



Validation Report

Reference Number: PVR-261
Project Number: 37698
Loan Number: 2191
December 2013

Uzbekistan: Information and Communications Technology in Basic Education Project

Independent Evaluation Department
Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
CLS	–	cluster leader schools
ESDP	–	Education Sector Development Program
ICT	–	information and communications technology
IED	–	Independent Evaluation Department
MOPE	–	Ministry of Public Education
PCR	–	project completion report
PIU	–	project implementation unit
PSC	–	project steering committee
RITTI	–	Regional In-service Teacher Training Institute
RRP	–	report and recommendation of the President

NOTE

In this report, “\$” refers to US dollars.

Key Words

adb, asian development bank, basic education, cluster leader schools, curriculum reform, ict, ict applications, independent evaluation department, information and communications technology, project completion report, project evaluation, project validation, teacher training, uzbekistan

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PROJECT BASIC DATA

Project Number:	37698	PCR Circulation Date:	Nov 2012	
Loan Number:	2191	PCR Validation Date:	Dec 2013	
Project Name:	Information and Communications Technology in Basic Education Project			
Country:	Uzbekistan		Approved (\$ million)	Actual (\$ million)
Sector:	Education	Total Project Costs:	43.00	25.04
ADB Financing: (\$ million)	ADF: 30.00	Loan: (SDR equivalent, million)	30.00	19.85
		Borrower:	20.40	12.75
	OCR: 0.00	Beneficiaries:	13.00	5.20
		Others:	0.00	0.00
Cofinancier:		Total Cofinancing:	0.00	0.00
Approval Date:	27 Oct 2005	Effectiveness Date:	90 days from loan signing	22 Jun 2006
Signing Date:	9 Nov 2005	Closing Date:	30 Jun 2011	31 Dec 2011
Project Officers:	L. Wu M. Prina B. Gafurov	Location: ADB headquarters ADB headquarters URM	From: Oct 2005	To: Apr 2006
			May 2006	Jan 2007
			Mar 2007	Dec 2011
Validator:	K. Hardjanti, Consultant	Peer Reviewer:	H. Son, Principal Evaluation Specialist, IED1	
Quality Reviewer:	C. Kim, Principal Evaluation Specialist, IED2	Director:	W. Kolkma, IED1	

ADB = Asian Development Bank, ADF = Asian Development Fund, IED1 = Independent Evaluation Department, Division 1, IED2 = Independent Evaluation Department, Division 2, OCR = ordinary capital resources, PCR = project completion report, SDR = special drawing rights, URM = Uzbekistan Resident Mission.

I. PROJECT DESCRIPTION

A. Rationale

1. In 2002, the government prepared a national strategy for information and communications technology (ICT) development that identified education as a priority sector for ICT implementation. The Asian Development Bank (ADB) assisted the government in preparing the ICT strategy, which was deemed to offer potentially multiple gains to the country. In education, benefits included (i) enhancing the quality of education, and (ii) improving access to education for children from poor families and in remote areas. In 2004, the government approved the National Program for Basic Education Development for 2004–2009. Within this framework, the government launched an ambitious program to integrate ICT in basic education nationwide.

2. The government requested assistance from ADB in upgrading the basic education system to minimize the gap between rural and urban schools. ADB support for the National Program for Basic Education Development focused on improving the quality, relevance, and access to education; and enhancing the national capacity to manage sector reforms. ADB also

supported basic education in terms of curriculum reform, textbook provision, teacher training, and library development. ADB had been engaged in the education sector of Uzbekistan since the 1990s, and had already approved funding for five projects earlier. As such, ADB was fully familiar with the education sector in the country and the government's mode of operations in Uzbekistan.

B. Expected Impact

3. It was envisaged in the report and recommendation of the President (RRP)¹ that the project would improve the quality, relevance, and equitable access to basic education for all students, including students from poor families and remote areas.

C. Objectives or Expected Outcomes

4. In addition to gaining familiarity with computer applications in general, the project was expected to improve the learning outcomes of students through ICT use in priority subject areas (such as mathematics, biology, physics, chemistry, and languages) for grades 5–9 in schools covered by the project, and with a pro-poor focus.

D. Components and Outputs

5. Outputs of the project were categorized into four components: (i) establishing operational school clusters for ICT, covering all schools in Uzbekistan and equipping 860 cluster leader schools (CLSs) with ICT and internet connectivity; (ii) training teachers and staff in ICT applications in priority subjects; (iii) developing learning materials for ICT; and (iv) capacity building and management support to enhance project sustainability and future ICT development with a pro-poor focus. As planned, the first component accounted for 75% of the base cost, while the second (9.0%), third (5.8%), and fourth (7.4%) components had relatively minor shares.

E. Provision of Inputs

6. At appraisal, the project's total cost was estimated at \$43.0 million equivalent; including physical and price contingencies, taxes and duties, interest, and other charges. Of the total cost, \$26.1 million (61%) comprised the foreign exchange cost, and \$16.9 million equivalent (39%) comprised the local currency cost. The project's actual total cost was \$25.0 million. ADB financed \$19.9 million², while the rest was financed by the government.

F. Implementation Arrangements

7. The Ministry of Public Education (MOPE) was the executing agency. The project steering committee (PSC) was integrated with the PSCs of two other ongoing ADB projects with MOPE—the Education Sector Development Program and the Second Textbook Development Project—at that time. Members of the PSCs were representatives of the Cabinet of Ministers, MOPE, and Ministry of Finance. Combining PSCs was expected to reduce transaction costs, generate synergy, and yield implementation efficiencies.

¹ ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of Uzbekistan for Information and Communications Technology in Basic Education Project*. Manila.

² When PCR was submitted to the Board, the final amount of loan utilization was \$19.9 million, and loan account was still open. Upon liquidation of Impress Account advance, and closing of loan account, the final amount of loan utilization was \$20.03 million

8. The project implementation unit (PIU), coordinated by a project manager, was responsible for daily project management, including procurement and recruitment, staff development, finance and accounting, and monitoring and evaluation. The PIU also prepared detailed project implementation plans, and annual and quarterly progress reports for submission to the PSC, the project director, and ADB.

9. In general, the implementation arrangements were adequate to deliver project outcome and outputs. During implementation, the government made periodical changes in project scope and implementation arrangements to achieve economies of scale and to enhance project performance. Among these changes were (i) to review e-readiness of CLSs, national experts were used instead of the planned international consultants; (ii) to improve administration and disbursement, project management was divided into two subcategories; (iii) the reallocation of funds for the procurement of additional school furniture for 860 CLSs, and partial loan cancellation of \$4.7 million; and (iv) approval to procure ICT equipment for an additional 150 CLSs out of loan savings.

10. At the start of project implementation, setting up the PIU took a long time. It took 8 months for MOPE to agree with other government agencies on the allocation of additional staff. MOPE also took time to make staff selection that would be acceptable to ADB. These delays were worsened during implementation by high staff turnover due to low salaries. On average, the PIU staff stayed for only 12–18 months. This created difficulties and delayed project implementation.

11. The PSC (a high-level body) did not meet regularly. More frequent meetings would have provided better implementation guidance and timely resolution of issues. In 2009, the government established an interministerial council, which improved monitoring of project implementation. Since the PSC consisted of high-level officials, some of the project-related issues were not brought up by the PIU for the consideration of this steering committee.

12. At the end, despite a short extension, only 67% of the original ADB loan amount was used. Reasons for the underutilization included (i) the MOPE's decision not to implement pilot projects or use the overseas study tours and contingencies allocation, hence, \$4.7 million was cancelled from the loan; (ii) \$2.6 million was saved from the procurement of equipment; (iii) \$1.3 million allocated for e-materials, consumables, and project management was not used; and (iv) \$1.5 million allocated for consulting services was not used. The project completion report (PCR) noted that some project cost estimates were not realistic. Of the 23 covenants, two covenants were not complied with and another four were partially met.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

13. The PCR rated the project's relevance of design and formulation *relevant*.³ It noted that the project was consistent with the government's strategy on long-term ICT development, and its role in basic education. It was also consistent with ADB Country Strategy and Program Update, 2004–2006 and Country Strategy and Program, 2006–2010; particularly in mitigating

³ ADB. 2012. *Completion Report: Information and Communications Technology in Basic Education Project in Uzbekistan*. Manila.

the social costs of transition and in promoting human development.⁴ The project supported the needs for equipment, training, e-materials, and consultancy. It enhanced access to and awareness of ICT across schools nationwide, especially in the poor, remote, and rural areas. More importantly, the project complemented the other ADB interventions in basic education. It also supported the role of ADB and that of other development partners in assisting the country in implementing education sector reforms.

14. This validation finds that the project was generally well designed. Its emphasis on identifying CLS as a modality was simple and yet robust. The project design included innovative and value-adding features. Relevance of the school cluster-based training model increased further as Uzbekistan moved toward providing computer classrooms not only in CLSs but in all secondary schools nationwide. The government was fully on board with components 1 and 2 as designed. However, the government's buy-in on the project design was only partial. Components 3 and 4 were either below target or unreached, and were not prioritized. Many deviations seemed to be rooted in procedural issues and time slippages. The PCR noted that similar issues were earlier encountered in other ADB projects, known as "portfolio-wide issues." This validation also rates the project design and its formulation *relevant*.

B. Effectiveness in Achieving Project Outcomes

15. The PCR rated the project *effective*. This assessment was mainly based on attaining the expected outcomes of components 1 and 2, such as (i) exceeding the target for ICT use in project-supported schools from zero in 2005 to a minimum of 5.0 hours per week (from a target of 2.5 hours per week), and (ii) the number of teachers as advanced ICT users increased from 3% before training to 13% after training. At project completion, all schools had equitable access to ICT. The share of CLSs located in rural and poor areas (88%) exceeded the original target (70%). The average level of knowledge was 81.5% (mathematics, 88.8%; chemistry, 80.9%; language, 74.6%; and physics, 82.7%) against the baseline of 71.4% in 2005.

16. Notably, improved learning outcomes through the use of ICT in priority subjects were secured despite less effective outputs in the development of materials and support services as envisaged under components 3 and 4. Teachers now use ICT facilities for enhancing their skills in preparing teaching materials, apply ICT in teaching, and display strong motivation to improve the teaching–learning process. The CLSs supported the delivery of e-learning materials and decentralized training for teachers. Teachers trained in priority subjects in the regional in-service teacher training institutes (RITTIs) provided training for specialists in cluster schools, who in turn provided training for teachers in their own schools.

17. The project directly benefited 45,275 teachers (including 31,600 female teachers) and 535,500 students in CLSs annually, providing equal access to ICT for girls and boys. With government support, the project was able to improve the ICT skills of most teachers, including female teachers, thus contributing to women's empowerment. E-books and teacher-generated teaching–learning materials were assessed as useful and effective. The sharing of the materials developed by teachers at cluster and district levels with other schools contributed to improved learning outcomes. Despite the fact that outputs and outcomes of components 3 and 4 were not fully achieved, the project succeeded in achieving its objective in the core component. Therefore, this validation also rates the project *effective*.

⁴ ADB. 2004. *Country Strategy and Program Update: Uzbekistan, 2004–2006*. Manila; ADB. 2006. *Country Strategy and Program: Uzbekistan, 2006–2010*. Manila

C. Efficiency of Resource Use in Achieving Outputs and Outcomes

18. The PCR assessed the project to be *less efficient*. The CLS model was generally efficient and positive as it provided decentralized and cascading teacher training to 860 school clusters. Students and teachers benefited from access to computers and multimedia devices, which motivated teaching–learning process and increased the students’ possibilities for enhanced employment opportunities. However, a number of inefficiencies surfaced during implementation. The project experienced delays and had significant amounts of undisbursed loan resources. The expected outputs for components 1 and 2 were mostly achieved or exceeded project targets, but those of components 3 and 4 were only partially achieved.

19. The project developed only 16 e-materials (13% of the target) due to delay in engaging consultants. The government decided to use the Center for Development of Multimedia Education Programs, which undertook only a part of the project’s materials development role, and the resources were not allocated to other components or were cancelled. In total, only \$19.9 million or 67% of the original loan amount was disbursed. There was also delay in recruiting international consultants for monitoring and evaluation. Hence, MOPE and the PIU were not able to conduct a proper and structured evaluation of the project. The PCR noted that some cost estimates were not realistic. For example, the cost of physical repairs and converting a regular school classroom into a computer classroom was underestimated. Likewise, estimates of the cost of furniture for computer classrooms were low.

20. It is understood that some of these delays and changes could have been avoided if the project had greater management attention from the PSC. Some of the slippages were not necessarily directed against the project per se. Often, these were procedural delays. This validation also rates the project *less than efficient*.

D. Preliminary Assessment of Sustainability

21. The PCR rated the project *likely sustainable*. There is strong commitment from the government to support the further development of ICT in the country. The sector and the project facilities would be financed by the national budget and off-budget funds under the Ministry of Finance, for operating costs and eventual replacement costs. Development partners were also supporting investments in the sector. The People’s Republic of China and the Republic of Korea extended a loan each with a combined value of \$50 million for ICT equipment.

22. Within basic education, sustained improvement in teaching–learning outcomes is expected from (i) the teacher training, (ii) the use of CLSs developed under the project, (iii) the development and dissemination of curricular materials by the Center for Development of Multimedia Education Programs, and (iv) greater teacher access to new materials through the Ziyonet network. More importantly, teachers in Uzbekistan continued to display greater enthusiasm in using ICT in schools.

23. After project completion, the government continued providing annually 72-hour advanced training for all teachers that use the computer classrooms in 7,534 schools, and engaging RITTIIs and CLS staff trainers. This network of trainers was expected to deliver cost-effective training closer to schools across Uzbekistan. The government assured that by 2014, all schools will have modern computer classrooms. However, benefits will be better sustained if access to internet with increased broadband width connectivity could be given to teachers and students. It is important that schools should have predictable power supply with only short and

scheduled outages. Based on the above, this validation also considers the project *likely sustainable*.

E. Impact

24. The PCR indicated that the intended project impact could only be determined by 2016, as it was too early to do so at project completion. Nevertheless, it was noted that 88% of all CLSs were located in rural and remote areas; which contributed to enhancing inclusive growth opportunities, reduction of rural–urban divide, and increased chances of better education and employment opportunities for rural youth. Also, the CLS model linked the center with regions and schools for cost-effective teacher training programs. It also addressed the needs of female teachers by bringing their training closer to schools where they work. With these considerations, and the combined successful achievement of outcomes (for components 1 and 2) and sustainability, this validation rates the impact likely to be *significant*.

III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agency

25. The PCR rated the overall performance of the borrower and the executing agency (MOPE) *satisfactory*. This rating was based on the following: (i) timely support to the project and the availability of counterpart financing, (ii) the project formed an important part of the government's ICT development strategy for education, (iii) the acceptance of a common approach in preparing and reviewing schools' e-readiness resulted in better access to ICT, and (iv) the commitment to upgrade teacher qualifications contributed to effective training through RITTIs and at CLSs. Clear directions from MOPE ensured that district education departments met their obligations to enable the project to pursue its objectives. MOPE succeeded in coordinating with other ongoing projects and avoiding duplication. It continues to implement distance teacher training initiatives under the Education Sector Development Program, which provided computer classrooms in 5,461 schools using other funding. These enabled MOPE to achieve 77% ICT coverage of secondary schools, expand training to teachers in ICT applications, and provide a wide range of electronic learning materials.

26. However, the project also experienced some downsides; such as delays in setting up the PIU, frequent changes in PIU staff, and lack of capacity to retain the members that adversely impacted the project, and inability of the executing agency to closely monitor project implementation. This validation also rates the performance of the borrower and the executing agency *satisfactory*.

B. Performance of the Asian Development Bank

27. The PCR rated the performance of ADB *satisfactory*. During project implementation, ADB demonstrated continued strong support and provided consistent guidance to the project. ADB was flexible when changes were needed to expedite the pace of implementation. During the project life, ADB undertook seven loan review missions and one PCR mission with a total amount of 157 person days. However, the midterm review was delayed and fielded only in January 2010, or more than 4 years after the Board approval. An earlier fielding of midterm review could have detected some of the implementation issues in time and hopefully fixed them. ADB did not succeed in upgrading PIUs' performance, particularly in their capacity for monitoring and evaluation, which was expected to be financed 100% by ADB. This validation rates the overall performance of ADB *satisfactory*.

C. Others

28. The government ensured that minor civil works for the rehabilitation of CLS did not have any negative environmental impact nor involved any land acquisition or resettlement. The project also benefited the population in rural and remote areas; and with government support, contributed to women empowerment through the improvement of ICT skills among teachers, the majority of whom were women.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

29. Overall, the PCR gave the project a *successful* rating, which was based on the following: (i) the project made a major contribution in supporting the government's commitment to improve the quality of teaching and learning outcomes; (ii) the introduction of CLSs has made decentralized teacher training in the country (from originally centralized) possible, and has improved the quality of education through using ICT; (iii) the continuous professional development concept through self-help, regular training, local staff upgrading, and collaboration between schools and teachers within a cluster had been widely accepted as crucial for developing the education system in Uzbekistan; and (iv) the project made good use of resources for developing ICT in basic education.

30. This validation, however, notes that although the predominant components were implemented successfully, components 3 and 4 were implemented only partially. This brings the assessment closer to the borderline, although, as per this validation, it remains *successful* (see table).

Overall Ratings

Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Relevant	Relevant	
Effectiveness in achieving outcome	Effective	Effective	
Efficiency in achieving outcome and outputs	Less efficient	Less than efficient	
Preliminary assessment of sustainability	Likely sustainable	Likely sustainable	
Overall assessment	Successful	Successful	
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Impact	Not rated	Significant	Based on the achievement of outcomes for components 1 and 2, and the project's sustainability (para. 24).
Quality of PCR		Satisfactory	Refer to para. 35.

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report.

Note: From May 2012, IED views the PCR's rating terminology of "partly" or "less" as equivalent to "less than" and uses this terminology for its own rating categories to improve clarity.

Source: ADB Independent Evaluation Department.

B. Lessons

31. The PCR identified four lessons to which this validation agrees with. These lessons pointed out that (i) the CLS model with decentralized training cascade is an effective model for continuous professional development training; (ii) e-learning is for both teachers and students and requires new pedagogical skills, which is an important transition from teacher-centered to student-centered pedagogy; (iii) smooth implementation and efficient procurement and consultant engagement could have been improved if there was an in-depth assessment of the procurement capacity of the PIU and the executing agency; and (iv) without timely monitoring and evaluation, an opportunity to demonstrate improved sector performance was missed.

32. This validation offers two additional lessons. First, the project design should have focused primarily on components 1 and 2, and only those parts of components 3 and 4 that were doable, by taking into account the capacity of the executing agency in implementing these components. A more accurate assessment of its capacity should have been conducted at project preparation stage. Second, the project's main objective is to improve the quality, relevance, and equitable access to basic education in Uzbekistan by using ICT. However, the RRP and the PCR had limited discussions on this main objective, presumably because the project was being implemented alongside other projects in the education sector. Notwithstanding, achieving an enhanced access and higher quality of basic education was an essential accomplishment of the project that should have been highlighted.

C. Recommendations for Follow-Up

33. The PCR stated a number of recommendations that related to (i) beneficiary ownership of the project, (ii) future monitoring, (iii) covenants, (iv) future actions for follow-up, and (v) the suggestion that project performance evaluation be conducted in 2016.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Evaluation Design, Implementation, and Utilization

34. Monitoring and evaluation design was included in the design and monitoring framework (Appendix 1 of both the RRP and PCR). However, there were some downsides in the project's monitoring and evaluation, as the PIU took a much longer time to establish, and the recruitment of consultants was also delayed. The PCR noted that some project cost estimations were not realistic, which shows the weakness in project preparatory work. The implementation of some project subcomponents experienced delays and some were cancelled, especially in components 3 and 4.

B. Comments on Project Completion Report Quality

35. In evaluating the project's performance, the PCR was comprehensive and detailed. It followed the PCR guidelines and provided qualitative and quantitative data. It included a thorough analysis of components 1 and 2; and presented the achievements, overachievements, successes, and issues or difficulties in reaching intended targets. For components 3 and 4, the PCR did not provide sufficient analysis of the underachievement. Such analysis would have been instructive in learning what to avoid, what to prevent, or what to prepare for future project designs. The PCR also thoroughly examined and rated the performances of ADB, the borrower, and the executing agency. This validation rates the PCR quality *satisfactory*.

C. Data Sources for Validation

36. Data sources for this PCR validation were mainly the PCR, RRP, back-to-office reports dated 8 March 2007 and 3 February 2010, and aide memoire of the midterm review mission dated 23 January 2010.

D. Recommendation for Independent Evaluation Department Follow-Up

37. None.