrunk down and kept the old abbreviation, as you noted, but our name has changed, and there is real content behind this. I think the key word is 'change', constant change. This is not just change for its own sake, but rather change in response to a fast-changing world of new information flows, changes in technology, and changes in the social sphere. That is why I see change as being necessary for the university, but it must also preserve a normal, basic level of training on which all of this can be based.

Unfortunately, many higher education institutions – and here I might be skipping to the third question – have preserved a very good legacy, and hang on to this legacy. This, of course, is important, but if it is placed above all else and fails to move in any direction, this is poor. We had these scientific schools, and in the 1950s and 1960s we built our most advanced engineering school, all of which should be preserved. However, it seems to me that something must be risked, and that we should not even follow any of the standard roadmaps. We have a special office in our university for future plans, which creates standard roadmaps, but we must also follow some other roadmaps out into the wilderness, which may not lead us anywhere, but will make us think. The greatest danger, it seems to me, is not the stability of preservation, but a certain conformism. This cannot be tolerated within the university, because if conformism and accommodation come to the top of the agenda, it leads to a dangerous situation of decay. That is why it seems to me that if these two goals I mentioned are to be the foundational tasks that should be set

before the faculty, then most colleges and universities are not following the leading institutions.

There is a third major element, which I think should be considered carefully and understood: a university is not a closed system. Any closed system, whether technical, social, or biological, will inevitably collapse. The more the system opens, the more it moves towards self-organization. It begins to change, but also to self-organize. If this is a given, then we will never succeed by relying solely on our own group of faculty members – and our university does not suffer from this. We must attract the best teachers and practitioners from all the colleges and universities in St. Petersburg. There are disciplines, such as certain aspects of ICT or in the field of photonics, in which only two people in St. Petersburg are qualified to teach a number of disciplines at a high level, or one person per discipline. Therefore, we must attract those people. There are skills which we simply do not have access to, and which are practically non-existent in Russia as a whole. Therefore, we must gather these skills and invite faculties to teach them.

In fact, decree No. 220 is not required for this. Business can also be of help. As an example of an open system, I would point to a small Moscow company, Mail.Ru, which I believe currently has a market valuation of USD 8 billion. They have created a department at our university, with their CEO Mr. Grishin serving as department chair, and they have financed a successful search for new faculty teachers.

By the way, Isak, one might point to things outside the realm of programming; I mean the world championship, in which we did, indeed, have excellent results. But these guys go on to have success in the commercial and scientific fields.

I shall just give a small example. I could point towards the group made up of Sasha Shtuchkin, Zhora Izhakov, and Fedya Tsarev, who became champions I believe in 2003 or 2004. Within a year and a half they wrote a software package which was the first ever for WiMax, the 4G wireless system. They were all executives at Skartel, which produces products under the Yota brand name. I can offer other examples which would support some of these points.

As far as universities are concerned, I have already spoken about this with Ms. Zaitseva, and would like to reiterate from this podium that we are not aiming to fill all fields of training. We must focus on those fields in which we believe we now have strong institutions. In my university we have gone as far as to say that we will work only on technologies with a high level of diffusion, that is, the technologies which penetrate into most areas of life. Among them is ICT, which is obviously everywhere, in the field of medicine, and many others beyond just management. Likewise with photonics, since light is everywhere, the photon is everywhere. And so on. This is our first priority, and this is the direction in which we strive to develop. Thank you.

I. Frumin:

Just one follow-up question. Is it true that you have gone over to electronic form filing, and that your students get their grades electronically, etc.?

V. Vasiliev:

This is true. And not only students, but parents also. Parents also have access to this education.

I. Frumin:

Thank you. I would like to introduce one example, since there was recently a discussion about this. The Russian citizens among us will probably understand. Is it possible for universities to get rid of student record reports in paper form? There was an argument against this possibility, which posited that it is impossible to be sure that the student record will be preserved in electronic form. In paper form, it is certain: we put them in storage, and they will keep for 70 years. Then someone said they could imagine a discussion in ancient Babylon, where someone proposed moving to papyrus. But the people object, saying "No, papyrus burns, weathers, but these tablets will keep." This is a good example of beneficial conservatism.

Colleagues, our next speaker knows that we have deviated from the selection principle I mentioned earlier, about inviting only university heads. Our next speaker does not yet have the top job at his university. If I am not mistaken, Professor Rafael Reif will have that job only after the second of July, correct? Only on July 2 will he begin fulfilling the function of President of the Massachusetts Institute of Technology, which is a difficult job. It is practically what we would refer to as rector: so rector and president.

We should mention that Professor Reif's biography is an interesting example of the trajectory of an American professor and university leader. His first degree was not from an American university, but from Venezuela. After that, Professor Reif earned his degrees from Stanford University, after which he devoted himself to the Massachusetts Institute of Technology and was recently elected as the Institute's new president.

Professor Reif, as you answer this question, it would be interesting to hear not only the ways in which MIT maintains its leading role, but also how you plan to maintain it into the future.

R. Reif:

Let me first of all thank you for the invitation to be on this panel, despite the fact I am not the President yet. Let me answer the questions you raised very quickly. In my view, the key to success in a place like MIT is to have and maintain a culture of discovery and innovation. I can elaborate on how we think we do that. The more important questions are the other three. How do we know that we are leaders? This is a very important question, and the answer has broader implications. We live in a very competitive environment, and we compete for talent. Any academic institution, such as MIT, succeeds only if they have the best and the hardest-working talent. We compete to attract undergraduate students, and we compete to attract graduate students. We hire about 30 new faculty members every year to replace departures and we compete for these individuals very heavily. Each time we chose someone to come to MIT, whether as a student or a professor, we are competing with a variety

of strong institutions who want them too. Very often, if not always, we win. To me, that is an indication that we are doing very well. I can give you more metrics, but the moment we stop winning in regards to talent I would worry about it. Hopefully it will not happen while I am President.

Changing society was another question that you raised. It is interesting that we have “to serve society” in MIT’s mission statement. When you have a culture of discovery and innovation, you want to apply it to make an impact in the world and improve society. That is something that is very important to us.

The last question is the one that puzzled me, in terms of followers. When you are a leader, why is that people either do or do not follow you? Because of the competitive environment in the US, I actually view that the other way around. If we started something new and nobody followed it, I would worry. That means we did not start something good enough. By and large, when we start something, other universities follow and compete with us. To me, that is a measure of success. If we do something and nobody follows us, then I know we did not begin it very well. It is a much more dynamic environment, thanks greatly to the very competitive environment we live in.

I. Frumin:

Thank you very much. I got a text message saying that I presented two other universities, but did not speak about the Massachusetts Institute of Technology, but I think that you can forgive me for this.

We will ask our next speaker today to appear before us in more than one incarnation. I would ask Dmitry Livanov to speak out as a rector who has caused quite a stir. When a successful Deputy Minister of Education and Science left to become President of the National University of Science and Technology (MISIS), many of us were confused by this move. But when a presidential decree was issued to develop a pilot project towards the creation of a research university out of MISIS, Mr. Livanov’s intentions became apparent. During his tenure at the head of this university he has succeeded in making the institution a much more dynamic one.

So, as a recent president and university leader, I would ask you, Mr. Livanov, the same set of questions.

D. Livanov:

It seems to me that since the competition over human resources is increasing practically from year to year, we feel that not only are there no more borders between countries, but also that there are no longer any barriers to communication and to the movement of individuals. Social barriers are falling as well, as well as economic ones, and so on. Therefore the issue of competition is becoming the most important one. Here I absolutely concur with Raphael in saying that those universities which attract the best people to their faculty, the best students, and the best administrators, will become the leading institutions. All of my actions as president were linked with this vision and this understanding. My only regret is that at times I acted with insufficient decisiveness and energy, having been tied down by stereotypes. I believe I could have done much more had I realized in time that these stereotypes slow down progress.

I. Frumin:

Thank you, Mr. Livanov. Colleagues, I see that you are already eager to ask questions, but for now please continue to think, and write them down. Our palette is about to broaden even further, as we introduce our next two speakers. Both of them are founder-presidents, but one of them achieved this twenty years ago, while the other did so within the past year. So we will first listen to the man who began to create the Higher School of Economics at 35 years old. There are not many here who remember 1992. It was not the best nor the most bountiful year in the history of the Russian Federation. It was a strange idea, but it so happened that it turned into a leading institution. Ladies and Gentlemen, Yaroslav Kuzminov, President. Briefly tell us, please, what kinds of answers to these questions has your experience provided.

Y. Kuzminov:

All of us here are like one of the characters in the novel *The Pit* by Alexander Kuprin, in which customer asked, after their intense moments of intimacy, “How did you come to live a life like this?” But, if you remember, young women always lied. I see four conditions that can be applied more or less universally, even though there is a huge number of contingent moments in our history.

The first is, of course, research. The university is distinguished by the fact that its teachers are also scientists. Strange as it may seem, this simple truth is often forgotten by universities and their administrators in various countries. In the final analysis, we were oriented from the beginning towards building the university around high-level researchers. This is the first condition, and it is an essential one. This does not mean that the university cannot create programmes of extended education, which are not oriented towards bringing up new cadres into the sciences and humanities. But these activities are secondary because it cannot be the other way around.

The second condition involves attracting the best. This means directing the university towards high calibre students, the best teachers, and maintaining this position without compromise. As soon as one begins to compromise on quality – whether it is for reasons of convenience, or to increase scale when it is needed, and it is often needed – then one begins to lose the game. I see that all of the universities represented here are fairly single-minded in their orientation towards finding the best people, and are not afraid of passing over something in their search, or losing something in the process. Attracting the strongest educators automatically means orienting oneself towards those who are plugged into the global market.

Thirdly, one must correctly identify areas in which the university is competitive. Any kind of competition is always a very costly endeavour. With whom is the university competing? Within the labour market, from the very beginning – I want to highlight this, from the very beginning – we were in competition with business, and not with other universities. After the first ten or twelve years of our existence, we collected enough resources – not financial ones, but human resources – so that we could

compete with international universities. Strangely enough, competing with Russian business was financially roughly equivalent to competing with international universities, and generally easier because attracting good people from the global market is done not so much with money as with a good environment. I believe that within the first twelve years of our existence we were able to create an environment that was attractive to interesting people from abroad.

And finally: the university must be a good place. This is a very substantive issue. Many of us know and love to repeat that the university is a place of freedom for each individual who finds himself or herself in that environment. However, this freedom must always be manifest in a very concrete way. In other words, freedom is the feeling that it is right for you. And the realization of this principle is directly linked to the other three principles I have listed. After all, how can a weak student have a good feeling? This would be somewhere where he or she is left alone. For many of us, at least those of us who are Russian citizens, as well as others, the university years were a wonderful time when we played a lot of football and wandered around the city. Once in a while you had to get yourself together before taking a final exam. How can we make a university a good place when students are expected to concentrate on their work 14–16 hours a day? It is a challenge. Those who are able to overcome this challenge succeed in creating a good university.

I. Frumin:

Thank you, Mr. Kuzminov. There is a piece of advice for any president, to wake up every morning and ask themselves, “What have I done to make the university a place that feels good?” We can pose the same question to a man who is in the process of creating a university. I want to remind the audience that Professor Edward Crawley, former Chair of the Department of Aeronautics and something else space-related at MIT, was invited to Russia as a founder-president of the Skolkovo Institute of Science and Technology with a mandate to set about creating a leading institution right from the start. In this sense it would be interesting, Edward, to hear about how you plan to accomplish this. Before Edward makes his

statements, I cannot resist adding that Professor Crawley is also a distinguished professor of the Moscow Aviation Institute, where he did postdoctoral research. And from the age of ten he has dreamed about someday seeing Russians and Americans setting out together to conquer the vastness of space. And now together they are creating one of Russia's best universities.

E. Crawley:

I think the answer to the first question, "What is the secret of success of the best research universities?" is quite simple. They do the best research. So then we move the definition to "What is the best research?" I have a very strong view here, which is that it is essentially at both ends of the spectrum. First, you do what my colleague Rafael called "discovery". In the UK it is called blue sky research, research that is motivated by a desire to discover new things and learn new fundamental ideas. And then at the other end of the spectrum, value is created at the university by taking that knowledge and applying it to new problems and having an impact on commercialization, on societal problems, or on government, depending on the field. Now, this is obviously not what we do. Much of what goes on at many research universities is not blue sky research, but what I call grey sky research. It is the elaboration of ideas that are already known, but without any movement towards impact and application. It is very easy for professors to get into the mode of being the expert in the further elaboration of existing knowledge. It is one of the most difficult things for researchers to recognize when it is time to move to a new topic and take the personal risk of changing their field. My answer to the second question, "How can you have long-term competitive advantage at a university?" is that you do this by creating a culture in which it is not only possible, but encouraged for people to move from a field that they now recognize has been mostly developed to a new field or to a different field or to a new problem, and to take the risk that they are no longer the expert and be willing to create a new school of thought. I think that creating that environment and that culture in a university is one of the principal aspects of being a sustainable leader in universities.

Now, I do not disagree with all of my colleagues. It is about people, it is about creating good universities that have the right culture, it is about attracting the best talent, but I think that these things are at the core of how to attract the best talent.

One more point, as I answer your questions, is “How can you objectively evaluate universities?” I am not sure you can objectively evaluate universities, but you can subjectively evaluate universities with great rigour. Let me give you an example of where I think this is done moderately well, which is in the UK. There is an internal system set up by the government to rate universities’ research performance on a scale of one to five, in terms of departments and programmes. That was not enough, so they created a five-star rating, the highest rating possible. Then they wanted to get an international view on how good the five-star programmes were.

I think international reference to peers is the basis of rigorous subjective evaluation. Rafael mentioned it. He looks around and sees who follows when MIT moves. We need to constantly examine ourselves by looking in the mirror of our peers, at the other great institutions around the world. When we did this in the UK in 2006, they brought together a group of professors, very distinguished leaders in science and technology, and we went and visited all of the five-star programmes. Within minutes, it was obvious which were very strong programmes, which were even stronger programs, and which were the strongest programmes amongst the five-star programmes. I suggest that we need to create a system of international peer review where distinguished people from other universities routinely come to our institutions and examine them and give us honest opinions on how we can improve.

I. Frumin:

Thank you for this very practical answer, or rather suggestion, in fact we will keep it in mind.

Colleagues, it is a great pleasure to introduce the president of a university which many in the audience may never have heard of, since we often know more about the most distant countries than we do about our neighbours. Professor Ilkka Pöyhönen , Rector of Lappeenranta Polytechnic University. When I asked Finland’s

Deputy Minister of Education to recommend an exceptionally dynamic, leading university, he told me, “You know, of course, that the University of Helsinki is wonderful, with a great tradition. But there is a university not far from Russia’s border which has been attracting a lot of visitors who go out there to observe what is happening. There are interesting things going on there which are also fast-moving, by Finnish standards. Professor Pöyhönen is a professor of mechanical engineering, and has led that university as president for the past four years, before which he held the position of provost. I will ask him to briefly answer the set of questions that have already been on the table for others. Please, go ahead.

I. Pöyhönen:

Thank you very much for the opportunity to be here. The first question is what are the keys to success. One of the major keys is actually to make tomorrow’s decisions today. Many times we wait and wait and look around, but if we do not move rapidly, then someone else will make the decisions, and then what is our role? As a small university especially, this is more important for us than for anybody else. But of course, you cannot change everything. You have to have your own history and acknowledge the strength of your history, and at the same time you have to look at what is going on in the world, and see what the areas where there will be importance for you are. If you can combine these two things in the right way then you have the key to success.

Of course you cannot do everything. We have to make choices. Our choice is to have just three strategic areas. Earlier, we had plenty of them, but we went in a totally different direction and now we have only three. One, of course, is why we are here, and Russia is very important for us in this area. We have a lot of cooperation with Russian universities in the area of education and research, and also in the use of infrastructure. That is our way to act. All together we have nine international Masters programmes at our university. Of them, about 25% of the students are from foreign countries, and of our students about 10% are from Russia. They are excellent students, and we are very pleased with this situation.

The next of our areas are technology and business. We now have the Aalto University, along with the other universities in Finland, which is a very big one, and they are playing the same game. But we have to be a little bit faster in order to be in a good position in the future. What we have done there is not only to set up these international Masters programmes and accept so many foreign students – we actually hold the record now in Finland – but also to do some research. There was international research done on 200 universities in different countries analysing how the foreign students there think about their host universities, and we were ranked first in that list of 200 international universities. We are very pleased about that.

Of course, research is very important for universities. There are three areas. We performed a research assessment exercise. At the international level, business areas and energy sectors were at especially high levels, and we are very pleased about that. I believe that in those areas we can plan cooperation with other countries and with other universities. We are also doing this here in Russia. Actually, if one were to define what is important for us in two words, they would be CO2 and HO2. We are working on them, and we are leading in those areas in Finland. Our share of that area in Finland is about 40% of the Finnish universities.

Of course, at the same time we consider education to be very important, and in the technology area we were the first one to actually take our programmes with us to gain accreditation in Nordic countries, and other universities are now following our lead. In the area of business we have EPAS accreditation for five years. If I understand correctly, there are only 15 such universities at a world level now with that. That is something that we have now done.

I. Frumin:

That is impressive. Once again I would like to draw our attention to the fact that nearly all of our colleagues today are speaking about identifying priorities, about concentration, and about talent. I suppose that all of you could make other kinds of connections, and I hope that you will do so later.

Rounding off our panel is Andrei Volkov, whom I specifically wanted to have as our concluding speaker, since he has himself been a moderator for several sessions, and understands the difficulty of keeping everyone to their allotted time, so he will undoubtedly be brief. But I must mention that he is also a founder-president, heading the Skolkovo Moscow School of Management. In addition, I would say that he is something of a radical when it comes to his philosophy of education. Perhaps, Andrei, you will tell us that the research universities represented here today are all old news? Please, go ahead.

A. Volkov:

Isak, should you not be a moderator, rather than a provocateur? I will be brief.

I would like to begin with the last question. Why do we not see a mass movement of everyone towards the bright, happy future of innovation? Instead, we often say that the system is dull, conservative, and that nothing is changing. These are not just my opinions, but also those of journalists and education policymakers. The answer is simple. Change is scary, expensive, and time consuming. It is scary because the university is a social system, not a set of machine tools. A president must balance various interests, which must be done very artfully or the esteemed faculty will take him down and toss him out on the street. Any observer of the educational landscape is familiar with many examples of this kind of thing.

Change is expensive; I do not think it is possible to start any kind of educational venture without having USD 50–100 million in mind. It would be a huge gamble.

Change is also time consuming. Based on my empirical observations, the minimum startup period in education is 10 years. After 10 years you can finally look to see if you are doing it right or not. Beyond that, it takes 20 or 30 years. Just look at modern history and the time it took to build up such excellent new schools as INSEAD, London Business School, or IMD Business School in Lausanne. I am talking here about my own field of business education. These are very long term projects. I shall not even mention other university projects that took one or two centuries. So, why do we not have a mass movement? It is scary, expensive, and

time consuming. And there are not many people out there crazy enough to make a 10-year commitment.

I shall now make a couple of points about leadership. First of all, I think in today's world, universities must also take the concept of positioning very seriously. Yaroslav Kuzminov already spoke about this. It is impossible to be indiscriminate, and one must decide what one is good at, and enter the global arena in some special area. From my point of view, it is no longer enough today to simply claim that you provide a good fundamental education. I will give an example of how we framed the issue at our school. We specialize in BRIC countries, countries with difficult but rapidly developing economies, and with unpredictable conditions which are sometimes referred to as crony capitalism. We also specialize in people who will become agents of change, of transformation; that is what entrepreneurial education is about. For example, we do not train managers to function in established companies. It is not our field. It took many years for us to even agree on these simple issues. I see this as a challenge that currently faces many of today's educational institutions.

There is a second, even more fundamental issue. I see the re-emergence of the curriculum question: what to teach and how to teach it. Fifty years ago one could say 'fundamental education', and see heads nodding across the room. It was obvious what one meant: maths, physics, all of the fundamentals. Today, the answer is not as evident. What are the new fundamentals? What kinds of people are needed in the contemporary world? The previous session was an attempt to answer just this question. My working hypothesis is that we should stop the practice of cutting things up into disciplinary pieces: 16 kinds of biology, 18 kinds of maths, 38 kinds of physics. Instead, we should try to bring all of these things together in a holistic, systematic approach. This is very difficult and expensive, but I believe that the answer to the future of education lies in the mainstream of this approach.

Of course, I agree with my colleagues who say that, in Russia especially, we were thrown into a global market for human resources against our will. It seems like most of my peer universities still think that they are in competition within St. Petersburg, or within the Russian Federation. In fact, we are already competing on a world

market for the best students and the strongest job candidates. The sooner we realize this, the sooner we will be able to set things right within the professional education system in the Russian Federation. Thank you.

I. Frumin:

Colleagues, I thank you. We have very little time left, 20 minutes, and so we must shift to something of a lightning round. I cannot resist pointing out that the whole discourse about leading universities is a relatively new phenomenon in our system. We always knew, of course, that we have some excellent universities. One of them had a building with the tallest spire and excellent professors – I even studied there myself – and it does not stop there. Another had the longest hallway and also had excellent professors. But the notion of direct competition between them was never discussed. Our Minister of Education from 2004 to 2012, Andrei Fursenko, who is here today, has done a great deal to launch this kind of competition among universities. It is now in full swing, and it is possible that this panel exists thanks to the fact that this process was launched, and I am very grateful to Mr. Fursenko, as are many of my colleagues.

Today however, the Russian educational system has a new leadership team, and I will ask them the final question, after which we might put some other points of view on the table. We will exempt one of the panelists, Mr. Livanov, from having to answer this question, but I will put it to the other colleagues. Briefly, please give one piece of advice to Dmitry Livanov regarding steps he and the Ministry of Education could take towards the goal of creating more universities in Russia that would be similar to the Russian and international universities which are represented here today. Please, who would like to give a response to this question?

Y. Kuzminov:

Let me answer this question. What I have to say may be paradoxical in terms of the traditional discussions about education policy. The key here is that we must have a massive renewal of universities, for which we must immediately implement reform in

the doctorate programmes and the State Commission for Academic Degrees. As I said before, universities are places in which the teachers are also scientists. Until we can stop the systematic profanation of science and the replacement of science which has tragically appeared in our country over the past 20 years, and which we seem to be doing nothing about, then all other measures will be fruitless.

I. Frumin:

Andrei, please go ahead.

A. Volkov:

I want to say the same thing, but from another angle. I believe that the Ministry should give universities the right to a demise. That does not mean that we should implement administration and closings, but we should recognize that these institutions are finite. For some reason, we seem to create them for eternity. A nuclear power plant is built, and eventually complicated processes for closing the plant and disposing of radioactive waste come into play. There is a cycle of 100 years. We must understand that universities, like public companies, must arise, achieve success, and also retire from the arena, go bankrupt, and disappear. Right now we have no such process.

I. Frumin:

Edward, would you like to say something?

E. Crawley:

I think I've already actually given my suggestion, my piece of advice, which is this idea of creating this international peer review of the universities.

I. Pöyhönen:

I like these easy questions and short answers but of course one thing is that you can't do everything, you have to focus on something, but that's the problem with

universities that we're trying to do everything. But if we can combine education and research, and also what I think is important here in Russia, is how you get the society and companies involved in these processes. This is the way we are playing. The other way is that some universities in Finland are just trying to focus on research and leaving the companies and the society away. This is the other way but I believe that here in Russia it is important that all these three areas can be combined together.

I. Frumin:

Openness, OK. Oleg, please go ahead.

O. Kharkhordin:

I have a brief and very simple suggestion: send a minimum of 210 people to study at the Harvard Graduate School of Education's Institute for Educational Management. Why 210? That makes six people from each of our eight federal and 27 national universities, so that there can be six managers (a smaller team would not work) who can come back and offer their services, and perhaps change something. Actually, 50 out of 210 will stay in the US anyway, so it would be better to send 300.

I. Frumin:

Please go ahead.

V. Vasiliev:

I would first like to say thank you to the Minister of Education and Science Andrei Fursenko, who is here today, for everything he has done between 2004 and 2012. I am very happy to see him looking fine. I mean, one can see that he is a healthy man.

I. Frumin:

A nice little comment for Livanov.

V. Vasiliev:

So my message to Mr. Livanov is a simple one: good health above all. I am very eager to see a good team come together around him, which is important for all of us, and that this team works within the paradigm that Mr. Livanov has already outlined. Thank you.

I. Frumin:

Actually, Vladimir, that kind of advice is for the dinner table. What should be done going forward? So the team comes together...

Y. Kuzminov:

It has been said already – without good health, nothing can be done.

V. Vasiliev:

Well, you are right, of course. Good health is imperative. But now will come the time for some very difficult issues. As I understand, the graduate schools will have to be sequestered, separated, and restructured. This will require a great deal of health, will it not? They will be leaving from all sides. Why am I talking about the team? Because the rectors will leave, the employers, the governors will leave, and so on.

I. Frumin:

Thank you. Raphael?

R. Reif:

It is difficult to give advice to somebody with such a huge responsibility. So I'll say just one good thing: MIT would not be MIT without other universities, without having strong interaction with industry and without educating students for research. Thank you.

I. Frumin:

Colleagues, we now have the opportunity to weigh in and to ask questions. Please introduce yourselves. Be very brief: a question or a comment.

Z. Zaitseva

Zoya Zaitseva, Quacquarelli Symonds. I have a comment and a question. I agree with Edward's comments about peer review as one of the key elements of a quality system of evaluation. We have also made our own evaluation of universities and gathered information to create ratings. We have found that the response rate in Russia is minimal. I have already mentioned today that more than 33,000 experts participated in the survey in 2011 alone. America had more than 10% of respondents, while Russia had only 1%. What I want to ask the panel, or Mr. Livanov, is whether they see a possibility to change the actions of the representatives in the room so that people would not be afraid to speak their mind, to honestly give their opinion, without fear of some kind of repercussion? Will it be possible to break down this phenomenon of social silence within the next four to six years? Thank you.

I. Frumin:

That is a profound question. It is true not only for the QS rating, but also for other international ratings. Ratings agencies have noted that our peer review culture is somehow underdeveloped, and that there is a lack of activity in this area. I suggest we hear a few more questions, and allow our colleagues to decide which of them they would like to answer.

A. Potemkin:

Good afternoon, esteemed colleagues. My name is Alexander Potemkin, and I am a member of the committee of the Union of Student Organizations of the Russian Federation, and a member of the Moscow State University student council.

Esteemed colleagues, my question is as follows: in your opinion, what contributions can be made by students and student organizations towards modernizing universities? How can we help you, and what processes can we be plugged in to? This is probably a question for Mr. Livanov and to the esteemed participants of the plenary session.

I. Frumin:

It would probably be best to direct the question to the presidents. Can you tell us, please, what faculty you are from? Is it sociology, by any chance?

A. Potemkin:

Foreign Languages and Regional Studies.

I. Frumin:

I see.

S. Guriev:

Many thanks. My question is about the elephant in the room, which was, for some reason, not mentioned by anyone: corruption in Russian universities. How will we fight corruption in Russian universities? This problem is not only about the quality of education, but also about shaping the character of the students. These are 18–20 year old people, members of student unions, who understand that corruption is the norm, that everything can be bought. They grow up to be cynical people who will probably be unable to build a modern, competitive economy. The university presidents who are here today are some of the few who do not take bribes. But surveys show that from 40–60% of students have encountered the reality of corruption in their colleges and universities.

I. Frumin:

We can direct this question to Vladimir Vasiliev and Yaroslav Kuzminov. Maybe they can tell us why they do not take bribes, or why their institutions are free of them. More questions, please, and then we will come to the responses. I hope that our colleagues will remember the questions.

B. Nuraliev:

Many people would like to know, and I, as a representative of employers, would like the presidents to give their assessment of the importance of strong business ties for a university to be a leading institution. What role is played by the practical side of business?

I. Frumin:

Boris, unless you give this question a sharper edge, I will have to disregard it, because everyone will say the same thing: that we must work together with business. What are you aiming at? Would you like to participate in the selection of university presidents?

B. Nuraliev:

I would like to know in what ways do educators expect business to participate in education. Because in the past, they simply said, "Give us money".

From the audience:

You give us your requirements, and in exchange we need you to provide resources. We are ready to change.

B. Nuraliev:

What resources do you need? Should we start teaching at universities? Or do you need money? What is needed? The system used by the Moscow Institute of Physics and Technology is a good one, so why is it so rarely used?

I. Frumin:

Great question, Boris. Can we have the last question please?

L. Sorkin

Leonid Sorkin, CEO of Honeywell Russia and for 12 years the Chair of the Foundations Department at PhysTech. I have a question for the Minister of Education Dmitry Livanov. Will the ministries – the government of the Russian Federation – support the participation of global high-tech corporations from abroad in Russian education? By support, I mean give moral support, as well as support through media and information outlets and in public opinion.

I. Frumin:

Astonishing questions. I apologize, I know that this goes beyond my role as moderator, but do you really think that he will say that he will refuse to support this? If we do not ask more pointed questions, we will not get any answers.

From the audience:

I am a journalist from *Poisk* newspaper. We have heard about leading universities, but what should be done with universities that are outsiders? Amputation and execution were mentioned, even going as far as euthanasia. And what should be done with middle-of-the-road universities – should they be considered a healthy core, or do they also need to be sanitised?

I. Frumin:

Thank you. And now, for the answers.

Y. Kuzminov:

Boris's question about the role of business is on the mark. Andrei Volkov is aware of the issues, and he has a board of directors, a steering group. I also have a board of directors, which often disagrees with us and which forces us to work in the public

interest in a slightly different way. As soon as state universities have real boards, not merely observational ones that give advice, but boards of directors in which people from business, government, etc. are involved, then it will be easier to raise funds because there will be a sense of community around the university. This is probably a question for the Minister, but perhaps also for the presidents. Thank you.

A. Volkov:

I would like to speak to the question about corruption. I do not see this as a sensitive issue. It represents a black mark on the system. The answer is very simple. As long as the diploma remains a social commodity, as it is now, which is given on the basis of government money, then corruption will not be eliminated. The issue is not simply one of morality and immorality. As soon as the diploma is separated from the government, and ceases to be a social commodity, and instead becomes a diploma granted by a specific educational institution, then we will be able to drastically reduce the pressure of corruption.

I. Frumin:

Thank you.

From the audience:

I would like to speak on the same question, and will basically pick up where Andrei left off. The answer is very simple. Within the current system, even if we raise the salaries of instructors, we will not solve any of the problems. We will not be able to formalize the system to the level of the Uniform State Exam, and a subjective element will remain. In my view, the answer is this: educational corruption will cease to be a mass phenomenon as soon as we are able to create a set of independent professional examinations which will maintain a student's qualification outside of the college or university. Until that point, corruption will continue to exist in one form or another.

I. Frumin:

Thank you. Edward?

E. Crawley:

I think that there is an answer to several of the sharp questions from the floor, which is that universities have to be more open – more open to influence from industry, both through advisory committees, and through participation on the board of directors. They have to be more open to students, because students are an important source of information at universities. They know which parts of their education are going well, they know which parts of their education are not going well, they know how students learn. I think we need to engage students as important sources of information and important stakeholders in the university community.

I. Pöyhönen:

Actually, students are very important to us, so we have a student presence on our board and almost all of our committees have students on them, because they have good ideas, and they think about what the future of their country will be. We were also asked how to influence Russian university levels, and of course one important thing is to send people to other countries and to take people from other countries, as well as to send students to study in double degree programs and double Masters programmes in other countries, and vice-versa. This is the way to create something very rapidly.

I. Frumin:

Oleg, Vladimir, Rafael, do you have any brief comments?

O. Kharkhordin:

I would like to second the question posed by Sergei Guriev, and hear an answer to it, because we also have a board of trustees which plays the *de facto* role of a board

of directors. We are constantly debating with them about the way in which they place us at odds with society at large, even though we know very well where science should be heading. But this is what makes the university function at a higher level.

I. Frumin:

Rafael, do you also have a comment?

R. Reif:

Yes, I would like to support in particular the comment about linking business with universities. After all, our students graduate in order to join businesses, and that link will improve the quality of the university system.

V. Vasiliev:

I would like to address the question from the Moscow State University student. I feel that all student organizations should move to take a more active position in the educational and extracurricular activities of the university. This is not for the sake of the university, but for their own benefit. Only then will you be able to elevate your intellectual and human capital.

With regards to corruption, I fully support what Mr. Kuzminov has said. We must understand that if we are speaking about leading universities, then we are rewarding talented students, rather than trying to take something from them. This is an entirely different approach and a different set of conditions. And all of these black marks on the records of university presidents, as if we are constantly collecting money, like when the enrolment process is taking place: honestly, it is insulting. Thank you.

I. Frumin:

Mr. Livanov, if you would, please make a closing statement for today's panel.

D. Livanov:

Thank you. I certainly will not try to give comprehensive answers to all of the questions which have been raised, but will simply give my own impression of some of these issues.

Firstly, I would speak on the issue of peer review and self-assessment of the professional community. As long as Russia lacks a system of science which is understood as a system of scientific reputations, we will not have peer review, either. I can firmly assert that while we have many scientists, we lack science. When it appears, then we can make an objective assessment about how our universities are doing. Until it appears, we will actively rely on international experts. I do not see any other method available to us in the current environment, and I do not see that changing in the coming years.

The question of corruption is clearly beyond the limits of the educational system alone. We know that day to day corruption is a blight upon society as a whole, and the educational system cannot be taken in isolation. Everything that has been said about the fundamental openness of universities as organizations, their being funded by taxpayers and their responsibility to them for their work, as well as about professional examinations, and about the move to degrees being granted by universities, rather than by the government – all of these seem to me to be relevant questions, which should be discussed, and we must proceed along all of these lines.

A very potent question is the one about how our universities should be governed. I see non-executive boards of directors as an effective tool for fulfilling this role. Today, all federal universities and most national research institutions have them. Perhaps not in most, but a few certainly do. We must make sure that they are working properly. Sometimes they work better, and sometimes not as well. But in either case, we have created a mechanism for external influence on the policies of the university.

In addition, there is one more important detail. We must take into account the interests of the country, interested parties, society, and those student organizations

of working universities. These interests are not universally promoted – far from it. We are seeing the number of Russian experts who are interested in being associated with universities approaching zero. Universities are a part of society, and in that regard the type of active civic society that emerges in Russia will dictate the ways in which many different levels of social organizations will develop. The extent to which a society of consumption will turn into a system of student self-government – a real self-government, and not one patronized by a university administration – will define the extent of openness of the university, and its ability to meet the demand that is out there. Thank you.

I. Frumin:

Thank you very much, Mr. Livanov. And many thanks to all the participants in the discussion, and thanks to the wonderful audience. Thank you.