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Introduction: two key tasks

Education is the foundation of the knowledge-based economy — the economy of the post-industrial information society. It does more than simply train specialists for specific jobs and broaden people’s professional and cultural horizons. Today, it is a key means and resource for the emergence of creative individuals who are willing and capable of living in a multicultural society, taking responsible decisions in an atmosphere of free choice, and engaging in dialogue as a consciously adopted form of cooperation and competition. The principle of “life-long education” makes this activity fundamental for everyone living in modern society. As a result, the task of constantly modernizing education itself becomes all the more important. ***We are the inheritors of the educational system of the industrial age. If we do not make it fit the needs of the new economy and new social processes, our civilization is bound to lag behind.***

A national consensus on the mission of education in the coming years is a necessary precondition of the success of such a transformation. This consensus may be reached around the following key tasks for the state and society:

- Preservation, development, and consolidation of the Russian people;
- Support Russia’s position in the global competition of innovative economies.

The resolution of the first problem requires an ***understanding of the role of education as a powerful factor for making the young generation feel they are taking part in the common task of the sociocultural construction of a new Russia and as a means of overcoming barriers between different cultural and social groups.***

The resolution of the second problem requires evaluating education from the standpoint of the country’s competitiveness. To this end, our educational system should ***compare itself with other effectively developing systems and strive not so much to preserve its specific nature and the respect for its past achievements as to attain a competitive advantage in the market of international educational.***

Today, these two key tasks of the educational system — the development and consolidation of the nation and the improvement of the country’s position — are not being solved sufficiently well. The Public Chamber believes that this is primarily due not only to the lack of funds allocated for education but also to a lack of harmony on key positions among the parties interested in education. The latter is, in turn, connected to the fact that the direct participants in the educational process — educational workers, students, and parents — do not have sufficient opportunities and incentives for taking active and responsible action. As a result, only 23% of the adult population of the country is “generally satisfied” with the educational system. The percentage of people who are “generally unsatisfied” amounts to 44.5%.¹

The current report was prepared by the Commission on Issues of National Intellectual Potential of the Public Chamber of the Russian Federation headed by Y.I. Kuzminov.

The report makes use of the materials from hearings conducted by the Commission on Issues of National Intellectual Potential of the Public Chamber of the Russian Federation; the data of the Russian Ministry of Education and Science, the Federal Agency of Education of the Russian Federation, the Federal State Statistics Service, the Public Opinion Foundation, the Yuri Levada Analytic Center, the Organization of Economic Cooperation and Development, and the World Bank; and the results of studies conducted by the Institute of Sociology of the Russian Academy of Sciences, the Center of the

¹ Levada Center (June 2007).

Sociology of Education of the Russian Academy of Education, the Federal Education Development Institute of the Russian Ministry of Education and Science, the International Organizations Research Institute of the Higher School of Economics State University, the Education Development Institute of the Higher School of Economics State University, and the Institute of Statistical Studies and the Economy of Knowledge of the Higher School of Economics State University.

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Chapter 1

Education and sociocultural harmony in society

The educational system in every type of modern society is an instrument for promoting and supporting social and cultural unity. First of all, it acts as a social elevator for people from low-income and poorly educated social strata. Secondly, education creates channels of territorial mobility that serve to mix the country's population across regions. Both instruments have a great impact on preventing rapid economic and social stratification. In comparison, other social and state institutions such as programs of economic assistance to low-income individuals and unemployment benefits play a secondary role, for they only alleviate the consequences of growing inequality.

In common with most other developed countries in the world today, Russia faces another (cultural) challenge to its unity and sovereignty. Education plays a decisive role here, too. The school consolidates the linguistic and cultural identity of citizens and their support of social interests — at the national level, among others. The Twentieth-century experience shows that the educational system can successfully assure the socio-cultural harmony of society not through the translation of mottos or the direct propaganda of patriotic symbols and rituals but through effective study in the state language that opens the way to all kinds of knowledge, skills, social roles, and positions. The Russian language has all of these properties. Its preservation and development as well as the distribution of already existing and developing Russian-language culture in the fields of art, science and technology is a key imperative for the sustainable development of Russia and the consolidation of its position in the modern world.

Russia is a multiethnic, multicultural, and multid denominational state. Every individual and ethnic group is becoming increasingly affected by changes in the world around them (this dependence will increase even more rapidly with time) as a result of globalization, which is marked by the transition of society to a postindustrial and information stage of development. The instilling of tolerance and the promotion of a culture of dialogue between people with different traditions and views can represent a contribution of Russian education to the consolidation of society.

1.1. Education as a means of overcoming barriers

Sociological studies have shown in recent years that education in Russia has not only ceased to serve as a social elevator but, in contrast, has become an instrument that preserves barriers between different social and cultural groups in certain sectors.

Public education: the dangerous growth of inequality

The question of paid education has troubled Russian public opinion for over 15 years now. In contrast to the growing commercialization of the vocational and, in particular, higher education systems, public education has always been viewed as a protected institution that assures social equality. Society has therefore tried hard to prevent commercial mechanisms from entering this domain.

However, it is no secret that the preservation of an essentially Soviet institutional and economic model of education was accompanied by a sharp social, territorial, and economic stratification of the population. By the early nineties, the real state funding of schools was greatly curtailed and has remained insufficient ever since, amounting to only 22,900 rubles per school student (at current prices) — lower than for all other educational levels.

As a result, zones of real inequality representing a danger to social stability have formed in the public educational system. At the same time, it should be noted that **paid education has not entered mass public education to a considerable extent and has not become a significant cause of inequality. Neverthe-**

less, the preservation of mostly free public education has not eliminated other (cultural and territorial) factors of stratification.

Unequal access to high-quality public education arises as soon as a child enters school, continues to aggravate during primary school, crystallizes fully by the time the child completes primary school, and is then consolidated in secondary school.

Attempts to assure equality (with regards to educational results) at the end of schooling has proved ineffective both in Russian and in foreign practice. Such work should begin as early as possible. Several studies have shown that pupils who did not attend kindergarten frequently perform poorly in school. This is why the “Priority Areas of Development of the Educational System of the Russian Federation”¹ call preschool education “an effective means of equalizing the initial possibilities of children entering the first grade of primary school”.²

However, the implementation of a potentially good idea must bear in mind the **unequal access to kindergartens**³ (especially good kindergartens) that has emerged in Russia and that depends on such factors as their cost (and consequently their inaccessibility to socially vulnerable groups) and the type of settlement. Although this problem is extremely serious, it unfortunately receives little attention in state educational policy.

Nevertheless, the **unequal access to school education** as a quality educational service is particularly grave. One is forced to admit that the school system in Russia is gradually splitting into two: one system for educated and well-off citizens (primarily living in urban areas) and another system for poorly educated low-income families (primarily living in rural areas). Recent studies have shown that about 25% of Russian secondary schools lack modern equipment and highly qualified teachers. They give rise to consistently low educational results. Such schools are mostly located in small towns and rural areas. They are virtually absent in larger centres of population. Most children studying at these schools come from families in which the parents did not get a higher education.

In contrast, the share of parents with a higher education exceeds 80% in the best schools (gymnasiums and lyceums for the most part), whose education quality indicators are high, in which highly qualified teachers work, and which receive greater funding from both public and private sources (such schools represent approximately 20% of all schools). It is telling that such schools are better equipped with computers, despite the fact that virtually all of their students have computers at home. The situation is reversed in weak schools. This is no surprise, for the per capita cost of the education of one student in schools of one size and even located in the same town can differ by several times.

As a result, graduates of “strong” schools outnumber graduates of “weak schools” by a factor of 2.5 among the freshman class of higher educational establishments. The danger of this situation lies in the fact that such a structure of public education reproduces and consolidates the already existing social inequality.

The territorial factor is one of the most important aspects of inequality. About 17% of schoolchildren do not get to choose their school (for there is only one school in their community). It is important to note that virtually none of these no-alternative schools are on the list of successful and well-equipped schools. Are special programs aimed at removing this territorial barrier effective? On the one hand, the results of rural school students from the Chuvash and Karelian Republics, the Krasnodar and Krasnoyarsk Territories, the Tver Region, and certain districts of the Moscow Region on the Unified State Exam and Russian-language tests are comparable to and even higher than the results of urban students

¹ Approved as the meetings of government of the Russian Federation on December 9, 2004.

² Section II: Assuring the Accessibility of Quality Public Education.

³ Образование детей и взрослых: семейные проекты траекторий: инф. бюллетень. М.: ГУ ВШЭ: Фонд «Общественное мнение», 2005. № 7 (15).

and are sometimes higher than the Russian average. However, PISA 2003 and other sociological studies suggest that stratification continues to be high across the country as a whole.

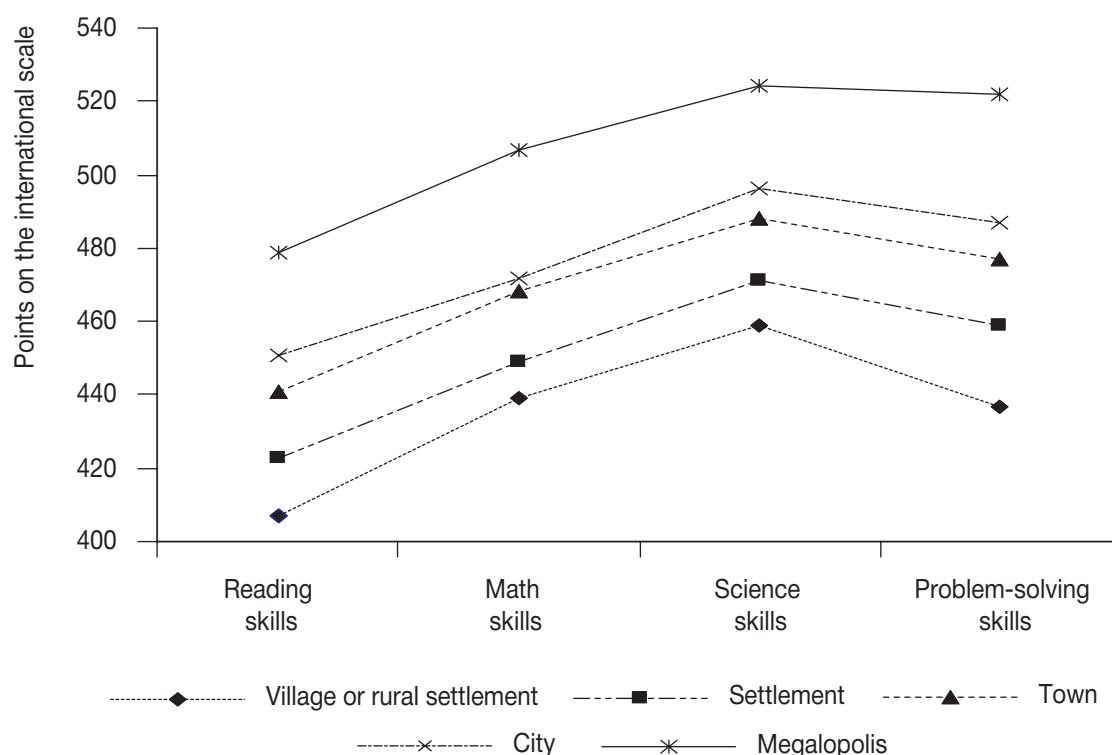


Figure 1. Correlation between students' educational results and place of residence (according to the PISA international study)

The sociocultural, income and territorial barriers to the equal access to education are aggravated by the **selection of schoolchildren at different stages of education** (in most schools with high educational results, students are selected on a competitive basis).

In turn, the spread of **paid complementary education** stimulates stratification processes in this domain and leads to a decline of educational opportunities even for talented children from low-income families.

This inequality stems from an insufficient and sometimes even inequitable allocation of public funds for education. Today, this situation is being corrected by an overall increase in funding and its more equitable allocation through the mechanism of capitation (the principle of "money follows the student"). Yet **it is abnormal when a considerable number of schools do not provide education of sufficient quality to their students**. A number of regions are taking steps to provide special assistance to small and remote schools. For example, students and teachers of small remote schools in the Republic of Karelia get to use digital textbooks provided by Petrozavodsk State University and receive individual on-line consultations from its professors. However, at the current time, there is no overall federal policy on improving the situation in weak schools.

Accessibility of vocational and higher education

Inequality of access to vocational and higher education is even more evident. The system of entrance exams to higher educational establishments requires parents to make considerable expenditure (on courses, tutors and sometimes even bribes). In the conditions of a chronic shortage of funds, higher

educational establishments are forced to give preference to students that may not be particularly talented yet are able to pay for their education.

Similar to the situation at preschool and school levels, stratification takes place along not only income but also territorial lines. Applicants from small towns, villages, and other regions have much a smaller chance, as a rule, to get into a prestigious Moscow or St. Petersburg university than students who attend its preparatory courses from the 10th or 11th grade onwards. In comparison to 1985, the share of out-of-town students in Moscow and St. Petersburg universities had fallen by 2—2.5 times by the end of the 1990s. Even public universities that are mostly financed by tax payers from all over the country predominantly accepted graduates of Moscow and St. Petersburg schools.

Since 2000, the Russian government has tried to change the situation by introducing such instruments as the Unified State Examination (USE) and Federal Olympiads in different subject matters. It must be said that they have made quality education a lot more accessible. For example, the share of out-of-town students at the Higher School of Economics, one of the first Moscow universities to switch to the new admission method, rose from 12 to 50% over five years.

The USE is successfully overcoming two forms of inequality: territorial inequality (which is extremely important in Russia) and inequality linked to corruption and nepotism (the previous system of university entrance exams gave a major advantage to families with ties and the means of paying for the services of the “right” tutors).

Nevertheless, even the fairest and most objective USE is unable to overcome the social inequality arising in school, for it can evaluate only academic results. As a result, prestigious disciplines are predominantly open only to children of the most well-to-do and educated parents. It is no surprise that in the secondary vocational education system, children of parents without a university degree outnumber children of parents with a university degree by almost 15 to 1. Vocational and higher education has therefore become part of the cycle of social stratification.

Weak higher educational establishments also serve to consolidate inequality. According to many experts, 20—30% of all higher educational curricula do not give even a minimum set of skills necessary for exercising professional activities, and their graduates unwillingly end up in the “pseudo-education” sector. This is particularly true of numerous economic, management, and legal majors. They appeared in virtually every Russian higher educational establishment in the 1990s during a period of great demand for such subjects. As a rule, the universities that created such departments did not invest in the corresponding human and information resources but only viewed them as sources of income during a period of falling demand for their basic disciplines.

Things have gone so far that economic, management, and legal departments in most specialized technical universities account for between a third and a half of admissions. In many Russian regions, there are a considerable number of people with “bad” diplomas of such departments among the registered unemployed.

Up to half of all Russian students study in distance or evening programs. One cannot help but notice that a considerable number of distance programs set low requirements for students, which leads to graduates having unsatisfactory professional skills and knowledge (a few successful examples of mass distance education notwithstanding, such as the Moscow State University of Economics, Statistics, and Informatics, the Modern University for the Humanities, and the All-Russian Distance Institute of Finance and Economics). At the same time, socially vulnerable population groups and children of parents with a low educational level are the first to be caught in the snares of higher educational “swindlers”.

Accessibility of education for children with disabilities

The Russian Federal Law “On Education” has set down as a basic guarantee the state’s responsibility to create “conditions allowing citizens with developmental disorders to get an education, correct their developmental disorders, and be inserted into society through special pedagogical approaches” (Section 6, Item 5).

Today, by the very conservative estimate of the Russian Ministry of Education and Science, there are 450,000 disabled children in Russia. This represents over 4.5% of the total number of schoolchildren. 250,000 of them are getting an education (140,000 in public schools, 40,000 at home, and about 70,000 in special schools). Thus about 45% (200,000) of all disabled children of school age are getting no education at all.

About 29,000 mentally disabled children (one third of the total number of mentally disabled children) are isolated from society in public children’s homes, where they are stripped of the right to get an education and doomed to personal and social deprivation.

Disabled children are virtually unable to get an education in special (corrective) schools near their place of residence, for such schools not only account for less than 4% of the total number of public schools but are also divided into different types and categories and are therefore far from being ubiquitous. As a result, 70% (166,400) of disabled children are forced to study at boarding schools.

Physically disabled children, whose education often does not require a modification of the school curriculum, are forced to study at home in isolation from their peers, because school buildings are not adapted for the handicapped.

The amount of funding per child depends not on the child’s needs but on the type of school (thus different amounts may be allocated for the same child in a special school and an ordinary school).

A legislative framework for the rehabilitative educational activities of higher educational establishments has still not been worked out and lacks the necessary state funding and personnel. In 2004, head centers for educating disabled children and student and teacher’s district centers for vocational and higher education at prevocational, vocational, and higher schools were set up at the order of the Russian Ministry of Education. Nevertheless, no norms or laws, including regulations for these centers, have been adopted.

There is no normative or methodological framework for organizing and holding USEs for physically and visually handicapped students, which puts them in an unequal position with respect to other high-school graduates.

The development of inclusive (integrated) education is very important, as can be seen from the educational practice of developed countries. Studies conducted in Great Britain show that performance in schools with inclusive education has increased among all children and not just those children with special educational needs. The school is a small model of society: if certain children are excluded from schools, they are likely to be subsequently excluded from society as well. The priority of inclusive education is set down in the UN Convention on the Rights of Persons with Disabilities, including disabled children. It opens the way to their social integration.

It is important that the access of children with disabilities to better educational services will increase their access to vocational and higher education and improve their chances on the labor market. In addition, integrated education for healthy children and children with disabilities will instill values of compassion, tolerance, and mutual assistance among students. This is in itself an important educational achievement.

We should mention another group of children in which socially disabled and marginal cases frequently arise: orphaned children. These children either were unwanted by their parents or lost them. The state and society must assume the responsibility for their fates. There are 288,000 orphaned children in Russia today. The integration of children from children’s homes into regular schools has been a big step forward. Nevertheless, mechanisms for the effective socialization of orphans in new socio-economic conditions are still lacking. It is important not to simply allocate additional funds for their education but to search actively for new technologies for integrating them into society.

1.2. Education as a means of cultural and political dialogue

Civil education for the formation of sociocultural communication skills

The education of citizens is a key task of the educational system; it is performed in the interests of society and the nation as a whole. In present-day Russia, this task is complicated by the historical weakness of civil society and its institutions, the lack of a new Russian identity, and other circumstances linked to the transition of a state with a multiethnic and multicultural population to a postindustrial and information stage of development.

Of all the various aspects of civil education for children and teenagers that are relevant for this transition, only the historical aspect is discussed in the present report. This choice is explained by the great importance of the study of history (and, in particular, Russian history) for making students recognize that they are a part of the fate of the nation and the state, understand their place and role in the historical trajectory of their native country and mankind as a whole, develop the ability to perceive the material and spiritual values created by their forefathers as heritage and patrimony, and critically assess the key events of both the distant and recent past.

It is becoming increasingly popular to view the historical process exclusively from the standpoint of the Russian state rather than of ethnic groups whose interests do not always coincide with the interests of the central government. It suffices to mention the colossal waste of human lives during Peter the Great's reforms or Stalin's industrialization. Many textbooks factually impose the author's view and evaluation of historical events on school students instead of making the latter into critically-minded experts that learn to understand the events of the past (and consequently the present) in the context of the openness (probability) of the historical process and the struggle of different interests.

A number of school textbooks have adopted the approach of justifying all events in the domestic and foreign policy of the Russian state by state interests. This is not what real patriotism is all about. Loving one's country and being proud of belonging to it does not mean mythologizing its history and justifying all errors and crimes committed by regimes on its territory with respect to its own and other peoples.

One must therefore be very careful about emphatic recommendations on "correct" textbooks and teacher's manuals. Broad public and professional discussion of the content of these books is a lot better at improving the quality of historic education than administrative decisions.

The striving to give schools a limited set of "exclusively correct" textbooks with "scientifically rigorous" interpretations of historical events and introduce standards and tests oriented on the "right" answers would be a simple and economic solution, indeed, if it only corresponded to educational reality. And the reality is that "school knowledge" represents only a small portion of the information that schoolchildren can find in books and newspapers and on the Internet and television. Thus, attempts to close schools off from unwanted information are bound to fail.

Moreover, an approach based on imposing a single point of view is dangerous insofar as it develops the habit of unreflecting trust in simplified ideologies. People who are subject to such education become weak and instable in the face of all agitation, including extremism. Thus adepts of the return to a propagandistic approach create, in reality, the intellectual foundations for the spread of populism and extremism.

The ultimate goal of the school history course should not be the assimilation of "absolute historical truths" but a reflection about the past (as well as the present and future) as a field of choice of real historical figures and, simultaneously, the development by the pupil of a personal attitude towards the past, which will determine, in particular, his own life choices to a considerable degree. After a lack of free historical discussion and ideology-free science for many decades, historians and textbook writers are faced with a very difficult task: forming the free critical thinking of people who are then capable of reasonably assessing the situation, making a choice, and finding their place in the construction and improvement of their country.

Nevertheless, this can take place only if “building materials” are abundant and, most importantly, if discussion, dialogue, and incisive questions and answers are permitted. Of course, the issue of historical and civic education should get very serious attention from society and the state. Yet one should think about engaging in profound work on fostering an open discussion about teaching history and civics rather than taking hasty administrative measures. Teachers also need to be retrained: many of them were educated in the tradition of indoctrination that formed the basis of the study of Soviet history. New methods of education should be developed to make school students learn the skills of critical thinking, interpretation, and discussion. And, of course, neither civil society nor true patriotism can exist without the civil activism of students and their personal participation in local sociocultural projects and programs.

Education in the system of spiritual values

Russians are profoundly concerned about the growth of xenophobia, ethnic and political extremism, and other forms of intolerance, especially among teenagers and young people. If we look at public opinion polls concerning the most sensitive indicator in this area — the attitude towards migrants — it turns out that the total number of teenagers who are irritated by “foreigners” has tripled in recent years, while almost a third of Muscovite schoolchildren are in favor of the slogan “Moscow for Muscovites”.

Of course, schools cannot change this situation by themselves. All of society must participate. This is also the task of mass media, which mostly deny responsibility today for the social and spiritual development of the young generation. Nevertheless, one regrettably remarks that education has not become an effective force for counteracting this trend and has not proposed a set of measures for making students assimilate values and meanings that are adequate to today’s multicultural, multiethnic, and multid denominational world. On the contrary, **a certain part of the Russian educational community is drifting towards civilizational self-sufficiency and monoculturalism — on religious grounds, among others.**

One cannot deny the colossal role of religion in the history of cultures and states and the lives of countless people. A religious spiritual and philosophical stratum lies at the basis of the ethnocultural traditions of all peoples on Earth, constituting a precious part of their historic heritage and patrimony. Most socio-psychological norms that we assimilate during childhood derive from these traditions and have long become characteristics of everyday behavior and mass culture.

It is evident that all the communities that are highly successful today in the socioeconomic, scientific, and cultural domains are secular. Religion is the private affair of its members and does not pertain to the affairs of the state and its system of education. This principle is set down in the current Constitution of the Russian Federation. Russia is a secular state.

The “latent revision” of the principle of the secularity of schools in certain regions clearly risks making education a zone of social instability in such a country as modern Russia (especially in conjunction with other factors that are described in the current report).

However, the secularity of schools does not mean that students should not be acquainted with the peaks of creative spirit that have been attained by “religious mankind” over the centuries. As a universal value itself, education seeks to engage in a dialogue with religion — not about creeds but about the view of the world and mankind that was provided by religion. When dealing with religion, education has a wonderful opportunity to tell students about the different systems of values (especially ethical values) developed by religions, to study their common and individual traits, and to make the notion of “human values” more concrete. **It is essential to stop excluding religious themes from courses on history, social science, literature and world arts — a Soviet tradition that still continues today.**

While remaining in the secular educational space, the study of world religions in a separate course or within existing courses would help schools not only to maintain their tradition of tolerance for different opinions but also to save their students from prejudice against members of other religions living in their midst.

At the same time, it is important to understand that the desire to increase attention on ethical and cultural aspects in school is linked to the fact that these aspects were ignored for decades in Soviet

schools, where ideological indoctrination replaced honest and in-depth discussion of basic questions of meaning and values.

Teenagers should be prepared to face the “ultimate” existential problems of being: what does a person live for, what is good and evil, and what is the “price” of life and death. The scope of their ideas regarding himself and others (society) should be greatly enlarged, because the countless questions that arise here do not have uniquely correct answers that one can learn by taking a look at the answers at the back of the book.

Unfortunately, the authors of several generations of educational standards have not understood the role of religious culture and ethics in the general cultural and moral development of young people. This may explain why the teaching of the humanities gives rise to a sensation of vacuity and insipidness that people try to fill in the simplest and quickest possible way.

The problem of migrants: education as a means of mutual adaption

As Russia’s economic situation improves, it becomes a more attractive country for labor migrants. As with the world’s other centers of attraction, where residents of former colonies or zones of influence strive to come, Russia has become a “recipient” of manpower (virtually all of which is low-qualified). And, the further the Soviet Union recedes into history, the fewer migrants possess even a rudimentary knowledge of the Russian language.

At the same time, their desire to come to Russia is partially explained by the recommendations of their parents and elder neighbors, who recall Soviet times that were marked (or so it seemed) by the friendship of nations, openness, and hospitality. In this sense, very many people of that generation have a very positive image of Russians.

This migration to Russia is apparently a long-term trend that is accelerating (to hundreds of thousands and, in the foreseeable future, millions of people). International (and especially European) experience clearly shows that the barrier of language (and, more generally, civilization and culture) that inevitably arises between the inhabitants of the host country and immigrants (particularly those that come from different cultural and language zones) can become the cause of profound and tragic antagonism. Unfortunately, examples are appearing with increasing frequency in Russian cities and towns.

It is clear that this is an objective process that is an expression of the global problem “rich North — poor South”. Yet it is no less clear that Russia needs this inflow of migrants, for its demographic situation does not correspond to the economic challenges that the country wants to meet.

In these circumstances, education can help to transform this mass of people from former Soviet republics that are looking for a better lot in life and that are very favorably inclined towards Russia into an integral part of multiethnic Russian society. At the same time, it can also carry out the parallel task of promoting tolerance among Russian citizens and raising their cultural level, making it harder for racists and fascists to recruit adepts.

Chapter 2

Competitiveness of russian education: are we leading or lagging behind?

The only way to be competitive is to compare yourself with the leaders and look for the best and most competitive solutions of problems that arise. Thus a comparison of the Russian educational system with those of other countries can help us to identify our competitive advantages as well as the domains where we would do well to learn from others. Such a study will also help us to see whether the general development of our educational system corresponds to that of other countries.

2.1. Educational coverage and educational impact

Russia is the world leader in educational participation at different levels of education: 55% of Russians have a vocational or higher education degree (this is twice as high as the OECD average).

Participation in secondary and higher education is also very high in Russia: 63.67% of the population of the respective age gets a vocational or higher education in comparison to 25.11% in OECD countries.

This shows that we will continue to be leaders in the quantity of people with a relatively high level of education. However, it is important to ask about the *quality of this education*.

An indirect yet very telling indicator is the correlation between education and income. A comparison of the situations in Russia and OECD countries shows that a higher level of education gives rise to a higher salary in both cases, yet the “bonus” for higher education is smaller in Russia than in other countries, while a vocational degree has virtually no impact on salary.

This is an alarming indicator. It shows that a substantial percentage of graduates from vocational and higher educational establishments do not get qualifications that are in demand in the labor market. It also shows that vocational education should be subject to a profound critical review. We do not have any figures on the distribution of graduates by profession and income, yet we can make a reasonable conjecture on the existence of four main groups of workers with higher or vocational education.

The first group consists of successful workers in the private sector. Their incomes surpass the base salaries by a factor of 2—2.5. This is the only group that truly shows the advantages of higher and vocational education in the labor market.

The second group consists of public workers. The shortage of funding in this sector leads to a small increase over the base salary.

The third group is made up of workers that do not work in the field of their major and are therefore unable to use the analytic and technical qualifications that they obtained. As a rule, their salary bonus is comparable to that in the second group. The exceptions are those who have found work in the advertising, real-estate, building, and tourist industries: they get even higher salaries than they would have if they had stayed in their engineering fields (although another question is whether they are satisfied with their work).

The fourth group are workers who got a purely formal higher (or, more rarely, vocational) degree without getting any serious qualifications. As a rule, their salary bonus is equivalent to the market appraisal of an “empty diploma”, which is near zero.

Table 1. Distribution of average level of earnings by educational attainment¹, 2003—2004 school year
(The average salary of workers with a general secondary education is taken as 100%)

	General secondary education or lower	Pre-vocational education	Vocational education	Higher education and advanced research programs
Countries with a per capita GDP of over \$25,000	79	108	115	160
Countries with a per capita GDP of \$15,000—25,000	73	120	126	185
Countries with a per capita GDP of under \$25,000	78	102	127	157
Russia	79	105	100	148

Lower “returns” of individual investments in education lead to lower “returns” of society’s investments, lowering the competitiveness of education.

2.2. Quality of education

Quality of school education

When people speak of the success of school education, they frequently refer to the results of international Olympiads. At the same time, it is unlikely that these results are a good indicator of the quality of public education, just as the results of sports Olympiads do not say anything about a country’s health. (It is common knowledge that Russia continues to be one of the world’s sport superpowers, while its average life expectancy is lower than that of many developing countries.)

The results of international comparative studies, in which Russia has been taking part for several decades, are more informative and less optimistic.

The conclusions of the Program for International Student Assessment (PISA), in which dozens of countries take part, are quite telling. For the first time ever, PISA made a comparative study of tens of thousands of ordinary schoolchildren (rather than elite Olympiad participants) in such important practical fields as the ability to read (i.e., understand and interpret) texts including mass media, the ability to listen to another’s opinion, and the ability to solve non-standard problems (academic problems with a relation to real life). According to the study, Russia and its school students rank 27th in reading literacy. The highest overall scores were obtained by Great Britain, Canada, New Zealand, and Australia.

The study showed that Russian school students have a fairly high level of knowledge in mathematics and natural sciences yet lag behind their peers in other countries in their ability to apply this knowledge in practice, work with different sources of information, and perform different productive activities such as expressing and supporting their points of view.

Russian school students are fairly successful in solving easy problems yet score quite poorly on difficult problems. Our education seems to “cut off” the high end (i.e., it aims at the middle level). Things are even worse with understanding non-fiction texts and particularly with natural science texts. Our school students perform poorly on information texts (which constitute the bulk of school reading in grades 5—11).

¹ Figures for foreign countries: Education at a Glance. OECD Indicators 2006. Figures for the Russian Federation: «Формирование заработной платы: взгляд через “призму” профессий», in: Л. Белоконная, В. Гимпельсон, Т. Горбачева, О. Жихарева, Р. Капелюшников, А. Лукьянова: препринт WP3/2007/05. М.: ГУ ВШЭ, 2007.

At the same time, *Russian primary school graduates perform considerably better than the world average in the aforementioned areas* and rank alongside leading countries in reading literacy (according to the PIRLS 2006 international study). These figures indicate that we should devote a great deal of attention to lower secondary school (grades 5–9), since Russian school students begin to lag behind their peers in most developed countries precisely during this period.

The introduction of a Unified State Exam has made it possible to get regular figures on the quality of school education. USE results in mathematics and Russian confirm the conclusions of international comparative studies on the problems of lower secondary school. Even the introduction of special math classes in upper secondary school did not change the situation a lot and had no impact on USE results. For over five years, about 20% of secondary school graduates have received unsatisfactory grades in math on the USE. Thus it would be expedient to **take into account the areas of our qualitative underperformance** when developing new educational standards, textbooks, and teaching methods in order to improve the competitiveness of Russian schools in the field of the quality of education.

We should pay particular attention to our students' health problems.

Russian schools are notorious for the very high loads put on pupils. The connection between this factor and the incidence of disease among schoolchildren has long been established (over the last five years, the general incidence of disease rose by 21% among the under-14 age group). The number of digestive, motor, and endocrinal diseases and nervous and psychological disorders has grown considerably. Over half (up to 55%) of schoolchildren have entered the risk group of the development of chronic pathologies and functional disorders, so that less than a fourth of all schoolchildren are considered to be “generally healthy”.

According to the World Health Organization, Russia ranks fourth in the world in the incidence of smoking among adolescents (33.4%). This figure has increased since 1998. At the same time, specialists say that physical education classes that are set down by state educational standards and curricula neither help to educate a physically fit and healthy generation nor meet the recreational and sportive interests of the students themselves. The content and technologies of physical education programs in schools are hopelessly outdated. Although a lot of sports are highly popular among children, teenagers, and young people today, school programs are so conservative that they simply do not notice them. Very few schools have sports clubs that can set up their own sports teams and participate in local and national competitions.

Quality of vocational and higher education

When speaking of higher education, one should proceed from the same principle: the quality of tertiary education cannot be measured by the quality of education at leading universities. Nevertheless, their indicators give an idea of the system's basic reference points and the quality of elite specialists trained for the innovative economy, while international ratings measure the competitiveness of our system of vocational and higher education. In 2006, only Moscow State University and St. Petersburg State University figured in these ratings, ranking 93rd and 164th, respectively, out of 200 in the Times Higher Education Supplement and 67th and 343rd, respectively, out of 500 in the Shanghai Jiao Tong University's Academic Ranking. As the following table shows, other participating countries have a lot more universities figuring in these ratings.

The Webometrics Ranking of World Universities (webometrics.org) also indicates that Russian universities are lagging behind. The top ten Russian higher educational establishments in the rating rank poorly in comparison to other world universities (2007 figures).

Table 2. Number of universities in ratings

Country	SJTU Rating (500 universities)	THES Rating (200 universities)
Germany	40	9
Canada	22	7
France	21	6
China	9	8
Finland	5	0
Ireland	3	1
India	2	3
Russia	2	2

Table 3. The Webometrics ranking of world universities (webometrics.org; 2007 figures)

Russia	World	University
1	150	Moscow State University
2	799	Moscow Institute of Physics and Technology
3	815	Novosibirsk State University
4	900	St. Petersburg State University
5	935	Higher School of Economics State University
6	1,076	Tomsk State University
7	1,268	Kazan State University
8	1,342	Moscow State Academy of Fine Chemical Technology
9	1,347	Altai State University
10	1,359	Krasnoyarsk State University

The number of foreign students (students from CIS countries not included) is an important though indirect indicator of the quality of higher education. This indicator has steadily fallen from 34,100 students in 1993 to 17,300 students in 2004.

This indirect indicator suggests that the quality of Russian higher education is indeed falling, although there may be other causes for the decreasing number of foreign students: from political and linguistic factors to the growth of xenophobia and racism in Russia.

It would be incorrect to attribute the poor performance of Russian universities on international ratings to the latter's lack of objectiveness and the decreasing number of foreign students to non-educational factors. It is important to support leading universities that present clear programs for improving their ranking in international ratings and attracting foreign students.

The share of Russian students in the higher educational establishments of OECD countries is about 2% today and has grown by 0.1% annually over the past ten years. Thus Russia is becoming an increasingly active consumer on the world education market.

At the same time, a substantial part of this mobility results not from state programs but from individual decisions. Joint programs account for a minute share of this mobility. This leads not to the exchange of knowledge and talent, but to a brain drain.

In comparison, student mobility in China, India, Kazakhstan, and certain Latin American countries is supported by special state programs that envisage the return of students after graduation and their active participation in the country's workforce.

Russian higher education has traditionally attracted students from CIS countries. Nevertheless, we are losing ground here, too: the number of students from CIS countries is becoming comparable to the

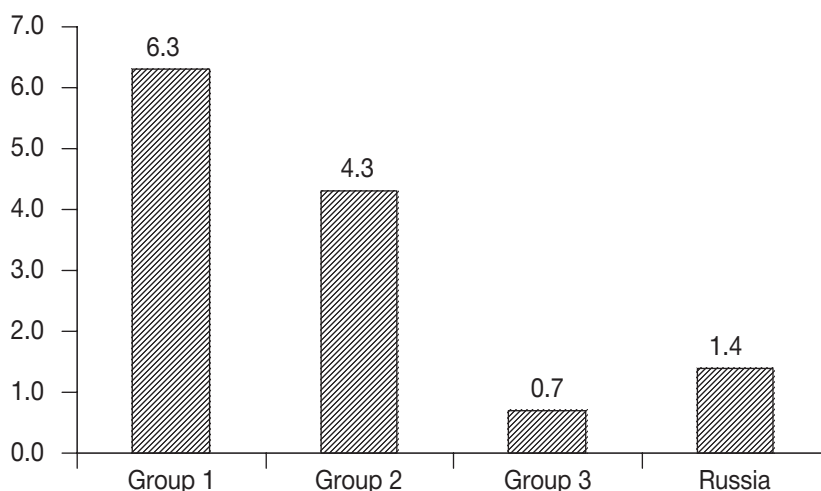


Figure 2. Foreign students in higher education (share of foreign students in the total number of students), 2005

number of students from other foreign countries. The following fact is telling in this regard. Over the last three years, 5,000 secondary school graduates in Kazakhstan get annual grants for studying abroad. At the same time, the number of Kazakhstan students entering Russian universities has fallen from 4,233 in 2004 to 3,806 in 2005. This means that young Kazakh students prefer to get an education in countries other than Russia.

Indeed, how can our system be attractive for foreign students that have the freedom of choice if it is not attractive even for Russian students, who do not work in their field of study after graduation? Less than half of all students (from 40 to 50%, depending on the educational level) connect their work with the discipline that they are studying at university. Many of them (about 35%) are more uncertain about their plans, yet they can envisage working outside of their field of study. The remaining students (10–15%) are almost certain that they will work in a different area (the proportion of such students is higher in prevocational schools).

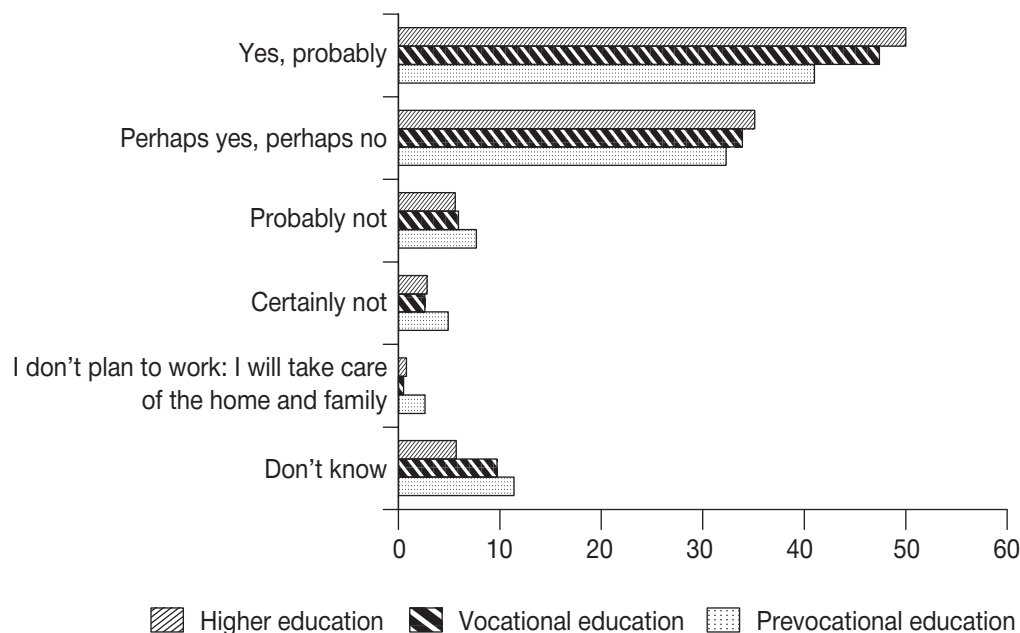


Figure 3. Do you believe that, in the future, you will work in the field that you are currently studying? (Monitoring study by the Institute of the Economics of Education, 2007)

Today, many employers say that recent graduates of higher educational establishments and vocational schools that come to work at their companies have much poorer professional knowledge than their current employees. Graduates of prevocational schools lag behind current employees even further.

The main hindrance to hiring recent graduates is the low marks given by employers to their professional and, more importantly, social and psychological training. Many of them have poor communication skills, which is especially important in the service sector. Employers say that an advantage of recent graduates is their capacity to learn (assimilate new knowledge and acquire working skills).

Table 4. Evaluation of current graduates by company directors (average mark on a five-point scale, with 1 the lowest mark and 5 the highest)

	2004	2005	2006
Evaluation of professional knowledge			
Graduates of higher educational establishments over the past 2 years	3.6	3.7	3.7
Graduates of vocational schools over the past 2 years	3.6	3.5	3.5
Graduates of prevocational schools over the past 2 years	3.4	3.4	3.3
Evaluation of learning capacity (assimilation of new knowledge and skills)			
Graduates of higher educational establishments over the past 2 years	4.1	4.2	4.2
Graduates of vocational schools over the past 2 years	3.9	3.9	3.9
Graduates of prevocational schools over the past 2 years	3.7	3.7	3.7

Source: Monitoring Study of the Economics of Education. M.: Higher School of Economics: Levada Center, 2007.

2.3. Educational process

Duration of different levels of education

Although it is the world leader in vocational and higher education participation, Russia performs worse in the key indicator of education expectancy (expected number of years that a five-year-old child will spend in the formal educational system given the current structure and education participation level), in which it lags behind countries with a high and medium level of development by 2.5 and 2 years, respectively, and is close to the median for countries with a per capita GDP of under \$15,000.

If we examine the reasons for this lag, we will see that

- The duration of secondary education is a lot shorter in Russia than in the rest of the world;
- Russia attains the average indicators of countries of the third income group thanks to the very broad participation in and duration of tertiary education (i.e., vocational and higher education in the Russian context);
- The high tertiary education expectancy indicators result from the larger share of distance students. Distance students account for 43% of all tertiary students in Russia as opposed to 20% in OECD countries and 5% in countries with a medium level of development.

The shift towards evening and distance education means that students devote less time on average to the educational process, since they have to combine it with work. This ultimately leads to poorer professional qualifications.

Of course, distance education can have a positive impact when it allows workers who have already started their careers to raise their qualifications at a vocational school or an institute. Still, the share of such students among all distance students does not surpass 10–15% in all countries. It seems necessary to increase the duration of compulsory education and reduce the share of distance forms of education (or to improve their quality greatly) to increase the competitiveness of Russia's human resources.

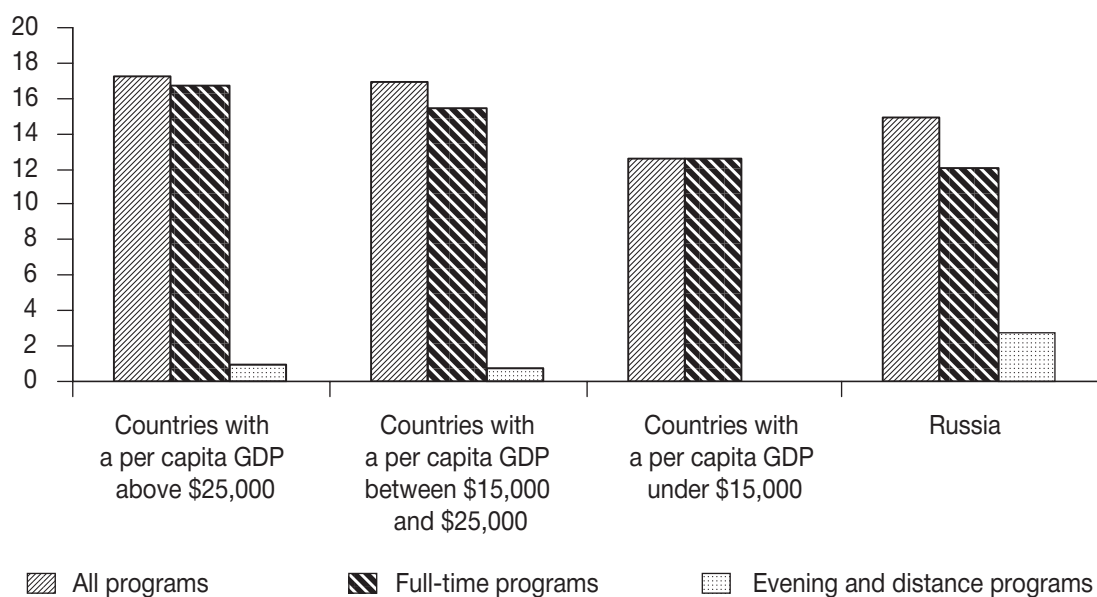


Figure 4. Educational expectancy (*years*)

Table 5. Distribution of students in vocational and higher education by forms of education, 2003–2004 school year (%)

	Vocational education		Higher education	
	Full-time programs	Distance programs	Full-time programs	Distance programs
Countries with a per capita GDP above \$25,000	81.4	18.6	86.4	13.6
Countries with a per capita GDP between \$15,000 and \$25,000	78.9	21.1	67.3	32.7
Countries with a per capita GDP below \$15,000	86.2	13.8	79.9	20.1
Russia	69.2	30.8	55.0	45.0

Structure of higher education

Although Russia has joined the Bologna process, which strives to increase the flexibility and effectiveness of higher education, it is lagging behind in its implementation of this process. Today, over 60% of students in countries participating in the Bologna process are involved in a two-cycle model of higher education. The highest indicators (over 90%) of student participation in two-cycle degree programs are found in the Czech Republic, Finland, Iceland, the Netherlands, Norway and Great Britain. This indicator is between 60 and 89% in Belgium, Estonia, France, Greece, Poland and Switzerland and between 30 and 59% in Croatia, Portugal and Spain. The Russian Federation has the lowest rates of student participation in two-cycle higher educational programs.²

Structure and content of public education

The content of Russian education also differs significantly from what is taught in schools in countries with a high and medium level of development. The key differences in curricula in lower secondary education are shown in the following table.

² Bologna Secretariat (2007), Bologna Process Stocktaking — London 2007, accessed 23 July 2007 from: <http://www.dfes.gov.uk/londonbologna/uploads/documents/6909-BolognaProcessST.pdf>

Table 6. Disciplinary make-up of the compulsory (national) curriculum at state educational establishments for pupils aged 12–14 years (percentage ratio of the teaching load in each discipline to the total teaching load), 2004–2004 school year

	Reading, writing and literature	Mathematics	Natural science	Social sciences	Modern foreign languages	Technology	Art	Physical Education	Practical and industrial skills	Other disciplines
Countries with a per capita GDP above \$25,000	15	14	10	12	13	5	8	9	3	10
Countries with a per capita GDP between \$15,000 and \$25,000	12	11	15	13	10	3	7	7	4	19
Countries with a per capita GDP below \$15,000	15	15	17	11	9	6	6	6	7	10
Russia	19	17	27	10	10	5	5	7	n	n

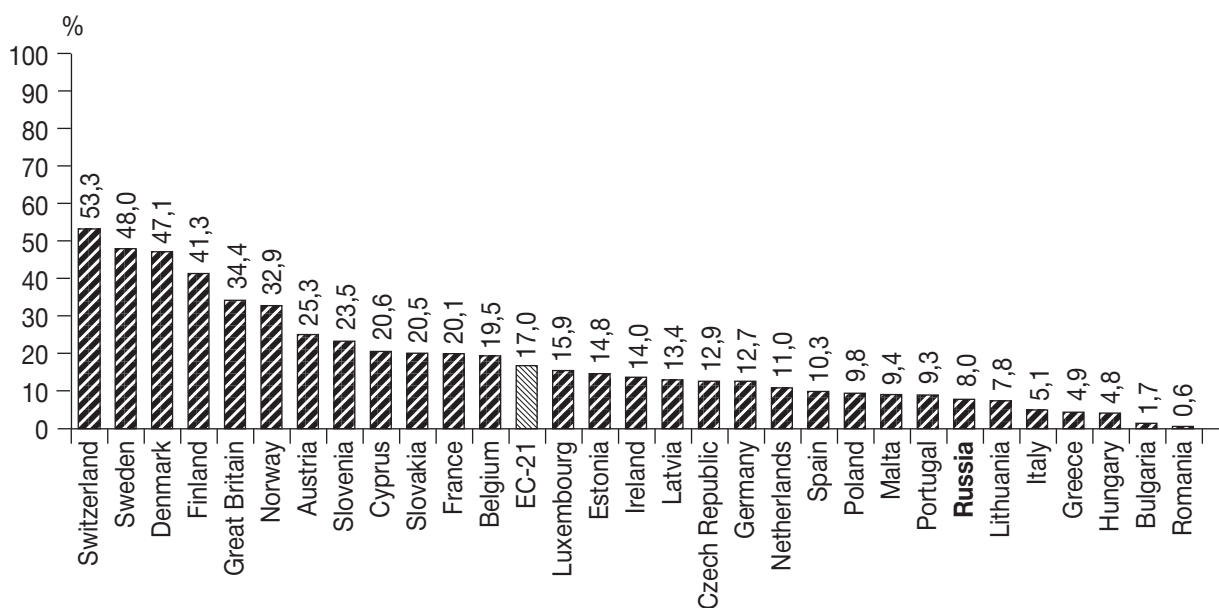
The table shows that Russian schools devote particular attention to studying the basics of natural sciences (chemistry, physics, biology, and geography) at the expense of the social sciences, foreign languages, art, technology and practical skills. Whereas the negative consequences of the lack of social, communicative and practical disciplines are fairly clear, the advantages of preserving such a large volume of natural sciences are less obvious. For example, the discipline of mathematics, where the advantages of the Russian educational system are particularly clear, takes up just as much time as in most foreign schools. It is also important to note that Russian school students have virtually no choice of courses within the curriculum, whereas electives account for 10% of all courses in OECD countries on average.

Continuing education

Today, national competitiveness depends not only on a country's traditional educational institutions but also on the potential for workers to constantly improve their qualifications. Therefore people who have got an education and want to improve their qualifications or get new ones are a key resource for the economy. Continuing education becomes an essential and ever more important element of modern educational systems.

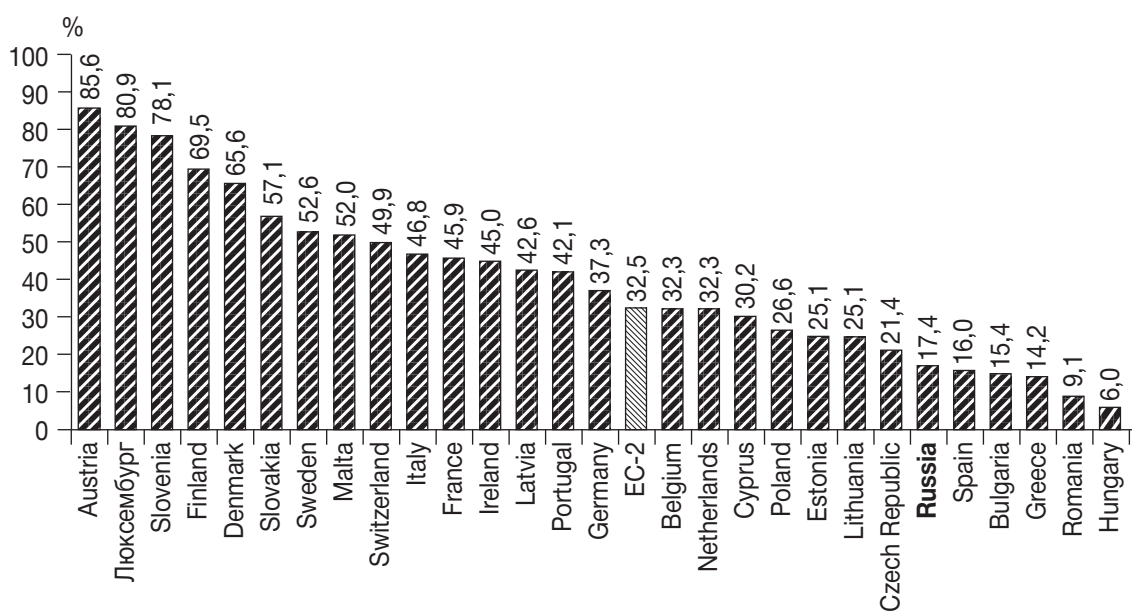
Although the development of continuing education was declared one of the five priority areas of the development of education in Russia in 2004, progress has not been satisfactory in this domain. As the following tables show, we lag far behind most European countries both in the participation in continuing education and in self-education. And, as a study of company training shows, this situation results not only from insufficient state participation in this domain but also from the insufficient involvement of our businesses in personnel training.

The gap in the area of continuing education is aggravated by a relatively low educational expectancy. It is essential to give this area greater attention without delay. Moreover, as the experience of the leading countries shows, regions, municipalities and non-governmental associations make the biggest contribution to the development of continuing education.



Sources: Eurostat (<http://epp.eurostat.ec.europa.eu>, theme: Lifelong learning) and the Institute of Statistic Studies and the Economics of Knowledge of the Higher School of Economics. Figures date from 2005 for European countries and 2006 for Russia.

Figure 5. Participation in continuing education over the last 12 months (percentage share of all surveyed people aged 25–64 years)



Sources: Eurostat (<http://epp.eurostat.ec.europa.eu>, theme: Lifelong learning) and the Institute of Statistic Studies and the Economics of Knowledge of the Higher School of Economics. Figures date from 2005 for European countries and 2006 for Russia.

Figure 6. Participation in self-education over the last 12 months* (percentage share of all surveyed people aged 25–64 years)

* No figures are available for Norway and Great Britain.

2.4. Funding education

Russia lags behind all countries in all income groups in educational funding (including public and private expenditures) per student.

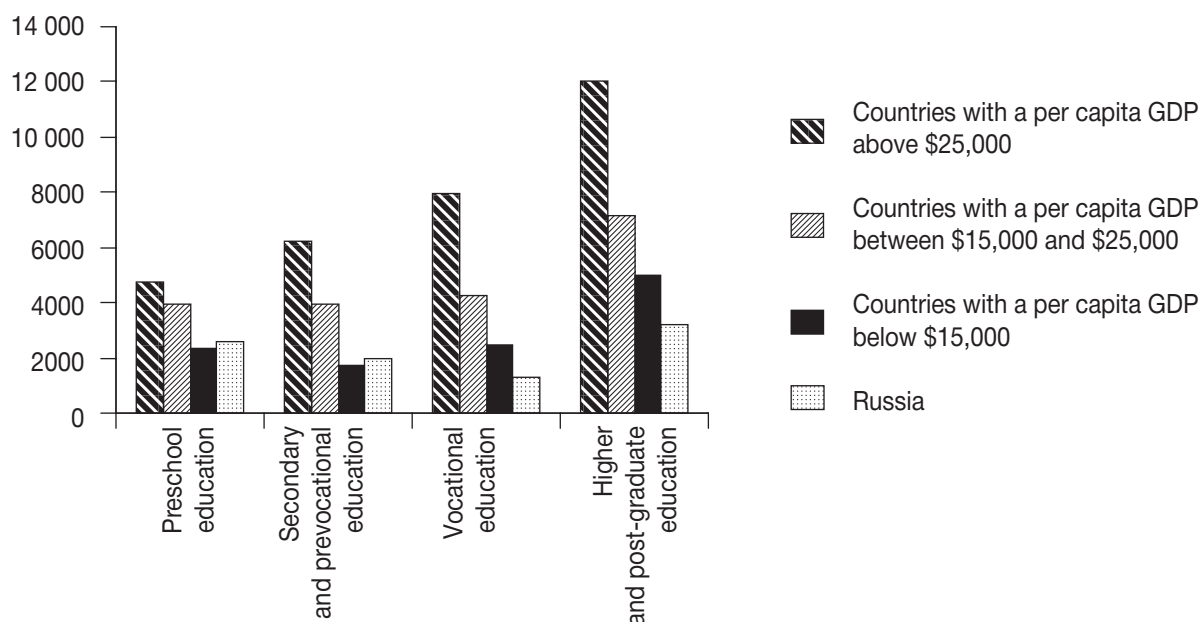


Figure 7. Educational expenditures per student (*US dollars PPP, 2004*)

This differential is greatest in primary and secondary education and least in preschool education.

Table 7. Ratio of expenditures per student in Russia and in countries of income groups 1–3 by educational level, 2003–2004 school year (%)

	Preschool education	Secondary and prevocational education	Vocational education	Higher and postgraduate education
Countries with a per capita GDP above \$25,000	55	32	17	26
Countries with a per capita GDP between \$15,000 and \$25,000	66	50	31	45
Countries with a per capita GDP under \$15,000	111	115	54	64

Such a level of funding is the primary cause of the low competitiveness of Russian education. We should point out that reducing the number of students would make it possible to increase the per capita funding of higher educational programs.

Contrary to the commonly held view, private expenditure on education is fairly high in Russia. Given the fact that the share of state expenditure on education is a lot higher in developed countries than in developing countries, Russia ranks among the last in this indicator.

This situation suggests that it would be virtually impossible to increase the private funding of education in Russia any further.

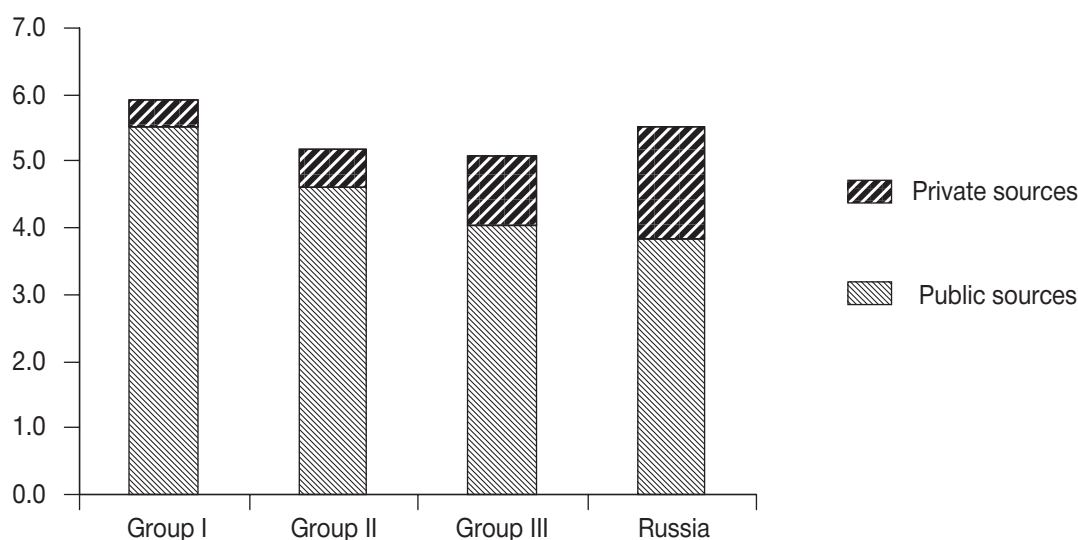


Figure 8. Percentage share of education expenditures in GDP

2.5. Educational technologies and resources

Investment in recent years has led to improvements in the infrastructure of education. Still, however, a lot of problems remain.

The fixed assets of education amounted to 1,217 billion rubles in early 2005 (3.2% of the total fixed assets in the Russian economy). At the same time, their overall deterioration amounted to 41.8% (in comparison to an average of 44.3% in the economy as a whole). Nevertheless, this indicator does not give a complete picture of the situation. In 2005, 35% of state (municipal) day schools required major repairs and 3.1% were in a hazardous condition. Only 58% of schools had all the necessary amenities, while 37% lacked sewage, 20% lacked central heating, and 25% had no running water. In contrast, Canada, many of whose territories have similar climatic conditions and population density to Russia, has no school buildings at all in a state of disrepair.

Although physical education is a key part of education at public schools, many schools are unable to hold such classes on their premises, since gyms are lacking in 25% of state (municipal) day schools.

According to a monitoring study of the economics of education, educational establishments are best equipped with such resources as textbooks and teacher's manuals, premises, furniture and supplies (75%).

With regard to other types of resources (educational equipment, information technologies, and scientific books and equipment), there is a large differentiation by level of education: high indicators for higher educational establishments and low indicators for prevocational schools. The indicators for the availability of software and databases as well as Internet access are particularly low (about 50%). Nevertheless, the situation is gradually improving in most of these areas. For example, the indicator of the availability of educational equipment has grown by about 8 percentage points over three years and has reached 83% for higher educational establishments, 76% for vocational schools, and 68% for prevocational schools.

By the estimates of school and university directors, the availability of information technologies has grown by 7–12% at higher educational establishments and from 5% to 22–23% (Internet access) at prevocational and vocational schools. Nevertheless, the demands of educational establishments are a lot higher: the current IT levels are only 69% of the desired level at vocational schools and 55% at prevocational schools.

At the same time, the indicators of the quality of information technologies are not improving: the pool of computers and other IT equipment is not being upgraded quickly enough, while software and databases are becoming obsolete. Only 64% of higher educational establishments, 49% of vocational schools, and 28% of prevocational schools have good-quality computers, while 8 and 19% of directors of vocational and prevocational schools, respectively, have complained about the poor quality of computers (these figures have deteriorated in comparison to previous years).

92% of higher educational establishments provide Internet access to students. The situation at vocational and prevocational schools is a lot worse: only 56 and 30% of them, respectively, provide Internet access for their students.

Steps taken in recent years to equip educational establishments with information technologies have led to an increase in the number of personal computers in Russian schools from 2.8 per 100 students at the beginning of the 2005–2006 school year to 5 in 2007. However, Russia continues to lag far behind foreign countries in this sphere: there were already 10–20 computers per 100 school students in developed countries in 2003. The level of computerization of Russian public schools is comparable only to schools in the Near East and the Baltic states.

Table 8. Number of personal computers per 100 school students

Country	2003*	Country	2003*
Russia (2007, estimate)	5	Luxembourg	16.0
Austria	11.7	Malta	6.3
Belgium	12.4	Netherlands	11.0
Bulgaria	4.0	Poland	3.7
Great Britain	15.5	Portugal	5.7
Hungary	14.4	Romania	10.4
Germany	7.1	Slovakia	4.0
Greece	6.0	Slovenia	5.0
Ireland	12.1	Finland	14.8
Spain	7.4	France	10.5
Italy	11.1	Czech Republic	9.5
Cyprus	10.2	Sweden	23.1
Latvia	5.0	Estonia	4.0
Lithuania	3.1	Japan	11.9

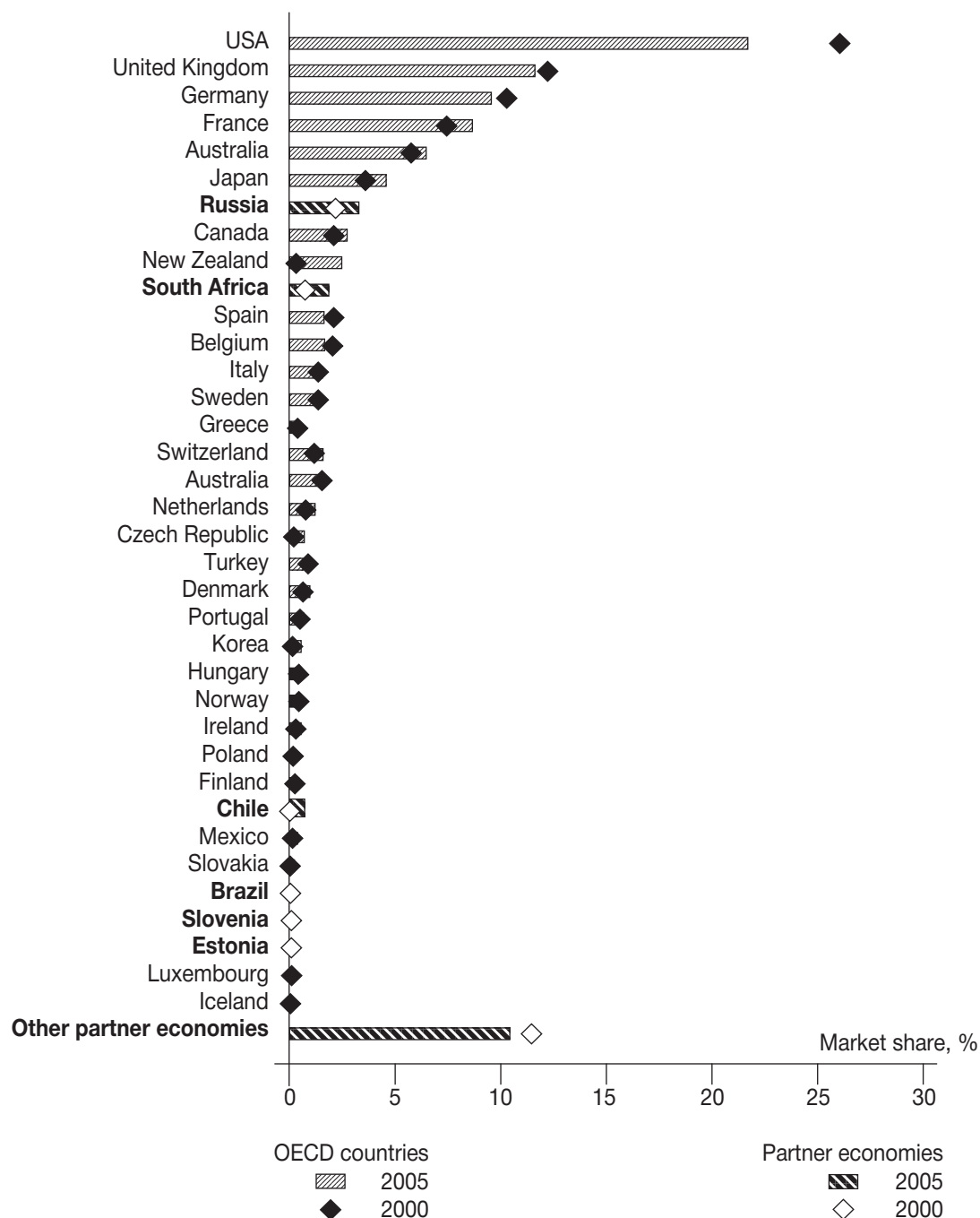
* Or the nearest year for which figures are available.

Sources: For Russia: estimate by the Institute of Statistical Studies and the Economy of Knowledge of the Higher School of Economics using the figures of the Russian Federal Agency of Education, for foreign countries: Eurostat.

At the same time, the increase in the number of computers in schools and the availability of Internet access puts the spotlight on Internet educational resources. Russia lags behind most OECD countries, which have set up national portals with a wide range of free-access educational resources for schools and universities. The initiative of the Ministry of Education and Science to create a unified national collection of digital educational resources has not got the support of the Russian Federal Agency for Culture and Cinematography and is facing difficulties with copyright issues. Russian copyright legislation has become a real hindrance to providing schools and people at large with basic educational resources today. At the current time, it has turned out to be impossible to even place works of Russian classical literature in the national collection.

2.6. Academic mobility of students and teaching staff

A country's competitiveness is largely determined by its activity in the global market of knowledge and talent. Domestic and international mobility of students and teachers is a key mechanism for participating in this global process.



Countries are ranked in descending order of 2005 market shares.

Source: OECD and UNESCO Institute for Statistics for most data on partner economies. Table C3.8 (available on line at the link below). See Annex 3 for notes (www.oecd.org/edu/eng2007).

Figure 9. Trends in international education market shares (2000, 2005) (percentage of all foreign tertiary students enrolled, by destination)

The indicators of the **international mobility of students** have grown considerably in the world over the last thirty years. The growth has been particularly great in the last decade: from 1.3 million students in the world in 1995 to 2.7 million in 2005. According to estimates and forecasts based on studies of the international education market, international student mobility should rise to 5.8 million students by 2020 and 8 million by 2025.

Australia, Belgium, France, New Zealand, Switzerland, and Great Britain are the countries with the highest share of foreign students among the total number of students at higher educational establishments with over 1 foreign student per 10 students in 2005. The smallest figures (less than 3%) are recorded in Chile, Finland, Greece, Japan, Korea, Norway, Poland, the Russian Federation, Slovenia, and Spain.

Countries also differ in the outward mobility of students. In 2003, such countries as Greece, Iceland, and Norway sent over 7% of its students to study abroad. Over 3% of all students from Belgium, Finland, New Zealand, Portugal, Sweden, and Switzerland study in foreign countries.

With regard to outward mobility, Asian countries continue to score highly along with European and African countries. The most mobile students in the world are the Chinese, who account for approx. 17% of all students studying abroad. The vast majority of Chinese students studying abroad prefer the US, Japan, and Great Britain and, to a lesser extent, Australia, Germany, and New Zealand. Indian students are the second most mobile: they account for 6% of all students studying abroad. They prefer US, Australian, and British universities.

Another important mechanism for increasing the competitiveness of post-secondary educational systems is attracting the best researchers and academic staff from foreign countries and making Russian academic staff participate in internships and joint projects abroad.

In most OECD member and partner countries, it is common to attract foreign academic staff to work at higher educational institutions. In such countries as Belgium (Flemish Community), Chile, the Czech Republic, Estonia, New Zealand, Poland, Portugal, Spain, Sweden and Great Britain, there are no limitations on attracting foreign academic staff to work at higher educational institutions.

As a result, one-third of all the faculty at Swiss higher educational establishments are foreigners. The same indicator provides figures of 25% in the Netherlands and 17% at research universities in Great Britain and New Zealand.

A number of OECD member and partner countries do not limit the opportunities of faculty members to work at foreign higher educational institutions, guaranteeing their positions during short-term leaves of absence. This is typical for such countries as China, the Czech Republic, Estonia, Mexico, New Zealand, Poland, Spain, Sweden and Great Britain. A similar rule is in effect in the Russian Federation.

In most countries, the internationalization of university departments mostly takes place through an increase in the number of short-term trips abroad by faculty members, faculty exchange, and joint research projects. The number of faculty members participating in short-term exchange programs is a lot higher than the number of faculty members participating in long-term exchange programs. According to figures of the European Commission, the average length of stay of academic staff at foreign universities is 6.2 days. The highest incoming and outgoing faculty mobility is recorded in Belgium, the Czech Republic, Estonia, Iceland, Spain, and Finland.

2.7. University education in the social sciences and humanities

As a result of the long-term isolation of Soviet social sciences and humanities, Russian education in these domains falls short in many respects of the levels attained by the best universities in developed countries. These disciplines continue to be seen as a sort of “conversation” or fairly vague “discussion” whose success depends on the overall erudition and personal qualifications of the lecturer. There is virtually no notion that they contain a methodological and theoretical “core” with which every specialist must be familiar. This is less common in economics and more frequent in other social sciences and humanities (political science, sociology, etc.).

It is important to understand that modern social sciences are highly formalized. Thus the curriculum program of every modern university has numerous courses on the logic and method of scholarly research in each discipline. In Russia, such courses are either lacking altogether or give only very general and non-compulsory information. As a result, not only students but also most faculty are unable to read Western journals in political science, sociology and ethnology, where many articles contain formal mathematical equations. Thus it is better to speak not of a gap but of an ongoing profound difference in the content of education.

This has unfortunate consequences. Education in these domains does not serve to train professionals. It gives rise either to pseudo-scholarly essayists or specialists in PR work, political and social propaganda, etc. The academic tradition breaks off, research schools fail to arise, and intellectual and cultural degradation occurs.

2.8. Research potential of universities

The tasks of modernizing the higher educational system and raising the effectiveness of integrative processes in Russia's research and educational system calls for particular attention to the problems of university research, which is an integral part of the nation's research potential. As international experience shows, university research can act as a powerful innovative resource for national development. It should serve to assure the connection between the values of fundamental education and the possibility of flexibly reacting to the demand for specialists in the research areas, high technologies, and high-tech manufacturing processes that are needed in Russia, the development of the intellectual abilities of future specialists and scholars, and the continuity of research schools.

World practice of the past decade shows that universities are increasingly contributing to innovative development and economic growth. The public funding of university research in leading industrial countries is increasingly aimed at concrete socioeconomic targets and tied to end results. The role of contract funding is growing. Although the average share of the higher education sector in expenditure on research and development in OECD countries has stayed virtually the same since the early 1980s (about 16–17%) and universities continue to perform the bulk of fundamental research (up to 50% of the total volume of research and development in this sector), the relative share of private funding by industry of university research is growing. It has reached 8–14% in Canada, Belgium, and Germany and up to 15–22% in Korea and Turkey. In China, this figure is 37%. The innovative activities of universities also include training qualified scientists and engineers, the growing participation of faculty and graduate students in research and development work, and the transfer of their results to industry.

The number of patents obtained by faculty at Russian universities has grown in recent years (by 1.4 times over the period 2002–2005); they account for almost a fifth of all patent applications filed in Russia by Russian citizens. If we compare this figure to the share of the university sector in research expenditures, we see that this sector has a relatively higher innovative potential than other sectors of Russian science. This is corroborated by the fact that almost a third of the funding of university research comes from the private sector. 35% of all ground-breaking manufacturing technologies are developed at higher educational establishments.

However, the poor commercialization of intellectual property remains a serious problem. Universities conclude only 6.7% of all Russian deals involving the export of research and development results. In 2005, 113 such contracts were signed. The share of universities accounts for 0.2% of the net value of license agreements.

According to annual studies of innovations, industrial enterprises have a low opinion of higher educational establishments and research institutes as sources of information for innovations. They prefer to purchase ready-made technological equipment (especially from foreign countries) rather than to acquire scientific research results and other intellectual property.

Russian universities have considerable research and innovative potential and long research traditions. They have a significant number of highly qualified specialists that can conduct research at the

highest professional level. Nevertheless, universities do not play a key role in the development of the scientific and technological complex and the innovative system as a whole.

The number of higher educational establishments engaging in research and development fell from 453 in 1990 to 406 in 2005; the latter figure represents only 11% of all research organizations. It should also be mentioned that newly founded private universities engage in virtually no research and development. In view of this, one can say that only 37% of Russian higher educational establishments engaged in research and development in early 2006. If this trend continues, it could have irreparable consequences not only on science itself but also on the quality of professional training.

At the same time, universities in developed countries house the main national potential of fundamental science, and implement large-scale applied research and development projects. With regard to the volume of expenditure from all sources on scientific research and development, Russian university science is approximately at the level of Denmark and South Africa with 988 million dollars PPP, lagging behind not only the world's leading economies but also behind such developing states as Turkey (2.5 billion dollars), Taiwan (1.7 billion dollars), and Mexico (1.6 billion dollars).

Despite a nominal growth of expenditures on research and development in the higher education sector from 657.4 million rubles in 1995 to 13.3 billion rubles in 2005 (i.e., almost double at current prices), this increase was clearly insufficient to return to the pre-reform level: this figure does not even reach two thirds of the 1991 amount. The higher education sector accounts for less than 6% of expenditure on science in Russia, and this situation has not changed for almost two decades now. This is half the amount of the US (13.6%) and Japan (13.4%) and almost four times as low as in EU countries (22.1%).

As a result, the expenditure on research per researcher continues to be very low at Russian universities — \$14,000. This is roughly equal to the indicators for Slovakia and Romania. If it is recalculated to take into account the total number of teaching faculty and researchers, this figure falls to \$3,300 annually. Such a situation cannot create the necessary conditions for conducting research and assuring the continuity of scientific schools.

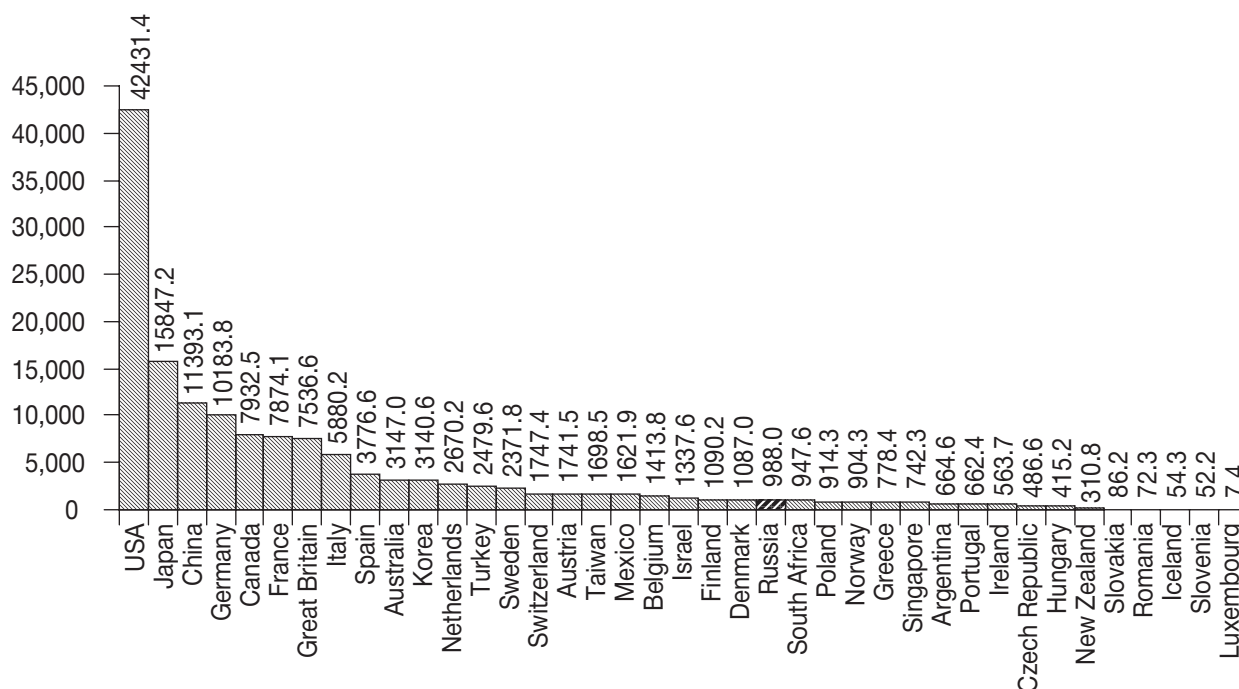


Figure 10. Domestic expenditures on research and development in the higher education sector (2005*) (in millions of US dollars PPP)

* Or the nearest year for which figures are available.

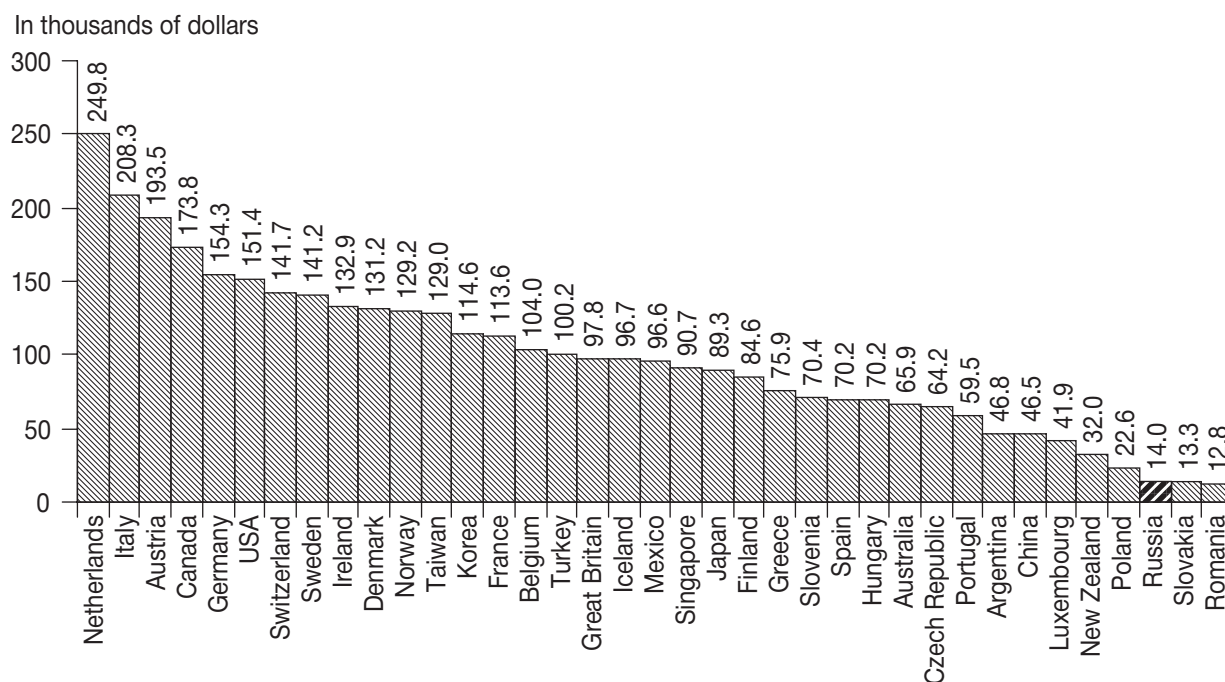


Figure 11. Domestic spending on research and development per researcher in the higher education sector (2005*)

* Or the nearest year for which figures are available.

The number of university faculty engaged in research and development continues to decline. Given the shortage of financial resources, university research tends to be greatly underpaid in comparison to teaching at private higher educational establishments and on private courses, which makes it unattractive to academic staff. Salaries in university research institutes are approx. 1.2–1.3 times lower than those in universities as a whole and research organizations. Nevertheless, part-time positions at university research institutes remain highly attractive for academic staff that strive to combine teaching and research: the number of part-time positions at these institutes is more than double the number of full-time positions. For many university teachers, the combination of research and teaching has always been and continues to be a venerable tradition. At the same time, **the overwhelming majority of academic staff do not engage in research: over the last ten years, the share of university teachers participating in research and development has fallen from 38 to 16%.**

The cost of the fixed assets of university research fell by almost 1.5 (in constant prices) during the period 1995–2005. As before, passive assets (buildings, facilities, etc.) predominate, while active assets (machines and equipment) account for less than a quarter. Nevertheless, the funding of the technical re-equipment of research laboratories in universities that were selected in a contest of innovative educational programs (National Project “Education”) has brought about substantial changes.

Besides the scant public funding of university research, inadequate **funding mechanisms** are responsible for many of the problems in this domain.

University research is predominantly funding by areas through so-called unified work orders. This mechanism was acceptable so long as it financed the salaries of permanent staff of university research organizations and other expenditures. However, the base funding of university research virtually stopped in mid-1990 and resumed in appreciable amounts only in recent years, partially thanks to the coordinated efforts of the academic community. The volume of public expenditure on university research through the “Developing the Research Potential of Higher Education” Federal Target Program will not reach more than 1.3–1.4% of the total expenditure of the federal budget on education and research even after its expected increase from 2.6 to 4.7 billion rubles between 2006 and 2010. On average,

3.9 million rubles of research funding are allocated per public higher educational establishment; by 2010, this figure will reach 7.1 million rubles. According to the Monitoring Study of the Economics of Education in 2004—2006, the funds generated from research and development account for only 3.7% of the revenues of higher educational establishments on average. This figure is substantial (over 10% of the total revenues) in only 8% of higher educational establishments.

An important source of research funding in Russia, as in other countries, is the competitions of federal target programs, grants, etc. Every higher educational establishment can participate in these competitions. Nevertheless, for a number of reasons, this funding cannot compensate or even alleviate the negative consequences of the low permanent funding of university research.

The imperfection and inflexibility of financial mechanisms results, among other things, in universities spending virtually all the funds they get for research on wages, which leads to the degradation of the infrastructure of university research and, in particular, fundamental research. Universities have trouble finding funds for recruiting new staff and renewing the infrastructure of research. Expenditure on these items is not allocated, as a rule, by unified work orders and projects implemented in the context of federal target programs.

The current system of public funding destroys the natural process of the renewal of research staff at universities and leads to growing social tensions in this domain. They result, among other things, from the discrimination against the permanent staff of university research institutes, which serves as a major hindrance to consolidating human resources and making young people take an interest in research and education.

2.9. Conclusions

The above picture may seem too gloomy. After all, many Russians believe that our education is the best in the world or, at least, competitive. Indeed, if we compare the situation in Russian education with the situation in countries with a comparable per capita GDP, we will see that we perform considerably better. Yet the conditions of global competition require that we compare ourselves with the strongest and wealthiest countries. Overcoming this gap calls for solutions that do more than simply increase funding.

Chapter 3

Who participates in the development of education and how?

Every person who is familiar with the state of Russian education will easily list its principal problems:

- The content of education is outdated: it lags behind the demands of life and the achievements of science and technology;
- The low wages of teachers can lead to low motivation;
- The infrastructure of education has not been renewed for a long time;
- The structure of vocational and higher education does not meet the current or future demands of the labor market;
- Universities have virtually ceased to be research centers: without any innovative potential of their own, many universities train not innovators but people who work according to rules;
- The growing sphere of pseudo-education does not give the required professional qualifications.

These are major risk factors, indeed. However, positive changes are slowly but surely taking place in each of these domains.

New public education standards are being discussed. The content of vocational and higher education is being constantly renewed as far as resources allow.

A national education project, currently being implemented, plans to raise teachers' salaries (today, the salaries of teachers lag far — by a factor of 1.5 — behind those of doctors).

The same national project has brought about the large-scale renewal of the active infrastructure of vocational and higher education such as instruments and equipment.

The Russian Ministry of Education and Science is constantly (though not very decisively) limiting the number of incoming students at those departments whose graduates do not find work in their disciplines of study.

A group of innovative universities that have retained their research potential has been identified and is being supported by the state.

Education consumers are gradually becoming more experienced. High-school graduates increasingly shun establishments with a poor quality of education. Federal and regional educational brands — schools and universities with a good reputation — are gradually emerging. Students have flocked there in ever greater numbers in recent years.

Nevertheless, there is another fairly basic problem that must be solved in the first place and that alone can make Russian education develop and give good results. It is essential that education become a **national political priority** and that its aims and content, as well as the nature of the end product, be determined by society (including its different strata, groups, and communities), business, and the state. This is impossible without the active participation of the key participants of education — students, teachers, parents, employers, and non-governmental organizations — in the elaboration and implementation of educational policy.

The national educational policy should be an expression of a civil contract between all the subjects of education — its clients, providers, and recipients. Such a policy will serve as a guarantee that Russian education will not only leave the aforementioned problem zones behind but also become a force that consolidates society, serves as a foundation of the knowledge economy, and makes the Russian model of civilization competitive in the conditions of the global challenges of the 21st century.

3.1. Clients and controllers

The educational system represents a considerable and respected part of society and enjoys its trust. As a result, it has received considerable autonomy and is not subject to other social institutions and groups. This is not a defect but the “natural condition” of education that constitutes its unique freedom experienced by all of its participants — from schoolchildren to professors. Nevertheless, social structures external to education (students’ parents, employers, and finally the state) have a major and ongoing impact on the educational community.

Citizens (parents)

Every day, tens of millions of Russian citizens come into direct or indirect contact with the educational system. One can say that Russians have a steadfast belief in the value of education and its important role in living a good life. Most parents consider it to be self-evident that their children should get not only a complete secondary but also a vocational and/or higher education. This belief is so strong that it has not been shaken by the success of poorly educated “New Russians”, the serious difficulties of getting a job experienced by graduates with “prestigious” majors and even the constant criticism of the quality of contemporary public and higher education. Today, over three quarters of high-school graduates want to get a higher education. Half of the graduates of prevocational establishments and almost 80% of the graduates of vocational establishments also strive to get a higher education. Moreover, approximately 80% of all these people are ready to pay for education. Russia is one of the world leaders in the relative number of people that get a second or even a third higher education. These social expectations are confirmed by the high returns of money and efforts spent on education.

Nevertheless, education does not get a lot of attention (i.e., real attention to educational problems and ways of solving them rather than mere words) in political party programs, the Federal Assembly, and mass media (it gets much greater coverage in newspapers and magazines in OECD countries than in Russian media). In other words, the educational preferences of Russian citizens form spontaneously and exist at the level of mass consciousness.

This “cult” of education with the *a priori* belief in its absolute quality and value is apparently one of the reasons why Russians have become so slowly aware of the need to play an active role in formulating educational policy and elaborating and submitting their own “educational order” to the educational system. For many decades, they have viewed education as a monopolistic function of the state that simultaneously acts as the spokesman of the educational interests of “everyone” (society, individuals, and the “national economy”) and the principal manager and combined client, assessor, and beneficiary of the products of the educational system.

Parents are willing to participate in funding education (90% of parents pay for school in one form or another and over 57% of families say that they are willing to go to considerable expense to allow their children to get a higher education).

In comparison, they are much less interested in participating in managing education (low share of parents take part in PTAs, etc.).

They lack the qualifications to assess the quality of education. This has led people to make a mistake with increasing frequency in recent years: they choose an education that *seems* to be effective, i.e., it is inexpensive, close-by, not very labor-intensive for students, and, at the same time, provides qualifications that are in demand on the market. As a result, middle-income families sometimes spend their savings on paying for tuition at a local commercial branch of a Moscow or private higher educational establishment to obtain the degree of a manager or an economist without getting a good half of the courses that are required for this. With this degree in hand, the students go directly to the job market.

Of course, this is not simply a matter of naive consumers falling victims to fraud. The very striving to get an education is often tantamount to the desire to get a degree rather than to get useful qualifications.

This need is easily satisfied on the “degree market”. A vicious circle arises: companies do not trust the quality of degrees, citizens buy low-quality educational services (together with degrees), educational service providers build the market of inexpensive low-quality education, and companies get even more grounds not to trust degrees. The state and nongovernmental organizations (including the active part of the professional educational community) are responsible for stopping this vicious circle by assuring transparency of information on the quality of educational services to stop fraudulent providers.

As to the well-known opinion that Russians are “overly” educated, one should keep in mind that a number of countries are already striving to make higher education universal. To all intents and purposes, higher education has already become a precondition for socialization in the “urban” economy. Thus one should make higher education accessible to all who want to study instead of trying to limit the number of students. This can be accompanied by the preparation of students for professional life by making graduates take one or two short professional training courses.

In recent years, parents have begun to experience a credibility crisis about the foundations of the entire “educational pyramid” — the public school and the quality of secondary education. There is a growing relative share of high school students who finish school through distance learning and therefore do not benefit at all from the collective study and socialization offered by schools. A public education is evidently not sufficient to allow everyone to get into the higher educational establishment of his or her choice. The gap in the needed qualifications is bridged by paid for courses and private tutors.

Clearly, when non-public education begins to replace (and not just complement) public education, students demonstrate an increasingly poor knowledge of the curriculum. At the same time, getting an education outside of a group and without day-to-day communication with teachers and fellow students has a negative impact on students’ socialization.

It is essential to overcome this crisis. The state has already begun to implement this task by organizational means. The introduction of a unified state examination is a key measure that will make it possible to restore the formal status of upper secondary school as a step towards higher education already in 2010.

Assuring the information transparency of the educational system as a whole, including its interaction with the labor market, and of individual educational establishments should greatly help citizens to choose the right education for themselves and their children.

It is also important to create instruments for coordinating the interests of parents and, more generally, citizens interested in education in the form of support of noncommercial and nongovernmental organizations working in this domain and creating mechanisms for the participation of education consumers in managing education both at the level of regional and city educational systems and, even more importantly, at the level of schools, preschool establishments, and extracurricular education for school students.

A comprehensive project for modernizing education that is currently being implemented in over 20 Russian regions aims to increase citizens’ participation at the school, municipal, and regional levels. At the same time, civil (managing or trustee) school councils have the right to participate (together with the school owner and administration) in developing the curriculum of educational establishments and in allocating the incentive part of the wage fund to those teachers that have made the biggest contribution to the implementation of this program. The curriculum becomes, to all intents and purposes, a civil contract between the educational system (represented by the school) and society (represented by the parents) about the “civil commission” for the social component of the quality of education in addition to its traditional pedagogical component. The Public Chamber considers this to be an enormous step forward in the development of civil society in such a key sector as education. **The time has come to set down formally the participation of civil institutions in the elaboration of educational policy and create all the conditions necessary for augmenting their role in education as a state and societal system.**

Employers

The economic recession of the 1990s led to a sharp decrease in the demand of companies for workers with up-to-date qualifications. The only exceptions were lawyers and economists, who helped companies to adapt to totally new conditions. This led to a growing gap between the educational system and labor markets: educational establishments continued to function while waiting for a better future without getting any signals from the market (and, in addition, without effective demand for their specialists).

The reconstruction of the economy after the year 2000 (at least during the period leading up to 2003) made use of the accumulated supply of qualified specialists. The latter went from company to company, raising their qualifications and wages each time. Yet, by the middle of the decade, it became clear that their supply had been exhausted. Companies began to experience a growing shortage of qualified workers and specialists — from technologists to logisticians.

Nevertheless, the expected revival of technical universities and prevocational and vocational schools did not take place. Most of them were unable to provide labor markets with workers with the necessary qualifications in contemporary technologies. Moreover, graduates of many vocational and especially prevocational schools showed a lack of discipline and overall culture and had poor communications skills. In the conditions of the modern economy, where the share of transaction benefits has greatly increased, an employee with a limited potential for client communication is *a priori* unsuitable for an ever growing number of companies.

In these conditions, employers began to express an increasing demand for graduates from higher educational establishments who may lack the necessary industrial qualifications yet are easily trained and have the necessary social skills. At the same time, the other part of the labor market that called for purely routine work largely switched to the employment of temporary workers from the former Soviet republics. These workers are much more dependent on their employer and cost a lot less than Russian citizens.

The institutional model of the school and university that we have inherited from Soviet times clearly does not fit in with the market economy, especially when the latter changes much more rapidly than the educational system itself. In view of the fact that the Russian educational system as a whole and its unit cells (traditional educational establishments from schools to universities) are not oriented towards the basic mechanisms and values of a free market economy (competition, initiative, self-management, choice, responsibility, dynamism, etc.), there is a danger that their diverging paths will bring Russia into a risk zone.

An important though extremely negative recent trend has been the falling confidence of employers in the traditional system of vocational and higher education. A monitoring study of the economics of education has shown that

- In the last few years alone (2006 in comparison with 2004), the share of companies that do not work with prevocational schools and vocational high school has grown from 59 to 67%, the share of companies that do not work with vocational schools has grown from 61 to 65%, and the share of companies that do not work with higher educational establishments has grown from 51 to 70%. Internships and student in-company production experience (which are key forms of joint work between companies and higher educational establishments) declined particularly sharply (from 39% in 2004 to 30% in 2006);
- Companies have established their own systems of retraining and continuing education in recent years: 29% of the companies surveyed engage in their own educational activities (15% have their own retraining courses, 11% training centers, 2% prevocational schools, 2% vocational schools, and 2% higher educational establishments). Employers also prefer to send their staff to study at other companies rather than send them to official educational establishments, which are therefore losing the market of continuing education. It would be interesting to make a cluster study by employee category (chambermaids, restaurateurs, seamstresses, etc.) here;
- From the employer's standpoint, the most important characteristic of the potential employee is not the quality of his knowledge and professional skills but his work experience. On the one hand,

this shows that most of the knowledge and skills gained through education is not useful. On the other, it leads most students to start working while studying. This is particularly important for higher educational establishments, for it results in a lower quality of education and puts additional pressure on them by forcing them to adapt to working students by voluntarily or involuntarily lowering the requirements for them;

- The characteristics of the educational establishment where a person got his education as well as the level of his educational achievements are less important for the employer than experience and extended education certificates. Whereas 54 and 38% of employers speak about the importance of experience and recommendations from previous places of work, respectively, only 25% accord importance to the reputation of the educational establishment, while 10% are totally indifferent to this parameter. The concrete content of the degree plays an even lesser role. For example, the list of courses and grades plays a primary role for only 8% of employers, while 25% of them say that they never look at this. Thus the labor market pays very little attention to the quality indicators of higher educational establishments;
- There is a crisis of confidence in the system of vocational and higher education everywhere. Studies show that less successful and fairly small companies are increasingly complaining about the poor quality of the workforce and are cutting back their partnership programs with higher, pre-vocational, and vocational educational establishments. This implies that employers could have a greater impact on the system of vocational and higher education. Cases of successful partnership practices can be seen at some major Russian companies, which set high standards for the quality of the workforce, on the one hand, and cooperate actively with educational establishments, on the other.

In recent years, the main Russian employers' unions have expressed their interest in the development of education and have proposed a series of promising areas of educational policy that could be implemented through a private-public partnership. They include, first of all, the development of a system of professional examinations that would be independent from educational establishments and that would not only help to improve the labor market but also be a sort of "Unified State Examination for Vocational Schools and Higher Educational Establishments". They also include rating educational establishments and curricula from the employers' standpoint, which would give high school graduates and their families a clear idea of the possibilities that graduates of different educational establishments have on the labor market. Another area is the formation of endowments for educational establishments.

Nevertheless, one has to admit that the resources invested by business in the development of new institutes for influencing education are clearly insufficient. The state should play a role in stimulating such activity.

Overcoming the existing alienation between business and the educational system is critical both for the development of education and the development of human resources capable of meeting the challenges of the 21st century.

The state

From the first moments of its existence, the post-Soviet Russian state began to cast the foundations for a new educational policy in keeping with the democratic principles of society. The federal law "On Education" of 1992 formulated the key rights and freedoms in the domain of education: for citizens, to get the education of their choice (for example, the possibility of homeschooling, the freedom to choose one's school and college, etc.) and, for educational establishments, the freedom to determine their corporate structure (the permission of nongovernmental establishments), the freedom to elaborate their own curricula on the condition that the latter be conform to license requirements (essentially sanitary norms), and the freedom of free market activities. A normative principle for funding educational programs was also adopted.

Unfortunately, this democratic educational policy was not backed up by real resources for education. The public funding of education was cut back by several times in the early nineties. The only resource allocated to education was the resource of freedom. And only the largest public higher educa-

tional establishments could take advantage of it. In contrast, prevocational, vocational, and especially public schools were essentially obliged to abstain from using the opportunities provided by the new law and to keep under the protective cover of state support and guidance.

Nevertheless, the state's low (and often nominal) financial backing of its responsibilities led to the violation of the informal contract between the government and society, on the one hand, and between educational establishments and teachers, on the other. The respect of mutual responsibilities became increasingly nominal. To all intents and purposes, the state abandoned the educational system by refusing to set down compulsory requirements and by greatly weakening control over the respect of state educational standards and license requirements.

By the late nineties, it became clear to society and educational policy makers that the quality of education was rapidly declining. In 1997–1998, the government attempted to change the situation by proposing an organizational and economic reform of education. Given the severe shortage of funds, the reform proposed the economic selection of educational establishments by allocating funding on a per student basis, which opened up competition for students. At the same time, the state refused to interfere in the content of curricula, leaving this matter up to the educational community.

The organizational and economic reform met with determined and organized resistance from most leaders of the educational community and virtually all functioning educational associations — from the Russian Rectors' Union to the Labor Union of Educational Workers. Without a doubt, this resistance was partly founded on the desire of educational establishments to preserve the *status quo* and to retain their previous levels of funding, irrespective of the effectiveness of their programs. Yet it was also clear that this reform did not affect the interests of school and university teachers. The support accorded to the reform by the few active “clients of education” — parents and employers — was not enough to assure its success.

The abandonment of the reform in 1998 took place under the slogan of the revival of a “correct” educational policy and of state interest in the quality and content of education. However, it soon became clear that, due to the lack of resources, these slogans were merely words and that the quality and accessibility of education was continuing to decline.

This led to a return to the principles of the organizational and economic reform in the 2000 Program of the Russian Government, which was based on German Gref's Program. In contrast to the earlier version, this economic reform was supplemented by the introduction of new institutions that provided an independent quality assessment of the knowledge of high-school graduates and that made acceptance and entrance to public higher educational establishments more transparent — the Unified State Examination and Federal Olympiads in individual subjects. It was also proposed to change the structure of education: a subject-oriented upper secondary education and a two-cycle higher education. It is important to note that the implementation of these reforms coincided with a marked improvement in state educational funding as well as an inflow of additional resources from students' parents. Given the gradual growth of the financial backing of state responsibilities, the government was finally able to implement this program — although the period of discussions and experiments lasted for almost ten years.

Although “quality, justice, and effectiveness” were well-chosen principles of the state educational policy in the early 2000s, one cannot help but notice that these principles and the real possibilities of their implementation were not put into practice. It was a matter of trying to move in a certain direction rather than attaining concrete results. At the same time, the state did not aim to make its educational system internationally competitive up until a few years ago. Nor did it set itself the target of reviving the effectiveness of the professional teachers' community. It tended to treat the latter as a constructive opponent of reforms than a key educational institution.

Only in the second half of the current decade did the state begin to take a truly new approach to educational policy. In 2006, large-scale initiatives began to be implemented in the context of the National Project “Education”. This project aims, first and foremost, to revive professional competition in the educational community — the fight for better quality. By declaring its support for the best educational establishments, the state proposed an alternative to purely economic competition — the race for money — that had held sway in the educational system for 15 years.

By giving bonuses (though fairly small at first) to teachers that also serve as class (homeroom) teachers, the state demonstrated its interest in reviving the pedagogical function of the public school.

During the first two years of the implementation of the national project, the state managed to go from providing additional funding to the best educational establishments (which is important in its own right) to taking systemic measures in several areas. This is particularly true of integrated regional programs for public schools and an innovative curriculum competition for higher educational establishments.

In recent years, the state has promoted the modernization of education by adopting a series of key laws. It took into account the fundamental recommendations and remarks of the Public Chamber on such key bills as

1) A law on the introduction of the Unified State Examination (which takes into account the Public Chamber's recommendations on the creation of a legal framework for the creation and development of a system of Olympiads in different subjects as another form of admission to higher educational establishments (along with the USE), especially for gifted young people;

2) A law on the creation of a state monitoring and supervisory system in the domain of education (which takes into account the Public Chamber's recommendations on clarifying notions as well as procedural issues of implementing monitoring and supervisory functions in this domain);

3) The law "On autonomous establishments" (which takes into account the Public Chamber's recommendations on improving the mechanism of public funding of autonomous establishments, including programs for their development, a more effective participation of citizens in controlling the activities of these establishments by expanding the functions of the supervisory council, and the voluntary transition of state establishments to autonomous rule).

Unfortunately, the Public Chamber's recommendations on the bill making vocational and higher education accessible to servicemen (citizens) that serve (served) in the armed forces on a contractual basis (primarily by providing them with scholarships at the minimum subsistence level) and on the bill making upper secondary education compulsory (primarily by creating effective financial guarantees for this) were not taken into account.

With regard to the latter bill, members of the Public Chamber voiced their opposition to items that empower federal state bodies and educational administrative organizations to set down the rules for selecting organizations that are authorized to publish textbooks used in state-licensed public educational establishments and to adopt a list of such organizations. First of all, this norm is anti-competitive, creates unequal conditions for companies on the publishing market, and incites corruption. Secondly, the creation of a list of textbooks is left up to the discretion of authorized publishing houses, which are commercial organizations bent on making commercial profits. Teachers are excluded from this process, which hampers the pedagogical freedom of teachers and schools and puts the competitive advantages of Russian education and its variety at risk.

The State Duma has recently adopted a law introducing a system of cycles into higher education. It takes into account the recommendations of the Public Chamber on the creation of a legal framework for increasing state funding for Master's programs in comparison to Bachelor's programs. The State Duma also adopted the Public Chamber's recommendation that military service be deferred for students who enter a Master's program after getting a Bachelor's degree, not necessarily in the same higher educational establishment. We believe that this recommendation is vitally important for the full-scale introduction of the two-cycle system.

The Russian state was in a state of confusion during its first years of democracy. Where are the framework and limits of its responsibilities and rights with regard to the educational system? What is the relation of public and individual good in education and in what cases should the state interfere in the decisions of private individuals? What are the limits on the freedom of teacher teams and individual teachers to implement their own conception of education?

In this context one cannot help but notice that, whereas the state strove to leave the domain of education in the 1990s, the pendulum has swung in the other direction today, and the state is so actively returning to direct regulation that there is virtually no room left for initiatives from other levels, including society. The state is augmenting control and administration instead of promoting the openness and transparency of education and encouraging horizontal feedback. Lower-rang educational administrators are complaining about increasing administrative hurdles and a flood of instructions and demands from the federal center that are accompanied by inspections of all kinds. Moreover, these instructions and demands increasingly stem not from the Ministry of Education and Science but from other ministries, agencies, and departments.

The Public Chamber believes that the strong constructive incentive provided by the central government through the National Project “Education” should be supported through initiatives from below, the removal of barriers (such as making the public funding of educational programs accessible to non-governmental educational establishments and even commercial firms), and the transition to providing support to leaders of the educational community on a competitive basis.

Finally, it is becoming clear that such strategic documents as the Federal Law “On Education”, the Program for Modernizing Education (2000), and the Priority Directions for the Development of Education (2004) need to be reviewed. Their revision would augment the systemic effect of national projects.

Associations and non-governmental organizations

The civil society emerging in Russia is represented both by political parties and by all kinds of associations, non-governmental organizations, and so on.

The content of education has not received the attention that it deserves in party programs and political discussions so far. At the same time, one cannot help but notice the constructive fact that many nongovernmental organizations have begun to work with educational institutions, influence them, and even involve school and university students in social activities. Many sports organizations, professional associations, cultural societies, and veterans’ unions do this. This is a positive trend, and it should get serious support from the educational administration at all levels. At the same time, participation in such a delicate sphere as education requires a non-aggressive and moderate approach.

The future seems to lie not in the direct interaction of state-owned schools and nongovernmental organizations but in the expansion of the role of civil organizations in the extracurricular activities of children.

The current legal framework of education represents the interests of individuals and society mostly in a declarative fashion. Their participation in the elaboration of educational policy and the management of education is not defined and regulated sufficiently, while the role and functions of the state are set down very clearly: indeed, the state is accorded virtually all key functions from day-to-day administration and control to the management of the development of the educational system. Whereas such a situation is natural and even necessary in a totalitarian state, it is simply cumbersome in a democratic society, where it contradicts the principle of the freedom of choice of individuals and society with regards to education.

The limited participation of society and social institutions in the study and resolution of the problems of education are closely connected with the system’s lack of openness on corporate and professional grounds. The public at large is unable to understand the language used to formulate and discuss many of these problems, all the more as there are no commonly accepted definitions of many terms (including such basic terms as the quality and effectiveness of education, the relation between education and qualification, the continuity and innovation of the educational process and curricula, etc.).

The reverse is also true: “external” discussions of the problems of education as a social institution do not have any repercussions either, for their results are usually not translated into the standard language of the educational system and are not formulated in the format of regulations or ordinances that

must be executed. In view of the fact that, as we have already mentioned, the state continues to be virtually the only effective client of the educational system, the latter is not willing to pay attention to other sources of potential change (with the only possible exception of the reaction to the effective demand of the population for “fashionable” disciplines and areas of preparation).

3.2. The main resource for the development of education is the activism and initiative of participants of the educational process

Specific features of “educational production” are

- High degree of autonomy of teachers: it is difficult to make them follow orders strictly and to control what they do in class and during other interaction with students;
- High degree of autonomy of parents: they refuse to obey orders and act in accordance with their own beliefs;
- Absolute dependence of the results of education on the initiative and interest of students: you cannot teach students anything unless they want to learn it.

Of course, one can try, as in Soviet times, to stifle these features by very strictly regulating and controlling every minute of class time. Nevertheless, as Soviet experience showed and as international experience continues to demonstrate, all such attempts to “force a horse to drink” are effective only in a very narrow interval of time and space. To make people obey today, one would have to apply even stronger measures and augment restrictions on open information, informal education and free speech. We are not even speaking of the fact that it is impossible to nurture a free and responsible person in a system that takes the same approach to everyone. Yet only independent people that are capable of taking the initiative can lay the foundations of the well-being of a society.

Therefore, **the support of the activity, initiative, creativity and independence of all direct participants of the educational process becomes a practical rather than an ideological issue.** The contribution of education to a country’s competitiveness depends on how this matter is resolved. This issue serves as a litmus test that separates those who want our country to be competitive and expanding from those who fail to understand this key target. Unless teachers, students, and parents come together to work consciously and openly on the common goals that are held by society and the state, they will never attain these goals. Such cooperation and initiative is the main resource of an effective educational system. Today, the principal groups on which the success of our educational system depends do not participate in setting targets, elaborating strategies and tactics, and assessing results.

School students

A striking feature of our public schools, which everyone has got used to and prefers not to notice, is that students’ performance declines as they get older. One would expect just the opposite. Success at lower educational stages should lead to even greater success at higher stages. This does not occur, because teenagers and young people lose interest in school and the desire to learn. Psychologists emphasize that an important cause of the loss of motivation is the fact that the students’ own initiatives get little support.

Choice is one of the mechanisms of supporting initiative. Although students have begun to get a choice in our schools, this is still something exotic. Nevertheless, **the main problem lies in the fact that neither choice nor independence is supported by our school culture.** Studies have shown that lecturing continues to dominate in class (up to 80% of class time), while active and individual forms of learning are virtually absent. Educational technologies aimed at supporting the interest and initiative of school students (such as Elkonin and Davydov’s “developing education” and A.N. Tubelsky’s “pedagogy of self-determination” that are getting a lot of interest abroad) are not widely implemented in schools. Students continue to be overtaxed, and many are simply incapable of being successful. At the same time, the repressive and rejecting nature of education continues to grow, as a result of which our children’s confidence in their own knowledge is a lot lower than that of children in about 30 other countries.¹

¹ According to the PISA и TIMSS International Reports.

Another indicator of the declining participation of schoolchildren in education is the growing number of children who study through distance learning. They have tripled over the past six years.

As a result, the educational system “adapts” by driving out “poor students” into low-quality schools or prevocational schools or out of the system altogether without giving them a second chance to correct their academic failures.

School self-government is an important way of encouraging student participation and can give them a real impact on school life. Surveys have shown that almost two thirds (60.7%) of school students say that there is no form of self-government in their school. In the 40% of schools where the answer to this question is positive, self-government mostly consists of isolated events such as “self-government days”.

Only one in every four teenagers (24.3%) says that there are functioning self-government organizations in his or her school such as a school council, student council, “school parliament”, etc. However, almost half of these students do not know anything about the activities of these organizations.

In addition, it turns out that social stratification is closely intertwined with self-government. The most active participants in school social life are “A students” and students from highly educated families (where both parents have a higher education). They are the ones who describe the different activities of school self-government. The students with poor performance (“F students”) and teenagers from lower social groups (“low-income students”) are the most remote from school social life. Thus even the rare social participation aggravates social stratification rather than training involved citizens.

Gifted children are a special category of schoolchildren. They are the most motivated group of schoolchildren and are capable of attaining impressive results. They are the nation’s patrimony, yet the educational system is not capable of giving them support at an early stage, which inflicts enormous damage on the country’s human potential.

We cannot help but notice that we lag behind developed countries in this area.

US and British educational centers search for talents all over the world, while we do not even have an unambiguous definition of giftedness as an operative definition that would be accepted by all specialists.

“Work with gifted children” is not systematized in our country. There are no figures or survey results on gifted children and no data on the connection between the existing system of supporting gifted children and the successes of Russian scientists, musicians, and sportsmen. The Gifted Children Program, which was introduced almost twenty years ago, needs to be renewed, yet no mechanism that would meet today’s needs has been proposed. Different Russian regions create their own republican, regional, and city Centers for Supporting Gifted Children and Uncovering Talents in Adults, yet it is impossible to evaluate the qualifications of specialists working at these centers.

The existing system of working with gifted children is socially and institutionally closed. The burden of supporting talented children usually falls entirely on parents, greatly increasing expenditure on their education and making the development of their talents dependent on money. Gifted children do not get any social advantages at all if their talents are uncovered “late” — in high school or university. At the same time, programs for developing talents are associated in the public mind with the early classification of children into “elite” and “ordinary”, involuntarily increasing social inequality and social stratification. We increasingly hear about “indigo children”, the subsiding of the talents of child prodigies when they grow up, and the unstudied reserves of the human intellect and mind. Giftedness is increasingly opposed to “disciplinary knowledge”. The only ones who “care” about gifted children are folk healers, witchdoctors, producers of special shows and religious figures.

At the same time, the passive attitude of society with regard to the state prevents people from even posing the question of the role of nongovernmental organizations in working with gifted children. A paradoxical situation arises: in our country, successes and failures in this domain are typically viewed as successes and failures of state policy, although the state still does not have a systematic and target-oriented policy for uncovering and supporting talent.

Extracurricular education can serve as an important mechanism for supporting motivation, especially if it is considered in the context of the transition from academic knowledge to a wider and more practical paradigm of competence in which the school student ceases to be assessed in one dimension

only — from the point of view of his academic performance — as is often the case today. This segment of education creates real incentives for those who can be successful not in academic work but in other domains such as sports, art and practical work. Without a doubt, academic performance continues to be an important, though not the only, indicator of the personal success of a school student, for the ability to study well in class is only one of the skills that a high-school graduate should master. In the system of extracurricular education, children make their own choices and develop their abilities in a much more casual atmosphere. Suffice to say that during the period 1998—2007, the participation in extracurricular education programs among children aged 5—18 years grew from 29.3 to 46.1%. Yet this growth was mostly fueled by a growth in paid for educational services. Today, the offer of free extracurricular education lags behind the demand from motivated students.

Students in the system of vocational and continuing education

The participation and independence of students plays an even greater role in good educational performance in the system of vocational education than in public schools. There are two indicators that show the level of independence and initiative in vocational education: the ratio of lectures to independent work and the ability to choose classes for designing one's own educational trajectory.

In recent years, steps have been taken to increase student independence. However, the ratio of lectures to independent work in most higher educational establishments continues to lag far behind the practice of most developed countries. Schools and higher educational establishments predominantly continue to transmit knowledge rather than making students participate in the processing and production of new knowledge.

Despite the declarations that our educational process is becoming more flexible, the ability to choose one's major and courses in Russian universities also lags behind the best international practice. The principle "the teacher knows what students should learn" continues to predominate in the development of curricula.

In contrast to the situation in most universities in developed countries, Russian high-school graduates are forced to choose an educational program that will strictly determine their major. In other countries, this takes place a lot later. At the same time, the costs of changing one's educational trajectory in the middle of study are extremely high in Russia (changing one's major, program, and higher educational establishment are all fraught with difficulties).

This lack of flexibility is aggravated by the small number of elective courses in most Russian universities. 45% of students affirm that there are no elective courses at their universities, while 15% say that these courses take up less than a tenth of all course time. At the same time, the full-scale implementation of the "Bologna system" presupposes a fairly broad freedom in the choice of courses in the vast majority of educational programs. Students not only get to choose their majors in the middle of study (and, as a rule, can also choose a minor that may have no connection with their major) but can also choose individual study programs (by complementing the basic set of compulsory courses with electives) and their semester course loads.

The lack of choice blocks the mechanisms of student control. Indeed, when students get a freedom of choice, they can evaluate courses by attending interesting disciplines and ignoring outdated and useless subjects. This increases the discipline of professors, who are interested in students attending their courses. If there is no student choice and all courses are compulsory, professors are not motivated to listen to students' opinions and to give courses of good quality. In addition, their approach will have no bearing on their course loads, standing in the departments, etc.

The forced passivity of students as participants in the evaluation of the quality of the educational process lowers their incentive to becoming really involved in the educational process as active participants. Such alienation has a negative impact on the results of studying, for the only way to get an education is to make an effort and therefore to be motivated.

Students must get the freedom of choice at most points of their educational trajectory. In addition to getting a choice within programs, they must get the opportunity to move between programs. This requires a real separation between Bachelor's and Master's programs. So long as students simply "flow" from Bachelor's to Master's programs at their universities, the level of the Master's program will largely depend on the quality of graduates from Bachelor's programs. In these conditions, universities are not interested in having their best students move to Master's programs of other educational establishments and do everything they can to retain them. This creates a hindrance to the real globalization of the educational space and the support of the Bologna process.

The current situation at the Department of Sociology of Moscow State University may serve as an example of different attitudes to student initiative. A group of students publicly voiced their opinion about the quality of teaching at the department and its artificial isolation from the Russian and international academic community. The department's administration has not entered into negotiations with the students at all, although the conflict is more than a year old already. Cases of plagiarism were uncovered in the textbooks of the department's chairman V.I. Dobrenkov, yet this did not become the subject of broad discussion at the department, either. Here, the administration of Moscow State University took a principled stance. Without violating the tenets of academic self-government (the dean has just been reelected by the department's Scientific Council), V.A. Sadovnichy, Rector of Moscow State University, turned to the external academic community for assistance by creating a commission for inspecting the quality of the work of the Department of Sociology. After the students of the Department of Sociology of Moscow State University appealed to the Public Chamber, a working group was created in April 2007 to analyze the situation at the department, its standards and textbooks, and the educational process. The conclusions of the commission set up by the Rector of Moscow State University and the Public Chamber's working group largely coincide.

The lack of openness and the isolation of the Department of Sociology of Moscow State University from the world community of professional sociologists and its "independence" from the needs of its consumers is, unfortunately, a common situation in Russian higher education (although it is an exception for MSU, the country's leading university). At the same time, the stance of the MSU administration, which did not try to defend the honor of the institution but, in contrast, tried to improve its image by engaging in dialogue with the students instead of the department's dean and attracting independent experts, showed the presence of vital forces in the Russian university community.

Student participation helps to orient educational programs in the labor market and the concrete needs of students. Studies show that almost 70% of employers prefer specialists with a broad orientation whose key skill is the capacity to learn. The highly specialized education currently offered to students is also inadequate for the simple reason that no more than 50% of university students are intent on working in their field of study, according to surveys. 15% of them are sure that they will work in a different sphere. Clearly, it is difficult to expect students to be active and motivated in such a situation.

Parents

There is no doubt that good educational results depend a lot upon the family. Thus, to be effective, every program for improving the quality and productiveness of education must make use of the family as a key resource. Yet the involvement of parents in the educational process should take place not only through the satisfaction of their current needs but also through forming (developing and enriching) the latter. Nevertheless, educational policy is very weak in this regard in practice.

As studies show,² a key expectation of parents from education is the improvement (or, at least, preservation) of the social status of their children over the family's current social status, i.e., education

² Institute of Sociology of the Russian Academy of Sciences.

should enable social mobility. This need clearly remains unmet in the conditions of the rapidly growing inequality of access to quality education, leading to the alienation of a large group of parents from education.

This common expectation, which is virtually the same for parents of primary school and high-school students, varies greatly among the different types of educational establishments. Each type of establishment is marked by a certain method of accommodating families' needs to the provided education.

One can identify three main categories of such relations:

- High demands and high expectations in “prestigious” schools that specialize in certain disciplines and admit students selectively (approximately 20%);
- Formal interest and medium expectations in ordinary schools (approximately 55%);
- No real demands and low expectations in “weak” schools (approximately 35%).

Thus the parents that place their children in specialized prestigious schools strive to give their children a quality education that is seen as a preparation for higher education. Such parents have their own ideas about the desired results and help their children to attain them. At such schools, partner ties usually arise between parents and the school.

Nevertheless, these schools are not always ready to lean on a “giving hand” by simply submitting a list of their financial and material “needs” to active and highly educated parents. Schools seldom turn to parents for help in administration and in the educational process as such, even when such assistance is proposed. This is connected to the existence of established traditions as well as regulations that do not promote this type of cooperation between schools and parents.

In schools with low results and low ambitions, parents tend to be even more alienated from the school. As a rule, their expectations are purely formal. The most important thing for them in a school is its infrastructure and not its high educational results. Strictly speaking, the educational process is incomprehensible and uninteresting to them. It is important to note that low expectations for the school always go together with low expectations for their own children. Such parents are undemanding towards the school and their own children, and schools are perfectly happy with this. Yet such a situation is extremely dangerous for the children themselves.

Numerous studies have shown that parental expectations are a key factor in children's academic success. Thus, if students of “weak” schools are also children of “weak” parents, they have a high chance of getting swept into a vortex of academic failure and onto a descending educational trajectory.

In this case, the educational system (in “weak” schools) encourages parental inactivity instead of promoting their participation. One may say that the educational system virtually ignores one of its key functions — forming a steady educational demand among parents and creating the conditions for engaging in dialogue with them about meeting it. Still, although there is a lot of truth in such judgments, it would be incorrect to accuse only the school for this: underdeveloped public awareness and the lack of attention to such problems in the media are also to blame, without a doubt.

In essence, the administratively appointed school director and representatives of higher levels of state administration continue to determine all the key parameters of school life and activities 99% of the time, including:

- Content of education;
- Educational technologies;
- Evaluation system;
- Organization of education and overall student life in the school (daily schedule, vacations, etc.);
- School economy (parameters of budgetary funding);
- Personnel (school administration, teachers, and auxiliary staff).

The only things lacking on this list (which could be expanded) are the parents' organization of graduation parties, weekend gatherings to clean the school courtyard, painting the school in summer in preparation for a new academic year, buying curtains for classrooms, etc...

Here is how one of today's most burning issues — the deteriorating health of schoolchildren — appears from this standpoint.

One may pose the question: what can parents do to lower school overloads and improve the daily schedule of their own children? The answer is “nothing”, for the current school system is not subject to the control of parents or any other social group. People simply have to accept what others decide for them. Such a state of things clearly contradicts the logic of civil society.

The qualitative and in-depth reform of the Russian school requires the participation of many different kinds of resources: pedagogical, economic, etc. Yet a key role should be played by the new principle of social participation in school management, which would allow the participation of a new, systemic and possibly determining resource: the family.

Without excluding the possibility of taking repressive measures against negligent parents, we admit that the patient nurturing of parental participation — the education of parents — is a more effective, albeit longer, approach. Certain schools and kindergartens have already set up partner ties with parents (yet they represent less than 15% of the total number of establishments, according to sociologists). Today, the partnership between parents and schools is getting increasing political support — the expansion of civil governance with the participation of parents is one of the areas of the National Project “Education”. Nevertheless, figures show that many of the new PTAs are formal and do not have any real powers. Educational establishments continue to be exclusively represented by their administrations before higher-standing bodies. The phenomenon of municipal and regional public councils (involving the participation of parents) is still very rare today. It is essential to formalize these positive trends through regulations and to make the participation of parents in the administration of educational establishments and, even more importantly, their role in upbringing and educating children a priority area of national educational policy.

The participation of parents in education is not limited to their role in school management and assistance. Their most important role lies in family education. Nevertheless, the practice of supporting family education (in particular, from infancy on) is very rare in Russia.

A paradoxical situation arises: the state prefers to invest enormous resources in the development of the standard service of preschool education (which is very expensive in Russia even in comparison with wealthy countries) yet ignores the enormous resource of family education.

At the same time, educational administrative bodies continue to believe that they are responsible for educational establishments — schools, kindergartens, higher educational establishments, etc. — rather than the educational process in all of its different forms, including family education. Thus the most effective form of support of socialization and education continues to be at the periphery of educational policy. It is no coincidence that the support of family education is not a function of regional departments of education. The rarity of homeschooling in Russia in comparison to many developed countries is also apparently linked to this.

Above all, education must solve citizens' problems. Thus we need a horizontal power structure that would take the interests of students and their families into account and that would try to improve the quality of education on the basis of these interests.

School and university teachers

The quality of a school cannot be higher than the quality of its teachers

Before we discuss the possibilities and incentives for the active initiative and participation of school and university teachers in our educational system, we should give an honest answer to the question about who works in schools and universities today. This question is vital. A recent OECD study showed that the most important factor that is common to all countries with successful educational systems is the quality of the teaching corps.

It must be admitted that, despite the existence of tens of thousands of outstanding teachers in Russia that are highly educated, dynamic and committed, the average level of qualifications of many representatives of this mass profession leaves a lot to be desired. Figures show that students at teacher training colleges tend to come from families with a lower level of education than students at traditional universities and vocational higher educational establishments. This low competition lowers the status of the profession of a teacher. The enrollment in teacher training colleges is excessive from the start, for no one expects that ninety or even fifty percent of graduates will work as teachers. Indeed, students who want to go on to work in education are considered to be unusual there. Most graduates of teacher training colleges do not consider professional work in education to be a means of social mobility and success. As a result, the best students do not return to schools as teachers. Thus the very existence of teacher training colleges in their current form is one of the causes of the cycle of negative selection in the teaching profession.

Russia is not the first country to face such negative selection. Yet other countries not only raise teachers' salaries but also specially select the best university graduates for working in schools in rural or problem areas. In England, a large-scale publicity campaign and the introduction of major benefits for beginning teachers over the period 2000—2005 has led teaching to grow from a low-prestige profession to one of the most popular choices among university graduates.

The best 10% of university graduates become teachers in Korea and Finland, and the best 30% in Singapore and England. In these countries, teacher training is structured in such a way that it does not give rise to an excess of candidates, does not lower the status of the profession and, indeed, increases competitiveness.

To this end, teacher training courses are offered, as a rule, at the last stage of study and for a number of candidates that is close to the number of job vacancies. In addition, such a system makes it possible for people from highly different disciplines to take part in teacher training competitions. Thus, in effective educational systems, the selection procedure for professional teacher training is strict, on the one hand, and the candidate pool is broad, on the other.

The results of the negative selection of teachers are clearly visible. The age structure of Russian teachers is deteriorating. The share of teachers of retirement age is growing: it surpassed 15% in 2005. Only 42% of teachers are under 46 years of age. This profession is also marked by a gender imbalance: women still account for 86.3% of Russian schoolteachers (the gender misbalance among school directors is somewhat smaller: 76.9%). In comparison, this figure is a lot smaller in OECD countries and amounts to 40% in Japan, 64% in Greece, and 68% in the US.

Despite the relatively high educational level of teachers (78% of them have a higher education), “the average teacher”, as a recent studies concludes, “reads little, seldom goes to the theater, barely makes ends meet, loves her work, yet is not particularly interested in its effectiveness”.

Naturally, the main cause of the falling quality of the teaching corps is salaries. In 2005, over half of teachers (58.1%) noted that they have enough money only for food and essential commodities. The low level of earnings forces teachers to look for supplementary sources of income. According to experts, 35% of school teachers work on the side as tutors.

International statistical studies assess the relative wages of teachers by using the ratio of the teacher's salary to the per capita GDP, which makes for a fairly good comparison. This indicator is equal to 1.3 in OECD countries. In Russia, the ratio of the wages of education workers to the per capita GDP is 0.65. From this standpoint, one may say that the teaching profession is valued half as much in Russia as in developed countries.

The low average wages are supplemented by an even more alarming indicator: a low starting salary. The new generation will not choose to work in this profession so long as this level is a lot lower than the starting salary in other (socially prestigious) professions. Studies have shown that all effective educational systems offer competitive starting salaries. Starting salaries in these countries surpass 95% of the

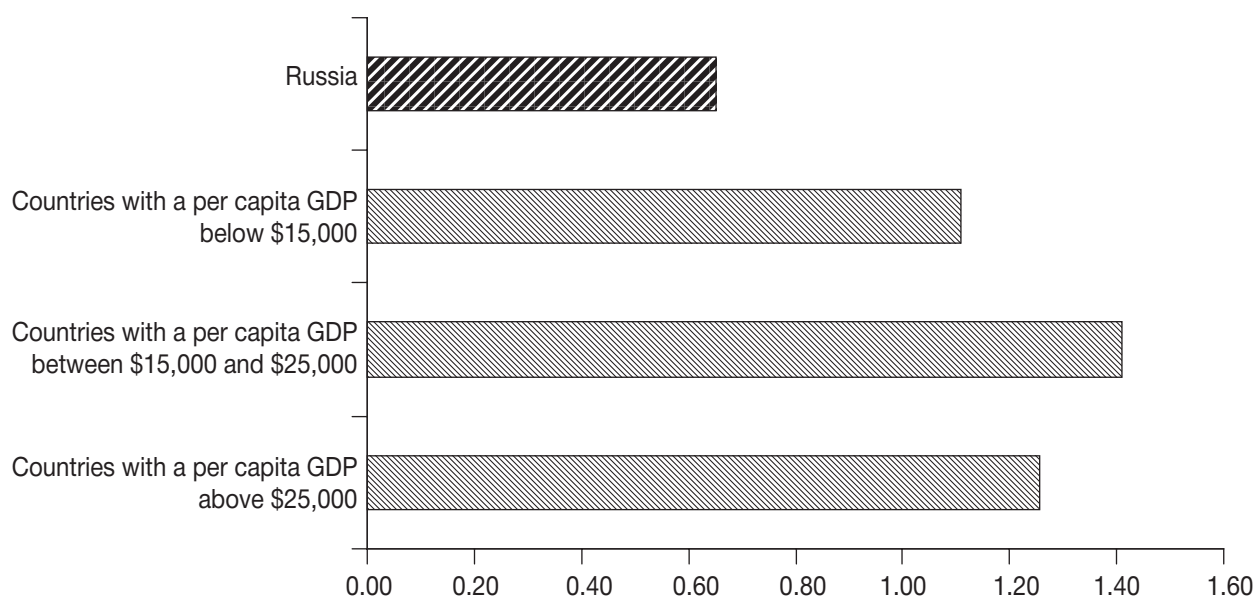


Figure 12. Ratio of a teacher's average wages to the per capita GDP (2004)

per capita GDP (which is higher than the starting salaries of teachers in OECD countries, for example), although the relative expenditures on education in these countries are lower on average than in OECD countries.

The social self-awareness of the teaching community also has a negative impact on the quality of its work. How can one expect active and conscientious work when 66.5% of teachers and 60.7% of directors affirm that society has an unacceptably low image of the work of teachers?

The sharp decline in the prestige of teaching affects even the "holy of holies" of the Russian pedagogical community — teacher dynasties. 67.6% of teachers and 60.1% of directors, even if they do not want to change professions themselves, would not advise their children to follow in their footsteps. It is therefore no surprise that almost half of all prevocational teachers, 44% of school teachers, and a third of vocational and university teachers would like to change jobs or stop working altogether.

Teachers and directors also have a pessimistic view of changes in the prestige of their profession over the next five years. Most teachers and directors do not expect society to change its attitude towards the teaching profession. Today, only 3.7% of parents would like their children to become school teachers when they grow up. This profession lags considerably behind engineers, workers, soldiers and sportsmen in the popularity rating.

All of these factors taken together have led to a situation where, in the opinion of most people, there are fewer good teachers in schools today, although good teachers continue to outnumber bad ones.³

15% of teachers admit that they do not put all their effort into their work. Another fact that is just as alarming is that one half of all teachers say that the main difficulty is the insufficient cultural and intellectual development of today's schoolchildren. To all intents and purposes, these teachers refuse all responsibility for the quality of educational results. It is telling in this regard that teachers' proficiency in modern educational technologies considerably lags behind the level of development of these technologies themselves.

According to a specialized study conducted in 2006, only 50% of teachers use computers and information technologies in some way in the educational process. Where the Internet and email have become standard practice for university teachers (83.7%), the usual public or vocational school teacher uses a computer no more than twice a month.

³ According to the Public Opinion Foundation.

The situation in higher educational establishments also gives grounds for concern. Certain positive trends notwithstanding, over 44% of academic staff are aged 50 or over, while 38.6% of full professors at Russian universities are aged 65 or over.

There is an increasing incidence of corruption among school and university teachers — a phenomenon that was totally inconceivable up until recently. At the same time, it is typical that one fifth of those students that engaged in bribery during admission to the university note that they are forced to turn to bribery again during later stages of study at the university. Thus the “gray” schemes and mechanisms used during admission have lasting negative consequences, for admission in exchange for bribes leads not only to the recruitment of weak students but also deforms the general moral and ethical atmosphere of the educational process at universities.

As the following table shows, corruption is most widespread in kindergartens and higher educational establishments.

Table 9. Figures based on answers to the following indirect questions:
Have you heard about cases of bribery at these educational establishments?
Would you give a bribe if the occasion arose?
Do you have the financial means to do so?

Percentage share giving bribes for a favorable attitude	Moscow		Russia (except Moscow)	
	2003—2004 academic year (third wave of MEE)	2005—2006 academic year (fifth wave of MEE)	2003—2004 academic year (third wave of MEE)	2005—2006 academic year (fifth wave of MEE)
In kindergartens (% of the total number of all preschoolers)	4.7	18.8	2.9	10.2
In schools	2.7	8.1	1.6	6.7
In universities (tuition-free study)	6.4	10.2	5.1	9.4
In universities (tuition study)	7.1	10.5	5.6	10.3

It would be possible to neutralize these factors to a certain extent if there were an adequate professional development system for educational workers. Nevertheless, far from having improved, this system has largely deteriorated since Soviet times. This greatly contrasts with the experience of effective educational systems in countries in which a lot of attention is given to teachers’ professional development. New forms of advanced training are actively used there: they are meant to assist concrete teachers to solve concrete problems. In these systems, mentoring is the most widespread form of teacher support. Unfortunately, this method is little used in most Russian regions. Moreover, Russian teachers do not get to choose among different services on the advanced training market. Their choice is limited to the services of traditional advanced training institutes.

Further delays in overcoming the negative selection in the teaching profession can lead, in just five years’ time, to a situation in which most teachers work in schools by chance. It is necessary to make teachers part of the middle class once again and give them resources for individual and professional development.

Opportunities and incentives for initiative and independence of school and university teachers

In addition to higher wages and better material infrastructure for the educational process, teachers also have a growing need for greater institutional freedom from the excessive regulation of education.

Education should form free citizens that are willing to make choices. This is possible only if teachers are free and have the experience of making responsible choices. Schools as such have a very weak

tradition of choice. It is dangerous to limit teachers' reasonable choice of textbooks and teaching methods and students' and parents' choice of schools, teachers, and subjects. Today, one of the arguments for limiting choice is the fact that people are not ready for it. Yet they will never be ready if the conditions are not created for making free and responsible choices.

An example of the limitation of choice is textbooks. The current method of the evaluation of textbooks is based on the expert reviews of two respected organizations: the Russian Academy of Sciences and the Russian Academy of Education. Nevertheless, this model entails a risk that derives from the fact that the members of these organizations are often involved in writing textbooks. There is also the risk of the predomination of the point of view of a single group of reviewers. The development of feedback mechanisms and the civil review of textbooks would reduce this risk. As international practice shows, this is the principal and most reliable means not only of selecting quality textbooks but also of continually improving them. Unfortunately, these mechanisms are not sufficiently developed in Russia.

The new norms on the factual restriction of the choice of not only textbooks but also teaching materials lie in the same tradition of the administrative limitation of choice. Such a measure is unlikely to be effective in an information society. Our schools already lag far behind schools in competitor countries in the volume and variety of available popular science books and materials. New discoveries in science and technology take a long time to get into the classroom. Now, this path will become even longer. Of course, it is necessary to develop mechanisms for filtering information that reaches schools from the boundless reaches of information space. Yet these mechanisms should not be based on centralized selection. The best way of optimizing the information flow is to teach schoolchildren, teachers, and school directors to select the best and most modern materials themselves. Administrative measures will never be successful or effective.

A common argument against expanding the autonomy of teachers is the weakness of their professional community. Indeed, our teachers may be called individualists in comparison to teachers in developed countries who are members of dozens of professional associations. Professional communities are also developing in Russia, albeit slowly. The period of their rapid growth, during which professional educational associations were supported by foreign charitable foundations, is over. For the time being, no one has filled this niche, which is very important for the development of Russian teaching.

University teachers enjoy a broad autonomy today. At the same time, mechanisms for supporting their initiatives and raising their qualifications are weak. There are very few universities that have systems of internal grants for supporting research and teaching initiatives.

Despite all the difficulties encountered in supporting the initiatives and autonomy of school and university teachers, certain positive trends can be seen today. Without a doubt, the National Priority Project "Education" sent a very important signal by raising teachers' salaries and improving their social status. Another important factor is the programs for supporting the best teachers that have been launched in a number of Russian regions. In certain regions, the idea of supporting "past achievements" was expanded, and grants are awarded there not only for previous merits but also for the implementation of teaching initiatives. Similar policies on the support of teaching initiatives are implemented in a number of universities. All of this goes to show that an increasing number of educational directors have bridged the resource gap and understand that the initiatives of teachers are a key resource for the development of the educational system.

Educational establishments

The independence and initiative of vocational schools and higher educational establishments contributed a lot to the survival of the educational system in the nineties. Yet the need to improve the overall functioning of the system and stop abuses of autonomy has led us to the opposite extreme: strengthening regulation, standardization and control. We have already spoken about attempts to limit the choice of textbooks in public schools. Yet the rigidity of educational standards in vocational and higher education and the inflexible system of quotas for admission to different departments are very surprising and distressing, too.

Restrictions on the financial and economic activities of state-funded schools and universities have become notorious. It is assumed that rigid control and procedural regulations will assure an effective use of resources. Yet this overlooks the fact that independence and flexibility in conjunction with transparency and accountancy may be a lot more effective.

The rights of state and municipal educational establishments to the use of resources that they have earned on their own continue to be progressively restricted. At first, after the Budgetary Codex of the Russian Federation came into force in 2000, these funds were classified as non-fiscal budgetary revenues, which meant that operations with the off-budget revenues and expenditures of establishments were regulated by the Treasury, leading to a strict control of the item-by-item execution of every affirmed list of revenues and expenditures. The next step was the amendments to the Budgetary Codex adopted in April 2007, according to which “off-budgetary resources of budgetary establishments” and “resources received by budgetary establishments from off-budgetary sources” were excluded from the Budgetary Codex altogether. In other words, funds earned by educational establishments are now considered to be budgetary rather than off-budgetary resources, with all the ensuing restrictions on their use.

We see two negative consequences of the new budgetary legislation. First of all, educational establishments begin to lose interest in raising their own funds, despite the overall shortage of state funding. Secondly, the use of financial resources becomes less flexible, which is especially problematic for vocational establishments, which are subject to not only internal but also external competition.

All of this runs counter to the international trend of expanding the rights of local communities, schools, and universities in different areas, including the funding of education. It has been shown that the average quality of education is higher in countries where school communities and universities get considerable autonomy. It should be noted that, in such countries, the state weakens its administrative asset yet greatly strengthens its ideological and social assets. It draws the local community and parents into school administration, assures the transparency of decision-making and educational results at the school level, and widely promotes modern educational practices and methods. In the university sector, other developed countries encourage business and the local community to participate in administrative councils that have substantial powers.

Thus the autonomy of schools and universities increases as their transparency and responsibilities grow. Such a practice is gradually emerging in a number of Russian regions. Schools and municipalities are publishing reports on their work, mechanisms for the objective evaluation of educational results (starting with the USE) are being developed, nongovernmental evaluations of schools are being conducted, and professional associations of teachers and administrators are being established for the introduction of high work standards.

Another important step in this direction is the transition of some educational establishments from public to autonomous status, which gives fairly broad economic independence. They can freely dispose of the money that they earn and the property that they buy with this money and are entitled to take out loans and keep their liquid assets in banks. “Autonomous establishments” are similar in their key economic features to the former “educational establishments” (defined in earlier versions of the Federal Law “On education”). At the same time, the law offers effective mechanisms of state and civil control of the compliance of the activities of an autonomous establishment to the mission conferred upon it.

The law “On autonomous establishments” of 2006 and previously adopted federal bylaws are fully sufficient for drafting the needed normative and legal documentation at the regional and municipal levels. For example, such resolutions have already been adopted in Tatarstan, and thirty establishments in the social sphere have already become autonomous. It is necessary to speed up this work in different areas so that, if the rules for public establishments become stricter, alternatives will be available everywhere and for all the establishments that really need it.

Non-governmental organizations that offer educational programs

In today’s conditions, non-governmental organizations (NGOs) can provide major civil support for the development of education. Although they cannot, and should not, replace the public educational

system, they have a series of advantages over the less flexible state and municipal educational structures that are weighed down by large-scale tasks.

In what areas can NGOs contribute the most?

Given the shortage of places in preschool establishments, it would be very timely to use the potential of NGOs to help resolve this major social problem. This would create a competitive environment that may encourage traditional preschool educational establishments to pay more attention to the quality and variety of educational services.

Already adopted decisions and decisions in preparation on federal subsidies for multi-child families and the transfer of funds for buying preschool education services not to kindergartens but directly to families with preschool children will turn our young parents into clients with the right and possibility to choose.

Nongovernmental structures can fairly quickly amass high qualifications in expert evaluation and consulting with regard to the developing educational system and offer them to society. It would be strange to assume that directors of industrial enterprises have a much greater need for management consulting services than school directors. Nevertheless, the system of educational consulting should be developed by the state alone: this is an important field of activity for noncommercial civil structures. Quality civil audit of schools and the education they provide is also urgently needed. The main guarantee of trust in such audits will be the reputation of the experts participating in them. In particular, the participation of NGO workers as observers during the Unified State Examination would be very useful.

NGOs already play an important role in the system of extracurricular education for children and young people. At the same time, they continue to work almost exclusively on a pay basis, although they could well provide services through a private-public partnership. Such cases already exist. For example, money for the organization of summer holidays for schoolchildren in the Krasnoyarsk Territory is allocated not to state summer camps but on a competitive basis to all organizations that propose interesting educational programs.

NGOs could provide healthy competition for educational establishments working in the domain of extended vocational and higher education. The end of the monopoly of teacher retraining institutes would be useful to teachers and educational directors that really want to raise their professional qualifications.

The necessity of an in-depth transformation of the teacher retraining system is perfectly well understood in regions, which are now responsible for funding it. Because teacher retraining has ceased to be compulsory and depends today on the personal desire and willingness of teachers, the situation in regions is becoming increasingly diverse. Whereas a voucher system has been introduced in certain (isolated) regions, giving teachers a certain freedom in choosing the type of retraining, it is completely absent in others on account of a severe shortage of resources.

We need a system for the state support of NGOs that create specialized educational programs. Generally speaking, NGOs should play a major role in education, especially extended education, as is the case in most developed countries. They create competition for state and municipal educational establishments and objectively contribute to improving the quality of educational programs.

Chapter 4

What should be done?

4.1. Let's not close in upon ourselves

If we take a look at the scope of reforms — both the reforms that have already taken place in Russian education since the early 1990s and the reforms that still need to be implemented — we cannot help but notice that a lot more work lies ahead. Virtually all the aspects of our educational system need to be profoundly restructured, while certain areas must be created “from scratch”. We are getting used to the fact that our educational system is part of the international educational space and that it must take this context into account. This context is determined by such globalist processes as the emergence of a planetary market of labor, goods, and services, the openness of the scientific, information and cultural space, colossal migratory and demographic transformations, etc. In these conditions, education cannot remain a closed system — neither with regard to its own society and the latter's interests nor with regard to the trends that determine the direction and speed of development of education in the world as a whole.

The analytic part of the present report showed that education cannot (and should not) be responsible for everything — from the spiritual, moral, and physical state of citizens to their social successes. Moreover, education that is left to its own devices cannot (unlike Baron Munchhausen) pull itself out of the quagmire of past and present problems linked to the improvement of the infrastructure of preschool, public, prevocational, vocational, and higher education, the development of state-civil forms of management, a new understanding of the quality of education, etc. Educational problems should be treated as a very important common cause by society and the state, get continual media coverage, and become the subject of nationwide concern.

At the same time, contemporary education, just like contemporary economics, cannot be approached from the standpoint of autarchic self-sufficiency. The division of labor and the use of the best technologies and solutions have become an important feature today not only of the industrial market and traditional service sectors but also of education. Thus it is important to understand that a country's competitiveness largely depends on its ability to identify the best international know-how and technologies and the best international specialists and to attract them for its own socioeconomic and cultural development. Up until now, our educational system has remained in self-sufficient isolation. **A key task of educational policy is opening the educational system to the global market of know-how, technologies and talents.**

Our schools used to be fairly competitive. Today, a number of innovations of Russian schools are being used in other countries. For example, Russian math textbooks for primary schools (the Elkonin-Davydov program) are actively used in American schools. Nevertheless, our compulsory, vocational and higher education has become outdated both methodically and technically in many areas.

Unfortunately, the development of new educational standards for public education over the past decade has shown that our educational thinking continues to be oriented on the memorization of large volumes of information. The analysis of the structure of the syllabus and the content of education shows the presence of basic factors that explain why we lag behind in key skills and the ability to live and work in an information society. It is essential to make full use of leading international experience in the development of educational standards and to attract the best foreign specialists, if necessary.

The university sector is more active in using international resources and technologies. Still, every university acts on its own today and has a need for qualified assessments about effective quality technologies. It is essential to create a system for monitoring the global market of educational technologies and resources at all levels and promoting the use of the best world experience in our education.

Russia is part of the world economy. Our labor market is part of the global market. Therefore our education must ensure its international competitiveness by using the positive experience of the best international educational systems and centers, identifying and translating the best textbooks and teacher's manuals, sending Russian school and university teachers and researchers on internships and trips abroad to get acquainted with foreign work experience, identifying and inviting the best foreign university faculty to work in Russia, and implementing joint research and education improvement projects.

4.2. Let's create conditions for assuring equal opportunities and improving access to quality education

As we have already noted, the earlier one starts to assure equal opportunities, the more effective such measures will be. The Constitution of the Russian Federation stipulates that free preschool education must be accessible to all. At the same time, in view of the great importance of preschool education and its poor accessibility today, it would be expedient to make preschool education compulsory by law by introducing the necessary amendments into the Federal Law of the Russian Federation "On education". The provisions of this law should be backed up by norms that make parents, state officials, and educational establishments responsible for providing preschool education to children. It is necessary to design financial mechanisms that assure the development of the network of kindergartens and improve the quality of their activities. A legal framework should also be created for an effective private-public partnership in preschool education. Parents should be entitled to receive public support for paying for services in private kindergartens.

In public education, one can support the idea of introducing basic standards for the educational environment. One effective way would be to implement assistance programs for schools with the poorest results, as many countries do today. We believe that improving the quality of weak schools should become the common cause of the different levels of government and municipalities today. It would be expedient to adopt a special federal target program or to create a subprogram in the Federal Target Program for the Development of Education. Similar target programs or subprograms could be adopted by Russian regions and municipalities. It is important to ensure the effective integration of state and municipal efforts.

It is necessary to conduct a review of the educational system for such student categories as orphans and handicapped children, for the present system dates from Soviet times and does not reflect new socioeconomic conditions and technologies. Experts from countries in which such work is conducted effectively could participate in this review.

The problem of educating migrants should get special attention. The elaboration and public funding of Russian language and culture courses for immigrants and the greatest possible integration of their children into kindergartens and schools near their place of residence are important practical tasks. At the same time, the problem of multicultural dialogue and at least basic information on the cultural and historical heritage of ethnic groups whose members migrate to the region should also be included in the school curriculum. It is essential to give special support to schools that work with migrant families (Russian language programs, teacher target training, etc.).

Today, Russia has sufficient resources to launch the implementation of a comprehensive set of measures aimed at making quality vocational and higher education accessible to students from low-income families. Such measures should include the construction of new, and the refurbishment of existing, student dormitories; the reinstatement of free preparatory courses at vocational schools and universities (after the transition to a two-cycle higher education, such courses would be useful for admissions to Master's programs); and the funding of need-based scholarships at the minimum subsistence level, which would greatly improve the chances of members of vulnerable population groups focusing on their studies and successfully completing their degree.

Educational loans are one of the ways of making quality vocational and higher education accessible. Although loans for higher education are already offered by a number of private banks, the demand for them is small on account of the high interest rates and the necessity of using property as security for the loan. Educational loans can become widespread only with the support of the state, which can make loans a lot more accessible to students. Such loans should cover not only tuition but also supplementary expenditures on food, board, and the purchase of textbooks and other literature. Today, the Russian Ministry of Education and Science has launched an experiment providing state backing for educational loans to university students. Nevertheless, a special federal law must be adopted to make educational loans an effective instrument for making quality higher education more accessible. We should emphasize that state support for educational loans should serve to supplement existing guarantees of free education rather than provide an alternative to them.

One must be very resolute in fighting pseudo-education, which mostly catches students from low-income families in its snares. Administrative measures are unlikely to be effective by themselves. Work on closing programs that diminish the value of education should certainly get support. However, taking decisions on each individual establishment and program is a long and not very effective path. It would be a lot more rational to speed up the implementation of institutional reforms that have been adopted long ago. We are referring, above all, to the transition to funding higher education programs on a per student basis, according to the principle of “money follows the student”.

In addition to the aforementioned measures, it is necessary to make educational trajectories that provide an alternative to higher education more prestigious. It is sufficient to recall that prevocational and vocational education opened the way to professional and social careers and incomes just as well as higher education in the Soviet Union during the 1940s—1960s. In many European countries, the preparation for manual work and the career of a qualified workman is completely devoid of social stigma. Prevocational and vocational education should regain this “seal of quality”.

This calls for changes in numerous elements of the educational system, beginning with the public school curriculum, which has a one-sided orientation on developing academic skills. It is not always successful, for students have different talents. The incorporation of applied and artistic practical skills into the school curriculum would allow students who plan to work in practical fields to stand out. They would form the core of the best and most motivated students at vocational schools and courses.

4.3. Effective society-teacher contract

Teachers, vocational trainers, and university professors are key elements of the educational system. The educational reform has missed a key target so far: to make ordinary school and university teachers more active and involve them in the modernization of education not as passive elements but in a leading role. Instead of thinking “What will they come up with next? What new form will I have to adapt to now?” teachers should feel that they are the chief participants in the reform. The only way to achieve this is to develop an effective contract between teachers and society — a contract that would guarantee the respect of the interests of society in the educational system.¹ Yet this is not possible unless one keeps the interests of teachers in mind, too.

The greatest hindrance to solving this problem is wages. As a result of the implementation of a national public health project, the salaries of doctors surpass those of teachers by 50% today: 15,000 rubles in comparison with 8,000—9,000 rubles. This is a very sensitive issue — after all, in many Russian regions, the extra five or six thousand rubles represent the difference between the lower and middle classes. Of course, it is a good thing that teachers’ salaries have risen by 50% over the last year-and-a-half. Yet this trend must be accelerated. The idea of the Russian Ministry of Education and Science to offer several (3 or 4) groups of incentives at the regional level and to allocate them with the participation of councils of educational establishments seems promising. At the same time, it proposes to make the analysis of the work of teachers as objective as possible by renewing the mechanisms of teacher evaluation.

¹ We are not speaking about a formal contract but about a social contract of sorts.

The salaries of teachers in vocational and, especially, higher educational establishments are somewhat higher — up to 12,000—15,000 rubles per month. However, less than a third of this amount is constituted by the base salary. This is abnormal, of course.

Society's interest in education lies in that teachers be the most prepared and motivated members of the educated class and that they continually renew their knowledge and skills. Society is also interested in teachers taking the interests and talents of students into account as much as possible, both inside and outside the formal framework of the educational process. In other words, society relies on the professional ethics of teachers.

To assure an effective contract, society (and the state, which represents its interests) must solve two problems. First of all, it must make education competitive in the labor market. The educational system should not give up its best and most promising personnel to the market sectors of the economy, nor should leading Russian universities lose their faculty to foreign competitors. A key task is to make talented young people interested in the professions of teacher and researcher and to overcome the existing “unfavorable selection” among the new generation of teachers. The Federal Program “Research and Teaching Staff” can play an enormous role here. The Ministry of Education and Science proposes that 50 billion rubles be allocated for this program over the coming five years. Nevertheless, this program has not been adopted so far, although the Presidential decree for preparing it was issued in autumn 2006.

The second problem is to restructure or form new professional communities of teachers, including both associations of the teaching staff of individual university departments or schools and professional associations with members from different educational establishments. They constitute the environment in which the teacher works and grows and the milieu that assesses his successes and, if necessary, admonishes his faults. A certain quality level of educational programs and services creates a milieu that forms and nurtures professional ethics. There is a need for a system of grants for creating such professional associations, clubs, and network organizations at the municipal level and higher.

How much should teachers earn?

Today, supplementary jobs account for a considerable part of teachers' incomes (in vocational and higher education, they account for the greater part). This is a dangerous situation. After all, if a teacher spends a lot of time earning money on the side, he will necessarily neglect his principal duties and especially those aspects that are not subject to formal control. The latter include out-of-class work with gifted and weak students and work aimed at building students' personalities in schools; research in universities; and, in all types of educational establishments, teachers' self-education and “keeping in shape”.

It is essential to abandon the model that is silently accepted today — the model of the teacher working on a per-hour basis — in favor of the model of the full-time teacher. This means that schools, vocational schools and universities should pay teachers a sufficient amount to allow them not to work anywhere else. Their basic salary should cover their everyday expenditures, professional development, and family needs.

Far from being unskilled laborers, teachers are highly qualified workers. Their salaries should be comparable to those of managers and civil servants, i.e., they should be higher than the average regional salary. The real salaries of school teachers should be correlated to the conditions and cost of living. The salaries of vocational training teachers should be sufficient to attract the best and most qualified workers and foremen that are proficient in contemporary technologies. Given the shortage of such personnel in the Russian economy, their salaries should be even higher than those of teachers.

University teachers are a problem apart. Given the great differences in their qualifications, the salary system must assure above all their selection. Faculty that engage in research and get high student ratings should receive large salary bonuses. At the same time, workers with insufficient qualifications should be economically motivated to look for work in other spheres. The base salaries of university teachers should be comparable to those of school teachers. Yet universities should dispose of a large fund of salary bonuses for professional achievements that would make good teachers earn 3–4 times more — up to 50,000–75,000 rubles a month (in the framework of their principal job). To make university teaching attractive for the most talented university graduates, one should award so-called starting grants that would double their base salary during the first two or three years. During this time, the young teacher will either attain professional success (and begin to receive “regular” supplements) or, in turn, become subject to replacement by younger and more promising candidates.

An important contractual obligation for the state should be the organization of a broad system of grants that are accessible to teachers at different levels and that should serve to finance research, innovative projects, trips to seminars and conferences, and retraining. Such grants should be awarded on a competitive basis and ideally be received by at least a third of teachers every year (and at least half of university teachers). To this end, it is necessary to expand the terms of reference and budgets of existing state funds (Russian Fund for Fundamental Studies and Russian State Research Fund) and create new ones (Fund for the Development of Russian Teachers, Fund for Professional Development in Vocational and Higher Education, and Fund for Economic, Social, and Legal Studies). These funds should become effective mechanisms of grant-based support for the initiatives of school and university teachers with regard to their own professional development as well as research and teaching innovations.

The increase in teachers’ salaries and the introduction of salary bonuses should be financed by the state on a per-student basis. The only limitation on the educational establishments themselves should be the institution of a minimum wage for full-time teachers at each educational level. This should be performed by the legislative assemblies of Russian regions for preschool, public, and vocational educational establishments and by the State Duma for higher educational establishments (taking regional differences in labor markets into account).

An important element of an effective contract is retirement benefits for teachers. Their current low levels have a double negative effect: older teachers try to take on a maximum teaching load (that is often beyond their strength), while young people are not attracted by such prospects.

In principle, this problem should be solved by measures that are currently being adopted at the recommendation of President V.V. Putin: the co-funding by the state and the employer of voluntary deductions to the retirement pension fund. Nevertheless, this mechanism will only affect the retirement benefits of today’s young teachers. There remains the problem of retirement benefits for teachers that are over 50 years old today. We propose to create a public-private fund that will be used to finance bonuses to the retirement pensions of school and university teachers. The resources of this fund will be depleted by the mid-21st century, while new clients will cease to appear after 2017, when retirement savings will become available by the new scheme.

Increasing the base salaries of teachers will require substantial allocations from the state budget. The government’s three-year financial plan does not provide for such allocations. This means that we will lose another three years, during which our schools and universities will increasingly lag behind not only the West but also BRIC countries, with which we are competing. **The cost of this item will roughly amount to 200–250 billion rubles annually by 2010 (or 0.75% of the GDP). This is a lot of money, indeed, yet Russia spends only 3.5% of the GDP on education today — less than the overwhelming majority of other developed countries.**

How to promote the emergence of a professional milieu?

The National Project “Education” was aimed at renewing incentives for professional competition in the educational milieu, which was virtually excluded from the struggle for resources in the 1990s and 2000s. The grants awarded by the state to the best teachers and educational establishments began to contribute to the formation of a healthy educational community.

Such instruments should be developed further, both by allocating sufficient resources (especially for public education) and developing modern systems for awarding grants. We are speaking about specialized funds that would work publicly and attract leading Russian and international experts as well as businessmen, NGO workers, and journalists for assessing projects and taking decisions. Members of federal and regional Public Chambers should become members of the boards of trustees or boards of governors of these funds.

It is also necessary to switch from mass prizes for past achievements to grants for the implementation of initiatives, projects, etc.

It would be expedient to allocate special financial support for existing and newly established professional associations of teachers and researchers. Such support (on a competitive basis) should include the funding of publishing, the organization of professional conferences and seminars, and the participation in international professional exchange. The state should involve professional associations in monitoring the quality of education and research at all levels.

4.4. Reviving the innovative aspect of universities

Research is an important part of university activities in the entire world. However, research in Russia is conducted through private initiative without substantial state funding.

The lack of resources has brought our higher education to a real crisis of quality. After all, universities are key elements in national innovation systems all over the world. What innovations can graduates of Russian universities make if their teachers use textbooks written by others 80—90% of the time without any developments of their own?

The research schools that remain at universities can subsist at most another five more years with their aged human resources. Afterwards, they will irrevocably disappear. Importing scientific potential “anew” costs a lot more than supporting existing potential.

Russia runs the risk of losing its last “normal universities” that can compete with international research and education centers and assure the “production of intellectuals”. The general trend of the last 15 years has been the growth of the demand for higher education and its increasing availability to the masses (450 students per 10,000 population). In combination with the very low funding of higher educational establishments, this has turned 90% of Russian universities into college-like preparatory establishments where faculty use textbooks written by others and reproduce knowledge rather than developing it. University teachers have turned into teachers working on a per-hour basis that divide their time between 3—5 higher educational establishments and extended education programs and do not have the opportunity not only to engage in research but also to work with students outside class.

If these processes continue another five years, Russia will become a country with mass higher education of medium and low quality. The elite will begin to be imported from other countries (similar to the situation with top managers today). The Russian innovative system will lose its university foundations. This means that the system of the Russian Academy of Sciences will collapse in 5—10 years, too.

Research universities

It is necessary to provide ongoing state support to universities that have preserved their research and innovative potential. The National Project “Education” provided such support a single time through 1.5—2 year-long grants for the development of 50 universities selected on a competitive basis. Although this project is reaching completion today (in 2007 for the first group and in 2008 for the second), it has

still not been decided whether the country's leading universities will continue to get support. It would be expedient to continue this project for another five years at least as well as to support joint educational programs with the participation of universities, research organizations and companies. Such programs should be tested in 2009 after the completion of the second stage of funding of innovative universities.

Initially, it is essential to finance the educational activities of research universities to reach the following targets:

- Raise the average salaries of teaching staff to at least 75,000 rubles per month by 2010 and 150,000 rubles per month by 2015, making it possible to attract and retain the most highly qualified specialists, competing with Russian companies and foreign universities;
- Create and support a modern educational, laboratory and information infrastructure that would be competitive on the international market;
- Provide at least 75% of the students of these universities (150,000 people in 2010 and 250,000 people in 2015) with scholarships equal to or above the minimum wage and comfortable halls of residence and create conditions for the gradual abandonment of the practice of admitting tuition students with relatively low USE results;
- Expand admissions of the best graduates of Russian and foreign higher educational establishments to the Master's programs of these universities (120—150% of the number of admissions to Bachelor's programs).

Research universities should also get ongoing state support for their fundamental research programs.

Such funding should amount to at least 35% of the state funding of university educational activities by 2010 and attain 75% by 2015. If they get the opportunity to implement their original developments on a long-term basis, the academic teams of these universities will become the foundation of a new generation of Russian fundamental science. Nevertheless, the status of a research university should not be given once and for all to a closed group of higher educational establishments. This status should be awarded on a competitive basis in exchange for the commitment to maintain a high level of research and teaching. At the same time, the use of state resources should be transparent not only for auditing bodies but also for the academic community.

Grant-based support for research teams

Research teams and individual scholars working at Russian higher educational establishments that are unable to get on the list of research universities should not be left without support. These teams provide a chance for the revival of the innovative potential of mass higher education. Special instruments are needed for their development:

- Increasing the size of grants awarded by the Russian Fund for Fundamental Studies and the Russian State Scientific Fund and awarding grants for the development of university departments and large chairs and laboratories amounting to 5—50 million rubles annually for 3—4 years;
- Co-funding investments by higher educational establishments in the development of their information, research, and laboratory infrastructure and human resources. Such co-funding may be awarded through annual competitions.

The mechanism of federal target programs and departmental target programs should be profoundly restructured. The current practice of implementing such programs simply boils down to the execution of state orders. It does not support initiative from below. It is essential to adjust the mechanisms of project and target funding: in particular, it is necessary to search for and support initiatives that are worthy of being spread. It is also necessary to implement as quickly as possible a mechanism for funding long-term projects (scheduled to last 3—10 years) through these programs.

Training and attesting researchers

The system for training and attesting researchers was particularly affected by the disintegration of the academic community. Today, graduate students get virtually no state support at all (during the Soviet period, they got a scholarship that was close to the average salary) and, as a result, cannot concentrate on doing research.

Academic degrees, especially in the social sciences and education, have been undermined by the increasing number of people who defend Ph.D., D.Sc., and D.A. degrees without engaging in research and without having any real relationship with the academic community and who simply want to obtain the formal status connected with these degrees. Provincialism (the ignorance of international research in one's discipline) and plagiarism are flourishing. The government and the healthy part of the academic community must take urgent measures against this contagious disease.

We propose to change the structure of graduate studies by completely abandoning tuition-based forms and giving each graduate student a state scholarship equal to the average starting salary of a university lecturer. Graduate studies should be concentrated at research universities and major scientific centers. The only exception may be graduate studies at chairs that have received the support of institutional grants of state research funds. One should not be afraid of reducing the number of graduate students by 1.5–2 times in the process. They will bring a lot more benefit to society by working than by studying.

The procedure of defending dissertations and awarding academic degrees should be radically altered. Research teams with a good reputation (research universities, state research centers, major institutes, and branches of the Russian Academy of Sciences and the Russian Academy of Medical Sciences) should get the right to confer their own academic degrees, as it is done in the rest of the world. The Higher Attestation Commission should be retained as a control body, and its expert councils should be charged with preparing annual surveys on the quality of dissertations defended in Russia. The participation of external experts from leading foreign universities should be mandatory for evaluating dissertations.

It is necessary to make the discussion of dissertations public. To this end, one should require that the full text of the dissertation be placed on the Higher Attestation Commission's portal three months before the defense procedure. This should give ample opportunity for all interested people to read the dissertation and file their remarks, with which all voting members of the Scientific Council must get acquainted.

Publicity plus clear individual and corporate responsibility for the quality of awarded degrees rather than an anonymous procedure spread over numerous levels of hierarchy are a simple recipe for success that has been proven all over the world.

4.5. Mass higher education

The 21st century is the century of mass higher education. In developed countries, over 50% of high school graduates participate in higher education, which is becoming a requirement of the “new economy” labor market sectors. Russia does not lag behind its competitors in participation in higher education. Nevertheless, the problem lies in assuring its quality (all university graduates must get the necessary qualifications) and its correspondence to the current and future demands of the economy. To this end, it is necessary to

- Make Bachelor's programs more widespread;
- Assure a high level of funding for Master's programs;
- Develop a national system for assessing the quality of education and a system of exams for the transition from a Bachelor's to a Master's program. Employers should participate in the work of agencies that assess the quality of education.

Universities for all those who truly want to study

As to the well-known opinion that Russians are “overly” educated, it should be kept in mind that a number of countries are already striving to make higher education universal. To all intents and purposes, higher education has already become a precondition for socialization in the “urban” economy. Thus one should make higher education accessible to all who want to study instead of trying to limit the number of students. This can be accompanied by the preparation of students for professional life by making graduates take one or two short professional training courses.

At the same time, it is essential to assure that only students with the necessary level of knowledge for getting a higher education (at least 40—45 points on the USE in the disciplines of their major) are admitted to universities. To this end, we propose establishing a threshold below which students will not be admitted to either state-financed or tuition-based educational programs at higher educational establishments. This will reduce the number of students by 10—15% without any effect on the nation's intellectual potential. After all, a high school graduate who is determined to get a higher education will simply prepare better for the exams the following year.

At the same time, the number of chance students applying to higher educational establishments should fall in coming years on account of reforms in compulsory military service. The reduction of military service to one year along with mandatory service after the end of university studies should lower the attractiveness of higher education as a “five-year refuge from military service”.

At the same time, it is essential to attract foreign citizens that are capable of passing the entrance exams and have a good command of Russian to Russian universities. In this regard, the Public Chamber welcomes the creation of the Russian World Foundation whose activities are aimed at supporting education and believes that it would be expedient to entitle such students to regular admission with state funding during the entire educational program. This is the practice of most highly developed countries, which allows them not only to raise their educational prestige abroad but also to expand their cultural and civilizational influence.

Cut off pseudo-education on the supply side

It is essential to make the state accreditation of educational programs stricter and give the corresponding powers to leaders of the professional community. Accreditation commissions should consist of representatives of 4 or 5 leading universities in the respective discipline and interested employers' associations. If leading universities have to put their reputation at stake when they confirm the dubious qualifications of their colleagues, society will get much more motivated and attentive accreditation bodies.

Mechanisms of economic selection of universities should be put in place by giving state support only to high school graduates with above-average performance (for example, at least 60 points on the USE in the disciplines of their major). Many majors that are not in demand and entire higher educational establishments will be closed not by the decision of bureaucrats but due to the lack of students, who will simply cease to get state support. At the same time, it would be expedient to support those universities that attract strong high school graduates. High school graduates that get good results on the USE (over 85 points) or win federal or regional subject Olympiads should get state educational grants that are 2—3 times higher than those of other students.

Naturally, one should take into account a situation in which the state would be interested in high school graduates getting an education in disciplines that are currently not in demand among students. In these cases, one should provide incentive mechanisms — from higher scholarships to solid starting grants for employment or the implementation of mortgage lending programs for the families of young specialists.

Give high school graduates more choice

A law should be passed requiring educational establishments to present information on their official websites about their educational programs (number of students in each class; average USE marks of students enrolled in state-funded and tuition-based study; percentage share of students dismissed each year; teaching plans (schedule of classes) of different teachers; personal pages of teachers with a mandatory list of their publications and their employment status at the establishment (full-time, part-time, or on a per-hour basis); results of the last official accreditation in each discipline; number of books and periodicals, including electronic resources, at the library; and the establishment's resource base — list of educational buildings and dormitories stipulating the number of lecture halls and student beds, the presence of club and sports facilities, and the average salaries by teacher category during the preceding year). The directors of educational establishments should be civilly and administratively liable for incorrect, unfounded, or tardy information.

Entrepreneurs' organizations (Russian Union of Industrialists and Entrepreneurs, "OPORA Russia" All-Russian Nongovernmental Organization of Small and Medium Business, and "Business Russia" National Public Organization) and interested nongovernmental organizations could conduct annual public ratings of higher educational establishments and their disciplines that would take into account the satisfaction of employers and the average wages of graduates. We should note that Business Russia has already had experience in rating universities, which has met with a very favorable response among citizens.

A key area of educational policy should be the implementation of an initiative of the Russian Union of Industrialists and Entrepreneurs to organize the broad attestation of the professional qualifications of workers through a system of voluntary examinations. Such examinations already exist in many countries and serve not only as a "ticket" to various forms of professional activity but also as an indicator of the quality of training at educational establishments (a USE of sorts for colleges and universities).

The transition to the USE gives high school graduates broad opportunities for getting into Russian higher educational establishments. Nevertheless, it is necessary to expand the number of student dormitories and make them more comfortable to make this choice possible in practice. **The present-day condition of student dormitories lags far behind the contemporary living standards of Russians and corresponds more to the period of "militant communism". It is essential to implement a program of public investment in the construction of student dormitory complexes for the country's most popular universities from 2008 on.**

4.6. Training professional workmen

The incorporation of applied and artistic practical skills into the school curriculum would allow students who plan to work in practical domains to stand out. They would form the core of the best and most interested students at vocational schools and courses. Young people must see that society and the labor market have a demand for highly skilled manual workers and that this path does not lead into a dead-end. To this end, it is necessary to revive honorary titles such as "best worker", "best professional", "master worker", etc., define the mechanisms of conferring them with the participation of employers and broad media coverage, and develop a modern system for retraining specialists.

The system of prevocational education needs to be profoundly restructured. First of all, it must be adapted to the real needs of citizens who want to become qualified workmen, on the one hand, and employers, on the other. Present-day vocational high schools and prevocational schools are overloaded with social functions and the parallel task of providing a full secondary education. As a result, it takes three years instead of 6–12 months to acquire professional qualifications, whose level is insufficient for getting a job.

The state must liberate the vocational educational system from functions that are foreign to it and allow it to focus on its primary task: providing industrial and service qualifications at a modern level. Experience shows that this task is much more effectively implemented by commercial courses and educational centers that have emerged over the past 10 years both for serving the needs of large corporations and for working on the market.

We propose

- Funding vocational education through the use of state certificates (vouchers) from 2010 on. Such certificates will be allocated by employment services as well as to ninth and eleventh grade graduates who want to get applied qualifications. They may be used for covering the cost of vocational training at both public and private educational establishments;
- Changing the profile of the existing system of prevocational schools and vocational high schools by turning them into multiprofile centers of vocational qualifications, in particular through public-private partnerships. The material infrastructure of the centers as well as the implementation of the parallel programs of general education and social support for students should, as a rule, remain in the hands of federal or local government bodies.

At the same time, private educational centers and courses should also be allowed to receive funding through state certificates. To this end, a public-private accreditation system must be set up.

4.7. Renewing general education

Renewing content and methods

In view of the emergence of a knowledge society, the objectives of schools should change not just in word but also in deed. Normative documents as well as the actual content and methods of education should reflect the task of developing students' capacity and interest in life-long education. **The development and preservation of an interest in education should be the determining criterion when elaborating new standards, textbooks and methods.**

Today, schools fail to provide the required set of civil and social skills. The existing social science course makes use of methods dating from the mid-20th century.

Economics and law should be compulsory courses in high school, as in most other countries. Moreover, these courses should give students practical knowledge in such areas as taxes, the labor market, company takeovers, assuring the right to education, health, and housing and the rights and responsibilities of property owners.

This means that teachers must present concrete examples and discuss possible solutions of real sociopolitical and economic problems. Such discussions can and should serve to develop independent and critical thinking, which is the most effective mechanism of fighting extremism and social infantilism. The Public Chamber could conduct a competition for the creation of new social science programs and teaching materials.

It is essential to expand the role of children's creativity in the school curriculum, beginning with primary school, by introducing such subjects as drawing, sculpting, singing, and theater and by radically renewing teaching technologies. These subjects promote the development of creative skills, no matter in which domain they will be subsequently applied.

There is a need for profound changes in the content of secondary education (this is the most problematic school period, as international comparative studies show — cf. Chapter 2). It is necessary to abandon the memorization of enormous amounts of information in favor of the development of key skills and qualifications, no matter how difficult and even painful this transition is. The new standards of school education must inevitably incorporate them.

The current discussion in society of the future development of Russian schools shows that the Russian people recognize the need to modernize the school curriculum yet are afraid of losing the structure and content that give the Russian educational system a competitive advantage. This refers to the natural science and mathematics complex whose scope substantially surpasses the secondary educational standards in most foreign countries today.

It is true that the destruction of tradition is not the best method of modernization. Yet **one should understand that the only way of combining the implementation of urgent modernization measures and the preservation of the historical traditions of Russian school education is to expand the duration of study from 11 to 12 years. This transition is also inevitable in view of the necessity of reducing the load on students and improving the quality of school subjects.**

Specialized high schools, which are set down in the Conception of the Modernization of Education, continue to be isolated pilot projects that still lack a legal framework. Yet they were conceived as a way of bridging the growing gap between the school curriculum and the choice of a vocational or higher educational trajectory. In practice, specialized education often degenerates into the early selection of school students. Nevertheless, as the experience of countries that have practiced specialized education for decades shows, it is unacceptable to turn mass specialized education into an early narrow specialization. It should allow school students to build their own educational trajectories by giving them a broad choice of courses, tutorials, and electives. This means that one should expand the freedom and rights of schools in designing different specialized educational programs and that society should play a greater role in this process. However, the participation of society in discussing the content of education and, in particular, of specialized educational programs is clearly insufficient for the time being. This work is being conducted by a narrow circle of specialists. Yet **the success of this endeavor will ultimately determine the success of our school system: will people increasingly view school (and especially high school) as a**

formal institution or will it manage to supplant the existing forms of preparation for vocational and higher education that serve to reinforce and exacerbate social inequality?

Today, at a time when it is necessary to define the strategic goals of the development of education, the Public Chamber believes that it is timely and essential to organize a broad public debate, which should address, first and foremost, the very participation of society in the development of education and in the evaluation of its quality and social impact. Another topic of discussion may be the fundamental problems of regional education development strategies and the coverage of educational programs and educational issues by television and the printed media.

We should reconsider amendments to laws that limit competition in the market of textbooks and teaching materials and adopt laws that allow for public discussion and freedom in choosing textbooks that have been approved by civil and state commissions.

A promising mechanism for renewing educational standards and programs is network interaction between the best teachers and innovative schools. Several thousand top teachers and hundreds of innovative schools should participate not only in the one-time creation but also in the continuous renewal and correction of educational standards. The Ministry of Education and Science along with experts of the Public Chamber should constantly monitor such work, which should last for at least three years and include the stages of elaborating, testing, correcting, and diffusing modern competitive standards and curricula.

The Public Chamber salutes the fact that the Russian Federal Agency for Physical Culture and Sport and the Russian Ministry of Education and Science have begun to draft normative documents that regulate the activities of sports clubs and a new physical educational standard for schools. It is necessary to ensure, first of all, that educational administrative bodies at all levels from the Ministry of Education to municipal bodies hire staff members that can oversee the development of physical education and sports at public schools. Secondly, licensing and accrediting procedures should encourage school owners and administration to set up a contemporary sports infrastructure and improve physical education at educational establishments. Thirdly, sports clubs should be founded at educational establishments, and their sources and rules of funding should be defined. Finally, more grants should be awarded to physical education teachers: this would not only be an excellent way of improving their professional motivation but would also have a positive impact on the health of Russian children.

Gifted children should be supported not only through events of different kinds but also through a national system. It is a question of creating an “infrastructure for gifted children” that would bring together state programs and institutions as well as nongovernmental organizations. A key condition for recognizing talent at the international level is the integration of the Russian system for supporting gifted children into existing European and American systems.

Of course, another important area of the development of schools is their close interaction with the extracurricular education system, in which school students have more opportunities for making independent choices. Education is a single whole from the standpoint of school students and their future. Thus another important task is to create an institutional mechanism for recording and converting all of a child’s achievements into a single system of skill indicators. The high school graduate’s resulting personal portfolio could supplement USE results to provide a fairly objective “letter of recommendation” that would reflect not only his formal academic achievements but also his individual creative successes in his chosen activities.

Finally, we need a serious scientific basis for the renewal of public education. It is necessary to study the true present-day state of Russian education and not only “what it should be like”. Key areas of research should include

- A comparative analysis of the contemporary conditions of education and funding possibilities;
- An analysis of the demands, interests and independent activities of different groups of young people;
- A comparative analysis of the quality of education at educational establishments and world trends.

Such studies should be commissioned through an open competition that would attract fresh modern forces to educational research.

Educating human beings and citizens

It is necessary to overcome the trend (dating from the nineties) of young people focusing on particular and group interests, i.e., their social autism.

Revival of children's and youth organizations. It is not a matter of reviving communist youth organizations or any other type of state-directed unitary association. One should promote all forms of children's and young people's self-government and self-organization in existing interest groups as well as educational establishments in general. Socialization best develops through practice.

One should support in different ways (such as discussion clubs, regional and national competitions, and grants) not only the charitable and volunteer activities of children and teenagers (including assisting old people and handicapped children and cleaning and refurbishing territories and educational establishments) but also their creative activities leading to their intellectual and artistic development and their increasing contribution to the human resources of society. Grants may be awarded for such activities as discovery trips, artistic work, computer projects, and children's tourism. Russia needs a special grant program entitled "Russian Youth" that would last at least five years.

The religious education of children and teenagers has a major impact on the development of social ethics. Recent discussions on the possibility of religious education in schools seem to have masked positive policy opportunities in this educational sector. Naturally, the secular nature of the Russian state and its complex denominational make-up make it impossible to teach such courses in schools. The secular study of the foundations of religions is cultural rather than ethical in nature. Yet society and the state, in the framework of their promotion of different forms of extracurricular education, can support extracurricular forms of religious education such as Sunday schools, courses at churches, etc.

4.8. Points of growth

When solving the present-day problems of Russian education, we should stick to realistic targets. We clearly lack the financial and human resources to quickly overcome our lag behind the leaders that has arisen over the past twenty years. This process will take at least 15 years. We must therefore choose "points of growth" that will assure the fastest progress and the greatest impact on the educational system.

It is essential to become internationally competitive in the next five years in areas that are vital for assuring the country's progress and for guaranteeing the very existence of its innovative system. We can identify three such "points of growth":

- **Research universities and the system of producing researchers for the national innovative system** (including graduate schools and the support of promising research schools at universities that have not obtained the status of research universities). If this task is not fully resolved, we will not stop the brain drain of researchers to Western universities and will continue to surrender our own resources to the international research scene, although they were allocated with such difficulty on account of the massive problems that exist in other infrastructural and social sectors;
- **Training a new generation of teachers for public schools.** New teachers should study at Master's degree programs in education at leading universities and be recruited among *cum laude* and *summa cum laude* graduates of Bachelor's programs that are capable of making successful teaching careers. New teachers should continue to participate in university life and be integrated into broad academic communities that would assure their professional growth.

As the present report shows, one of today's negative factors is the relatively small number of "strong" teachers, which is a result of a long-term negative selection in the teaching profession. The only real way to solve this situation is to take an open look at the problem and not to fear taking radical steps. Given the low share of graduates that go on to work in the educational system, it would be expedient to convert most teacher training institutes into humanities universities that

would offer special teacher training programs during the last years of Bachelor's studies and in the Master's program.

One also needs to take radical measures with regard to the teacher retraining system, which resists all attempts to modernize it. The only way of overcoming this institutional inertia is to adopt the principle of "money for teacher retraining is allocated to the school or teacher". The conversion of advanced training institutes into autonomous establishments would also help to modernize education and improve its quality;

- **Creation and support of open-access scholarly and educational Internet resources.** Russia is a vast country: its research and education community includes millions of teachers and tens of millions of students. To meet their needs, it is essential to write abstracts of all educational and research literature that is published in the world and to translate every innovative work into Russian. One should keep in mind that the majority of our teachers and students have an inadequate knowledge of English and that many interesting innovative works are published in the native languages of their authors. Asian, Latin American, and Eastern European countries are playing an increasingly important role in the development of the international educational community. The state should subsidize all Russian research and educational periodicals without exception on the condition that they are placed in open Internet access. Internet technologies should be developed as much as possible, and library and museum resources should be digitalized to serve the needs of education. To this end, it is necessary to rapidly resolve problems arising from copyright legislation in this domain. One should buy and localize the best foreign information resources and place them in open access. In the long-term, one should assure the development of a national collection of digital educational resources.

Whereas these "points of growth" require solving the problem of global competitiveness, education as a whole calls for solving the problem of competitiveness on the Russian labor and innovations market:

- **Paying competitive salaries**, in particular to vocational teachers and public school teachers;
- **Making vocational and higher education correspond to the structure of the labor market and the modern (or, even better, future) technologies market** and overcoming blatant discrepancies that have existed in this domain for years. Ideally, vocational and higher education should keep ahead of industry in mastering new technologies. Today, such an edge is mostly due to the efforts of the public education system to implement a national project on connecting schools to the Internet and mass training in information technologies. In vocational and higher education, "zones of technological leadership" are rare and mostly pertain to the IT domain. It is necessary to take measures for supporting the optional certification of qualifications and the optional accreditation of programs by professional associations. These as well as other important areas of educational development should be set down in a new strategic document on the development of education in Russia. This document should be supra-departmental, and so the Public Chamber of the Russian Federation could coordinate this work;
- **Correspondence of education to the demands of students and their families.** Given the current interest in higher education, it would be meaningless to try to limit it artificially. In the system of prevocational education, one should focus on short-term training in specific industrial skills — the demand for long-term comprehensive education in today's prevocational schools is lower than the supply. At the same time, one should breathe life into the project of specialized schools which would assure the possibility of specializing in vocational education;
- **Expanding the participation of nongovernmental organizations in the development of education.** The Public Chamber believes that it is necessary to reconsider the law on civil participation in educational administration as well as to define the powers of school administrative councils and the boards of trustees of universities. One should introduce the practice of publishing annual public reports on the activities of all educational establishments and municipal and regional educational systems.

4.9. Macroeconomic limits on the development of Russian education

The problem of resources and the choice of priorities

The modernization of Russian education calls for considerable resources. If we want to retain (and, in preschool and extracurricular education, enlarge) the scope of education and the participation of different age groups in it and, at the same time, assure its quality, **we must increase the share of educational spending in the GDP by 2.5–3 percentage points — from the current 3.5 to 5.5–6% of the GDP for state funding and from the current 2 to 2.5% of the GDP for individuals and companies.** Clearly, this would be a very heavy burden that is at the limit not only of the politically possible but also of the economically feasible. Nevertheless, **such a share of educational spending in the GDP is far from being something unusual — on the contrary, it is typical for the overwhelming majority of developed countries.**

Shifting the existing structure of family and company budgets towards greater educational spending should be a top priority and a strategic target in the economic policy of the Russian Government.

The state must promote private investments in education by different means, not just taxation. It is necessary to develop a system of state co-funding that would supplement the spending of families as well as companies in a number of low-income economic sectors such as agriculture and machine building (similar to the system that has recently been proposed by President Putin for the pension system). Public resources at all levels of government should be allocated for co-funding the educational programs of educational centers of Russian corporations and enterprises that work not only on domestic but also on foreign markets. Finally, it is necessary to create an effective educational loan program for citizens for a period of at least 15 years in which the state would assume a considerable share of the risks of commercial banks and also subsidize the interest rate, if necessary. One should keep in mind that the corresponding public spending at all levels of government (approx. 0.4% of the GDP by 2015) will attract additional investments in education from companies and families in the amount of 0.5–0.75% of the GDP as well as providing an economic incentive for rapidly improving the quality of educational programs and, in the long run, the productivity of labor. After all, at least half of today's pseudo-education results from the inability of families to pay for quality educational programs.

Nevertheless, one must take into account systemic social limitations on the introduction of economic mechanisms into education that call for financial contributions from families. Whereas vocational and higher education is mostly seen as a private service that people buy to increase their future income, public education serves the needs of society as a whole. The task of assuring equal access to quality public education (and the equality of initial opportunities in choosing a vocational or higher education program) is an imperative of the educational policy of every modern state. Improving public education by attracting the resources of the parents of schoolchildren is tempting in its effectiveness yet dangerous in its long-term consequences. **Ideally, not only public schools but also kindergartens and the greater part of extracurricular education should be free.** In contrast to fundamental university education and research, where the state simply has no choice, in preschool and school education private effective demand exists and exerts a real pressure on the educational system. **As society (and its representative the state) gets greater opportunities to invest additional resources in the social sphere, it would be expedient to try once again to choose an optimal strategy in this domain in order to limit long-term social risks from the gradual privatization of public education.**

The question lies not in whether one should invest more resources in education but in how to distribute the increase in resources over time. The limiting factors are not only the financial possibilities of the state but also the incapacity of today's universities and schools to assimilate a rapid increase in funding. The experience of implementing the first stage of the National Project "Education" shows that even leading universities experience problems in this regard.

Risk of the ineffective use of additional resources

First of all, a marked increase in the salaries of school and university teachers will make today's weak teachers cling even more tightly to their jobs. When such teachers form the core of the teaching community at a school or university, they will prevent stronger teachers from being hired. This risk can be limited through economic mechanisms, some of which have already been proposed by experts and supported by the Russian Ministry of Education and Science. In many higher educational establishments, incentive salary bonuses for academic achievements and teaching quality have already been introduced. They amount to 200—300% of the base salary at some establishments. To a certain extent, they can also be applied in schools. It would be expedient to raise salaries primarily through such bonuses. This would make it possible to rapidly attain an optimal salary level (from the standpoint of the establishment's administration) for the best workers. At the same time, the method of salary bonus funds will spread out in time the required increase in state funding for assuring competitive salaries by combining it with a gradual replacement of weak teachers by strong ones.

Naturally, salary bonus funds should be supplemented by a rise in the base salaries of teachers. The latter is the only way of making the starting conditions attractive for new teachers. We believe that the increases in the base salary and the bonus fund should stand in a ratio of 50/50 for schools and 35/65 for vocational and higher educational establishments.

Secondly, the sharp rise in the funding of research is limited by the existing research staff at universities. This is a question not only of the number of researchers but also of the quality of their results. Over the last decade, provincialism has become a rampant disease in Russian universities. There is a great risk of state funding giving rise to pseudo-scientific rather than scientific results.

At the same time, the existing method of monitoring the direction and quality of research (numerous public competitions for short-term grants) does not attain its targets but, on the contrary, funnels a lot of resources into filling out an enormous amount of paperwork.

This makes it necessary to divide the growth of funding of university research into two parts. Several dozen research universities with a high academic reputation could get permanent funding in the framework of five-year programs approved by grantors. The starting funding of these programs could reach 15—20% of the funding of the respective universities in domain of education in 2008 and grow by 20—25% annually as the research staff at universities is renewed, reaching 80—100% of the funding of educational activities by 2015.

At the same time, the traditional competitions for funding the work of individual research teams should be expanded at the same rate yet award longer grants lasting 3—5 years.

Thirdly, the development of adequate infrastructure at certain educational establishments will be accompanied by a sharp decrease in admissions at other establishments and even their closure. It would be expedient to limit the construction of new facilities between 2008 and 2015 and instead to redistribute the educational system's existing real estate. For example, buildings belonging to military academies that are scheduled to be closed could be given to civilian universities. The only exceptions could be the construction of a new generation of student dormitories. This is a basic condition of the accessibility of vocational and higher education.

Sectors in which development could be fueled in part by the private resources of companies and families.

These include preschool education; extracurricular education; prevocational, vocational, and mass higher education; and continuing vocational education.

Russians are psychologically ready to pay for or co-finance existing educational services. It is important to improve the supply of these services and to raise the awareness of citizens and employers. In other words, the state must not only continue to finance and regulate the educational programs themselves but also to monitor the market of information on education. Today, the state of this market is so poor that the ordinary consumer is not protected from fraudulent advertising.

An important source of funding could be the reorganization of the system of vocational education. The establishment of centers of applied qualifications with a shorter duration of education in place of prevocational schools and vocational lyceums and a sharp decrease in the admission of school students with a ninth-grade education could liberate up to 30—40% of the resources of this sector. This alone would make it possible to increase the salaries of teachers and vocational trainers by 2—2.5 times.

Mass higher education requires raising teachers' salaries to 50,000 rubles a month by 2010 as well as increasing the need-based scholarships of at least a third of students to the minimum subsistence level. Sector reforms (transition to four-year Bachelor's programs and the elimination of pseudo-education and high school graduates with low USE results) will liberate about 75 billion rubles, making it possible to increase the funding per student. Yet, even in this case, the necessary increase in the funding of mass higher education should optimally amount to about 500 billion rubles annually by 2010 (a growth by a factor of 2.5!) and about 800 billion annually by 2015.

Although raising the average salary of university teachers to only 25,000 rubles a month by 2010 is economically feasible, it would lead to an ineffective contract (the average salary in the Russian economy will be about 19,000 rubles a month by this time).

Thus mass higher education will remain a risk zone in Russian education. The sector's current size (supported by demand) will not allow Russia to assure a sufficiently high quality of higher education in the coming five years. Should there be intensive reorganization of universities (and, in particular, their enlargement), a gradual improvement in mass higher education will arise only by the end of the next decade.

In each of these sectors, it is necessary to identify zones of exclusive state responsibility. Increasing the participation of children in preschool education will require raising state funding not only for teachers but also for the sustenance of children— after all, it is primarily a matter of involving children from low-income families. **It is necessary to plan for an increase of 50—75 billion rubles in the contribution of local government to preschool education by 2010.**

To sum up, it is absolutely necessary to increase the spending of the consolidated budget of the Russian state in these sectors by approx. 0.3—0.4% of the GDP by 2010.

Sectors where the increase in funding can (or should) come only from society as a whole, that is from the state.

These include public school, university research and research universities, and open-access educational resources (national collection, educational portals, and electronic libraries).

Over the coming 3—4 years, it may be possible to greatly change the situation in these sectors (which are key for the strategic development of Russia) by increasing state funding by an additional 0.9—1% of the GDP, i.e., by about 300 billion rubles in 2010.

In public schools, it seems feasible to raise the average teacher salary to the average level of wages in the Russian economy or even slightly higher (19,000—20,000 rubles a month) by increasing funding from regional budgets by 180—200 billion rubles in comparison to the inertial forecast and raising the consolidated school budget to 950—1,000 billion in 2010. Naturally, salaries will continue to reflect existing regional differences. This will assure the sustainable development of public schools and open the way to qualitative changes in the teacher community.

Research universities, upon which the growth of the innovative potential of the Russian economy depends, should be made internationally competitive as quickly as possible. This will require raising the current funding of their education programs by 2—2.5 times to 110—130 billion rubles by 2010 and the state funding of research by 5—7 times to 25 billion rubles.

State expenditure on grants for university research teams should double to a level of 15 billion rubles.

Finally, the cost of the national program of open-access electronic resources is estimated at 15 billion rubles a year up to 2010.

We believe that the Russian economy can support the burden resulting from the growth of national educational spending by 1.3% of the GDP over the period 2008—2010. Over such a short period, we will not be able to solve all our problems, create effective contracts with teachers in all sectors, or, furthermore, radically renew the teacher community and educational technologies. Yet we will cast a solid foundation for subsequent changes that will be vital for the future of our country.

We are convinced that the development of education is an issue that strengthens Russian society. We call upon all political and social forces to show determination in bringing about the necessary changes in education and in our attitude towards education. Our future depends upon the choice we make today.

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Доклад

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