

Document of
The World Bank

Report No: ICR00001010

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-47260)

ON A

LOAN

IN THE AMOUNT OF US\$100 MILLION

TO THE

RUSSIAN FEDERATION

FOR A

E-LEARNING SUPPORT PROJECT

IN SUPPORT OF THE FIRST PHASE OF THE
GOVERNMENT'S EDUCATION MODERNIZATION PROGRAM

December 30, 2008

**Human Development Sector Unit
Europe and Central Asia region**

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 30, 2008)

Currency Unit = Russian Ruble

1.00 = US\$ 0.036

US\$ 1.00 = 27.36 Rubles

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

APL	Adaptable Program Loan	IVE	Initial Vocational Education
CAS	Country Assistance Strategy	LA	Loan Agreement
CIS	Complex Information Sources	M&E	Monitoring and Evaluation
DER	Digital Educational Resources	MMS	Municipal Methodological Services
EAC	Expert Analytical Center	MOES	Ministry of Education and Science
EIP	Education Innovation Project	NTF	National Training Foundation
ELSP	E-Learning Support Project	PAD	Project Appraisal Document
FM	Financial Management	PDL	Portfolio Development Loan
FMR	Financial Monitoring Report	PDO	Project Development Objective
GOR	Government of Russia	PISA	Program for International Student Assessment
GSE	General Secondary Education	PIU	Project Implementation Unit
ICR	Implementation Completion and Results Report	QER	Quality Enhancement Review
ICT	Information and Communication Technologies	RAE	Russian Academy of Education
ICTE	Information and Communication Technologies in Education	RCC	Regional Coordination Center
IMC	Interschool Methodological Center	SITLMs	Sets of Innovative Teaching and Learning Materials
IOI	Intermediate Outcome Indicator	SL	Supplemental Letter
IRC	Interschool Resource Center	SSP	Sector Strategy Paper
ISR	Implementation Status and Results Report	TIMSS	Trends in International Mathematics and Science Study
ISTLM	Innovative Sets of Teaching and Learning Materials	TLM	Teaching and Learning Materials
		USE	Unified State Examination

Vice President:	Shigeo Katsu
Country Director:	Klaus Rohland
Sector Director:	Tamar Manuelyan Atinc
Sector Manager:	Mamta Murthi
Project Team Leader:	Isak Froumin
ICR Team Leader:	Olena Bekh
ICR Authors:	Olena Bekh/Juan Diego Alonso

**RUSSIAN FEDERATION
E-LEARNING SUPPORT PROJECT**

CONTENTS

Data Sheet

A. Basic Information.....	i
B. Key Dates.....	i
C. Ratings Summary.....	i
D. Sector and Theme Codes.....	ii
E. Bank Staff.....	ii
F. Results Framework Analysis.....	ii
G. Ratings of Project Performance in ISRs.....	viii
H. Restructuring.....	viii
I. Disbursement Profile.....	ix

1. Project Context, Development Objectives and Design.....	1
2. Key Factors Affecting Implementation and Outcomes.....	6
3. Assessment of Outcomes.....	12
4. Assessment of Risk to Development Outcome.....	24
5. Assessment of Bank and Borrower Performance.....	24
6. Lessons Learned.....	26
7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners.....	26
Annex 1. Project Costs and Financing.....	27
Annex 2. Outputs by Component.....	28
Annex 3. Economic and Financial Analysis.....	33
Annex 4. Bank Lending and Implementation Support/Supervision Processes.....	34
Annex 5. Beneficiary Survey Results.....	36
Annex 6. Stakeholder Workshop Report and Results.....	38
Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR.....	39
Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders.....	52
Annex 9. List of Supporting Documents.....	53

Map IBRD 33470

A. Basic Information			
Country:	Russian Federation	Project Name:	e-Learning Support Project (APL #1)
Project ID:	P075387	L/C/TF Number(s):	IBRD-47260
ICR Date:	01/05/2009	ICR Type:	Core ICR
Lending Instrument:	APL	Borrower:	GOVERNMENT OF RUSSIA
Original Total Commitment:	USD 100.0M	Disbursed Amount:	USD 97.6M
Environmental Category: C			
Implementing Agencies: National Training Foundation			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	06/27/2002	Effectiveness:	02/28/2005	02/28/2005
Appraisal:	03/17/2003	Restructuring(s):		
Approval:	03/02/2004	Mid-term Review:	02/01/2007	02/12/2007
		Closing:	06/30/2008	06/30/2008

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Highly Satisfactory
Risk to Development Outcome:	Low or Negligible
Bank Performance:	Highly Satisfactory
Borrower Performance:	Highly Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Highly Satisfactory	Government:	Highly Satisfactory
Quality of Supervision:	Highly Satisfactory	Implementing Agency/Agencies:	Highly Satisfactory
Overall Bank Performance:	Highly Satisfactory	Overall Borrower Performance:	Highly Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project	No	Quality at Entry	None

at any time (Yes/No):		(QEA):	
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	30	30
Primary education	20	20
Secondary education	20	20
Vocational training	30	30
Theme Code (Primary/Secondary)		
Education for the knowledge economy	Primary	Primary

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Shigeo Katsu	Shigeo Katsu
Country Director:	Klaus Rohland	Julian F. Schweitzer
Sector Manager:	Mamta Murthi	Maureen Anne McLaughlin
Project Team Leader:	Isak Froumin	Mary Canning
ICR Team Leader:	Olena Bekh	
ICR Primary Author:	Olena Bekh	
	Juan Diego Alonso	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The Project Development Objective (PDO) in the Loan Agreement (LA) was "to assist the Borrower in carrying out its education modernization program goals of improving the accessibility, quality and efficiency of Russia's general and initial vocational education". In the context of an E-Learning Support Project the PDO is understood to be referring to education modernization through improving skills and competencies in using Information and Communication Technologies (ICT).

A slightly more detailed formulation was used, however, in the Project Appraisal Document (PAD), where it was specified that during phase one, the proposed project would support the program goals of improving the accessibility, quality, and relevance of Russia's general and first level vocational education, to the benefit both of learning

outcomes (improvement in school-leavers' ability to use their knowledge and skills in order to meet real-life challenges) and of labor-market outcomes (improvement in school-leavers "ability to find well-paid jobs in new occupations"). Specifically, the project support ICT competencies through support to: (i) development of new learning materials; (ii) support for both pre-service and in-service teacher training in the introduction of ICT into teaching and learning; and (iii) establishing not less than 200 resource centers to improve access to ICT enhanced education opportunities and to disseminate new teaching practices.

There is a discrepancy between the two PDO definitions in that the LA refers to the "efficiency" dimension whereas the PAD uses the word "relevance". It is important to point out, however, that the spirit of the Project and all of its activities were clearly about improving relevance and to provide a radically new way to impart education by focusing on skills that would be marketable for future high-school graduates. Actually, in the Economics of Education jargon, the "marketability of skills formed in the school system" is sometimes referred to as "external efficiency". This may explain why the LA may have had this discrepancy, but for the purposes of measuring achievement of the PDOs, the two formulations can be considered as equivalent in this case. Therefore, for the purposes of our analysis throughout the ICR, we will exclusively refer to the PAD-stated PDO which refers to "relevance".

Revised Project Development Objectives (as approved by original approving authority)

The Project Development Objective was not revised.

The PAD (dated January 20, 2004) had originally established six performance indicators to measure the PDO. Per the amendments carried out under the Supplemental Letter (SL) dated December 7, 2004, the number of PDO indicators was reduced. This new agreed plan contained three of the original six. The remaining three were re-stated as output indicators (or performance indicators, by component) instead.

The PAD (dated January 20, 2004) had originally established six intermediate outcome indicators (or also called output indicators or performance indicators, by component). Per the amendments carried out under the SL dated December 7, 2004, there was an increase in the number of intermediate outcome indicators. This new agreed plan contained all six originally set in the PAD, three of the original six PDO indicators, plus six new indicators. Targets for 2 of the 15 IOI indicators were set by September 2006. All other targets were available from the start of the project in February 2005.

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Number of 9th grade graduates in project regions demonstrating ICT-competence.			
Value	47.7%*	More than 50%**		63.2%

quantitative or Qualitative)	*No baseline value existed, since the instrument for measuring information & ICT competence was developed during the lifetime of the project. Therefore, the first round of administration of this instrument can be considered the baseline.	**The target value was determined after the first test took place.		
Date achieved	02/28/2005	05/10/2007		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 126% Results for the first year showed a 47.7% of 9th-grade students demonstrating ICT competence. The results for the following years showed a significant increase, first, to 54% in 2006/07, & later on, to 63.2%, in 2007/08			
Indicator 2 :	Number of teachers in project regions demonstrating ICT-competence.			
Value quantitative or Qualitative)	79%* *No baseline value existed, since the instrument for measuring ICT competence was developed during the lifetime of the project. Therefore, the first round of administration of this instrument can be considered the baseline.	"Over 50%"		86%
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 172% The ICT Competence Test for teachers took place in school years 2006/07 & 2007/08. Results for the first round of testing showed that 79% of the teachers were ICT competent. The second presented a slight increase: 86%.			
Indicator 3 :	Number of general education and initial vocational education institutions in project regions with improved use of ICT in education			
Value quantitative or Qualitative)	No baseline value existed, since the instrument for measuring ICT school progress was developed during the lifetime of the project.	"Over 50%"		72.1%
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 144% The indicator "improved use of ICT in education" was operationalized for monitoring purposes as the no. of schools that improved their assessed ICT level. 72.1% of schools improved their ICT level from 2005/06 to 2007/08.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Number of sets of Digital Education Resources (DER) incorporated into the national educational e-collection.			
Value (quantitative or Qualitative)	0	75,000		75,172
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	FULLY ACHIEVED: 100% - The indicator was achieved by the closing date, with a total of 75,172 DERs incorporated into the national education e-collection. Out of this total, 61,428 DERs were already available for open access to the public as of 4/1/2008.			
Indicator 2 :	Number of sets of digital resources supporting the existing learning materials.			
Value (quantitative or Qualitative)	0	100		127
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 127% 127 sets of DERs supporting textbooks were created, 125 of which were made available in the "open access" collection.			
Indicator 3 :	Number of sets of innovative e-learning materials produced.			
Value (quantitative or Qualitative)	0	45		102
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 227% - A total of 102 innovative Teaching and Learning Materials (TLMs) were produced: 33 Sets of Innovative Teaching and Learning Materials (SITLMs) and 69 Complex Information Sources (CIS).			
Indicator 4 :	Number of testing centers created (in 7 pilot regions).			
Value (quantitative or Qualitative)	0	60		59 in pilot regions (96 more across rest of Russian Federation)
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	FULLY ACHIEVED: 100%-59 testing centers established during the first phase of the program (through 8/30/06) in the 7 pilot regions. Due to logistical capability problems to test the TLMs produced, an additional 96 centers were established across RF.			
Indicator 5 :	% of schools in the Project regions that received new generation teaching and			

	learning materials developed under the Project.			
Value (quantitative or Qualitative)	0	100%		100%
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	FULLY ACHIEVED: Achievement - 100%			
Indicator 6 :	% of schools in the project regions that introduced new generation teaching and learning materials into the curriculum.			
Value (quantitative or Qualitative)	0	Not less than 50%		68%
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 136%			
Indicator 7 :	Number of training programs in the use of ICT for teaching and learning created.			
Value (quantitative or Qualitative)	0	28		42
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 150%			
Indicator 8 :	Number of teachers trained in programs of developing basic ICT competence.			
Value (quantitative or Qualitative)	0	60,000		62,364
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	FULLY ACHIEVED: 104% - The total no. of teachers trained in the 22 regions where this activity was run was slightly larger than the no. planned. Furthermore, an extra 14,000 educ staff (including school administrators & librarians) were also trained.			
Indicator 9 :	Number of online educators and curators trained in the area of Internet education.			
Value (quantitative or Qualitative)	0	500		1,119
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 224% The total number of curators trained under the Project was 381 and the total number of online educators reached 738.			
Indicator 10 :	Number of students enrolled in distance learning courses under the project, including those ones in rural areas.			
Value (quantitative or Qualitative)	21,260	5,000		37,428

Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 748% - The total no. of students enrolled on distance-learning courses grew by 75% during the Project's lifetime (from 21,260 to 37,428). Of particular interest was the fact that more than 10% of total enrollment came from rural populations.			
Indicator 11 :	Number of instructional designers trained in the development of digital teaching and learning materials.			
Value (quantitative or Qualitative)	0	200		570
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	OVER-ACHIEVED: 285% 570 instructional designers were trained in the development of digital TLMs, 270 of which were teacher training university students specializing in instructional design.			
Indicator 12 :	Number of teachers trained in Interschool Resource Centers (IRCs) to use e-learning materials created under the project.			
Value (quantitative or Qualitative)	0	50,000		51,868 (An additional 15,448 were trained with additional regional financing)
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	FULLY ACHIEVED: 104%			
Indicator 13 :	Number of methodologists (tutors) involved in teacher training and support trained under the project.			
Value (quantitative or Qualitative)	0	1,500		1605 (An additional 75 were trained with additional regional financing)
Date achieved	02/28/2005	06/30/2008		06/30/2008
Comments (incl. % achievement)	ACHIEVED: 107%			
Indicator 14 :	Number of students participating in telecommunication educational projects under the project, including those ones in rural areas.			
Value (quantitative or Qualitative)	0	7,209* *The decision on the target for this		23,000

		particular indicator was made after there was a final decision on the number of telecommunication educational projects.		
Date achieved	02/28/2005	09/01/2006		06/30/2008
Comments (incl. % achievement)	ACHIEVED: 319% - The indicator significantly over-achieved the target due to the significant increase in enrollment, towards the end of the Project, of many students from distant schools in the project regions preparing for the Unified State Examination (USE)			
Indicator 15 :	Number of regions introducing e-education programs approved by the Ministry of Education and Science (MOES) out of total number of regions receiving grants.			
Value (quantitative or Qualitative)	0	8*		8
Date achieved	02/28/2005	09/01/2006		06/30/2008
Comments (incl. % achievement)	ACHIEVED: 100% This indicator reflected the expectation that a set of new regions could have e-education programs also fully in place. A total of 8 new regions were able to successfully establish these programs by June 2008.			

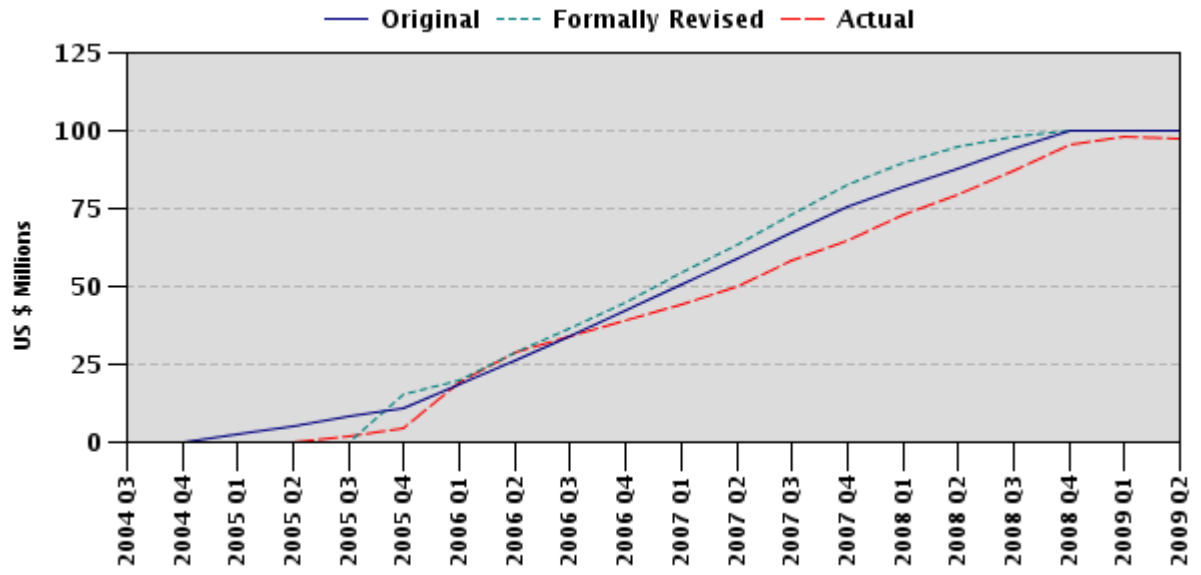
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	04/07/2004	Satisfactory	Satisfactory	0.00
2	06/08/2004	Satisfactory	Satisfactory	0.00
3	12/22/2004	Satisfactory	Satisfactory	0.00
4	03/30/2005	Satisfactory	Satisfactory	2.00
5	02/01/2006	Satisfactory	Satisfactory	30.57
6	11/08/2006	Satisfactory	Satisfactory	46.85
7	05/10/2007	Satisfactory	Satisfactory	61.22
8	11/20/2007	Satisfactory	Satisfactory	74.36
9	06/27/2008	Satisfactory	Satisfactory	95.75

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. PROJECT CONTEXT, DEVELOPMENT OBJECTIVES AND DESIGN

1.1 Context at Appraisal

Russia's transition to a market economy since the fall of the Soviet Union led to an increase in the inequality in the distribution of income across the constituent regions of the newly formed Federation. At the time of preparation of this Project, a few of Russia's regions were able to capitalize on their resource endowments, location and other factors to increase per capita income relative to the rest of the economy. At the end of last and beginning of this century, the decentralization of the delivery of basic social services to the population, like education, suffered along the way, with Russia's poorest regions struggling to, first, adequately fund their inherited education systems, and second, to maintain the basic requirements needed for learning achievement in schools.

The first problem, the variations in quality or relevance of the knowledge to be imparted, compounded the asymmetries across regions due to the varying degrees by which educational reform was undertaken nationally. The second problem, lack of appropriate funding, transmitted the inequities of the economic system into the classrooms by generating immediate adverse effects on access to various education opportunities to potentially competent but financially poor students, who could have otherwise better chances to receive more advance education and theoretically develop more marketable skills that would allow them to benefit from better opportunities in life. Furthermore, early specialization and streaming of students in both the general secondary education (GSE) and Initial Vocational Education (IVE) systems usually resulted in poor students and over-aged students not receiving the kind of education that would either equip them to function in a market economy or enable them to pursue lifelong learning or to undertake retraining needs.

Russian students continued to perform relatively well in subject-matter-based international assessments, like mathematics and science in the recognized Trends in International Mathematics and Science Study (TIMSS). However, the results for other international assessments measuring the degree of adaptability of the education system to produce students with skills that would be relevant to real life situations, like OECD's Program for International Student Assessment (PISA), presented startlingly opposite results. The 2000 round of PISA showed, for instance, that among 31 countries that participated in that year's testing, Russia's 15-year-old students ranked 27th in reading literacy, 26th in scientific literacy and 22nd in mathematical literacy.

In addition to the inter-regional inequities aggravated during the transition years, intra-regional differences got exacerbated, especially between urban and rural areas. Most schools in remote and rural regions of Russia did not have an education of equivalent quality level to their urban counterparts simply because teachers working in these rural areas kept facing ever reduced opportunities for professional development and a general lack of an adequate environment, not only given by antiquated facilities in poor state, but also for a general dearth of adequate teaching and learning resources, as well as considerable variations in overall resource allocation between urban and rural areas, and therefore variations in learning outcomes between and within regions. Of all the country's general secondary schools, over 70% were in rural areas; and they employed around 41% of the teachers. Enrolment rates for 15-22 year-olds were much higher in urban than in rural areas, with rural areas accounting for less than a third of total enrollment at the secondary education level.

The Government of Russia (GOR), increasingly aware that urgent measures were needed to ensure that Russia can keep up with technological change and global knowledge resources, decided to prepare a strategy to tackle these problems. This strategy recognized that the underfunded and deteriorating education system would affect the availability of a well-educated supply of human capital and the growth of a flexible and well-trained labor force, especially in view of the fact that rapid expansion of ICT in all areas of economic and social life poses new challenges for modern generations of workers. Ultimately, it was also recognized that the impact of these forces on the already troubled school system might pose serious threats to Russia's survival as a major world economic and scientific power. In order to tackle the issues of access, quality and relevance of the education system, the Russian authorities gathered that the introduction of ICT in day-to-day practices would help narrow gaps in all fronts.

The first stage of this general strategy, quite naturally, simply comprised equipping schools with the hardware (computers, printers, Internet connection) needed to launch the second part of the strategy: embedding ICT in educational practices. This was the stage at which the E-Learning Support Project came into place and this was the key priority at the time of Project appraisal. It is critical to mention, however, that both in its lending program and in its educational sector work, the Bank had been already contributing, prior to the launching of the ELSP, to the GOR's broader agenda of addressing the recovery of social capital as a major goal of the then-new Government's reform program. In terms of lending, the Bank had approved two loans to the Russian Government: the *Education Innovation Project* (EIP, 1997-2004) and the *Education Reform Project* (2002–2006). In terms of sector work, two pieces significantly contributed to shaping the reform agenda. The first one, “*Reforming Education in the Regions of Russia*” (1999)¹, influenced the policy thrust of the Education Modernization Program. The second report, “*E-Learning Policy to Transform Russian Schools*” (2003)², provided key guidance on ICT-related issues by identifying priority measures to address the key sector issues: (i) equality of access; (ii) enhanced teaching and learning for the information age and (iii) development of appropriate skills by both teachers and students.

The role of the pioneering ELSP Project was especially emphasized in the 2003-2006 CAS Progress Report as an instrument for supporting better access to quality education for students in remote destinations. The ELSP PDO is fully consistent with the Strategic Objectives of 2007-2009 Country Partnership Strategy (CPS) and falls under the Strategic Goal 3 “Improving Delivery of Social & Communal Services”. This Project strategy is also completely in line with the special focus of the current CPS on strengthening growth, governance and service delivery in Russia's regions.

1.2 Original Project Development Objective and Key Indicators (as approved)

According to the Loan Agreement (LA) the objective of the Project was “...to assist the Borrower in carrying out its education modernization program goals of improving the accessibility, quality and efficiency of Russia's general and initial vocational education”. A slightly more detailed formulation was used, however, in the PAD, where it was specified that “...during phase one, the proposed Project would support the program goals of improving the accessibility, quality, and relevance of Russia's general and first level vocational education, to the benefit both of learning outcomes (improvement in school-leavers' ability to use their knowledge and skills in order to

¹ Co-authored by Mary Canning, Peter Moock, and Timothy.Heleniak, and published under the World Bank Technical Paper Series (#457, December 1999).

² Report No. 25893-RU, The World Bank, April 29, 2003.

meet real-life challenges) and of labor-market outcomes (improvement in school-leavers' ability to find well-paid jobs in new occupations)". Specifically, the Project was to support: (i) development of new learning materials; (ii) support for both pre-service and in-service teacher training in the introduction of ICT into teaching and learning; and (iii) establishing not less than 200 resource centers to improve access to ICT enhanced education opportunities and to disseminate new teaching practices."

There is a discrepancy between the two definitions in that the LA refers to efficiency in its 3rd PDO and the PAD uses relevance. It is important to point out, however, that the spirit of the Project and all of its activities were clearly about improving relevance and to provide a radically new way to impart education by focusing on skills that would be marketable for future high-school graduates. Actually, in the Economics of Education jargon, the "marketability of skills formed in the school system" is sometimes referred to as "external efficiency". This may explain why the LA may have had this discrepancy, but for the purposes of measuring achievement of the PDOs, the two formulations can be considered as equivalent in this case. Therefore, for the purposes of our analysis throughout the ICR, we will exclusively refer to the PAD stated PDO which refers to "relevance".

In terms of indicators, originally, as indicated in Section F, the objectives were to be assessed by six outcome indicators and six output indicators (usually referred to as *intermediate outcome indicators* or specific performance indicators by component).

However, prior to effectiveness, the GOR requested to change outcome and output indicators. Per acknowledgment of the letter from the Ministry of Education and Science of the Russian Federation (Supplemental Letter dated December 7, 2004) the Bank agreed to the following new list of *three outcome indicators* and *fifteen output indicators*.

Outcome indicators:

- PDO Indicator 1: Number of 9th-grade students in Project regions demonstrating ICT-competence.
- PDO Indicator 2: Number of teachers in Project regions demonstrating ICT-competence.
- PDO Indicator 3: Number of general schools education and initial vocational education institutions in Project regions with improved use of ICT in education.

Output indicators (IOI):

Component 1: New Generation Teaching and Learning Materials

- IOI 1: The number of digital educational resources (objects) incorporated into the national educational e-collection.
- IOI 2: The number of sets of digital resources supporting the existing learning materials.
- IOI 3: The number of sets of innovative e-learning materials produced.
- IOI 4: The number of testing centers created.
- IOI 5: % of schools in the Project regions that received new generation teaching and learning materials developed under the Project.
- IOI 6: % of schools in the Project regions that introduced new generation teaching and learning materials into the curriculum

Component 2: Teacher Training in the Educational Use of ICT

- IOI 7: The number of training programs in the use of ICT for teaching and learning created.
- IOI 8: The number of teachers trained in programs of developing basic ICT competence.
- IOI 9: The number of online educators and curators trained in the area of Internet education.
- IOI 10: The overall number of students enrolled in distance courses under the Project, including those ones in rural areas³.
- IOI 11: The number of instructional designers trained in development of digital teaching and learning materials.

Component 3: Creating a network of Interschool Resource Centers

- IOI 12: The number of teachers trained in IRCs to use e-learning materials created under the Project.
- IOI 13: The number of methodologists (tutors) trained, involved in teacher training and methodological support.
- IOI 14: The number of students participating in telecommunication⁴ educational projects under the Project, including those ones in rural areas⁵.
- IOI 15: The number of regions which introduced e-education programs up to 2010 (passed EAC expertise and approved by the MOES) out of the total number of regions which received grants.

This ICR evaluates the achievement of the Project’s objectives based on the above indicators.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

The PDO was not revised.

1.4 Main Beneficiaries

There were two primary target groups of the Project. The first one consisted of students who were to benefit through the increase of their ICT competency from the acquisition of new, flexible problem-solving and team-working skills, from the development of the new ICT-intense school learning environment, the use of innovative e-learning materials and curricula, as well as access to the new generation of digital resources. In particular, the use of computer-based courses and distance-delivery methods was to benefit students in distantly located areas, students from poorer families, and students with special needs due to disabilities of different kinds.

³ This is a complex indicator, and together with indicator 14 in Component 3, it addresses the “access” dimension of the PDO (please see Section 3.2 on this). At the same time, it demonstrates that enrollment of students in distance learning courses is based on substantial ICT-competence, developed in students and teachers, that allows them to use ICT as an instrument for improving access to education. In this section, the indicators listed follow the original Project design and the order set up in the original Project’s Results Framework,

⁴ *Telecommunication* education projects are education projects implemented by school teams via the Internet

⁵ The comment in footnote 3 applies here, as well.

The second primary target group involved teachers who were to benefit from acquiring new, and more appropriate to the current challenging social and economic environment, teaching methods and practices, using new generation of learning materials engaging students in more active ways of learning; as well as access to various professional development opportunities, creative activities and rich depository of knowledge and expertise allowing higher quality teaching.

Due to the strong regional focus of the Project also school administrators, employees of the wide network of resource centers to be developed under the Project, employers and local communities in participating regions were to be among the secondary beneficiaries of the Project through the increased possibility for better communication and networking, increased community participation in supporting local initiatives, enabling industry participation and encouraging lifelong learning⁶. Professional groups such as educational software developers were to benefit from receiving access to new domestic and international markets. Finally, the Government as a whole would benefit from the successful implementation of Project activities, improved coordination among the levels of education administration, increased capacity for policy evaluation and monitoring and enhanced ability to take over the Project activities in scaling up future operations.

1.5 Original Components (as approved)

Component One: Learning Materials - US\$35.1 million (total estimated cost)

This component was to remedy the critical shortfall in new-generation learning materials in Russia by: (i) developing the regulatory documents for materials development and use; (ii) developing, licensing and distributing a range of critical and exemplar learning materials to introduce a reusable object oriented/constructivist design approach (including materials for students who study subjects not offered at their local schools); and (iii) testing materials that would focus on embedding ICT in teaching and learning practices.

Component Two: Teacher Training in the Educational Use of ICT- US\$43.2 million (total estimated cost)

This component was to support: (i) the training of new and existing teachers and education managers in Project regions in the use of ICT in education; and (ii) the development of Russian instructional design and development capacity in learning materials production. Teacher training would take place using the teaching and learning materials developed in Components One and Two. An outcome of the project will be the availability of new generation teacher training materials and advisory services throughout the Russian Federation.

Component Three: Development of a Network of Interschool Resource Centers - US\$63.45 million (total estimated cost)

The Regional and District interschool resource centers were to provide a range of services and materials for (i) strategic planning for the effective use of ICT in education; (ii) teacher support

⁶ Although no quantitative indicators are available to measure the impact on these secondary beneficiaries, this summary is the result of anecdotal evidence gathered during the ICR mission.

and advisory services; (iii) the dissemination of ICT in education practices; (iv) the extension of curriculum offerings to isolated regions by providing support for selected distance education services; (v) the extension of community and industry access to training in the use of ICT and the production of new resources and (vi) computer maintenance in schools. These centers were to be linked with the e-Learning support centers established by the MOES at Federal level.

Component Four: Project Management - US\$3.65 million (total estimated cost)

The Project was to be managed by the existing MOES Strategic Management Committee composed of Federal Ministry officials and senior education managers from the participating Regions. This committee was to coordinate and link GOR e-Russia and educational programs among all stakeholders. This component was to finance: (i) the establishment of a Federal project implementation group; (ii) the creation of capacity to monitor implementation and social development outcomes through continuous social assessment; and (iii) transparent and effective procurement and disbursement practice.

1.6 Revised Components

The components were not revised.

1.7 Other significant changes

There were no significant changes in the design, scope, scale or implementation arrangements of the Project. There were, however, some changes worth mentioning:

- It should be noted that while the Project was approved by the Board on March 2004 it only became effective almost a year later on February 28, 2005. This was because the LA was only signed on December 7, 2004 due to the civil service reform of the Federal Government. The effect of this delay meant that the Project implementation period was effectively reduced by a year.
- There was a reallocation of funds between the disbursement categories in order to better align and link E-Learning Support Project activities with another Federal Program known as Priority National Project “Education”. A respective Amendment to the LA was issued on April 14, 2008 and countersigned by the GOR on May 26, 2008.

2. KEY FACTORS AFFECTING IMPLEMENTATION AND OUTCOMES

2.1 Project Preparation, Design and Quality at Entry

Soundness of the background analysis: A substantial effort was invested through the relevant educational sector work in designing a quality operation. The Bank Project team requested a Quality Enhancement Review (QER) very early in the Project design process (June 17, 2002) and this also contributed to improving the Project’s quality at entry. In particular the QER panel recommended focusing the Project on supporting ICT-intense activities as “enabler”, and make production of “ICT-based instructional materials tailored to the needs of teachers and students... a priority Project objective”. This recommendation was included in the Project design.

The report “*E-Learning Policy to Transform Russian Schools*”, mentioned above, also provided guidance on ICT-related issues by identifying priority measures to address the key sectoral issues. The ELSP also drew upon two other key sectoral documents of relevance, namely the *Concept of Modernization of Russian Education for the period up to 2010*, approved by the Government in 2001 and the initiative of the State Council of the Russian Federation Project, *Educational Policy*

of Russia at the Current Stage (July 2001), which building on the Government Development Strategy stressed three objectives: accessibility, quality and merit. The Project objectives and design were also in line with the Government's objectives, as identified in the Country Assistance Strategy (CAS). Lastly, Project preparation was greatly facilitated by financing from the Portfolio Development Loan (PDL), which helped to achieve a high quality level of Project preparation by providing additional preparatory financing to complete Project preparatory activities.

By the time of Project effectiveness, both the Bank and the GOR had substantial experience in the design and implementation of joint lending operations in the education sector through one completed and one on-going project supported by the Bank. Therefore, both parties were able to draw on the lessons from these operations. Lessons learned in previous projects were well used in the design of the Project. The following were the lessons that contributed significantly to the success of the Project: (a) communication and coordination with major stakeholders is essential for success in education reforms; and (b) the success of Project to a great extent depends upon an effective dissemination strategy.

Assessment of the Project design. Overall, the Project components were well designed to ensure the achievement of Project development objectives. The Project design was realistic by both relying on the strong capacity of the implementing agency at the federal level - National Training Foundation (NTF) which had the experience of implementing the Bank supported Education Innovation Project and Education Reform Project - and the building on the strong support and ability of the pilot regions to co-fund and co-implement the program. Substantial project implementation expertise in the educational networks in the regions of the Russian Federation had been accumulated prior and was further enhanced during the Project implementation due to both the experience of participation in the Federal Program of Education Development (Phase 1) financed from the federal budget, and the collective efforts by the GOR and various international and local development agencies supporting programs of introduction of ICT into the learning process. The GOR and Bank teams designing the Project were able to assess the advantages of building on these joint efforts and leveraging the variety of resources for achieving a cumulative effect on the learning process.

High quality expert support was provided during the Project preparation by both national experts and international consultants who had solid experience of working with education programs in Russia, as well as from the availability of high quality university faculty and the Russian Academy of Education (RAE)'s expert resources.

Adequacy of government's commitment: The initially approved loan was designed as an Adaptable Program Loan (APL) that would be implemented in two phases over a period of 6.5 years to provide support to the Education Modernization Program of the GOR through the orientation of the educational system to the global information society.

The First Phase of the program was structured to last for 42 months (3.5 years) and support the program goals as well as those of the *e-Education* and *e-Russia* programs through: (i) the development of sustainable Russian capacity to produce high quality, affordable and flexible learning materials; (ii) the improvement of both pre-service and in-service teacher training in the introduction of ICT into classrooms; and (iii) establishing a network of ICT resource centers in Project regions.

The Second Phase of the program would have a duration of 3 years and would build upon the experience gained in Phase One by supporting the following activities: (i) the dissemination of

electronic teaching and learning materials created during Phase One throughout the Russian Federation; (ii) continued capacity building, development and launching of modern electronic teaching and learning materials; (iii) the extension of improved teacher training programs throughout the Federation with an increased focus on the development, in Russian teachers and administrators, of the ability to use ICT as tools to facilitate better learning outcomes; and (iv) the scaling up of resources availability in regions and municipalities and enhancements to the types of support they offer.

These two APL phases were in line with the goals set up in the Development Strategy of the Government of the Federation (May 2000), which highlighted the recovery of social capital as a major goal of the then-new Government's reform program, and the Government's Medium Term Reform agenda that had identified five structural reform priorities, two of which were directly related to the objectives of this Project: (i) improving the innovative and technological potential of the economy and (ii) reducing regional differentiation in social and economic development.

Finally, the ELSP would support two ongoing Federal Programs that aimed at moving the Russian economy toward the knowledge era: the *Development of the Common Education Information Space for 2001-2006* (also known as *E-Education*) of August 2001 and *Electronic Russia for 2002-2010* (also known as *E-Russia*) of January 2002. The former encompassed, among other things, two sub-programs, known as *Computers for Rural Schools* and *Computers for Urban Schools*, which equipped schools all over the Russian Federation (RF) with computers and related equipment. The latter comprised the connection of all towns with a population of 30,000+ people to the country's fiber-optic backbone for Internet access. These two Programs constituted the necessary prerequisites for accelerating the introduction and integration of ICT in education (ICTE) that would take place under the ELSP, at least in the seven pilot regions chosen as pilots for Phase One. Especially important was implementation of the National Priority Project Education. Within this Project all Russian schools were connected to the broadband Internet by the end of 2007.

Assessment of risks: The identification of risks and the mitigation measures proved to be appropriate. The Project's overall risk rating was originally rated M (modest) in the PAD. The two critical risks which were highlighted include:

- (1) (High risk): "New/amended standards for schools, initial vocational (especially new professions) and teacher training (pre- and in-service) are not in place for courses requiring ICT skills and core skills development".
- (2) (Modest risk): "Legal and regulatory barriers remain high."

Both risks envisaged by the Project preparation team materialized during the implementation phase and substantial effort was invested by the Government into the implementation of proactive measures which would help mitigating these risks. The details are explained in section 2.2 of this ICR.

During the Project implementation some minor risks that were difficult to foresee at the preparation stage surfaced, and among them we find a delay in the signature of the Loan Agreement due to the then-ongoing administrative reform of the Government.

2.2 Implementation

The Project was implemented smoothly. It was disbursed in full and according to the schedule. In all the 9 Implementation Status and Results Reports (ISRs), the Project was always rated "S" by

the Bank supervision teams. It has never been restructured, suspended, cancelled or considered a project at risk. In fact, this Project was one of the few projects in the portfolio which implemented on time and with no particular implementation concerns.

The credit for this major achievement goes to the strong capacity of the Implementing Agency (NTF), Government, as well as to the very proactive Bank's task team.

Most important to the success of the Project was the deep commitment of the federal as well as of the regional governments to the reforms underpinning the Project. The commitment to reforms was especially strong in the pilot regions. The pilot regions were also able to mobilize considerable resources – well above the originally committed amount - in support of these reforms.

The high quality of expertise, available in the professional community of the country, and the social acceptance of the reforms supported by the Project also contributed to the success of the Project.

In fact, the Borrower paid substantial attention to implementing appropriate mitigation measures which could be demonstrated by the following examples:

1) In the course of the development and implementation of ICT-enabled TLMs, the Project team faced an important problem: the general lack of educational standards and regulations needed for a smooth and timely introduction of these new-generation TLMs into the teaching and learning process. In order to reduce substantial delays in implementation due to the lack of this regulatory framework, the Borrower adjusted the original Project's schedule by introducing several phases and developing interim acceptance procedures for newly created TLMs. The Project team also facilitated the adoption of the necessary regulatory changes at the regional level to substitute for the lack of federal regulations and link them to TLMs' approbation⁷ activities under the Project.

As a result of the above, a set of methodological guidelines "*Regulatory Framework for the Informatization of Schools*" was prepared. These guidelines were approved by the Department of State Policy and Normative-Legal Regulation in Education and published on the Internet. Draft local regulations for GSE institutions were introduced into the learning process by schools participating in ELSP. These materials served as a basis for the development of methodological guidelines for all RF schools within the framework of the *National Priority Project "Education"*, under which all RF schools were connected to Internet.

2) Lack of provisions for ICT-intense learning is still evident in the current GSE standards, so the Project paid special attention to both the piloting and the approbation of the education standards related to ICT use in schools in order to facilitate and speed up further review of the standards at the federal level.

3) The Project implementation team's assessment of little availability of experienced textbook publishers with an adequate methodological potential brought up the need for further capacity development in this sector in order to meet the quality standards for the production of new textbooks and learning materials. The NTF's Expert Analytical Center (EAC) performed substantive evaluation of Project implementation at different stages and worked out

⁷ *Approbation* is a necessary step in piloting newly developed curricula in selected educational institutions before its official approval by the respective education authority.

recommendations on improving its effectiveness. From the Project start, all materials prepared within the ELSP framework were to pass EAC expert examination. EAC members – known specialists – provided constant support to all ELSP main programs. The role of expert support grew in that phase of ELSP implementation when the new developments were to be assessed and accepted. The Strategic Committee established five permanent expert commissions within the EAC, which played a key role in ensuring the quality of Project materials and provided access to the best expert resources on a permanent basis during the Project life. Please see below a list of expert commission of the NTF Expert Analytical Center:

No.	Commission name	Code
1	Expert commission for the development of teaching and learning materials	EC-1 “DER-TLM”
2	Expert commission for teacher training and instructional design	EC-2 “TT-ID”
3	Expert commission for Internet-aided instruction	EC-3 “E-learning”
4	Expert commission for the Collection	EC-4 “Collection”
5	Expert commission for work with regions	EC-5 “RCC-IRC”

4) One of the risks highlighted in the Project design was related to the level of preparedness of the country’s regulatory environment for dealing with copyright issues in the TLM development and utilization under the Project component providing support to the implementation of the Unified Collection of DER. During Project implementation, several amendments to the Federal legislation were adopted, including the copyright legislation and the law on procurement of software and databases which required prompt adjustment of Project implementation modalities. With the view of this particular risk, the Project team ensured legal support from the early stages of implementation.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

M&E Design: The design of the Project’s indicators was such that it adequately addressed all three axes of the PDO (access, quality and relevance) and the specific component objectives. There were a total of 18 indicators, 3 of which were PDO indicators. All the indicators were appropriate but it should be noted that the 3 PDO indicators only measured the quality dimension of the PDO while the two remaining dimensions were measured by the intermediate outcome indicators. Although it would have probably been better to have at least one PDO indicator for each of the dimensions, in this case, given the Project’s nature, the original design of the Results Framework is deemed to be technically sound and comprehensive.

In terms of preparedness, Project targets for 15 of the 18 indicators were available at Project Launch in February 2005. The targets for the three remaining indicators (PDO 1, IOI 14, and IOI 15) became available in late 2006. Also, it should be clarified that collection of baseline data for the three PDO indicators depended on the actual Project implementation (launch of the instruments), and therefore, only became available later in the Project.

M&E Implementation: The NTF closely monitored the Project through a solid M&E system, and the results were reported regularly in both the Project progress reports and the ISRs. The overall M&E process was implemented in full compliance with all provisions of the LA and had a strong influence on the Project’s performance.

M&E Utilization: In addition to regular monitoring and evaluation, the Government relied on the outcomes of the Project to inform further decisions regarding education reform in Russia. Extensive dissemination of Project results was undertaken already during this Project and the

Russian Government is continuing with the dissemination using its own resources as part of its commitment to the APL program.

2.4 Safeguard and Fiduciary Compliance

No safeguards were triggered.

Financial management

The periodic review of the Project financial management arrangements in NTF demonstrated that the financial management system including accounting, internal controls and reporting remained adequate and satisfactory to the Bank. The Financial Management (FM) Department was adequately staffed and managed. Therefore, the Project FM rating was always satisfactory and the overall FM risk remained at the acceptable level.

Quarterly FMRs were submitted on time and were acceptable to the Bank.

Unqualified audit reports for the Project were submitted on time and were acceptable to the Bank.

The final Project audit is underway. The audit report covering the first ten months of 2008 (including the grace period) is expected to be submitted to the Bank by January 31, 2009. This date falls beyond the one originally agreed by the Bank in the letter on the provision of the grace period, however, the submission of the final audit report by a later date is justified by a very high transactions volume during the very end of the grace period (October 31, 2008).

Procurement

Procurement conducted by the PIU – NTF – can be considered satisfactory. The NTF procurement department was staffed with skilled and experienced procurement specialists who regularly passed different training courses. High importance was attributed to supervision of contracts and to timely provision of deliverables. Before ELSP, and simultaneously with it, the NTF was successfully implementing three other projects, namely, Management and Financial Training Project, Education Innovation Project and Education Reform Project. Prior review of the procurement process conducted by the NTF and several ex-post review exercises always showed substantial compliance with the provisions of the procurement guidelines, the loan agreement and agreed arrangements. The latter included awarding grants to educational institutions, public and non-public organizations, groups of authors or individuals, on a competitive basis, all of which allowed solving the problem of eligibility. For the purposes of creating the collection of DER, a significant number of direct contracts were awarded to different entities which have copyrights or exclusive property rights for those DERs.

2.5 Post-completion Operation/Next Phase

Project outcomes have high prospects for sustainability, due to the fact that Project results received high marks from the Government and were subsequently integrated into existing and ongoing GoR programs.

As noted in the PAD, the initial choice of an APL instrument was based on the need to support the long-term goals set up in the Education Modernization Strategy, in part because such an instrument would be more flexible for implementing innovative activities and for being able to modify, expand or disseminate these activities in Phase Two. Nonetheless, towards the end of

APL1, the GOR decided to not implement the Second Phase using a Bank loan. It will instead allocate its own funds under the framework of a new Federal Program designed to such effect. Although the Government may still engage the Bank through the ‘new modalities’, i.e. to provide project implementation services on a fee basis, this determination of the GOR to continue financing the activities with own sources shows the level of commitment to the Project’s PDO and the relevance acquired by the Project to the country as a whole. The National Training Foundation has been selected as an implementing agency under the Federal Target Program of Education Development 2009 – 2013 (Phase 2) to which the GOR is committed to provide 3.5 bln rubles (approximately, US\$0.14 billion) annually.

3. ASSESSMENT OF OUTCOMES

3.1 Relevance of Objectives, Design and Implementation

Rating for Relevance: *High*.

The objectives of the Project were and remained highly relevant throughout all stages of the project cycle (preparation, implementation, supervision, and closure). The high significance of the Project’s objectives at the initial stage was evidenced by the strong analytical preparatory work that preceded its preparation, both from the GOR’s and the Bank’s side.

Among the key documents prepared on the Bank’s side, we find the CAS 2003-05⁸ and the Sector Strategy Paper (SSP) 2003, referred above⁹. The CAS emphasized the growing importance of the knowledge society for increasing the competitiveness of the Russian economy, but also to mitigate the social risks associated with poverty. It also brought to the forefront the GOR’s desire to develop a strong and relevant, but also modern and flexible, education system. The CAS also emphasized the role of the Project as an instrument for supporting better access to quality education for students in remote destinations. As mentioned above, the Project objectives remained relevant throughout implementation, as evidenced by the stated Strategic Objectives of the 2007-2009 Country Partnership Strategy (CPS), under Strategic Goal 3 “Improving Delivery of Social & Communal Services”. The Sector Strategy Paper precisely documented the state of the art in terms of the way education was imparted in Russia and made the case for a massive capacity building of the system, where e-learning as a tool would be instrumental.

The aforementioned Bank’s documents were fully in line with the client’s top priorities as noted in the original “Development Strategy of the Government of the Federation” (May 2000) and, in particular, in the sector-specific initiatives envisaged in the documents “Concept of Modernization of Russian Education for the period up to 2010” and “Educational Policy of Russia at the Current Stage”, both approved in the year 2001. The ensuing “Socio Economic Development Program of the Russian Federation of 2003-2005 (March 2003) reaffirmed the focus of the Project by explicitly stating the goal of improving the “quality of education services and equity through maximizing the role of ICT”. The last decision of the Government of the Russian Federation to continue its programs (second phase of the Project corresponding to the

⁸ “Memorandum of the President of the International Bank for Reconstruction and Development and the International Finance Corporation to the Executive Directors on a Country Assistance Strategy of the World Bank Group for the Russian Federation”, Report No. 24127-RU, The World Bank, May 14, 2002.

⁹ “Russian Federation: E-Learning Policy to Transform Russian Schools”, Report No. 25893-RU, The World Bank, April 29, 2003.

Federal Target Program of Education Development) in line with the general APL program is evidence of the Project PDO relevance to the country's needs.

The continuing, and even increasing, relevance of the Project during its implementation period can also be demonstrated by the significant ownership by the client, which launched a multiplicity of federal projects aimed at enhancing the enabling conditions for a successful dissemination of ICT activities for education, as it was highlighted above. Table 1 below presents a brief summary of the key programs in this regard.

Table 1
Projects and programs aimed at ICT introduction in education in Russia
coexisting during the ELSP's lifetime

Federal Program	Objective	Implementation period	Total Budget		Financing sources (distribution)
			Total (million US\$)	ICTE activities (million US\$)	Financing sources (distribution)
<i>E-Education</i> (Development of the Common Education Information Space for 2001-2006)	To establish an information technology infrastructure in the education system by providing educational institutions with computer equipment, access to global data resources, general systems, and applied software.	2001 - 2005	2,240	2,240	29% Federal Budget; 40% Regional Budgets; 31% Extrabudgetary Funds
Computers for Rural Schools*	To equip rural schools in 84 regions of the country with computers and related equipment.	2001	80	80	50% Federal Budget; 50% Regional Budgets
Computers for Urban Schools*	To equip 8,700 urban schools with one computer per classroom.	2002	84	84	40% Federal Budget; 30% Regional Budgets; 30% Municipal Budgets
<i>Education system development - Phase I</i>	Development of a system of educational Internet portals with a linked federal bank of Digital Educational Resources. Connection to Internet for all Higher Education Institutions.	2001 - 2005	659	659	No information is available
<i>E-Russia</i> (Electronic Russia for 2002-2010)	To increase the efficiency of the economy in both the public and private sectors, by making wider use of information technologies in government departments and transferring much of the state's work on-line. The main means to achieving its objective is the connection of all towns with a population of 30,000+ people to the country's fiberoptic backbone.	2002 - 2010	3,087	841	51.5% Federal Budget; 10.9% Regional Budgets; 37.6% Extrabudgetary Funds
<i>Children of Russia - Phase I</i>	Support of gifted children through annual supply of equipment.	2003 - 2006	815	3	80% Federal Budget; 20% Extrabudgetary Funds
<i>Children of Russia - Phase II</i>	Support of gifted children through annual supply of equipment and relevant distance-learning programs.	2007 - 2010	1,914	3	5% Federal Budget; 93% Regional Budgets; 2% Extrabudgetary Funds
<i>Priority national project "Education"</i>	Access to Internet for all schools through country's fiberoptic backbone, including a 1-year full coverage of Internet-related charges.	2006 - 2008	183	183	100% Federal Budget
<i>Education system development - Phase II</i>	Introduction of new educational technologies and teaching process, incl. support of modern ICT technologies.	2006 - 2010	2,477	459	68% Federal Budget; 32% Other Funds
Total		2001-2010	11,376	4,388	

* Sub-program within the E-Education one.

Source: National Training Foundation

Note: Values in dollars calculated at an exchange rate of 25 rubles per dollar.

3.2 Achievement of Project Development Objective

Rating for Outcomes: Highly Satisfactory.

The objective of the Project was to support the Borrower in its Education Modernization Program's overarching goals of improving the accessibility, quality and relevance/efficiency of the general and initial vocational education schools. The main means to achieve this overall development objective would be represented by a system-wide introduction of ICT, originally piloted in seven regions of the Russian Federation that had already been selected by the GOR. The operationalization of the Project's specific support revolved around three axes, each supported by a Project component: (i) building sustainable capacity to produce high-quality, affordable and flexible learning materials to meet the needs of students, teachers, and school administrators in a knowledge economy; (ii) supporting both pre- and in-service training of educational staff in the introduction of ICT into both teaching and school-management activities; and (iii) establishing a network or resource centers to provide the necessary technical and methodological support to schools in the use of ICT.

As indicated in Section 1.2, a set of *three key PDO indicators* and *fifteen Intermediate Outcome Indicators* were designed to monitor progress towards the achievement of the PDO. The values for this set of eighteen indicators, for both the baseline and the status at closure, are presented in Section F above. We discuss below the achievement of the three-pronged project's PDO based on this group of eighteen indicators.

PDO #1: Improving access

Rating: *High*.

The indicators specifically addressing this first PDO were:

IOI 10: Number of students enrolled in distance courses under the Project, including those ones in rural areas. (748% achieved)

IOI 14: Number of students participating in telecommunication educational projects under the Project, including those ones in rural areas. (319% achieved)

As is seen, both these objectives specifically referred to an increase in enrollment, with a particular emphasis on the situation in rural areas, which are usually the most disadvantaged in terms of access to high quality modern teaching aids. The Project fulfilled both objectives overshooting the expected targets.

In regards to the enrollment on distance learning courses, the Project did a commendable job in generating an important increasing the number of students enrolled in distance learning by 75% during the Project's lifetime (from 21,260 to 37,428) and, therefore, reaching the 30,000 mark set as target. Of particular interest was the fact that, whereas at the start of the Project, only 2.4% of these enrolled students came from rural areas, by the closing date of the Project, more than 10% of total enrollment came from rural populations, which represents a four-fold increase in the share of the rural population in these type of course. Further estimations from the PIU, which incorporate small towns into the "rural areas" group put this latter figure at 30%. Note that small towns, although usually self-declare as urban, are technically rural and disadvantaged in most of the cases.

The upward trend in the number of students participating in telecommunication educational projects is also stunning. The original target for the participation in this type of projects was set at roughly 7,200. However, according to information provided by the PIU, close to the end of school year 2007/08, the total figure reached approximately 23,000, as many students from distant schools in the Project regions wanted to take additional training to prepare for the Unified State Examination, a “Matura”-type school-leaving exam in the Russian Federation. The interest for this course became so high that many students, mainly from rural areas, got enrolled. The PIU also explained that this became possible because, by the time of the Project’s closing date, all rural and small towns’ schools in the country had been connected to Internet through the Priority National Project “Education”. This is another indication that the GOR, through one of the aforementioned ICTE-complementary support programs, had provided the necessary pre-conditions for raising the bar set by the ELSP and significantly expanding the reach of the goals of the Project. Therefore, although the over-achievement of this indicator is remarkable, it is clear that external events were probably as important. Yet, the ability of the ELSP to create this enabling environment to meet latent student demand cannot be underestimated.

PDO #2: Improving quality

Rating: *High*.

Three key PDO indicators are used to measure the achievement of this PDO:

- PDO Indicator 1: Number of 9th-grade students in Project regions demonstrating ICT-competence. (126% achieved)
- PDO Indicator 2: Number of teachers in Project regions demonstrating ICT competence. (172% achieved)
- PDO Indicator 3: Number of general education and initial vocational education institutions in Project regions improved use of ICT in education. (144% achieved)

All three of these indicators attempted to show, that once the program had launched, a marked rise in ICT competence levels of all units of analysis within the education system (schools, teachers, and students) would be experienced. And this was precisely what the data confirmed by the end of the Project.

The ICT competence level of students was monitored by an instrument called “ICT Competence Test” developed during the lifetime of the Project. The test was administered in all three years at the end of the third quarter of the respective school year (April 2006, April 2007 and April 2008). The ICT competence Test determined the proportion of students with high, medium, and low ICT competence levels. The proportion of students not located in the low category was taken as the key number to track. The team had set up, originally, an end-of-project target of “more than 50%”. The number obtained for the first (pilot) version of the instrument revealed 48% of 9th-grade students showing either medium or high levels of ICT competence. The following two rounds, presenting a larger coverage of the 9th-grade cohort in all 7 pilot regions, showed that this outcome indicator had progressed to 54% by April 2007, and to a further 63% by April 2008, two months before closure.

This ICT Competence Test for Teachers was administered to the teachers of those 9th-grade students tested with the ICT Competence Test for Students. The test was taken by roughly 7,000 teachers in total, from a randomly sampled set of schools in each of the pilot regions. Unlike the student version of the test, this was administered only twice (April 2007 and April 2008). The Project’s team had also set up an end-of-project target of “more than 50%” of the teachers in the

pilot regions with ICT competence level higher than “low”. The results of the two rounds for this outcome indicator showed percentages of 79% for April 2007 and 86% for April 2008.

Finally, the improvement in ICT skills at the school level was monitored by a different instrument called “School ICT Test”. This instrument was administered annually throughout the lifetime of the Project, also at the end of the third quarter of each of the school years involved. The instrument consisted of a 58-question survey to assess the ICT stage of development of the specific school and was filled out by a school team made up by administrators, teachers, and students. The final score for a particular school placed the institution in 1 of 12 possible clusters that were tied to 5 different ICT levels of development. The instrument then measured, for the same school, whether this school had remained within a certain ICT level of development, progressed onto a higher one or even regressed onto a lower one. The percentage of positive ICT-level changes experienced by the totality of schools involved (roughly 3,000 for all 7 pilot regions) would determine whether the objective was met or not. As with the case of the other 2 outcome indicators, the end-of-project bar was set up at “over 50%”. The number of schools that increased their ICT development level between the first round of the instrument (April 2006) and the third round of the instrument (April 2008) was 72.1%.

PDO #3: Improving relevance

Rating: *High*.

The remaining thirteen IOIs designed by the Project were instrumental for achieving the third PDO of the three-fold strategy envisaged by the GOR in its Education Modernization Program. And they were also the main vehicle to the improvement of quality experienced in the three key PDO indicators listed above. The list of these indicators is presented below, in accordance to the three key issues targeted by the Project.

1) Improvement in the Relevance of the Teaching and Learning Materials (TLMs)

<u>IOI 1:</u>	Number of sets of digital educational resources incorporated into the national educational e-collection. (100% achieved)
<u>IOI 2:</u>	Number of sets of digital resources supporting the existing learning materials. (127% achieved)
<u>IOI 3:</u>	Number of sets of innovative e-learning materials produced. (227% achieved)
<u>IOI 4:</u>	Number of testing centers created. (98% achieved)
<u>IOI 5:</u>	% of schools in the Project regions that received new generation teaching and learning materials developed under the Project. (100% achieved)
<u>IOI 6:</u>	% of schools in the Project regions that introduced new generation teaching and learning materials into the curriculum (136% achieved)

The first three indicators (IOI 1, IOI 2 and IOI 3) refer to the three types of TLM developed under the ELSP (Digital Educational Resources or DERs, Complex Information Sources or CIS, and Sets of Innovative Teaching and Learning Materials or SITLMs). None of these three types of material existed prior to the launching of the ELSP, so the baseline targets for these three indicators were obviously zero. Their end-of-project target numbers were set at 75,000 for DERs, 127 for CIS and 100 for TLMs. All of them were achieved by the time the Project closed. As for IOI 4, the number of testing centers that was created almost exactly matched the originally set target (59 instead of the 60), but due to the fact that these 59 testing centers did not have the logistical capability to manage the enormous amount/scope of work required for testing all the TLMs produced under the Project, 96 new centers across the Russian Federation were established,

which significantly helped ease the burden on the testing of TLMs and, if any, helped to achieve the expected direct outcome of this output: the adequate and timely testing of the quality TLMs. Finally, in terms of the last two indicators, IOI 5 and IOI 6, the Project fixed different end-of-project targets. In the case of the proportion of schools that received new generation TLMs developed under the Project, a 100% coverage rate was foreseen. In the case of the proportion of schools that introduced new generation TLMs into their curricula, the bar, once again, was set at “not less than 50%”. In both cases, once again, the Project reached its stated objectives: all schools in the 7 pilot regions received new generation TLMs developed under the ELSP and 68% of schools in the 7 pilot regions demonstrated having incorporated inside their curricula new generation TLMs.

2) Improvement in the Relevance of the Training of Teachers

- IOI 7: Number of training programs in the use of ICT for teaching and learning created. (150% achieved)
- IOI 8: Number of teachers trained in programs of developing basic ICT competence. (104% achieved)
- IOI 9: Number of online educators and curators trained in the area of Internet education. (224% achieved)
- IOI 11: Number of instructional designers trained in development of digital teaching and learning materials. (285% achieved)

All four indicators had zero-value baseline targets, and all of them met the expectations, achieving the goals set up at the beginning of the Project. In terms of the training programs in the use of ICT for teaching and learning, the original goal by the closing date was 37, but a total of 42 programs were developed. In regards to the number of teachers trained in ICT programs, the original goal of 60,000 was also fulfilled, with a total of 62,364 teachers trained (not counting school administrators, who sometimes also perform teaching activities). Also in terms of educators, but for distance learning courses, the original target of 560 was almost doubled (1,119). Finally, the actual number of instructional designers trained in development of digital TLMs (570) more than doubled the original goals set up by the Project (250).

3) Improvement in the Relevance of Teacher Support through Interschool Resource Centers (IRCs)

- IOI 12: Number of teachers trained in IRCs to use e-learning materials created under the Project. (104% achieved)
- IOI 13: Number of methodologists (tutors) involved in teacher training and support trained under the Project. (107% achieved)
- IOI 15: Number of regions introducing e-education programs approved by the Ministry of Education and Science out of total number of regions receiving grants¹⁰. (100% achieved)

These three indicators were also met, at large. In terms of the first two indicators (teachers and methodologists trained), where the obvious baseline value was zero because both referred to the

¹⁰ So-called “dissemination grants” played a key role in the project’s design by allowing new regions of the Russian Federation to benefit from the creation of IRCs, as well. After a call for proposals and further discussions with the MOES in terms of the potential interest from other regions not originally included in the 7 pilot ones, it was decided that a total of 8 new regions would be allowed. See Section 3.4 below.

training *under the Project*, the original end-of-project goals (50,000 teachers and 1,500 methodologists trained) were surpassed by between 4% and 7% in both cases (51,868 teachers and 1,605 methodologists trained). Finally, the last indicator reflected the expectation that, by the end of the Project, at least 8 new regions, other than the 7 pilot regions originally chosen for the ELSP, could have e-education programs also fully in place. This meant that these regions had to first pass the test from the Expert Analytical Center (EAC) to eventually get their plans approved by the Ministry of Education and Science. In order to facilitate this process, the PIU organized a competition for a series of grants that would help set up IRCs in these new regions with the same capabilities and characteristics as the ones already established in the pilot regions. Eight new regions¹¹ won this contest and were given the aforementioned grants at the beginning of school year 2007/08 and all of them were able to successfully establish the e-education programs by the end of the Project's lifetime.

In summary, the achievement against all PDOs is very high. The table below provides a concise summary of the average % achievement rates per category of indicator.

ELSP: Achievement rates by type of indicator and component		
Type of indicator		Average achievement rate
Key PDO indicators (outcome indicators)	Average	147.5%
Intermediate Outcome Indicators (output indicators, by component)	Component 1	131.4%
	Component 2	302.3%
	Component 3	157.4%
	Average	195.3%
<i>Note:</i> The average achievement rates in the table are the simple averages of the achievement rates of those indicators within each of the categories.		

3.3 Efficiency

Rating for Efficiency: *Substantial.*

The Economic and Financial Analysis presented in the Annex 4 of the PAD highlighted that the correct framework for analyzing the efficiency of such a project would be a cost-benefit analysis that used a partial-equilibrium model, given that the ultimate goal of the Project was to help contribute to improve the comparative advantage of the economy. The preparation team deemed it impossible to undertake such quantitative analysis, however, it did carry out a qualitative analysis by attempting to show how the Project would ultimately have an impact on both learning outcomes and labor market outcomes. Carrying out a similar analysis as of the end of the Project would not be useful, though, as many of the results of the Project in these two areas (learning outcomes and labor market outcomes) will take some time to materialize. In this regard, neither a rate of return nor a present value analysis is presented here.

¹¹ These regions were the Oblasts of Moscow, Novosibirsk, Astrakhan, and Yaroslavl, the Republics of Tatarstan and Chuvash, the Autonomous Okrug of Khanty-Mansy-Yugra, and the City of Togliatti.

What the ICR team attempted to evaluate was whether the Project was efficient and cost-effective in delivering the intended ELSP outputs. The conclusion is that the benefits of the Project far outweighed the costs incurred. In fact, for a third of Project indicators, the end-of-project targets were originally set lower but were soon revised due the impressive Project performance. For example, for IOI 3 (number of SITLMs) the target was originally set and budgeted for a total of 45. However, due to the outstanding quality of the proposals received, the Project team accepted more than double the number set by the original target. In other words, for the same amount of resources originally expected to cover the production of a given amount of SITLM, twice as much was delivered. This was also true in other five indicators (see Section F of the Data Sheet). Secondly, not only did the Project over-achieve in terms of the agreed indicators, but these over-achievement rates do not take into account the fact that, in the case of some indicators, the Regions themselves topped up these targets with voluntary financial contributions of their own (e.g. in the case of IOI 12, number of teachers trained in IRCs, although the ELSP achieved the 50,000+ original target, as many as 15,500 more teachers were voluntarily financed by the Regions themselves).

To sum up, the ICR team believes that the massive introduction of ICT-intensive teaching and learning methods in the 7 pilot regions selected for the ELSP provided demonstration cases, in each of the 7 Federal Districts of the Russian Federation, on how to make education at GSE and IVE schools more efficient in developing and delivering: a) a more accessible education to a larger number of students; b) a higher-quality type of learning through both a higher quality of the TLMS and a higher ICT competence from teachers to use these innovative tools at their disposal; and c) a significantly more relevant curriculum, better adapted to the current labor market needs in the Russian Federation. In doing so, the fact that all this took place at a decreasing unit cost rate¹² substantially fulfills the condition of efficiency.

3.4 Justification of Overall Outcome Rating

Rating: *Highly Satisfactory*.

An overall rating of *Highly Satisfactory* is given to the Project because of its high relevance, highly successful outcomes and substantial efficiency.

On the one hand, the Project supported a high-profile program of the GOR and produced a large number of indicators to address all dimensions of the three-fold strategy spelt out in the Education Modernization Program: improving the access, improving the quality and improving the relevance of education at GSE and IVE schools. All outcome indicators were fully or substantially over-achieved in a highly efficient and cost-effective manner. In fact, on average, the percentage of over-achievement of the Project's key PDO indicators was 147%, whereas the mean percentage of over-achievement of the 15 accompanying IOIs reached approximately 195%. Moreover, most of the targets were achieved relatively early in the lifetime of the Project. This is truly to be commended insofar as the Project's implementation period was actually one year shorter because of effectiveness delays. Last but not least, once the Project formally became effective, it always implemented on time, never experienced any delays in disbursements and

¹² The calculation of the achievement rates is made in relation to the Bank loan-financed activities.

fully disbursed by the closing date. The Project has never been extended, suspended or downgraded, and it fully complied with all M&E activities and was rated “S” throughout the ISRs. All the above factors would make a clear case for a solid ”Satisfactory” rating to the Project.

On the other hand, the ICR team felt that the Project had a solid track record of overachievement across all the key outcome and output indicators and there are a number of other critical reasons which strongly support a “Highly Satisfactory” rating for the Project.

The key accomplishment of the Project was that it provided an unprecedented demonstration of how coordinated efforts of federal, regional government, education community and international partners could achieve substantial results in such a short period of time (three years) in the country of a huge size of the Russian Federation, all supported by smooth implementation process and substantial time and efforts invested into monitoring and evaluation of outcomes, while building on the large-scale national investment in ICT connectivity in schools.

Another key reason for “HS” rating is that – while addressing the global challenge of bridging the digital divide and introducing the ICT into the teaching and learning process as the main factor of the country’s global economic competitiveness – this Project managed to apply a comprehensive and well-thought approach contrary to popular technology-centered models and demonstrated the added value of ICT as an important public good. The Project facilitated synergy between different programs supporting ICT introduction, and targeted three key elements of effective implementation of ICT policy:

- a) as proven by both empirical research and numerous anecdotal evidence, this Project achieved a substantial change in individual behavior of ICT users – teachers, students, administrators – as well as increased effectiveness of their collaboration in groups in the form of innovative projects or teaching/learning activities;
- b) it substantially increased technology infrastructure both at the central/federal level of education system and at the regional/local level, and by this provided greater physical access to technology for users from distantly located/rural areas, and especially– to students with special needs through distance learning means; and finally,
- c) it greatly increased for the variety of users availability of and access to high-quality digital educational content, both by developing the new electronic teaching and learning resources and providing unique access to the Russian masterworks of literature, music and fine arts which are now a digitally protected national heritage and would be otherwise hardly accessible to rural users. All this unique depository of masterworks is now available to every student in the country via Internet, CDs, etc.

In view of the above, the ICR team rates this Project as Highly Satisfactory given the outstanding learning nature of this investment. This rating is possible at this point (despite S ratings given to the Project throughout its implementation) because the rate of over-achievement of targets by this Project could only be fully measured at the end of the Project.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

The Project, through one of the three areas where it focused, namely the *access* dimension, did in fact directly address poverty. As stated above, the percentage of students from rural areas increased dramatically as a result of the Project’s distance-learning component. Not only students,

but also teachers from the most disadvantaged areas got access to the same quality of TLMs produced, and usually exclusively accessed by students from urban centers. Anecdotal evidence collected during the ICR mission to the Region of Karelia, confirms these findings (see item c in this same section below). As it was expressed above, the commitment of the GOR to provide the necessary nationwide platform (equipment, Internet connection) for a successful launch of a project like this was absolutely instrumental.

(b) Institutional Change/Strengthening

Institutional strengthening was part of the “quality” objective of the Project. The Project’s design overly stressed the issue of *capacity building*. However, rather than using the typical teacher-based approach, the ELSP proposed a holistic framework where teachers would still be at the forefront of the support, but also other stakeholders, like school administrators, instructional designers, methodologists, etc., would both benefit and contribute to the success of the whole program. Of special interest in this latter regard was the creation of the IRCs. These built upon a particular set of school-support institutions inherited from Soviet times known as Municipal Methodological Services (MMSs). They were created to help cope not only with the technical-support-related issues that would emerge as a result of the introduction of new ICT-intensive teaching and learning methods, but to also do so from a methodological or subject-based point of view, thereby retaining the original role for which the MMSs had been created. Again, anecdotal evidence collected during the ICR mission suggests IRCs’ contributions were instrumental in the success of the projects, and when merged with or established in parallel to the existing MMSs, they brought as a result a revitalization of the teacher support system embedded in the then-outdated functions of the MMSs.

The Project also significantly helped to build capacity in the Federal MOES, regional ministries/departments of education, academia and professionals in supporting educational reforms aimed at improving quality and market relevance of education. Enhancement of the capacity of NTF, which is a non-governmental organization that will continue to operate even after the Project ends, is especially noteworthy. It is increasingly being used by the Government for promoting reforms including the implementation of some components of the GoR’s Priority National Project Education.

(c) Other Unintended Outcomes and Impacts (positive or negative)

Some unintended outcomes of the Project were collected through the interviews carried out in the field during the preparation of the ICR and represent anecdotal but interestingly rich evidence. Two specific examples are of interest:

- 1) One example is a story of an 11th-grade boy of a rural school in the area of Pryazha, Karelia region, who mastered his ICT skills at school to become an advanced ICT user and, therefore, he gradually became indispensable in providing web development, system administration and user support to a nearby community hospital. In return for his commitment, this hospital offered to fund his higher education with the hope of being able to re-recruit him, after graduation.
- 2) Another example was the creative use of the “Grants” for dissemination of best practices under Component 3 (Creating a Network of IRCs). Grants were designed to encourage non-pilot regions to replicate successful reforms in pilot regions. Such grants were awarded to non-pilot regions on a competitive basis for replicating one of the reform areas of the Project such as the advanced ICT training program for regional and municipal level administrators, use of education

management software packages; implementation of Regional Coordination Centers' (RCC) - IRC network as means for permanent methodological support to teachers.

The ability of the dissemination grants to leverage reforms in regions in areas not related to grants was an unintended outcome of the Project and demonstrated a “snow-ball” effect:

- 3 of the regions that received dissemination grants established the "mirrors"¹³ of the Unified Digital collection of TLM;
- 11 dissemination regions introduced DER developed as supplement to the main list of school subjects into the educational process.

The Project has been able to publish a large pool of materials: 21 books, CDs and packs (book+CD) consisting of legal frameworks, procedures and guidelines for implementation of various reforms, impact assessments, monitoring reports, training materials, etc. Such documentation was produced not only by NTF but also by pilot and dissemination regions. The Project has contributed to enriching the knowledge base for educational reforms. This is also a noteworthy unintended impact of the Project.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

There were two types of surveys carried out.

The first instrument was called “*Social Survey of School Assessment of ICT Use*” and was administered to a series of students, teachers, and school administrators at the beginning and towards the end of the ELSP’s lifetime (2005 and 2008). This was meant to assess ICT self-awareness levels of different participants of the Project. The comparative results for those participants that were tested showed statistically significant changes in the number of participants that self-assessed as having low ICT skills back in 2005 vs. those in 2008 (administrators: 32.9% vs. 16.9%; teachers: 41.5% vs. 35.2%; students: 34.6% vs. 27.6%).

The second instrument that could be also interpreted as a beneficiary survey was the “Training Effectiveness Survey” carried out only in the month of March 2008 among participants of the various training modules of ELSP (teachers, school administrators, and librarians). It was a short instrument containing only 10 questions that was distributed to a random sample of about 5% of the almost 50,000 participants trained until October 2007. This questionnaire, though, included a very interesting question inquired about the usage of different ICT resources for daily work *prior* to the courses and *after* the training took place. The results were highly significantly positive for all three types of stakeholders showing an increase of usage of ICT-related resources for day-to-day work from an average range of increase of 1.4 times (text editor) to almost 3 times (programs for development of websites).

¹³ Given that the total volume of digital resources in the Unified Collection of DER is currently about 250 GB, regional copies (“mirrors”) of the Collection have been created in 3 regions to reduce both the Internet-traffic and connectivity costs related to downloading the materials.

4. ASSESSMENT OF RISK TO DEVELOPMENT OUTCOME

Rating: *Negligible*

The risk to Development Outcome is rated low, and indeed marginally so. The Project results were lauded by the Government and are fully incorporated into the existing Government programs and both federal and regional governments secured necessary state funding to continue these programs as a direct result of the Project. Therefore, the sustainability of Project's investments and more broadly of Project's outcomes is essentially 100% assured.

5. ASSESSMENT OF BANK AND BORROWER PERFORMANCE

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: *Highly Satisfactory*

The Project preparation was rigorously supported by analytical work, and financially supported by the Portfolio Development Loan. The main strength of the Project design and preparation lay in the ability to accurately identify the reform needs of the country and to prepare well for their implementation. Quality at entry was also strengthened through intensive consultations with pilot regions during the preparatory phase to correctly identify a set of mutually reinforcing reforms. We believe the robustness of the design allowed the Project to be completed without any major adjustment.

(b) Quality of Supervision

(including of fiduciary and safeguards policies)

Rating: *Highly Satisfactory*

A decentralized model of Project supervision from the Bank side was very effective. It allowed the Project team to maintain a close relationship with the counterpart on a daily basis in spite of the serious restructuring of the government in 2004 and a significant change of staff at the federal and regional Government levels.

The Bank team invested – in close cooperation with the Government – an enormous time and effort into very close supervision of Project activities at the regional level in order not only to collect evidence, but also proactively apply reality checks to the implementation of Project design. This included fact-finding visits and monitoring activities conducted at each and every Project site, even those that were distantly located. This was especially important in view of the fact that the Project maintained very strong regional focus throughout its implementation.

The ICR team actually found that the Bank supervision team was quite strict in assessing Project performance during its implementation. The TTL and the Bank team rated the Project as “Satisfactory” in all ISRs although indeed Project achievement far exceeded all expectation and deserved a higher rating.

(c) Justification of Rating for Overall Bank Performance

Rating: *Highly Satisfactory*

The high quality of Project design ensured a high quality of the Project at entry. In terms of the quality of Project supervision process it is important to emphasize that the Bank team applied a decentralized supervision model which allowed day-to-day interaction with the client and frequent reality checks – both in the framework of supervision visits and through an ongoing support to the Client by the team located in the Bank country office. Both quality of preparation/design and appropriate supervision provided an ultimate contribution to the achievement of PDOs.

5.2 Borrower Performance

(a) Government Performance

Rating: *Highly Satisfactory*

The commitment to reforms was strong at both the federal as well as the regional levels, despite some serious changes in the Federal Government which took place during the initial years of the lifetime of the Project. The commitment to and involvement in reforms were especially remarkable at the regional level. Regions supported reforms allocating resources on top of commitments made for the Project. Policy environment was also supportive to Project activities. MOES was very proactive to resolve the start up delays.

(b) Implementing Agency or Agencies Performance

Rating: *Highly Satisfactory*

The NTF team, which was appointed in time, had a high degree of commitment to achieving development objectives and it had adequate skills for fulfilling this commitment. It was able to maintain good relationship with partners and stakeholders. Adequate capacity and infrastructure is already in place for continuing Project supported activities after the end of the Project. It is especially notable that Project's high achievements were to a great extent due to the interactive approach chosen by the PIU in dealing with its partners in all Project pilot and dissemination regions, and most important – to ensuring that each Project site is given necessary attention both prior and during the implementation of respective Project activities and checking understanding of the “rules of the game” before embarking into substantial implementation. All Partners with whom ICR team consulted expressed great appreciation of the hard work and professionalism of the implementing agency and its team.

(c) Justification of Rating for Overall Borrower Performance

Rating: The overall rating for Borrower's performance is *Highly Satisfactory*.

The Borrower's role and contribution to the high quality of Project design/preparation and excellent implementation process is hard to overestimate. Both Federal and Regional Government invested substantial resources and demonstrated high level of commitment to the implementation of the Education Modernization program supported by the ELSP, and it continued demonstrating full commitment throughout the Project implementation to ensure high consistency and

compliance with agreements reached with the Bank in terms of implementation modalities and towards the full achievement (and overachievement) of the agreed Project development outcomes.

6. LESSONS LEARNED

This ICR reconfirmed the relevance and importance of two lessons learned from the second joint Project between the GOR and the Bank: the *Education Reform Project*:

- In reform-oriented projects it is important to support a set of complementary reforms rather than focusing only on the most important individual elements of reforms. The result is a far more comprehensive impact.
- In addition to implementing systemic reform measures to improve the ICT infrastructure or facilities in the education system, it is critical to take actions which support innovative group activities of various target groups – teachers, students, principals, members of local communities and experts of methodological centers, etc. These joint actions, either in the form of preparation and implementation of innovative projects, new types of learning activities in teams – and among them ICT intense activities - or school-local community cooperation initiatives, among others facilitate change in the mindset and boost the quality of learning and teaching.

Other lessons learned:

1. A systemic implementation of reforms requires a profound needs analysis prior to designing a project and this could only be successful provided: a) a long-term government reform program is implemented in phases, b) this program is supported by allocation of appropriate resources from the state budget, and c) this program is backed up by coordinated efforts of all actors in the sector.
2. This Project demonstrated that risks associated with the need to put together and organize large numbers of organizations and people with own practices and procedures can only be done if new requirements for collaboration and coordination among all elements in the system is developed beforehand and systemically followed.
3. This Project also proved that ICT in Education is much more than installing computers and buying software: these make just one element and could make a systemic impact only if the content of learning, teaching methods, forms, as well as the whole organization of educational institutions into self-developing and cooperating networks of innovative service institutions could generate new quality and provide for achieving those learning outcomes needed for the new knowledge and information economy.

7. COMMENTS ON ISSUES RAISED BY BORROWER/IMPLEMENTING AGENCIES/PARTNERS

(a) Borrower/implementing agencies

The Borrower's Completion Report has been received and filed. A summary can be found in Annex 7. The Borrower rated the Project as Satisfactory.

(b) Cofinanciers

Not Applicable

(c) Other partners and stakeholders

(e.g. NGOs/private sector/civil society)

Not Applicable

ANNEX 1. PROJECT COSTS AND FINANCING

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
COMPONENT ONE: LEARNING MATERIALS	35.10	33.48	95.37%
COMPONENT TWO: TEACHER TRAINING IN THE EDUCATIONAL USE OF ICT	43.24	36.76	85.02%
COMPONENT THREE: DEVELOPMENT OF A NETWORK OF INTERSCHOOL RESOURCE CENTERS	63.45	81.15	127.89%
COMPONENT FOUR: PROJECT MANAGEMENT	3.65	3.59	98.32%
Total Baseline Cost	145.44	154.97	106.55%
Physical Contingencies			
Price Contingencies			
Total Project Costs*	145.44	154.97	106.55%
Front-end fee PPF			
Front-end fee IBRD**			
Total Financing Required	145.44	154.97	106,55%

**This amount includes applicable taxes and duties: 13.00 appraisal estimate, 18.81 actual (USD mln)*

***According to LA front end fee is 1% of the amount of the loan. However, this amount was paid from the sources other than the loan proceeds.*

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		45.44	57.37	126.25%
International Bank for Reconstruction and Development		100.00	97.60	97.6%

ANNEX 2. OUTPUTS BY COMPONENT

Component 1. New-generation teaching and learning materials (US\$33.48 million total actual costs)

1. A set of methodological recommendations, “Regulatory Framework for the School of Informatization”, approved by the Department of State Policy and Normative-Legal Regulation in Education.
2. Normative technological requirements for developers of DER were elaborated based on the IMS consortium specifications and form a basis for DER inclusion into the Unified Collection of Digital Educational Resources in the section “For DER Developers”.
3. Three types of TLMs were developed under ELSP:
 - 1) 127 Sets of DER that comply with conventional practices and illustrate (or supplement) conventional textbooks approved by the Ministry of Education and Science of the Russian Federation.
 - 2) 33 CIS that can be used in both the conventional study process and as supporting material in innovative educational practices.
 - 3) 69 Sets of innovative TLM to support educational innovations.
4. The Unified Collection of DER (Collection) represents systematized digital teaching and learning materials that are arranged as subject and thematic collections united by a unified system of resource description and a unified search system. In total, there are about 250,000 information objects in the Collection that meet the basic requirements of the Federal Component of the State education standard for general and initial vocational education.
6. School managerial software. As digital system for organization and support of the study process, 1C: Obrazovanie 4. Shkola, was developed and delivered to all schools in the ELSP pilot regions.
7. The software package 1C: ChronoGraf Shkola 2.5 was developed under ELSP and delivered to all Russian general education institutions within the framework of the “Education” National Priority Project.
8. The software package “ChronoGraf 3.0 Master” purchased under contract ELSP/A2/02/G/05/ICB was delivered to all general schools of the ELSP pilot regions and placed in the Unified Collection of DER. Besides, it was delivered to all Russian general education institutions within the framework of the “Education” National Priority Project.
9. Mass distribution of these programs was fulfilled due to the efforts taken in order to embed software packages for the study process administration into school management practices (contract ELSP/B1/C/009-06) within the framework of subcomponent B1.
10. Informational tools for teaching activities. The system of informational tools for teaching activities was formed alongside works on forming the sample collection, sample analysis and sample purchase and/or development. As a result, tools for geometric construction, visualization of chronological information and genealogical tree operation, as well as a geo-information system were developed and/or purchased (Table 3.6) and afterwards placed in the Collection. Also, to populate the Collection, two versions of a server operating system distributed under a free license were prepared.
11. A system of teaching and learning materials testing had been built and put into operation

in the course of ELSP implementation. Testing (expert examination and TLM testing in real studies) was carried out directly in schools (testing sites) and integrated into the process of TLM development, which made it possible to perfect the TLM being developed and improve their quality in the course of Project implementation.

**Component 2. Teacher training in the educational use of ICT
US\$36.76 million total actual costs)**

12. Formation of Educator's Basic Educational ICT competence. Following the competitions 22 regions participated in this work in different phases of the Project. Alternative programs and sets of modular instructional and methodological materials for 72 academic hours were developed to carry out this work. T

13. 76,898 persons received in ICT-competence training in the period from September 1, 2005 to May 31, 2008, that is, 128% of the planned figure. The target groups of trainees were composed of subject teachers, school managers, education administrators, and librarians. There were three forms of training: full-time, full-time/distance and external. All trainees who completed training were granted certificates of competence.

14. Forty six conferences, 78 workshops, 24 competitions of projects, and 25 training sessions and master classes were held at the regional level in the 15 new regions of the Project.

15. Internet Support of Educator's Professional Growth. Nineteen competition winning organizations/educational institutions were awarded grants (Table 3.9). They worked out development plans and (a) updated their Internet sites where electronic libraries for teaching and learning materials in various subject domains were created; (b) opened Internet consulting agencies for teacher; (c) organized forums to discuss the experience and the results of educational initiative support within the ELSP framework.

16. A wide discussion of Internet support to teachers and formation of distributed network professional teachers' communities was held at the main Russian conferences ITO-2006 and ITO-2007.

17. Training of New Teachers. 10 Higher teacher training institutions developed about 150 teaching modules and courses (about 150% of the planned figure) for training new teachers in the methods of DER use in their professional activity, as well as in the instructional design application for the study process organization in the ICT-environment.

18. During two academic years (2006/07 and 2007/08) more than 4500 students (future teachers) received training in effective uses of DER in school studies, as well as in instructional design (two times more than planned). In the course of training students prepared methods aids (scenarios) for lessons with the use of DER, projects, their own DER, and portfolios. The best of these were displayed on the websites of their institutions.

19. The Laboratories of Digital Educational Resources and Instructional Design set up in all of the higher teachers training institutions greatly contributed to the success of the program

20. NTF (1) had organized and conducted a series of 3 workshops on instructional design, each for 100 to 200 TLM developers-winners of relevant competitions and (2) provisions were made in the new teachers' training program for the development and pilot testing in teacher training institutions of instructional design courses for future teachers using the materials created within the ELSP framework. The course syllabuses were developed and are now used in teacher training. A project for future teachers' specialization in instructional design along various lines was drafted.

22. Internet-aided instruction of school students at the streamed level. 3 Consultancy firms selected on a competitive basis, carried on pilot streamed-level training of 10th- and 11th-grade students in 7 Project pilot regions during two years.

23. E-learning STLM were developed for training school students at the streamed level in 14 subjects: Russian, Literature, Foreign Language (English/German), Mathematics, Informatics, History, Social Science, Economics, Law, Geography, Biology, Physics, Chemistry and World Artistic Culture). A system of network teacher and curator training took shape: its structure and content have been defined and effective forms of training that combine full-time and distance training have been specified. Pilot training helped establish most stable models of basic and additional forms of teaching. Additional training of network teachers and curators was carried mostly via special workshops and special websites.

24. Development of educational institutions providing distance instruction to school students. Support was given to the elaboration and realization of 19 development programs for educational institutions engaged in distance instruction of school students:

- The technological infrastructure of the distance schools that received grants in support of their development was replenished with 21 servers, 7 mobile classrooms, 20 multimedia projection devices, 9 mini printing shops, 260 computers and various software programs.
- The number of students supplied with educational services through distance schools grew by more than 75%: 37,428 students (including 4045 rural students) are taught presently by various distance school programs compared with 21,260 in 2004.
- The range of supplied educational services broadened and their quality improved. This happened due to the distance school TLM digitizing, development of new courses (more than 80 courses are being developed), and the use of the Internet to organize work with school students.
- Teaching by new TLM with the use of the Internet which were supplied by education managing bodies in compliance with the general (streamed-level) school programs began.

**Component 3. Creating a Network of Interschool Resource Centers
(US\$81.15 million total actual costs)**

25. The network of 239 RCC / IRC was built in 7 pilot regions with the purpose of forming an educational information environment for the Russian Federation regions so that to involve the greatest possible numbers of teachers and learners into informatization processes. All centers were equipped with ICT facilities (hardware and software), the IRC personnel was enlisted and trained.

26. All centers were equipped with hardware and software and connected to the Internet. Apart from computer and presentation facilities, active networking equipment, infrastructural software, antiviral software, and air conditioners for server rooms were purchased. All premises of the centers were repaired (financed from local budgets). All centers were supplied with initial content for their media libraries (instructional and methodological materials on 72 CDs).

27. An alternative in-service educator training program was developed at the federal level for all IRC. The teachers of educational institutions attached to IRC were trained by this program. Along with the ICT-competence program, IRC realized a number of other programs using, in particular, the modules developed in the regions. Those programs were aimed at mastering user skills in the context of professional activity; individual software products (by teachers); facilitator work and professional interaction with the use of telecommunication facilities; ICT application techniques as a resource of a particular pedagogical technology.

28. In total, 75,017 educators (137% of the planned figure), including those whose training was additionally financed by the region, took the IRC in-service training courses during Project implementation. The greatest number of trained educators was in Chelyabinsk oblast. There the number of educators whose training was additionally financed by the region was nearly equal to the number of those trained under the Project. In total, 24,217 educators were given IRC-based training.

29. By the time of ELSP completion, plans of the RCC-IRC system further development had been worked out in all Project pilot regions and approved by the Strategic Committee of the MOES. In most cases the plans envisaged changes in the organizational and legal status of a number of centers in order to maintain their steady activity after the Project completion.

31. Daily assistance to educators on various matters relating to ICT embedding into the study process was organized: face-to-face and distance (network) consultations provided individually, frontally and by groups.

32. IRC consultations can be grouped by the following topics: Regional repositories were arranged in all the 7 Project pilot regions in 2007 as mirrors of the Unified Collection of DER, and were integrated into the Collection.

33. RCC organized many competitions of educational initiatives in two areas (1) Support of educational initiatives of individual educators and educators' teams in the area of general and initial vocational education informatization; and (2) Support of initiative network projects presented by educational institutions and designed for widening the learners' access to competitions and olympiads on the basis of ICT. Competitions were held twice a year, beginning from August 2005. Educational institutions, initiative educators' teams and/or individual teachers, authors of educational projects, took part in the competitions. Winners were financed under individual and/or collective agreements or agreements with educational institutions from RCC funds for advisory services.

34. The ELSP reached a new level in 2006, when the competition for dissemination of project outcomes was announced. Target financing programs were launched in 22 regions along the following lines:

- Training of the regional and/or municipal education management personnel with the purpose of increasing education management efficiency using ICT (3 regions: Tver oblast, Kirov oblast and Sakha (Yakutia) Republic);
- Introduction of the state-of-the-art ICT into school management practices (11 regions);
- Introduction of the IRC model to support general education informatization (8 regions – Chuvash Republic, Khanty-Mansy Autonomus Okrug – Yugra, Republic of Tatarstan, Moscow oblast, Yaroslavl oblast, Novosibirsk oblast, Astrakhan oblast, Togliatti town).

35. Active participation of RCC in all-Russian and international conference as well as regular publication of project materials also contributed to the propagation of Project achievement. In the period from the second part of 2007 to the first quarter of 2008 reports on the activities of regional IRC networks were presented at 28 forums. The list of major publications (books and brochures) issued during Project implementation is given in Annex 1 (YI R).

Component 4: Project Management (US\$3.59 million total actual costs)

According to the LA, Component 4 “Project management” envisaged “provision of support to project implementation through the NTF”. The National Training Foundation, a noncommercial organization, acted as the ELSP implementation unit on the basis of the Resolution of the Government of the Russian Federation No. 273-P of August 12, 1994; Contract of Agency No. 01-01-06/04-7 of February 2, 2005 between MoF, MOES and NTF and in compliance with local statutory requirements. ELSP Department was set up within the NTF structure in accordance with the ELSP design and it consisted of ELSP director, coordinators for federal and regional components and was supported by the NTF general services (Finance, Procurement, Monitoring and Administration Departments) that carried on procurement and disbursement procedures, bookkeeping and accounting for the Project. All aspects of day-to-day implementation of the Project and execution of the loan proceeds and counterpart funds were done by the NTF, which included also procurement, financial management, accounting, information activities, interaction with all involved agencies and networks of institutions around the pilot and dissemination regions, regular interaction with MOES and other central and regional authorities, as well as monitoring progress under the Project.

General responsibility for overseeing the management of the Project at the federal level rested with the Strategic Committee of MOES established in full compliance with provisions of the LA by the Resolution of the Minister of Education and Science of the Russian Federation No. P-4 of February 1, 2005. The Strategic Committee supervised all content-related aspects of Project management, was making decisions on specific aspects of Project design, budget approval, distribution of funds over Project Components, and general control over Project performance and the quality of Project outcomes. Members of the Strategic Committee were representatives of the Ministry of Education and Science of the Russian Federation, the Federal Agency for Education and other federal ministries and departments, heads of regional education administrators, rectors of higher education institutions, and representatives of the educational community.

Immediately after the Project launch, MOES issued an order No. AC-24/02 of January 14, 2005, by which it assigned its departments to supervise each of the Project Components and major programs. According to a ministerial order, the Director of the Department for State Policy and Normative and Legal Regulation in Education was assigned responsibility for the general control over Project implementation. The NTF also established Expert Analytical Center (EAC) for quality evaluation of the content of all activities, and especially the quality of all teaching and learning materials and resources developed at different stages, as well as for provision of recommendations on improving their quality and enhancing Project effectiveness. The MoES Strategic Committee reviewed EAC work plans and performance annually and approved lists of analytical works to be executed by EAC.

ANNEX 3. ECONOMIC AND FINANCIAL ANALYSIS

(including assumptions in the analysis)

As discussed under Section 3.3 (Efficiency) in the main text.

ANNEX 4. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION PROCESSES

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Mary Canning	Consultant	ECSHD	
Isak Froumin	Sr Education Spec.	ECSHD	
Kirill Vasiliev	Education Spec.	ECSHD	
Andrei V. Tolstopiatenko	Senior Information Officer	WBIGM	
Alexandre Roukavichnikov	Procurement Specialist	ECSPS	
Anahit Poghosyan	Office Manager	ECSHD	
Alexander Mizgunov	Financial Management	ECRFM	
Shobhana Sosale			
Ian Hamilton	Consultant		
Martin Godfrey	Consultant		
Stephen T. Kerr	Consultant	ECSHD	
Karl Scamsing	Senior Procurement Specialist	ECSPS	
Alyona Korneva	Disbursement Analyst	ECRFM	
Irina Reshetnikova	Program Assistant	ECCU1	
Supervision/ICR			
Isak Froumin	Sr Education Spec.	ECSHD	
Kirill Vasiliev	Education Spec.	ECSHD	
Tigran Shmis	E T Consultant	ECSHD	
Galina S. Kuznetsova	Sr Financial Management Specialist	ECSPS	
Alexandre Roukavichnikov	Procurement Specialist	ECSPS	
Andrei V. Tolstopiatenko	Senior Information Officer	WBIGM	
Stephen T. Kerr	Consultant	ECSHD	
Anahit Poghosyan	Office Manager	ECSHD	
Aziz Mamatov	ET Consultant	ECSPS	
Mamta Murthi	Sector Manager, Education	ECSHD	
Rajendra Dhoj Joshi	Sr Education Spec.	SASHD	
Olena Bekh	Education Specialist	ECSHD	
Juan Diego Alonso	Education Economist	ECSHD	
Jennifer Manghinang	Sr. Program Assistant	ECSHD	
Irina Reshetnikova	Program Assistant	ECCU1	

(b) Staff Time and Cost

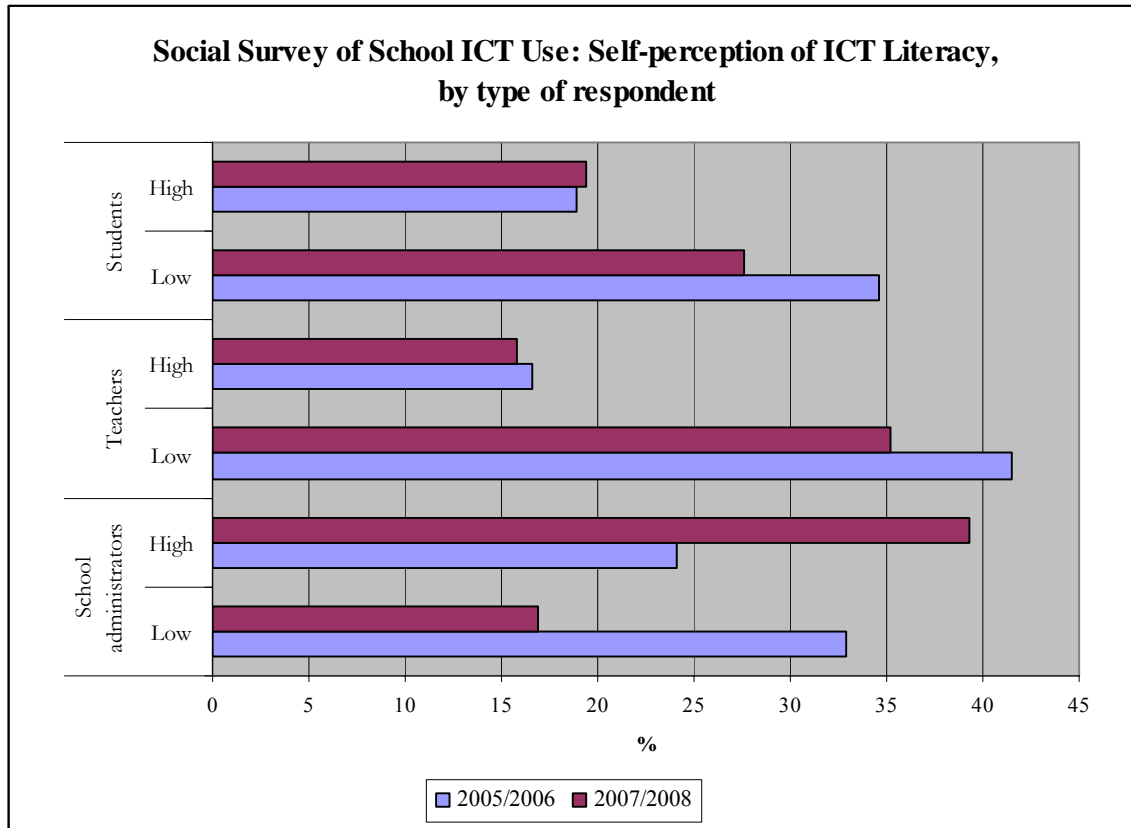
Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY02	19.00	46,297.61
FY03	33.86	99,581.28
FY04	27.17	67,377.74
FY05		
FY06		
FY07		
FY08		
Total:	80.03	213,256.63
Supervision/ICR		
FY02		
FY03		
FY04	13.82	45,674.38
FY05	11.42	25,557.97
FY06	33.73	73,936.88
FY07	44.93	81,485.30
FY08	35.83	81,908.09
FY09	19.34	42,030.19
Total:	159.07	350,592.81

ANNEX 5. BENEFICIARY SURVEY RESULTS

(if any)

There were two types of Beneficiary Surveys carried out during the lifetime of the Project.

The first instrument was called “*Social Survey of School Assessment of ICT Use*” and was administered to a series of students, teachers, and school administrators at the beginning and towards the end of the ELSP’s lifetime (2005 and 2008). This was meant to assess ICT self-awareness levels of different participants of the Project. The comparative results for those participants that were tested showed statistically significant changes in the number of participants that self-assessed as having low ICT skills back in 2005 vs. those in 2008 (administrators: 32.9% vs. 16.9%; teachers: 41.5% vs. 35.2%; students: 34.6% vs. 27.6%).



The second instrument was the “Training Effectiveness Survey” and was carried out only in the month of March 2008 among participants, from both pilot and disseminating regions of the various training modules of ELSP (teachers, school administrators, and librarians). It was a short instrument containing only 10 questions that was distributed to a random sample of about 5% of the almost 50,000 participants trained until October 2007. This questionnaire, though, included a very interesting question inquired about the usage of different ICT resources for daily work *prior* to the courses and *after* the training

took place. The results were highly significantly positive for all three types of stakeholders showing an increase of usage of ICT-related resources for day-to-day work from an average range of increase of 1.4 times (text editor) to almost 3 times (programs for development of websites).

Training Effectiveness Survey: Analysis of ICT use for participants before and after training				
ICT tools used	Type of participant	Total		
		% used before	% used after	% Change in use
Text Editor	Teachers	43	62	46
	Administrators	50	63	28
	Librarians	51	72	42
	Total	45	63	41
Powerpoint presentations	Teachers	26	60	131
	Administrators	32	57	78
	Librarians	26	65	149
	Total	27	60	118
Digital Educational Resources	Teachers	16	45	182
	Administrators	20	48	137
	Librarians	14	42	213
	Total	17	45	172
Programs for creating websites	Teachers	6	18	231
	Administrators	10	20	103
	Librarians	3	14	400
	Total	6	18	192
Establishing / Joining networks using the Internet	Teachers	23	55	144
	Administrators	33	61	82
	Librarians	23	57	148
	Total	25	57	125
Use of email	Teachers	15	36	140
	Administrators	29	54	89
	Librarians	11	37	243
	Total	18	40	126

ANNEX 6. STAKEHOLDER WORKSHOP REPORT AND RESULTS

No stakeholder workshops were conducted.

Ministry of Education and Science of the Russian Federation

NATIONAL TRAINING FOUNDATION

E-LEARNING SUPPORT PROJECT

(LOAN 4726-RU)

Project completion report

2005 – 2008

Moscow – 2008

1. Project objectives and structure

The E-Learning Support Project (ELSP) was financed from the IBRD Loan in the amount of \$300,000,000 provided to the Russian Federation pursuant to the Loan Agreement 4726-RU signed on December 7, 2004 in compliance with the Resolution of the Government of the Russian Federation No. 593 of November 4, 2004. The Ministry of Education and Science of the Russian Federation was the Loan beneficiary and implemented the Project. The Loan Agreement became effective on February 28, 2005 and was terminated on the Loan closing date June 30, 2008. The Amendment to the Loan Agreement was made in the allocation of funds between the disbursement categories and increase of the threshold ceiling for the NCB in order to maximise the efficiency in use of the Loan funds.

The National Training Foundation (NTF) acted as the ELSP implementing agency at Federal and regional levels under the Agency Contract No. 01-01-06/04-7 of February 2, 2005 concluded by the Ministry of Finance of the Russian Federation, the Ministry of Education and Science of the Russian Federation and the National Training Foundation.

ELSP was carried out in 7 Project pilot regions¹⁴ under Agreements on Regions' Participation in the E-Learning Support Project concluded by the Ministry of Education and Science of the Russian Federation, NTF and Administrations of each of the 7 ELSP Pilot regions in March – April 2005. 29 more regions of the Russian Federation joined the Project on a competitive basis starting from the end 2006 in order to disseminate the Project lessons.

¹⁴ Kaluga, Chelyabinsk and Perm oblasts (Permsky krai later on), Krasnoyarsky, Stavropolsky and Khabarovsky kraiss, and the Republic of Karelia.

The Loan Agreement envisaged the 2-phases project implementation (2005 – 2008 and 2009 – 2011) with the first tranche allocation of USD 100 mln. In the autumn of 2007 the Ministry of Education and Science of the Russian Federation decided to carry out the second phase of ELSP using the funds of federal and regional target programs. In this way, the review of the first phase of ELSP is actually the final report on the Project as a whole.

The ELSP aimed at achieving three interconnected objectives:

- To activate student’s learning; to form his/her organizational ability, the ability for independent learning, finding and using the required information, working in a team, finding solutions in unconventional situations, and problems solving;
- To promote teacher’s and school staff’s creative activity, their using active methods of teaching and flexible and constantly augmented methodological instruments;
- To provide for the affordability of quality educational resources and services for any school student interested in them.

The first of the stated objectives was to be achieved through developing and embedding new-generation teaching and learning materials (TLM) based on the use of new educational technologies that were meant for active methods of learning. The second objective was to be achieved by way of creating conditions for teacher’s in-service training and by transforming facilitation teachers’ methodological support services. The third objective was to be achieved by way of furnishing free-for-all digital educational resources of good quality and developing Internet-aided instruction.

General schools were to become the main beneficiaries of the ELSP. Changes in everyday educational practices were to be viewed as the main indicator of successful performance. Mastering of ICT assets was to stimulate the transformation of current educational practices and conduce to the appearance of new ones. Changes in the content, methods and organizational forms of study were to be bolstered by the new-generation teaching and learning materials accessible to teachers as well as by normative, legal and regulative documents ensuring effective organization of modern-day studies.

All activities within the ELSP framework were divided into three Components. ELSP was designed as an integral and systems project. All its Components and programs were closely interconnected. The table 1 below shows the ELSP structure and major activities within its framework. All works under the Project were organized on a competitive basis.

Component A	Component B	Component C
New-generation teaching and learning materials	Teacher training in the educational use of ICT	Building a network of Interschool Resource Centers
A1. Development of a regulatory framework for	B1. Organization of training in the educational	C1. Strategic planning and management.

<p>digital educational information resources development and use.</p> <p>A2. Creation and systematization of digital educational resources.</p> <ul style="list-style-type: none"> ○ Creation of collections of information sources for general and initial vocational education. ○ Development of tools for teaching and learning activities. ○ Development of an informational support system for studies organization. ○ Development of sets of teaching and learning materials oriented toward the achievement of qualitatively new learning outcomes. <p>A3. Development of a testing system for new teaching and learning materials and methods of their use.</p>	<p>uses of ICT for new and working teachers and education managers.</p> <ul style="list-style-type: none"> ○ Formation of educator’s basic ICT-competence. ○ Development of a system of in-service teacher training and methodological support. ○ Internet support of teacher’s professional growth. ○ Training of new teachers. <p>B2. Development of Russian potentials in the area of instructional design.</p> <p>B3. Development of a network of educational institutions providing classroom and distance instruction to school students.</p>	<p>C2. Setting up a network of Interschool Resource Centers (IRC).</p> <ul style="list-style-type: none"> ○ Making up IRC standard design. ○ Selection and instruction of IRC personnel. ○ IRC equipping, connecting to the Internet and putting into operation. <p>C3. RCC-IRC based facilitation system for the informatization of general and initial vocational education.</p> <p>C4. Forming public support to school informatization.</p> <p>C5. Promotion of Project attainments to other regions.</p> <p>Support to regional education informatization projects.</p>
---	---	---

Component A incorporated a cycle of creation and production of new-generation teaching and learning materials (TLM), which served to renovate the content of education and form new procedures of studies organization. **Component B** focused on the development of instructional and methodological materials for upgrading teachers and on the instruction of regional facilitators who would work with IRC and individual schools. In **Component C** emphasis was placed on arranging upgrading courses and continuous methodological support to teachers at large. Close coordination between the Components was maintained owing to the through organization of educator training where were engaged TLM authors, education managers and methods specialists of all levels, as well all subject teachers in the Project pilot regions.

2. Project Outcomes

Component A. New-generation teaching and learning materials

1. A set of methodological recommendations, “Regulatory Framework for the School of Informatization”, approved by the Department of State Policy and Normative-Legal Regulation in Education, was used by schools participating in ELSP as a model regulation for local acts. These materials were also used while preparing methodological recommendations that were sent to all Russian schools within the framework of the program of schools connection to the Internet under the Priority National Project “Education”.
2. Normative technological requirements for developers of Digital Educational Resources (DER) were elaborated based on the IMS consortium specifications and form a basis for DER inclusion into the Unified Collection of Digital Educational Resources in the section “For DER Developers”.
3. Three types of teaching and learning materials (TLM) were developed under ELSP:
 - 4) 127 Sets of digital educational resources (SDER) that comply with conventional practices and illustrate (or supplement) conventional textbooks approved by the Ministry of Education and Science of the Russian Federation. Methods of embedding such teaching and learning materials into the conventional study process were developed under the Project. The new developments cover most of the basic school curriculum (BSC) parts, including 9 subject domains and 14 BSC subjects.
 - 5) 33 Complex information sources (CIS) that can be used in both the conventional study process and as supporting material in innovative educational practices. Here the requirements to the development of methodological recommendations were more rigorous.
 - 6) 69 Sets of innovative teaching and learning materials (SITLM) to support educational innovations. Here the requirements to the quality of methodological recommendations on their application and the study process organization were even more rigorous.

All competitions had two rounds: the first was the competition of concepts, and the second the competition of TLM detailed outlines. Although each type of the TLM listed above is oriented to the solution of a local task, in the aggregate they cover the whole spectrum of resources which the state-of-the-art information and communication technology can give to school.

The fact that the Ministry of Education and Science of the Russian Federation asked for holding an additional competition for the development of SDER to the existing textbooks may be viewed as an indicator of success and appropriateness of the work done under ELSP.

The competition procedure proposed in ELSP should be considered as an important result. The development process was organized as progressive movement from concept

formulation to detailed outline and further to the creation of the final product by segregating its substantial elements and their testing. Such procedure can be recommended for use in other projects for the development of e-learning contents.

4. The Unified Collection of Digital Educational Resources (Collection) represents systematized digital teaching and learning materials that are arranged as subject and thematic collections united by a unified system of resource description and a unified search system. The Collection provides all general school teachers and students with the teaching and learning materials that are needed for the study process realization and facilitates progressive transformation of learning activities in the mass school.

5. In total, there are about 250,000 information objects in the Collection that meet the basic requirements of the Federal Component of the State education standard for general and initial vocational education. Considering streamed-level and additional education, the figure will increase to 500,000 at the minimum. The number of information objects in the Collection should surpass by far the number of similar non-digital objects used in contemporary school.

6. School managerial software. As digital system for organization and support of the study process, 1C: Obrazovanie 4. Shkola, was developed and delivered to all schools in the ELSP pilot regions. The system is employed for the unification of all components of educational resources that are developed under ELSP. The system enables schools to use the resources developed by different producers in a single content control system, which significantly facilitates teacher training.

7. The software package 1C: ChronoGraf Shkola 2.5 was developed under ELSP and delivered to all Russian general education institutions within the framework of the “Education” National Priority Project.

8. The software package “ChronoGraf 3.0 Master” purchased under contract ELSP/A2/02/G/05/ICB was delivered to all general schools of the ELSP pilot regions and placed in the Unified Collection of Digital Educational Resources. Besides, it was delivered to all Russian general education institutions within the framework of the “Education” National Priority Project. This program is actively used for drawing timetables by the schools in the ELSP pilot regions where adequate training has been provided.

9. Mass distribution of these programs was fulfilled due to the efforts taken in order to embed software packages for the study process administration into school management practices (contract ELSP/B1/C/009-06) within the framework of subcomponent B1.

10. Informational tools for teaching activities. The system of informational tools for teaching activities was formed alongside works on forming the sample collection, sample analysis and sample purchase and/or development. As a result, tools for geometric construction, visualization of chronological information and genealogical tree operation, as well as a geoinformation system were developed and/or purchased (Table 3.6) and afterwards placed in the Collection. Also, to populate the Collection, two versions of a server operating system distributed under a free license were prepared.

11. A system of teaching and learning materials testing had been built and put into operation in the course of ELSP implementation. Testing (expert examination and TLM

testing in real studies) was carried out directly in schools (testing sites) and integrated into the process of TLM development, which made it possible to perfect the TLM being developed and improve their quality in the course of Project implementation.

Component B. Teacher training in the educational use of ICT

12. Formation of Educator's Basic Educational ICT-Competence. Following the competitions 22 regions participated in this work in different phases of the Project. Alternative programs and sets of modular instructional and methodological materials for 72 academic hours were developed to carry out this work. The materials were arranged in the form of a set (a manual including digital learning materials with attached methodological recommendations on the organization of studies), and also in the form convenient for their placement on the website of the organization responsible for training.

13. It was planned to train 60,000 persons in 22 regions in ICT-competence. Actually, 76,898 received training in the period from September 1, 2005 to May 31, 2008, that is, 128% of the planned figure. The target groups of trainees were composed of subject teachers, school managers, education administrators, and librarians. There were three forms of training: full-time, full-time/distance and external. All trainees who completed training were granted certificates of competence.

14. The analysis shows that conferences and workshops were the most popular forms of feedback (stated by 95% of the regions). Telephone consultations were also used widely (90%), as well as E-mail (90%) and Internet chats devoted to ICT introduction into school subject teaching (80%). Forty six conferences, 78 workshops, 24 competitions of projects, and 25 training sessions and master classes were held at the regional level in the 15 new regions of the Project.

15. Internet Support of Educator's Professional Growth. Nineteen competition winning organizations/educational institutions were awarded grants (Table 3.9). They worked out development plans and (a) updated their Internet sites where electronic libraries for teaching and learning materials in various subject domains were created; (b) opened Internet consulting agencies for teacher; (c) organized forums to discuss the experience and the results of educational initiative support within the ELSP framework.

16. One of the significant outcomes of the program was the wide discussion of Internet support to teachers and formation of distributed network professional teachers' communities held at the main Russian conferences ITO-2006 and ITO-2007. The discussion confirmed that the program was conducive to the involvement of a great many educators in active use of Internet technologies.

17. Training of New Teachers. 10 Higher teacher training institutions developed about 150 teaching modules and courses (about 150% of the planned figure) for training new teachers in the methods of DER use in their professional activity, as well as in the instructional design application for the study process organization in the ICT-environment.

18. During two academic years (2006/07 and 2007/08) more than 4500 students (future teachers) received training in effective uses of DER in school studies, as well as in instructional design (two times more than planned). In the course of training students

prepared methods aids (scenarios) for lessons with the use of DER, projects, their own DER, and portfolios. The best of these were displayed on the websites of their institutions.

19. The Laboratories of Digital Educational Resources and Instructional Design set up in all of the higher teachers training institutions greatly contributed to the success of the program

20. In course of ELSP preparation a gap between the high technological level of digital educational resources making by Russian developers and low pedagogical effectiveness of the developed materials. To eliminate this gap and encourage the systematic use of knowledge about effective teaching and learning (in particular, in ICT-environment) in the process of TLM design, development, assessment and use in Russian educational practices, the program “Development of the Instructional Design Potential” was included into the ELSP framework. However, the Strategic Committee of the Ministry of Education and Science of the Russian Federation decided to transfer these activities to the ELSP second phase.

21. In order to compensate for the delay and considering the importance of this program for attaining the desired ELSP outcomes in the area of new-generation TLM development, the NTF (1) had organized and conducted a series of 3 workshops on instructional design, each for 100 to 200 TLM developers-winners of relevant competitions and (2) provisions were made in the new teachers’ training program for the development and pilot testing in teacher training institutions of instructional design courses for future teachers using the materials created within the ELSP framework. The course syllabuses were developed and are now used in teacher training. A project for future teachers’ specialization in instructional design along various lines was drafted.

22. Internet-aided instruction of school students at the streamed level. Taking into consideration the traditional approach to streamed-level training, which is practiced in full-time streamed classes, it was decided to develop 3 different streamed e-learning systems. Therefore 3 Consultants firms selected on a competitive basis, carried on pilot streamed-level training of 10th- and 11th-grade students in 7 Project pilot regions during two years.

23. E-learning STLM were developed for training school students at the streamed level in 14 subjects: Russian, Literature, Foreign Language (English/German), Mathematics, Informatics, History, Social Science, Economics, Law, Geography, Biology, Physics, Chemistry and World Artistic Culture). A system of network teacher and curator training took shape: its structure and content have been defined and effective forms of training that combine full-time and distance training have been specified. Pilot training helped establish most stable models of basic and additional forms of teaching. Additional training of network teachers and curators was carried mostly via special workshops and special websites.

24. Development of educational institutions providing distance instruction to school students. The unique system of correspondence schools was one of the mechanisms compensating for the cultural and educational inequality of different Russian regions. The Project made it possible to reveal the most effective distance schools and to demonstrate their know-how to the educational community, teachers, students and parents. Support was given to the elaboration and realization of 19 development programs for educational

institutions engaged in distance instruction of school students. The following figures reflect the results attained under these programs.

- The technological infrastructure of the distance schools that received grants in support of their development was replenished with 21 servers, 7 mobile classrooms, 20 multimedia projection devices, 9 mini printing shops, 260 computers and various software programs.
- The number of students supplied with educational services through distance schools grew by more than 75%: **37,428** students (including **4,045** rural students) are taught presently by various distance school programs compared with 21,260 in 2004.
- The range of supplied educational services broadened and their quality improved. This happened due to the distance school TLM digitizing, development of new courses (more than 80 courses are being developed), and the use of the Internet to organize work with school students.
- Teaching by new TLM with the use of the Internet which were supplied by education managing bodies in compliance with the general (streamed-level) school programs began.

Component C. Setting up Interschool Resource Centers

25. The network of 239 RCC / IRC was built in 7 pilot regions with the purpose of forming an educational information environment for the Russian Federation regions so that to involve the greatest possible numbers of teachers and learners into informatization processes. All centers were equipped with ICT facilities (hardware and software), the IRC personnel was enlisted and trained.

26. All centers were equipped with hardware and software and connected to the Internet. Apart from computer and presentation facilities, active networking equipment, infrastructural software, antiviral software, and air conditioners for server rooms were purchased. All premises of the centers were repaired (financed from local budgets). All centers were supplied with initial content for their media libraries (instructional and methodological materials on 72 CDs).

27. An alternative in-service educator training program was developed at the federal level for all IRC. The teachers of educational institutions attached to IRC were trained by this program. Along with the ICT-competence program, IRC realized a number of other programs using, in particular, the modules developed in the regions. Those programs were aimed at mastering user skills in the context of professional activity; individual software products (by teachers); facilitator work and professional interaction with the use of telecommunication facilities; ICT application techniques as a resource of a particular pedagogical technology.

28. In total, **75,017** educators (137% of the planned figure), including those whose training was additionally financed by the region, took the IRC in-service training courses during Project implementation. The greatest number of trained educators was in Chelyabinsk oblast. There the number of educators whose training was additionally financed by the region was nearly equal to the number of those trained under the Project. In total, 24,217 educators were given IRC-based training.

29. By the time of ELSP completion, plans of the RCC-IRC system further development had been worked out in all Project pilot regions and approved by the Strategic Committee of the MOES. In most cases the plans envisaged changes in the organizational and legal status of a number of centers in order to maintain their steady activity after the Project completion.

30. The methodological assistance to school teachers and methods specialists of the educational institutions attached to IRC and work with school teams included:

- Regular methodological consultations to IRC facilitators and teachers of educational institutions attached to IRC, including organization of network consultations on the assets of the informational-methodological environment created under the Project;
- Expansion and maintenance of the regional repository of initiative pedagogical developments (as part of the Unified Collection of Digital Educational Resources);
- Organization of regular assistance to teachers and methods specialists of the educational institutions attached to IRC by providing available educational and technical resources, including provision of access to the Internet educational resources;
- Organization and conduct of workshops, master classes and conferences to promote pedagogical experience and educational initiatives in the area of ICT applications in studies;
- Organization of free access to the IRC media library and Internet educational resources for teachers and students of the educational institutions attached to IRC;
- Encouraging teachers' teams and individual initiative teachers of general and IVE schools attached to IRC to participate in competitions in support of educational initiatives in the area of ICT uses in studies (within the framework of regional competitions organized by RCC), and offering IRC technical resources for the realization of innovative projects within the competition framework.

31. Daily assistance to educators on various matters relating to ICT embedding into the study process was an important line of IRC activity. Face-to-face and distance (network) consultations were provided individually, frontally and by groups. IRC consultations can be grouped by the following topics:

32. Regional repositories were arranged in all the 7 Project pilot regions in 2007 as mirrors of the Unified Collection of Digital Educational Resources, and were integrated into the Collection. Each region had a special mechanism and regulations for the selection of resources developed by regional teachers and their storing in the regional repository (RR).

33. In the course of project implementation (2005 – 2008) RCC organized many competitions of educational initiatives in two areas (1) Support of educational initiatives of individual educators and educators' teams in the area of general and initial vocational education informatization; and (2) Support of initiative network projects presented by educational institutions and designed for widening the learners' access to

competitions and olympiads on the basis of ICT. Competitions were held twice a year, beginning from August 2005. Educational institutions, initiative educators' teams and/or individual teachers, authors of educational projects, took part in the competitions. Winners were financed under individual and/or collective agreements or agreements with educational institutions from RCC funds for advisory services.

34. The E-Learning Support Project reached a new level in 2006, when the competition for dissemination of project outcomes was announced. Target financing programs were launched in 22 regions along the following lines:

(A). Training of the regional and/or municipal education management personnel with the purpose of increasing education management efficiency using ICT (3 regions: Tver oblast, Kirov oblast and Sakha (Yakutia) Republic);

(B). Introduction of the state-of-the-art ICT into school management practices (11 regions);

(C). Introduction of the IRC model to support general education informatization (8 regions – Chuvash Republic, Khanty-Mansy Autonomous Okrug – Yugra, Republic Tatars tan, Moscow oblast, Yaroslavl oblast, Novosibirsk oblast, Astrakhan oblast, Togliatti town).

35. Active participation of RCC in all-Russian and international conference as well as regular publication of project materials also contributed to the propagation of Project achievement. In the period from the second part of 2007 to the first quarter of 2008 reports on the activities of regional IRC networks were presented at 28 forums. The list of major publications (books and brochures) issued during Project implementation is given in Annex 1 (YI R).

Project sustainability

1. Links with other federal projects.

- a. Joint activities under ELSP and the “Education” National Priority Project initiated by the Ministry of Education and Science proved to be productive. The delivery of workstations to school managers and the started delivery of outfit (computer, software and a peripheral unit) to teachers-winners in the “Education” project residing in the ELSP pilot regions have demonstrated the possibility of fruitful joining of efforts at the federal level within the frameworks of different projects
- b. The designs and plans of the “Education” National Priority Project and the Federal Target Program of Education Development were worked out after the ELSP design had been already agreed and approved. Naturally enough, many ELSP ideas found reflection in new projects and programs. However, the borrowings were made mostly on the level of documents as a rule, without being discussed for practical purposes by the Russian and international experts who developed the ELSP design. For this reason, far from all opportunities for constructive cooperation between ELSP and other federal projects and programs had been used.

- c. The analysis of cooperation between ELSP and other federal projects has shown that the jobs combined at the federal level had been performed more effectively in the regions. For example, the RCC-IRC facilitators were the main performers of jobs under the “Education” project in the regions.
2. Project outcomes coverage.
 - a. The consistent work on acquainting the broad educational community with the Project concept, design, progress and outcomes carried by ELSP participants was conducive to shaping a positive attitude to the Project countrywide and instrumental in the propagation of its attainments: the competition of the interested regions passed very actively. As was evident from practice, the support from the mass media was an important element of control over the Project and contributed to its success in the regions. As concerns the central TV, there the E-Learning Support Project was obscured by the “Education” National Priority Project. Meanwhile, the conventional means of informing the educational profession about the Project progress and outcomes were insufficient for gaining a desirable public response.
 - b. The interest in ELSP and its positive image in the public mind, which was evidenced from hundreds of thousands references to the Project in the Internet, demanded greater responsibility of Project participants in the regions for the quality and effectiveness of their work.
 3. Two phases of the E-Learning Support Project were planned initially. The first-phase developments make it possible to advance in the Russian school modernization, in particular
 - To put into practice the established system of new TLM development and testing;
 - To perfect and bring to the marketable condition the developments in the Internet-aided streamed-level instruction of school students;
 - To continue with the Unified Collection of Digital Educational Resources (its further build-up and opening services for parents, students, schools, and educators);
 - To expand support to the educational institutions providing distance instruction to school children and Internet support to educators;
 - To continue the renovation of teacher training methods based on ICT assets.

New tools have been created under ELSP, which have never existed in the Russian school, such as

 - tools to assess the ICT-competence of school students and teachers;
 - a cluster model of the school informatization process to assess progressive changes in schools and assist the school teams who work out and update school development (informatization) programs.

4. The completed E-Learning Support Project has created conditions for large-scale introduction of innovative teaching and learning materials developed within its framework which let attain new educational outcomes in an ICT environment.

Main ELSP publications

(List of books and CDs issued under the Project)

No.	Title
1.	Information Technologies in Education Management. CD in plastic envelope.
2.	Information Technologies in Education Management. Book & CD (Part 1). Ed. S.M. Avdeeva, M.Yu. Baryshnikova and A.A. Yelizarov. 168 pp.
3.	Information Technologies in Education Management. Book (Part 2). Ed. S.M. Avdeeva, M.Yu. Baryshnikova and A.A. Yelizarov. 208 pp.
4.	Information Technologies in Education Management. Upgrading Program and Methods. Book. Ed. S.M. Avdeeva, M.Yu. Baryshnikova and A.A. Yelizarov. 80 pp.
5.	Information Technologies in Subject Teacher's Activities. Book & CD (Part 1). Ed. A.K. Kapitanskaya and A.A. Yelizarov. 172 pp.
6.	Information Technologies in Subject Teacher's Activities. Book (Part 2). Ed. A.K. Kapitanskaya and A.A. Yelizarov. 196 pp.
7.	Information Technologies in Subject Teacher's Activities. Upgrading Program and Methods. Book. Ed. A.K. Kapitanskaya and A.A. Yelizarov. 44 pp.
8.	ELSP Interschool Resources Centers. Reference book. 280 pp.
9.	Interschool Resources Centers: Work Organization. Book & CD. By K.B. Vasilyev, S.K. Kovalenko, D.Yu. Stolyarov and M.S. Tsvetkova. 140 pp.
10.	Building a Model of School Informatization Process. Book. By G.M. Vodopyan and A.Yu. Uvarov. 424 pp.
11.	Dissemination of Innovative Teaching and Learning Materials. Book. By A.Yu. Uvarov and G.M. Vodopyan. Moscow: Universitetskaya Kniga, 2008, 175 pp.
12.	Digital Educational Resources in School: Application Methods. Elementary School. Instructional and methodological materials for teacher training institutions. Book. Moscow: Universitetskaya Kniga, 2008, 157 pp.
13.	Digital Educational Resources in School: Application Methods. Mathematics and Informatics. Instructional and methodological materials for teacher training institutions. Book. Moscow: Universitetskaya Kniga, 2008, 303 pp.
14.	Digital Educational Resources in School: Application Methods. Natural Science. Instructional and methodological materials for teacher training institutions. Book. Moscow: Universitetskaya Kniga, 2008, 478 pp.
15.	Digital Educational Resources in School: Application Methods. Philology. Instructional and methodological materials for teacher training institutions. Book. Moscow: Universitetskaya Kniga, 2008, 214 pp.
16.	Digital Educational Resources in School: Application Methods. Social Science. Instructional and methodological materials for teacher training institutions. Book. Moscow: Universitetskaya Kniga, 2008, 223 pp.
17.	Digital Educational Resources in School: Instructional Design. Instructional and methodological materials for teacher training institutions. Book. Moscow: Universitetskaya Kniga, 2008, 557 pp.
18.	Attitudes of Participants in the Education Process to Information and Communication Technologies.

	Book. By V.S. Sobkin and D.V. Adamchuk, 182 pp.
19.	Set 1: Collection of Russian Classical Music (From the Unified Collection of Digital Information Resources). 2 CD
20.	Set 2: Collection of Russian Classical Music (From the Unified Collection of Digital Information Resources). 2 CD
21.	Set 3: Collection of Russian Classical Music (From the Unified Collection of Digital Information Resources). 2 CD

ANNEX 8. COMMENTS OF COFINANCIERS AND OTHER PARTNERS/STAKEHOLDERS

Not Applicable

ANNEX 9. LIST OF SUPPORTING DOCUMENTS

Bank-related documents:

1. Project Concept Document (PCN), April 25, 2002
2. Minutes from the Quality Enhancement Review, June 17, 2002
3. Minutes from the Project Concept Review Meeting, June 27, 2002
4. Minutes from the Decision Package Review Meeting, March 17, 2003
5. Summary of Technical Discussions and Negotiations, December 22, 2003
6. Project Appraisal Document, January 20, 2004
7. Loan Agreement, December 7, 2004
8. Supplemental Letter to the Loan Agreement, December 3, 2004
9. Amendment to the Loan Agreement, April 14, 2008
10. Implementation Supervision and Results Reports (04/07/2004 through 07/26/2008)
11. Aide Memoires from Project-related Missions (April 2002 through February 2007)
12. Audit Reports (2005 through 2008 (draft))
13. Financial Monitoring Reports (3rd quarter of 2006 through 1st quarter of 2008)
14. ECA Quality Review of ISR, June 11, 2007

Instruments used for monitoring and evaluation purposes:

1. School ICT Test (April 2006-April 2008)
2. ICT Competence Test Report (April 2006-April 2008)
3. Social Survey of School Assessment of ICT Use (April 2006 and April 2008)
4. Training Effectiveness Survey (March 2008)

Documents produced by Project Implementation Unit:

1. Attitude of Education Process Participants toward Information and Communication Technologies, 2006
2. ELSP Mid-Term Review: Years 2005-2006, 2007
3. Digital Educational Resources in School: Use and Methods, 2008
4. Knowledge Society and School. Learning and Methodic Materials for Skills Development Course, 2008
5. New Generation Learning Materials: The ELSP Experience, 2008
6. Monitoring of Social Consequences of ICT Introduction: What has changed in schools in the last 3 years? 2008
7. Regional Education System Informatization: Organization and Methodic Support, 2008
8. ELSP Final Review: 2005-2008, 2008

Other Background Documents:

1. Reforming Education in the Regions of Russia", Canning, Moock & Heleniak, World Bank Technical Paper No.457, December 1999
2. Russian Federation: E-Learning Policy to Transform Russian Schools", World Bank, Report No.25893-RU, April 29, 2003
3. "The Modernization of Education in Russia: Outstanding Issues", World Bank, Policy Note, August 2004.

This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.



RUSSIAN FEDERATION

- OBLAST CENTERS
- ⊙ NATIONAL CAPITAL
- RIVERS
- MAIN ROADS
- RAILROADS
- OBLAST, KRAI OR REPUBLIC BOUNDARIES
- - - AUTONOMOUS OBLAST, OKRUG OR REPUBLIC BOUNDARIES
- · - INTERNATIONAL BOUNDARIES

