Chapter 12

The Impact of PIRLS in the Russian Federation[1]

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12.1 The Russian Federation at a Glance[3]

Covering the eastern part of Europe and the northern part of Asia, the Russian Federation is the largest country in the world. It occupies one-seventh of the Earth's surface, with a territory of over 17 million square kilometers that includes a vast range of geographical, natural, and meteorological conditions. The country from east to west is more than 10 thousand kilometers in length; from north to south, it is more than 4 thousand kilometers.

The country's population of about 142.8 million people includes more than 100 ethnic groups, each possessing its own language. The majority of the population (about 81.5%) belongs to the Russian ethnic group. The overall population density is eight to nine persons per square kilometer. The urban population amounts to 104.1 million people, or 73 percent of the entire Russian population; 10.4 million people live in Moscow, the country's capital.

The living conditions of the Russian people have changed during the last 20 years due to the economic and social problems the country has encountered since the collapse of the Soviet regime. In 2005, infant mortality was 11 deaths per 1,000 live births. The average life expectancy is 65.3 years, with the average life expectancy of 72.4 years for females considerably higher than the 58.9 years for males.

Russia is a democratic federal parliamentary state with a republican form of governance. The state is ruled by the president and the Federal Parliament (comprising the Council of Federation and the Duma, Government, and the Courts of the Russian Federation). Legislative powers are exercised by the Duma.

In 2006, Russia's gross national product was about $USB1,000.00. The country's primary industries include oil, gas, and metal production as well as agriculture,

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2 This publication is co-authored by Galina Kovaleva, Andrey Melnikov, Marina Pinskaya, Tatiana Timkova, Yulia Tumeneva, and Galina Zuckerman.

3 The introduction is based on the Russian Federation's country profile in the *PIRLS 2006 Encyclopedia* (Kennedy, Mullis, Martin, & Trong, 2007). The profile was written by Galina Kovaleva and Marina Kuznetsova from the Russian Academy of Education. Most of the statistical information given in this current chapter comes from the Russian State Committee for Statistics "Goskomstat": www.gks.ru/data

forestry, and fishing. Women and men were almost equally represented in the total workforce in 2005—49.4 percent and 50.6 percent respectively. The proportion of GDP given over to education from the consolidated budget of the Russian Federation and of the state extra-budgetary funding was 3.9 percent in 2006 (Institute of Statistical Studies and Economics, 2007).

Russian is the official language of the Russian Federation. The nation comprises 88 administrative regions, including autonomous districts, each with its own regional culture and community identity. Most students are taught in the Russian language; some, however, study one or more of the 79 languages of the national ethnic groups within the Russian Federation.

12.2 Russian Education System as a Context for PIRLS 2006

12.2.1 Structure and Governance of Education

Under the current Law on Education, passed in 1992, the Russian education system has become more decentralized in its decisionmaking and funding. Under the Law on Education, the state guarantees citizens of the Russian Federation free general education and, on a competitive basis, free vocational education at state and municipal educational institutions.

The Law on Education gives schools considerable autonomy and responsibility. Under this law, two main documents regulate school instruction. They are known as the *Educational Standard* and the *Educational Program*. The standard sets minimum curriculum requirements for schools and specifies the levels of achievement students should accomplish at each stage of their schooling. Each educational institution has the right to shape, within the requirements of the standard, its educational program. It thus has leeway in determining its curriculum, annual calendar study plan, and schedule of classes.

The tendency toward increasing variability of educational provision in Russia is evident in the growing financial and academic autonomy of educational establishments, the variety of the types and kinds of educational establishments in existence, the growth in number and diversity of educational programs, and the growing number of textbooks for school subjects written by different authors.

12.2.2 Structure of the Education System

The Russian Federation's education system includes preschool education, primary education, general secondary education, vocational training, higher education, postgraduate education, professional development, inservice training, and re-training education.

12.2.2.1 Preschool Education

Preschool education is optional. In 2006, preschool education encompassed 47,835 educational institutions catering for about 4.3 million children, a fifth of whom were living in rural areas. In 2005/2006, about 58 percent of all children of relevant preschool age (i.e., one to six years) were enrolled in preschools. This proportion has stayed relatively stable over the years since. During the last two decades of the 20th century, the number of children not attending preschool institutions increased (in 1985, the percentage of children attending a preschool educational facility was 68 percent).[4]

Since 1991, new types of preschool educational institutions have appeared in Russia. These include special education institutions. In line with past practice, preschool education programs focus not only on the physical health and development of children, but also on their general, or holistic, development.

12.2.2.2 General Education

General (school) education, the core of the Russian education system, includes three stages: primary education (Grades 1 to 4), basic or lower secondary education (Grades 5 to 9), and upper secondary education (Grades 10 to 11). Basic secondary education is compulsory under the Russian Constitution. Under the 1992 Law on Education, upper secondary education also became compulsory and free.

Primary education may be provided in primary schools and in secondary educational institutions. The classroom teacher usually teaches all subjects except music, and an experienced teacher, such as the deputy principal, is responsible for providing teachers across all subjects with instructional support. In Russia, teachers are responsible for choosing instructional materials according to professional preference, children's characteristics and interests, and parental opinion.

In the main, teachers work with the whole class during reading instruction. Students or the teacher read aloud to the class, and the teacher then facilitates class discussion about what has been read. In the first grade, where not all students can read, individual and group activities are also used. Teachers will sometimes place students who can read sentences at this stage into advanced learning groups.

Almost every classroom in Russian primary schools has a class library, which contains enough books and magazines to accommodate independent reading, according to children's interests, during lessons. Children can also take books home.

The average class size for the primary school is 24. However, some schools, particularly the rural ones, have only a few students in the class.

Formative and summative assessments are conducted to ensure that students' achievements comply with the curriculum requirements. They are also used to diagnose students' progress. As a rule, each school chooses the timing and form of its assessments. Summative assessment of student proficiency in each school subject

4 Statistics retrieved from http://stat.edu.ru/

generally takes place at the end of each school year. Assessment formats include oral examinations, short-answer, extended-response, and essay questions, and multiple-choice tests. Schools usually use individual teacher-made tests, locally developed tests, or tests developed centrally and published as special supplementary materials.

Innovations in assessment arising from reforms to general education include the introduction of a qualitative system of assessment without grades or marks at the end of primary school and a shift in the orientation of assessment to accommodate the changing nature of student learning and achievement throughout primary school.

12.2.2.3 Teacher Education

People wanting to become primary school teachers have several educational options:

- Five years of formal education at a higher education institution, majoring in the pedagogy, methodology, and instruction of primary education; or
- Four years of a Bachelor degree program at a higher education institution, majoring in pedagogy; or
- Two years at a pedagogical college, after graduation from high school; or
- Four years at a pedagogical college, after graduation from basic school.

In recent years, studying at a higher education institution has become more popular.

The five-year training program consists of about 9,000 hours of theoretical, practical, and research work, along with 24 or more weeks of teaching in schools. Theoretical and practical work make up 60 percent of all instruction time.[5]

The teacher-training curriculum includes four cycles of subjects and elective courses. One out of four cycles, referred to as the professional cycle, accounts for the largest block of time (55% of class time). It includes Russian, children's literature, introduction to the history of literature, mathematics, science, methodology, and instruction in teaching the Russian language and literature (570 hours); methodology and instruction in teaching mathematics (250 hours); science, technology, fine arts, and music. There is no separate specialization for teaching reading. Training in teaching reading is included in the methodology and instruction associated with teaching the Russian language and literature course.

As a rule, primary teachers take part in inservice training every five years. Inservice teacher training is no longer compulsory and is changing its orientation in order to align with the new goals of education, namely, a switch in emphasis from imparting subject content to fostering students' holistic development. Today, teachers electing to engage in in-service education find that the focus of this provision is on active learning strategies and child development.

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5 State Educational Standard of Higher Professional Education, dated January 31, 2005, methodology and instruction in teaching State Registration No. 675.

12.3 Russia's Experience of National Large-Scale Assessment Programs

Over the last decade or so, the Russian education system's highest priority objective has been forming a national system for evaluating the quality of education.

Russia has had a long-term tradition of gathering comprehensive statistical data about the functioning of the general education system (school statistical reports). Also, until recently, students' successful graduation from basic (lower secondary) school was determined by their performance on annual, end-of-year examinations. These encompass particular subjects that were offered to students in some years and not others, at different levels of the school system, and in some schools and not others.

Choice of subjects and the examinations used to determine proficiency in those subjects also vary according to the entrance requirements of Russian tertiary education institutions. Russian students have always been expected, with rare exceptions, to sit state examinations at the end of both their basic and upper secondary schooling. Students successfully passing these examinations receive certificates of school completion. In 2009, with the aim of bringing some measure of national uniformity to the examination system, the government implemented the Unified State Examination in Russian language and mathematics in all regions of the Russian Federation.

Over the last 15 years, Russia has conducted a range of large-scale surveys and research projects designed to assess the quality of its education system. Some examples of these follow:

- *Assessment of Student Achievement in Mathematics, 1995:* The main aim of this assessment, which was conducted by the Center for Evaluating the Quality of Education of the Institute of Content and Methods of Education of the Russian Academy of Education (ICME RAE; see http://www.centeroko.ry/), was to survey basic school graduates' (Grade 9) achievement in algebra. Students were sampled from the Russian schools participating in IEA's Trends in Mathematics and Science Study (TIMSS) 1995.
- *Mathematics Achievement of Primary School Graduates:* This was carried out by the above-stated center jointly with the Department of Mathematics Education of ICME RAE. The main aim was to assess students' basic mathematical skills and to evaluate the findings against the particular context of the students' respective primary schools. About 2,400 students sampled from the TIMSS-Repeat 1999 schools participated in the assessment.
- *Quality of General Education, 2000–2001:* This, the first phase of an assessment designed to monitor the quality of general secondary education in Russia, targeted secondary education and was implemented by ICME RAE. The aim of this phase was to collect and analyze state compulsory examination papers completed by graduates of basic and upper secondary schools. The papers collected related to three subjects—Russian language, Russian literature, and mathematics—and came from Grades 9 and 11 students from a representative sample of schools.

- *Quality of General Education, 2000–2004:* This second phase of the national monitoring program focused on the educational achievements of primary school graduates. It began by assessing children's readiness for education on entering primary school. About 50,000 Grade 1 students were assessed at the beginning of the year and then again at the end of each subsequent academic year. They were assessed in mathematics, Russian language, and reading. At the end of their primary schooling, they were assessed in two additional subjects—English and ICT (information and communications technology).
- *The Unified State Examination (USE):* 2001 saw the implementation of a large-scale study that involved the participation of nearly all Russian regions. It was based on the introduction of the Unified State Examination (USE)—the main means of attesting student achievement at the end of upper secondary school and the main means for students to secure entrance to institutions of higher education or to vocational schools. On January 1, 2009, the government implemented the USE in two compulsory subjects—Russian language and mathematics—in all regions of the Russian Federation. The USE also offers attestation in nine other subjects, which students select on the basis of the requirements of the universities or the vocational schools they wish to attend.
- *"Reform of the Education System" Monitoring Study:* This study, conducted between 2004 and 2006, was designed to evaluate the availability of high-quality general secondary education in Russia as part of initiatives directed at reforming Russia's education system. The organization responsible for the study was the Institute of Sociology of the Russian Academy of Science. The study covered seven regions and 140 schools catering to 1,500 high school graduates, 1,000 secondary school graduates, and 800 students.

The Russian organizations best known for carrying out large-scale national assessments of the achievement of students in basic and upper secondary schools are the Center for Evaluating the Quality of Education of the Institute of the Content and Methods of Learning of the Russian Academy of Education, the Federal Institute of Education Development, the Federal Institute of Pedagogical Measurements, the Federal Testing Center, and the Higher School of Economics.

12.4 Russia's Experience of International Large-Scale Assessment Programs[6]

The Russian Federation has acquired considerable experience in participating in all kinds of international surveys related to assessment of student achievement and the quality of education, as is evident from Table 1.1 in Chapter 1.

6 Some of the information in this section was drawn from the official website of the Center for Evaluating the Quality of Education of the Institute of the Content and Methods of Education, Russian Academy of Education: http://www.centeroko.ru/

The first large-scale international survey in which Russia (the USSR) participated was the International Assessment of Educational Progress-II (IAEP-II), which was coordinated internationally by the American Educational Testing Service (ETS) in 1991. The survey assessed the knowledge and skills of 9- and 13-year-old students in mathematics and science, and it also focused on the factors that influence students' achievements in these subjects. The survey was carried out in Russia by ICME RAE.

IAEP-II represented a notable moment in the history of educational assessment in Russia (USSR). The study was the first to assess the achievement of a representative sample of students (approximately two million) against world standards and then to disseminate the findings publically. In 1991, Russia, as a subject state of the USSR, could not make independent decisions about education; its education system at that time can be characterized as closed and self-sufficient. It is therefore remarkable that the USSR allowed an international study on its territory, especially one that would see its education system compared with the education systems of the West. Even today, a common belief amongst people in the Russian Federation is that the USSR's education system was the best in the world.

Nowadays, the Russian Federation's participation in international comparative surveys plays a strong role in the Russian system of education. Russia actively participates in global integration processes, including those within the sphere of education. Implementation of long-term economic development plans as a part of the global economy requires, in the first place, investments in human capital. The degree to which education in the country is succeeding in this respect is evidenced by data from PIRLS and the many other international surveys of educational achievement in which Russia participates. Understandings gained from the results of these studies are helping Russia place its system of education on the "educational world map." The importance that Russia now attributes to these studies is evident in the priority given to them in its strategic education development plans and in corresponding policy documents put out by the government and the country's Ministry of Education and Science.[7]

The Russian organization with the primary responsibility for conducting large-scale international surveys (planning, implementation, and data collection) is ICME RAE, which, as we noted earlier in this chapter, has considerable responsibility for conducting national surveys and monitoring the effectiveness of Russia's education system. Over the years, the center has collected a considerable amount of data on how well Russia's education system is achieving its aims with respect to student performance.

7 See, for example, *Objectives of the Modern Model of Education of Current Importance*, an enclosure with a letter put out by the Ministry of Education and Science of the Russian Federation dated August 5, 2008. Also of relevance is the National Education Initiative No. 03-946, *Our New School: Education for Each and Every One of Us*, retrieved from http://mon.gov.ru

12.5 National Results, Impact, and Expected Long-Term Effects of PIRLS

12.5.1 PIRLS 2006 Results[8]

The performance of Russian students on PIRLS 2006 placed Russia amongst the top-performing countries on the international ranking scale. Russian primary school students achieved an average score of 565 on that scale. The difference between this outcome and the scores for Hong Kong and Singapore results was minimal and not statistically significant. The Russian score, however, was statistically considerably higher than the average scale scores of students from other participating countries.

Of the countries that participated in both PIRLS 2001 and 2006, Russia had the largest increase in average score (37) across the intervening years. In 2001, the average achievement score for the Russian primary school students was also higher than the international average score, but Russia ranked 12th on the international scale (out of 35 participating countries).

Another result of note for the Russian students across the two PIRLS surveys is the considerable growth in the students' average score for the group of skills delineated as retrieving information from the text and making straightforward inferences. The difference in the scores between 2006 and 2001 was 33 scale points (562 compared to 529). An even bigger improvement was evident with respect to Russian students' ability to interpret, integrate ideas and information, analyze, and evaluate the content, language, and elements of written text: the difference was 38 scale score points (563 in 2006 compared to 525 in 2001).

In 2006, 61 percent of the Grade 4 Russian primary school students demonstrated advanced levels of text comprehension. In comparison to 2001, the proportion of children with a very low level of achievement decreased from four percent to two percent.

12.5.2 Influence of PIRLS Results on Educational Policy and Pedagogical Practice

The improved performance of Russian fourth graders over the period between PIRLS 2001 and 2006 needs to be considered within the context of reforms made to primary education throughout the Russian Federation before and during the period encompassed by the two surveys. It is impossible, however, to identify any one factor accounting for the improvement. We consider the main reasons for the improvement to be the following:[9]

8 This section is based on work by Kovaleva, Zuckerman, and Kuznetsova (2007).

9 See also Zuckerman, Kovaleva, and Kuznetsova (2007).

- *Change in the average age of Russian primary-school graduates:* Russian school students who participated in the survey in 2006 were about half a year older than the children who participated in the same survey in 2001: the average age of primary school graduates in 2006 was 10.8 years while in 2001 it was 10.3 years. Given the rapid development of children in this age bracket, the difference is a considerable one (see Martin, Mullis, & Foy, 2011, in this regard).
- *Structural changes to the system of primary education:* In 2001, all Russian primary schools became four-year programs. Before that time, two systems of education co-existed: primary school Grades 1 to 3 and primary school Grades 1 to 4. In 2001, 63 percent of primary school students were taught under the Grades 1 to 3 configuration and thus only 37 percent under Grades 1 to 4. In 2006, almost all of the Russian students who participated in PIRLS were taught under the four-year pattern.
- *Rise in the level of school readiness of Grade 1 students and greater attention paid to pre-primary education:* According to data obtained from PIRLS questionnaires given to parents and principals, the number of children entering school in recent years who are deemed "school ready" is increasing. Between 2001 and 2006, the number of students whose parents described their readiness as "very good" increased by 15 percent. School principals reported an increase of 10 percent in the number of students they considered ready for school.
- *Qualitative changes in Russian primary schools:* During the mid 1990s, the Russian Federation formulated new aims for its education system. From here on, education would be directed not only at imparting skills and knowledge to students but also at facilitating their ability to direct their own learning. The most prominent feature of the innovations is the transfer from reproductive teaching methods, with knowledge and skills given to children in a "ready-made" form, to active and creative methods. The latter provide children with incentive to search independently for new knowledge that they need to answer their own questions. This change in emphasis has led to the implementation of new curricular programs and the publication of new textbooks that focus on developmental education. Although these changes have taken time to bed in, they appear to finally be having a positive influence on students' school achievement.
- *Changes in the socioeconomic status of families:* Today, many more Russian families than previously have in their homes books, magazines, computers, and separate desks for those of their children at school.[10] Between PIRLS 2001 and PIRLS 2006, the number of participating students identified as coming from socially and economically disadvantaged backgrounds decreased by 17 percent.

10 The presence of these items in homes was used as a de facto measure of socioeconomic status in PIRLS.

The list of indices of improvement could be continued here, but we consider that the above give a sufficient indication of positive changes in Russian school-students' abilities. It is obviously important that these improvements are ongoing.

Between 2001 and 2005, the reading comprehension ability of Grades 2, 3, and 4 students in about 2,000 Russian schools was evaluated as part of a study designed to assess the influence of reforms to the structure and content of general education. The survey was carried out in Russia by ICME RAE. The research team used PIRLS as their reference point when determining how to conduct the assessment and when developing test instruments. Research such as this, along with a considerably greater use of monitoring student achievement in general in schools, may also have had a positive influence on children's achievement in terms of them having become more accustomed to such activity.

Recently, the system for assessing students' educational achievement has been subject to another round of review. As a result, different types of tests as well as more "subtle" means of monitoring student achievement have appeared in schools. These enable teachers to check not only students' acquisition of knowledge but also their ability to apply acquired knowledge in new, atypical situations and to think critically and independently. We are sure that these developments have been prompted by Russia's participation in international comparative surveys such as PIRLS and PISA.

Changes to Russia's system of education over the last decade have involved both the particular (such as the developments in monitoring student achievement) and the general. Changes with respect to the latter involve a whole-scale program of modernization. At the end of 2000, the Russian Government began implementing wide-ranging changes that they signaled were to be in place by 2010. The government explained the main thrust of this program of reform as one directed at moving from a regime focused on functioning (maintaining the status quo) to a regime centered on continuous development. The program would thus involve an overhaul of the structure and content of educational provision, implementation of measures necessary for ongoing assessment of the quality and effectiveness of education, strategies to enhance equality of access to education, development of effective mechanisms to allow consideration of social directives and challenges, and a broadening of public participation in the governance and management of education.

The modernization agenda outlined in 2000 established a general framework that provided a reference point for programs and projects focused on achieving the educational developments (at both federal and regional levels) called for. Russia's participation in PIRLS 2001, PIRLS 2006, and other large-scale surveys of educational achievement directly influenced the content of these initiatives. For example, the Federal Program of Education Development for 2006–2010 established the following achievement indicator: "Raise Russia's ranking in international surveys of the quality of educational provision." The program has also paid close attention to putting in place means of decreasing the number of primary students whose level of achievement is such that they are "held back" (i.e., required to repeat a grade). The program was

furthermore intent on raising the standard of reading literacy nationwide (Government of the Russian Federation, 2008).[11]

The important influence that preschool education tends to have on students' performance in primary school was also reflected in the government's educational reform policies. The Federal Program of Education Development for 2006–2010 again provides an example. It established measures to ensure that, by 2010, at least 85 percent of all five- and six-year-olds in Russia would be receiving preschool education, thereby bringing preschool enrollment of young children more in line with that of other developed countries. The federal program also set directions for the curriculum content of preschools. The aim was to have all children leaving preschool and entering primary school with the same level of readiness for school—a development that would, it was assumed, give children greater equality of access to all that the primary school has to offer.

12.6 Future Activities

12.6.1 Systemwide Reforms

Today, we can see within the Russian Federation's strategic documents pertaining to educational development a natural progression from the nation's previous programs of educational reform. For example, a current emphasis is on preparing as great a number of children as possible for school through widely accessible yet different (including independently provided) forms of preschool education.[12] To this end, the state now supports a variety of early childhood development programs offered by various organizations. (It is estimated that by 2016 almost 95 percent of five- and six-year-olds will be receiving some form of preschool education.[13]) The state is also mindful of the role that preschools can play in developing children's literacy and has either proposed or has in place means of providing each child with opportunity to develop skills in the language of education they will encounter on entering first grade.

Attention is also being given to bringing a changed orientation to the general education standards of 2004, in recognition that their focus on developing and then using learning skills in the worlds of work and the everyday is not enough. Educational policymakers and practitioners agree that it is necessary to keep what is deemed best practice within Russian education, but then orientate it so that student outcomes will reflect not only acquisition of curriculum-based requirements (knowledge and skills, creative experience) but also metacognitive skills that can be directed toward learning

11 Addition to the Resolution of the Government of the Russian Federation, dated December 23, 2005, No. 803: *Federal Program of Education Development for 2006–2010.*

12 At the time of PIRLS 2006, provision by independent preschool operatives was expected to increase from 1 percent in 2006 to 20 percent in 2010.

13 Enclosure with letter from the Ministry of Education and Science of the Russian Federation, dated May 8, 2008, No. 03-946: *Modern Model of Education Directed at Meeting the Challenges of Innovative Economic Development (Project).*

in general and solving "real-world" problems in particular. This changed orientation should enable schools and teachers to focus on developing students' interpersonal and intrapersonal abilities—their systems of values, interests, motivation, and the like.

The Russian Academy of Education has been actively pursuing these goals. In 2010, it implemented "second-generation" standards of education. These, it is believed, will bring a needed comprehensive nationwide approach to developing curriculum content, improving the learning process systemwide, and bringing greater standardization to the quality of educational provision and to the means used to assess students' achievement outcomes. The standards are also seen as one of the quickest means of achieving these aims right across the Russian Federation.

The improvements to the assessment system provide federal and local government agencies with an important framework within which to conduct and communicate their respective responsibilities for education. The reformed assessment system will, it is hoped, provide agencies with the feedback about the education system that they need to regulate it and to ensure it is meeting its objectives in terms of inter-disciplinary curricula acquisition (i.e., universal learning skills and activities) and subject-specific curricula acquisition.

The new system contains a number of special features (see also Kovaleva & Loginova, 2009, in this regard):

- A comprehensive approach within general education to assessment of students' subject-specific, metacognitive, and personal knowledge and skills acquisition;
- Standardized criteria for assessing whether educational programs are delivering the intended student achievement outcomes;
- A systematic means (such as evidence of ability to accomplish particular tasks) of ensuring that students have achieved proficiency in the subjects they are studying at school;
- Identification of changes in patterns of student achievement locally, nationally, and internationally;
- A combination of external and internal assessments as a mechanism for bringing a high standard of quality to the whole education system;
- Comprehensive use of and reference to formal assessments and attestation of knowledge and skills at particular stages of students' schooling (e.g., end of general education);
- Benchmarking of intended achievement outcomes, test instruments, and data presentation;
- Application of a cumulative assessment system (portfolio), which enables one to track and assess each student's learning needs and accomplishments;
- Use of, in addition to standardized written and oral tests, assessment methods such as projects, practical work, self-analysis, creative activity, self-assessment, and observations; and

- Gathering of data about factors (e.g., family background) known to influence learning, in order to provide contexts of understanding within which to interpret the outcomes of educational monitoring.

The assessment that students typically undertake shortly before leaving primary education (i.e., the examinations determining what course of action—tertiary education, employment—students will take on leaving school) generally still focuses on acquisition of subject-specific and metacognitive knowledge only. Efforts are being made to enlarge the scope of what is assessed so that it encompasses the other types of knowledge and skills emphasized in the second generation of educational standards.

12.6.2 Research Studies

Russia will continue to participate in international comparative studies, including PIRLS. This ongoing participation is stated as a priority for the nation's program of educational reform.[14] Publication of the PIRLS 2006 results led to various agencies in Russia undertaking a number of research studies devoted to in-depth analyses of the factors associated with students' success or failure in the assessment. The In-Depth Analysis of the PIRLS-2006 Results project implemented by the Higher School of Economics (with support from the Center of International Cooperation for Education Development of the Academy of National Economy) is an example of these studies. Some of the findings and conclusions of this project have appeared in this chapter. To date, the outcomes of the analyses have been published in Russian periodicals devoted to educational issues.[15] A book containing all papers, published or otherwise, devoted to secondary analyses of the PIRLS 2006 data for Russia and/or describing and discussing aspects of changes in education policy and practice relating to reading literacy was published in 2010 (Froumin, 2010).

12.7 Concluding Remarks

Without doubt, Russia's participation in PIRLS has been a very positive event. Russia's involvement established the country's place on the international scale of reading literacy, and it led to serious reflection on and debate about the strengths and weaknesses of how Russia teaches children to read and about the overall efficacy of the country's education system. Two questions continue to be at the heart of this debate:

- What are the weaknesses and strengths of Russia's education policy?
- What do we need to pay particular attention to with respect to the content of education and teachers' daily practice?

14 Enclosure with letter from the Ministry of Education and Science of the Russian Federation, dated May 8, 2008, No. 03-946: *Modern Model of Education Aimed at Meeting the Challenges of Innovative Economic Development (Project)*.

15 For an example, see *Voprosy Obrazovaniya* [Education Questions], Volume 1, 2009.

The strong performance of Russian students in PIRLS should not be taken as a sign that we can relax with respect to how we teach children to read. A closer analysis of the PIRLS data for Russia shows that this success is not shared by all groups of children. There are those who need to be mentored, using special methods for improving reading literacy. We need to improve our understanding of how schools can work to remediate the adverse influence of socially and economically disadvantaged home backgrounds on students' achievement at school. We need to give closer attention to the caliber of primary school teachers and to the suitability and usefulness of the textbooks being used. We need to develop a comprehensive understanding of successful pedagogical practices and to disseminate them to all schools. And we need to analyze what factors appear to lead to success for children in other countries and to determine how they intersect with our own understandings of the influence of such factors.

We would like to finish here by stating two other objectives—ones that are not directly connected with research interests. The first is to establish a sound understanding among all participants of the educational process—parents, teachers, administrators, educational policymakers, and politicians—of the importance and necessity of beginning the process of teaching reading skills at an early stage of children's lives (within the family and at preschool). The second is to continue our participation in large-scale international studies of educational achievement, such as PIRLS.

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