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IMPLEMENTATION COMPLETION AND RESULTS REPORT

ON A GRANT

IN THE AMOUNT OF US$12.7 MILLION

to the Ministry of Finance of The Kyrgyz Republic

FOR THE KYRGYZ GLOBAL PARTNERSHIP FOR EDUCATION (GPE) - 3

December 10, 2018

Education Global Practice
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {Nov 14, 2018})

Currency Unit =	Kyrgyz Som (KGS)
KGS 0.014 =	US$1
US$1 =	KGS 69.59

FISCAL YEAR
July 1 - June 30

Regional Vice President:	Cyril E Muller
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ABBREVIATIONS AND ACRONYMS

CbK	Community-Based Kindergarten
CLASS	Classroom Assessment Scoring System
CPS	Country Partnership Strategy
CPF	Country Partnership Framework
EAP	Education Action Plan
ECE	Early Childhood Education
EDI	Early Development Instrument
EGRA	Early Grade Reading Assessment
ELDS	Early Learning Development Standard
EMF	Environmental Management Framework
EMP	Environmental Management Plan
FTI	Fast Track Initiative
GDP	Gross Domestic Product
GPE	Global Partnership for Education
KEEP	Kyrgyz Early Learning Project
MoES	Ministry of Education and Science
M&E	Monitoring and Evaluation
MTEDP	Mid-term Education Development Program
NSDS	National Sustainable Development Strategy
OECD	Organisation for Economic Co-operation and Development
PAD	Program Appraisal Document
PDO	Project Development Objective
PCF	Per Capita Financing
PISA	Programme for International Student Assessment
SCD	Systematic Country Diagnostic
SEN	Special Educational Needs
TLM	Teaching and Learning Materials

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P132490	Kyrgyz Global Partnership for Education (GPE) - 3
Country	**Financing Instrument**
Kyrgyz Republic	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
Ministry of Finance	Ministry of Education and Science of the Kyrgyz Republic

Project Development Objective (PDO)

Original PDO

The proposed Project’s objective is to increase equitable access to pre-school education, and to establish conditions for improvingits quality.

FINANCING

	Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing			
TF-16209	4,700,000	4,700,000	4,700,000
TF-16201	8,000,000	8,000,000	7,999,459
TF-A4531	100,000	100,000	100,000
Total	**12,800,000**	**12,800,000**	**12,799,459**
Non-World Bank Financing			
Borrower	3,570,000	0	0
Total	**3,570,000**	**0**	**0**
Total Project Cost	**16,370,000**	**12,800,000**	**12,799,459**

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
02-Apr-2014	07-Aug-2014	12-Oct-2016	31-Dec-2017	30-Jun-2018

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions
27-Sep-2016	8.24	Change in Loan Closing Date(s)

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Highly Satisfactory	Satisfactory	High

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	24-Oct-2014	Satisfactory	Satisfactory	1.90
02	24-Apr-2015	Satisfactory	Moderately Satisfactory	1.90
03	28-Oct-2015	Satisfactory	Satisfactory	4.56
04	27-Apr-2016	Satisfactory	Satisfactory	7.33
05	03-Nov-2016	Satisfactory	Satisfactory	8.24
06	06-May-2017	Satisfactory	Satisfactory	9.31
07	12-Nov-2017	Satisfactory	Satisfactory	11.32
08	28-Apr-2018	Satisfactory	Satisfactory	12.57

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Education	**100**
Early Childhood Education	94
Public Administration - Education	6

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Human Development and Gender	**100**
Education	100
Access to Education	50
Education Financing	50

ADM STAFF

Role	At Approval	At ICR
Regional Vice President:	Laura Tuck	Cyril E Muller

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. **Country context**. The Kyrgyz Republic is a landlocked, mountainous country with a total population of 6 million. About one-third of the population are children under the age of 15. Since the collapse of the Soviet Union in 1991, the Kyrgyz Republic has experienced economic and political turbulence. The first elected President of the Kyrgyz Republic was forcibly removed from office in 2005 following a disputed reelection; in April 2010, anti-government demonstrations took place against the centralized power within the presidency, culminating in the President's removal from office and the formation of an interim government led by a coalition of political and civic leaders from the opposition. Social tensions climaxed into violent clashes in the south of the country, leading to hundreds of deaths and large-scale internal displacement. The conflict also resulted in extensive destruction of public and private property, especially housing, and negatively affected the investment climate. The presidential elections took place in October 2011, but the government was dissolved in August 2012, and a new government was formed in September 2012. Years of political tumult added to the economic and financial pressures that the Kyrgyz Republic had already experienced following the global downturn. As a result, growth slowed down; the disparities between the regions—the primary cause of social unrest—widened. The poverty rate increased from 32 percent in 2008 to 37 percent in 2011, mostly due to the social unrest of 2010 and inflation. Despite the political challenges and vulnerabilities to external economic shocks, the country managed to keep its gross domestic product (GDP) growth at a stable 4.5 percent per year,[1] and in 2014 was reclassified as a low-middle-income country.

2. **Sector context**. The educational system of the Kyrgyz Republic has five levels, but only general basic education, which covers Grades 1 to 9, is compulsory. After that, students have a choice of either completing their general secondary program through Grades 10 –11, attending technical or vocational school, or entering the labor market.

3. Despite the high levels of adult literacy after the collapse of the Soviet Union, the Kyrgyz Republic has experienced a visible decline in the quality of learning. The National Student Assessments of 2009[2] showed that approximately two-thirds of Grade 4 students did not master the essentials in mother tongue, mathematics, and science, and by Grade 8, the proportion was greater than three-quarters. Furthermore, results obtained from the Programme for International Student Assessment (PISA)[3] of the Organisation for Economic Co-operation and Development (OECD) revealed that, while Kyrgyz students' performance improved between 2006 and 2009, 82 percent of 15-year-olds still were considered 'functionally illiterate', lagging about four and a half grade levels behind the OECD average.

4. The pre-primary sector of education had suffered the most after the collapse of the Soviet Union, and the financial consequences resulted in the closing of 70 percent of preschools, especially in rural areas, as well

[1] Kyrgyz Republic Systematic Country Diagnostic (SCD) 2018 (P159162).
[2] Kyrgyz GPE-KEEP PAD 2014.
[3] PISA 2009

as a 75 percent reduction in the number of preschool students in the system.[4] Although the number of preschool institutions slowly increased over the following 10 years, the coverage was still roughly half the level experienced before the collapse. In 1990, overall, 34 percent of children ages 3–6 years were enrolled in preschool education compared to 18 percent in 2010. While the rural population in the Kyrgyz Republic constitutes roughly two-thirds of the total population, only one-third of children enrolled in preschool institutions are in rural areas. Inequality is exacerbated as state kindergartens served the interests of the better-off families with 50 percent of children enrolled from the richest 20 percent, while only 10 percent of the poorest 20 percent of the population could afford to send their child to a preschool[5].

5. The most common form of preschool education up until 2011 was a full-day kindergarten, which operated as a combination of education and daycare facility with four hours allocated for play/instructional time and four hours for rest and meals. Stand-alone kindergartens would normally provide three meals a day and have separate sleeping and learning/playing spaces while only covering a small proportion of children ages 3-6 (only 17 percent in 2010[6]). The expenditures for preschool education, even with its limited coverage, had almost tripled between 2005 and 2010 (US$6.2 and US$15.2 respectively). The average yearly cost per child for preschool was nearly three times as high as the average cost per child for primary and secondary education. Over the few years before appraisal, access to alternative forms of preschool had expanded. With support from international agencies, community-based kindergartens (CbKs) were introduced, which offered educational services on a half-day basis while enrolling more children. The number of children ages 3–6 years enrolled in CbKs increased from 2,050 in 2006 to more than 7,000 in 2010. These types of kindergartens were less expensive because they operated on a half-day basis, did not offer sleeping and full kitchen facilities as in traditional state kindergartens, and had few or no non-teaching support staff. Demand for such facilities continued to increase, particularly in light of scarce public resources to cover full-day kindergarten services.

6. In 2011, with the technical and financial support from the World Bank's second grant under the Fast Track Initiative (FTI-II), the Ministry of Education and Science (MoES) introduced the 240-hour school preparation program, which focused on increasing school readiness, and operated over 3–4 months in spring and summer. The response from the public was unprecedented—the coverage increased from 44 percent in 2011 to 62 percent in 2012, the increase being particularly commendable in rural areas. Following up on the results of FTI-II, the ongoing active dialogue with the key stakeholders, and the increasing massive demand at the local level, the Government decided to introduce a full-year preparation program starting in 2014–15. The school system had sufficient physical capacity (with some exceptions in Bishkek) to accommodate the increased use of school premises, but the major problems of the preschool education still remained: outdated teaching and learning materials (TLMs), poor alignment with the curriculum of the primary education, and poor training available for teachers.

7. Children with special educational needs (SEN) were not well served by the preschool system. According to the MoES, there were 14 special kindergartens at appraisal, enrolling 1,556 children with special needs. Two-thirds of these special kindergartens were located in the capital of Bishkek. The regular pre-primary educational programs had little or no capacity to cater to children with SEN: teachers had very limited knowledge and skills to create an inclusive environment; parents and schools were unaware of screening and

[4] Kyrgyz GPE-KEEP PAD 2014.
[5] World Bank Saber Country Report 2013
[6] HBS 2010

referral services, which also lacked capacity. As a result, many children with SEN were either homeschooled, received no special attention at regular kindergartens (if enrolled), or received no formal education at all.

8. The Government of the Kyrgyz Republic recognized the importance of ECE and identified it as one of the core areas of the country's Education Action Plan (EAP) for 2012–2020. Universal coverage of school preparation programs and the expansion of pre-primary schooling were also embedded in the Law on Preschool Education adopted in June 2009, which set forth the goal of providing affordable, high-quality, and financially sustainable services.

9. **Rationale for World Bank support.** The Government's EAP for 2012–2020 and the National Sustainable Development Strategy (NSDS) for 2012–2014 were the key guiding documents for the World Bank's engagement. Both the EAP and NSDS stressed the need to expand the duration and coverage of the school preparation program, to increase access to lower-cost models of preschool education for children ages 4–5, to develop models with the private sector and for parents to share financing of preschool education, and to aim for more inclusivity in preschool. The Country Partnership Strategy (CPS) for 2014–2017 (Report #78500KG) was under preparation at appraisal, and one of the main goals was to promote more efficient public service delivery as a precondition for effective human capital formation. The project was also aligned with the World Bank Education Strategy 2020 'Learning for All.'

Theory of Change (Results Chain)

10. International evidence suggests that early intervention aimed at developing cognitive, physical, behavioral, and language skills helps promote greater equality when children enter primary education.[7] It also suggests that targeted ECE programs particularly benefit the most disadvantaged children. Parents' positive involvement in early childhood is equally important in helping children develop their cognitive and social and emotional skills. Finally, the PISA report (2009) confirms that the way teachers interact in classrooms and the quality of learning materials are both critical to ensure school readiness of pre-primary students. With this in mind, the project's main objective was aimed at maximizing equal coverage by the ECE program and establishing conditions for its improved quality while at the same time using more cost-efficient approaches for delivery, targeting most disadvantaged groups, promoting communication and advocacy outreach activities for increased parental engagement, focusing on quality of teacher training and teaching and learning materials (TLMs) and initiating system reforms through a revised legal framework.

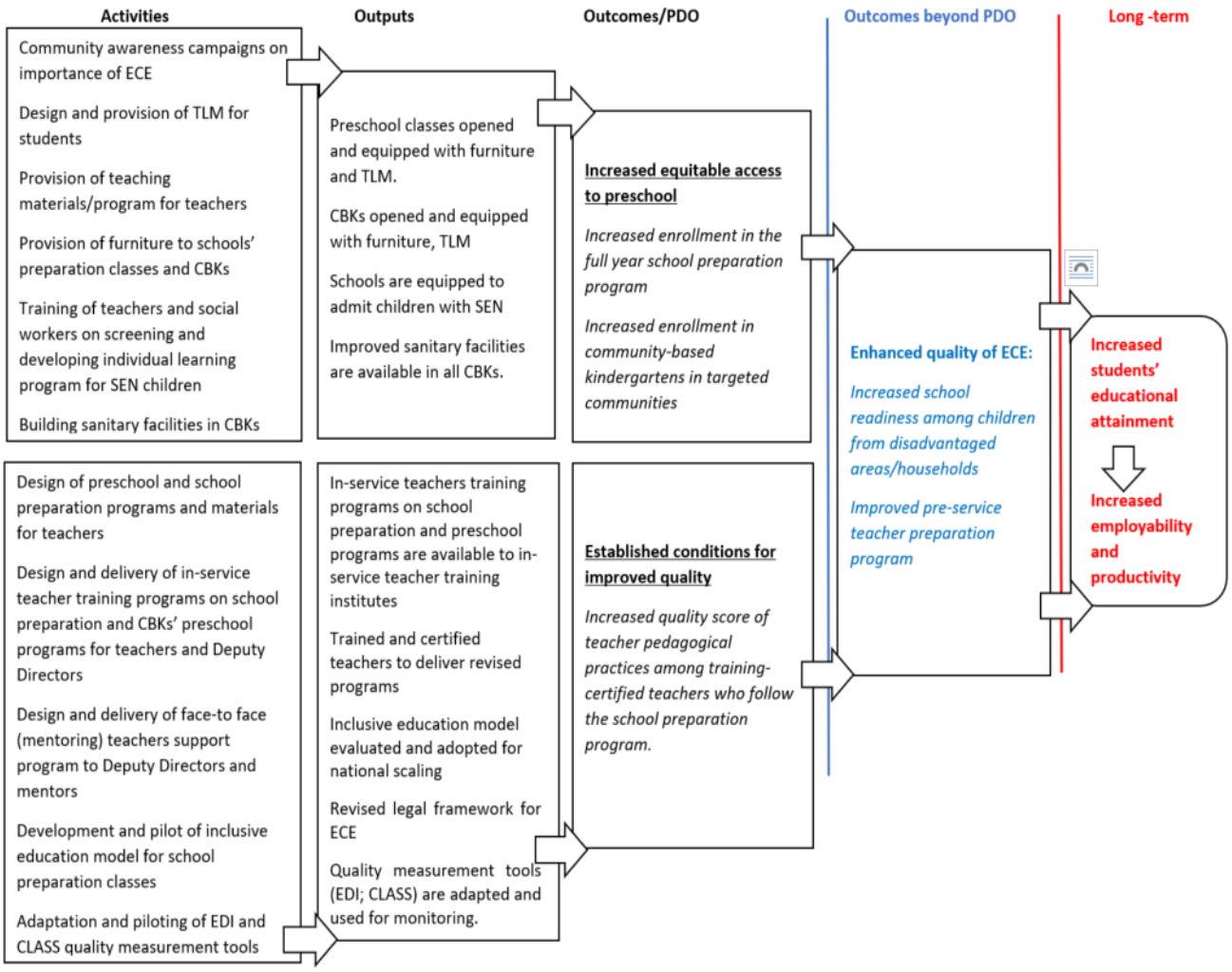
11. The project's Theory of Change was that expansion of equal access to quality preschool education would increase children's readiness for learning and, therefore, support the Government's long-term strategy to strengthen students' foundational skills for increased employability. **'**Equitable access to preschool education' was expected to be achieved through opening school preparation classes and ensuring enrollment of the most disadvantaged children at the existing school premises, or newly established CbKs, and providing them with quality TLMs (in key languages of instruction), furniture, equipment, and adequate sanitary facilities. The expansion of CbKs was targeted at the poorest communities, based on the poverty map and enrollment data, and ensured greater coverage of children by the ECE program due to the shift-based operation mode[8]. The introduction of the shift-based approach in delivering preschool education through

[7] Dearing, E., K. McCartney, and B. A. Taylor. 2009.
[8] A shift-based approach allowed schools to cater to a minimum of two groups of children a day with each shift lasting approximately 3 hours.

school preparation classes and CbKs across the country addressed the concerns of unequal access to pre-primary education across the regions and ensured a nearly universal coverage of children in the year before Grade 1. In addition, the project introduced and piloted a model for inclusive education to better serve children with SEN.

12. The objective of 'establishing conditions for improved preschool education quality' was to be achieved through improved training for in-service teachers, improved quality of TLMs,[9] enhanced measurement of children development and teacher practice and improved policies and legal framework. The key interventions on measuring improved teaching practice and students' learning skills contributed to school readiness of the targeted groups and improved quality of ECE overall. The project's Theory of Change is depicted in Figure 1 below.

Figure 1. Theory of Change: Kyrgyz Early Education Project



[9] TLMs included (a) design of curriculums (school preparation and for mixed age groups in CbKs, (b) design of methodological guidance for teachers, and (c) development of storybooks (in Russian and Kyrgyz).

Note: EDI = Early Development Instrument; CLASS = Classroom Assessment Scoring System; PCF = Per Capita Financing

Project Development Objectives (PDOs)

13. The Project Development Objective was to increase equitable access to preschool education and to establish conditions for improving its quality.

Key Expected Outcomes and Outcome Indicators

14. The achievement of the PDO was measured by the following key indicators:

(a) Increased equitable access to preschool education as measured by
- Increased enrollment in the full-year school preparation program and
- Increased enrollment in community-based kindergartens in targeted communities.

(b) Established conditions for improving quality as measured by
- Increased quality score of teacher pedagogical practices among training-certified teachers who follow the school preparation program.

Components

15. The project consisted of three components. Component 1 focused on enhancing access to quality preschool education, targeting the poor and vulnerable groups, including minority ethnic groups and children with SEN; Component 2 focused on improving policy, programs, and system effectiveness; and Component 3 supported the implementation through advocacy and communication and monitoring and evaluation (M&E) and covered operating costs.

16. The summary of all three components is provided below:

(a) **Component 1. Expansion of Quality Pre-Primary Education (estimated US$11.6 million and actual US$11.2 million).** The objectives of this component were to increase access to preschool education in targeted areas and to enable all children who are in the year before Grade 1 to complete a full-year school preparation program. The component included three subcomponents that reinforced one another by promoting greater coverage, quality, and integration:

- **Expansion of the school preparation program** sought to expand delivery of the full-year school preparation program in the year before starting Grade 1. The project financed the development and implementation of a training program for all teachers and deputy directors responsible for the delivery of the preparation program and provided essential TLMs, furniture, and equipment to all primary and kindergarten classrooms where the program was taught. An evaluation of these activities' impact on teaching practice and children development was done.

- **Expansion of early education services** financed establishment of CbKs in the poorest districts. The key element of expanding the network of CbKs was through proposals for available funding. To ensure the future sustainability of the intervention, the funding was tied to a series of criteria, such as ownership of the building, recurring costs to run the kindergarten for at least five years, availability of a qualified teacher, and a pro-poor approach (ensuring that the poorest families could send their children to CbKs). The project also financed design and delivery of an in-service teacher training program for the new CbKs; design and delivery of TLMs, furniture, and equipment; and upgrading or building of sanitary facilities.

- **Support for inclusive education** was financed through a pilot aimed to integrate children with SEN into mainstream kindergartens and preparatory classrooms. The project supported the capacities of the commission responsible for screening children with SEN and increasing the abilities of teachers and social workers to develop and implement individual learning programs. Based on the results of the pilot, the project developed a model which was approved by the MoES and became part of the Concept on Inclusive Education to be rolled out nationwide.

(b) **Component 2: Improved Policy, Programs, and System Effectiveness (estimated US$0.34 million and actual US$0.66 million).** This component's objective was to improve conditions for policy, programs, and systems effectiveness, which the project addressed through:

- Review and revision of the legal and regulatory framework germane to preschool financing;
- Introduction and piloting of shift-based models of preschool education delivery, including inclusive education;
- Revision of the preschool curriculum based on the newly introduced early learning development standards (ELDSs);
- Development of an education program for mixed groups in CbKs; and
- Adaptation and implementation of two internationally recognized assessment tools—EDI, a school readiness measurement tool, and CLASS, a classroom practice observation tool.

(c) **Component 3: Communications and Implementation Support (estimated US$0.76 million and actual US$0.80 million).** The component supported the communication and advocacy activities related to the project's key interventions, M&E by a third party, and all operating costs.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

Revised PDOs and Outcome Targets

17. The PDO was not revised during the implementation, neither were the key indicators.

Revised PDO Indicators

18. None.

Revised Components

19. Components were not modified during implementation.

Other Changes

20. The project's closing date was extended for 6 months (until June 2018), due to savings incurred during implementation. The extension was used to train additional number of teachers for the school preparation program and CbKs, establish additional 550 full-year preparation classes and 20 CbKs, and pilot a PCF model in three regions. The Results Framework has not been changed as these activities were in line with, and in support of, the project objectives.

Rationale for Changes and Their Implication on the Original Theory of Change

21. Not applicable.

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

22. **The relevance of the PDO is rated High.** Expanding the ECE network and increasing its quality were among the key objectives of the government's agenda at appraisal and remained equally important during implementation. The project's objectives were well aligned with the partnership agenda between the Kyrgyz Republic and the World Bank under the CPS for 2014-2017[10]. One of its objectives was to promote more efficient public service delivery as a pre-condition for effective human capital formation. The project was in line with the Government's Education Strategy for 2012–2020 and the Medium-Term Educational Development Program (MTEDP) for 2012–2014 and 2015–2017, aiming to expand the duration and coverage of the school preparation program; to introduce alternative, lower-cost preschool models; and introduce systemic changes to improve quality. The project continued to be relevant at closing and provided a bridge for enhancing the economic opportunities and resilience (Focus Area 3) within the Country Partnership Framework (CPF) for 2019–2022 (report # 130399) through the development of human capital (report # 130399). The current CPF highlights the importance of further reform in education and enhancement of skills for employability by building

[10] The Completion and Learning Review (CLR) for the CPS 2014-2017 is dated February 2016 which indicated Outcome 2 of the CPS as directly supported by the GPE KEEP project and was rated as *Mostly Achieved*. The CLR accounted for all children ages 5-6 while the school preparation program was designed for 6 years old (+/- 6 months but one year prior to enrollment) and counted enrollment for that age.

stronger cognitive competencies and foundational skills and increasing access to pre-primary education. The CPF 2019–2022 relies on the results of the first Systemic Country Diagnostic (SCD) completed for the Kyrgyz Republic in 2018, which also stresses the importance of improving the quality of education to increase readiness of the Kyrgyz citizens for the changing demands of the labor market[11].

23. **The relevance of the design was also High.** The project focused on equity, access, and quality improvement—the three areas that were well defined under the project's components, which focused on equitable access and strengthening the existing system to provide better quality of education. The design was supported by an achievable Results Framework which captures well the equity and quality aspects of the PDO. The design was relevant given the Government's objective to increase access to preschool education, particularly for the most vulnerable.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

24. The PDO consisted of two overarching outcomes:

(a) **Increased equitable access to preschool education,** which was achieved through (i) the countrywide rollout of the school preparation program, (ii) establishment of CbKs in remote areas, and (iii) a new model of an inclusive education program. The enrollment rates significantly exceeded or achieved their targets, due to shift-based approach, as described paragraphs 25 and 26 below. The equity aspect was captured by the evidence that the school preparation program benefitted children from poor households with no exposure to ECE most (see details in annex 6); the established CbKs served the lowest-income communities in the remote and hard-to-reach areas, and an improved inclusive education program was made available for children with SEN.

(b) **Established conditions for improving preschool education quality** was achieved through improved teacher practice under the full-year preparation and CbKs programs, enhanced measurements of children development and teacher practice, and improved programs for teaching and learning and strengthened legal framework. The supplemental evidence showed that improved conditions resulted in improved outcomes of child development and quality of learning (see more details in annex 6).

Increased equitable access to preschool education

PDO Indicator 1. Increased enrollment in the full-year school preparation program

25. **This indicator exceeded its target.** The increased access was achieved through a shift-based preparation program offered to all children before Grade 1. The program enrolled three cohorts of children within the three-year period. In Year 1, the target was to enroll 70,000 children, but the actual enrollment totaled 114,451, or 64 percent above the target. In Year 2, the plan was to enroll 75,000 children, but 137,886 were enrolled, or 84 percent above the target. In Year 3, 116,985 children were enrolled (or 46 percent above

[11] Kyrgyz Republic: From Vulnerability to Prosperity, SCD (P159162)

the target) instead of the planned 80,000 children. The number of children covered by the preparation program in three years totaled 369,322 (or 64 percent above the target value). According to the National Statistics Committee[12], the total number of 6-year-old children in Years 1-3 was 395,842 nationwide, which means the project achieved nearly universal enrollment for the preparation year (93 percent). The enrollment numbers exceeded the value targets due to the shift-based model offered by the schools, as well as the communication strategy aimed at raising awareness on ECE benefits. Table 6.1 in Annex 6 demonstrates the coverage by the preparation program in the regions with the highest poverty rate. The data shows that the projects reached out to the poorest households in all three regions, especially starting from 2016, thus addressing the equity issues in access to preschool.

PDO Indicator 2. Increased enrollment in community-based kindergartens in targeted communities

26. **The indicator was achieved.** By project completion, 10,000 students were enrolled in the CbKs. The CbKs served communities in the poorest, hard-to-reach, and mountainous areas offering the program to the most disadvantaged children in their mother tongue. The increased enrollment in targeted communities demonstrated an alternative for a more efficient use of the education budget. The CbKs also operated on a shift basis and only focused on the instructional time. The project required the local governments to contribute toward the funding of the project, specifically provide the building and ensure funding of teacher remuneration for at least 5 years, which developed a strong sense of ownership among stakeholders and ensured financial sustainability. The local regional governments provided subsidies to cover all recurring costs. The CbKs received wide support from communities and local governments as they reached out to rural, poor, and remote communities while also supporting ethnic minorities through providing the service in their mother tongue. The intermediate indicators to support PDO Indicator 2 have met or exceeded their end values—the share of groups operating in Kyrgyz (62 percent planned versus 87.7 percent actual) and Uzbek (9 percent planned versus 10.5 percent actual). All CbKs received a high-quality essential package of learning materials. Due to efficient project procurement, the project incurred savings, which supported establishment of 20 additional CbKs, and thus exceeded one of the intermediate indicators—number of newly established kindergartens (100 planned versus 120 actual).

27. Although not an explicit PDO indicator, equity was also addressed through a pilot initiative to integrate children with special educational needs ages 4-6 into mainstream kindergartens and full year preparatory classrooms. The initiative was implemented in a district (rayon) with little or no access to specialized schools. The number of children with special educational needs enrolled in mainstream schools in the pilot district was 50 out of total 70 children screened at the time (71 percent). The project strengthened screening and referral procedures, improved skills of 244 teachers and social workers (versus 150 planned) and provided the classrooms with essential TLMs to expand inclusiveness. Based on the results of the pilot, the project provided recommendations for national expansion. The model was included into the National Concept on Inclusive Education, which is currently under consideration by the Government and will be implemented nationwide. This evidence supports the sustained efforts of the Kyrgyz Government to improve equity in ECE services and further enhance the impact of the project's outcomes.

Established conditions for improving preschool education quality

PDO Indicator 3. Increased quality score of teacher pedagogical practices among training-certified teachers who

[12] National Statistics Committee 2018

follow the school preparation program

28. The indicator exceeded its target value. The choice of this indicator was based on the research evidence that teacher quality matters and their practice in the classroom plays a very important role in support of child development and learning[13]. The project used the CLASS instrument to assess the improvements in the quality of teaching, which showed that between the first and the second rounds (2015–2017), the teacher's quality score has increased by 10 percent, exceeding the original target of 5 percent. Increased quality score of teachers was measured by improved teacher pedagogical practices among training-certified teachers' in school preparation program and CbKs. The total number of teachers trained to deliver the preparation program was 5,210, which is 57 percent over the planned target of 3,300. The number of deputy directors who had undergone training accounted for 2,930 or 33 percent above the target. The number of teachers trained for CbKs' mixed age groups program exceeded its target of 250 by 32 percent (330 total). Using the results of the classroom observation, the MoES was able to adjust the training modules between the two rounds to address the identified gaps in key domains and introduce one-on-one coaching to teachers. The final round that took place in 2017–2018 observed the teaching practice of 110 newly trained teachers, who also received one-on-one coaching at the school level and demonstrated significant differences in three key domains of teacher quality: a large effect for emotional support (9.81 percent) and classroom organization (10.56 percent) and a medium effect for instructional support (8.61 percent). The results were validated by the University of Virginia team, who trained and certified 19 Kyrgyz teachers as coders and processed the observation results.

29. It must be noted that beyond the PDO indicators, tracking child development through introduction of the EDI, together with the assessment of teacher practice in classroom, enhanced the measurement of child development and learning outcomes and greatly contributed to the foundations for improved quality. The evidence generated by these measurements showed that the full-year school preparation program produced an increase in learning attainment among the children enrolled in the program. The results of the study using the EDI, undertaken with the support from the Offord Centre for Child Studies of McMaster University in Canada, revealed a remarkable improvement in children's language and cognitive development skills, which are known to play a crucial role in overall academic attainment at a later stage. The EDI also revealed that the disparities decreased among the children from the lowest wealth group in two of the five dimensions: a) language and cognitive development from 2.2 to 1, and b) social competence from 1.1. to 0.6 (see figure 6.1, annex 6). This means that the disadvantaged children in the program were catching up developmentally to their relatively more advantaged peers. The overall vulnerability[14] of children decreased by half over the period of assessment. The EDI was applied to a cohort of children participating in the preschool program in 13 districts twice in the 2015/16 school year: first, in November 2015 as a baseline, and then, as a follow-up, in February/May 2016 (see figure 2 below). Figure 2 demonstrates that overall the mean scores in all domains have improved with the following effect sizes: 0.29 for Physical Well-being, 0.35 for Social Competence, 0.28 for Emotional Maturity, 1.02 for Language and Cognitive Development and 0.38 for Communications and General Knowledge. The increase for all scores has effect sizes greater than 0.2 which means they are all statistically significant[15]. Although the attribution factor could influence the results of the assessment, the fact

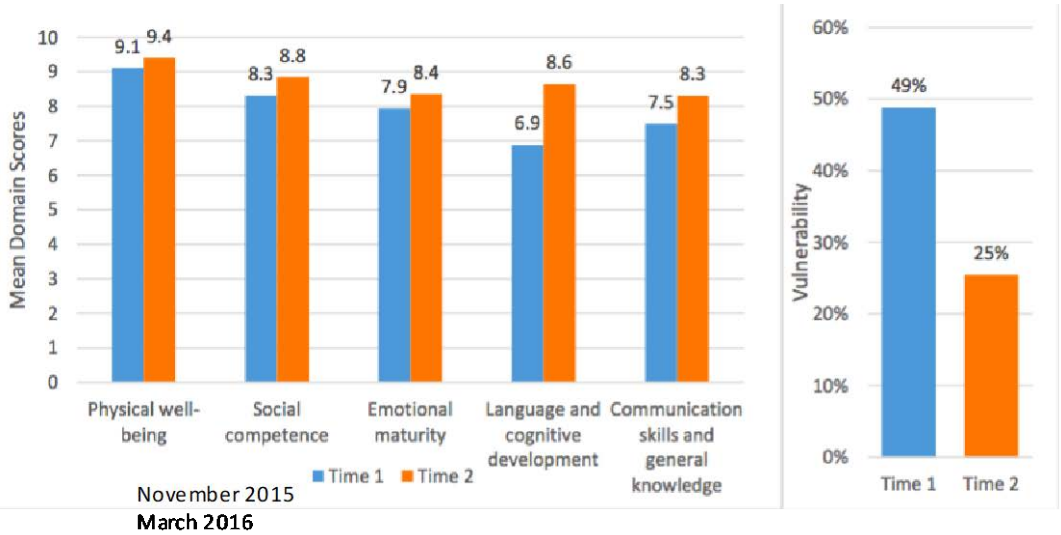
[13] Jennings and DiPrete, 2010

[14] Vulnerability describes children whose scores fall below the cutoff point in at least one of the five domains of EDI. The cutoff is set at the domain score value below which only 10 percent of children score lower in the baseline dataset.

[15] The effect size quantifies the size of the difference between the means of two groups and gives an idea of whether or not the difference is large enough to have practical meaning (0 to 0.2 – small effect size or not a meaningful difference; 0.2 to 0.5 moderate or meaningful difference; 0.5 to 1 – large or large meaningful difference).

that all mean domain scores improved over the course of implementation provide a very meaningful foundation.

Figure 2. Mean Domain Scores and Overall Vulnerability



Source: Project monitoring reports on EDI, Offord Centre for Child Studies McMaster University.

Justification of Overall Efficacy Rating

30. **The overall efficacy rating is High**, which is justified by the evidence described above. All PDO indicators have met or significantly exceeded their targets of increased enrollment because of the cost-efficient shift models used for service delivery and an improved teaching pedagogical practice. The project provided evidence of equal opportunities for all children before entering Grade 1, by targeting children from disadvantaged households and remote regions, as measured by the EDI. The results of the CLASS observation tool were used to improve and measure improvements of the existing teacher training program and teaching practices. Both instruments, including manuals, were validated and formally adopted by the MoES by project completion. The overall supply and demand for the ECE services increased nationwide during the implementation and the project laid a solid foundation for the continuous improvement of the ECE quality and informed policy making. Disbursement was carried out as planned and reached about 70 percent by midterm. Most importantly, the Government demonstrated its commitment to integrate, streamline, and continue the project's interventions at the national level by project closing.

C. EFFICIENCY

Assessment of Efficiency and Rating

31. The project financed the model and technical assistance aimed to support the transition toward a shift-based preschool education, which operated on a half-day basis and extended the services to the most disadvantaged children who had no exposure to ECE, particularly in rural and remote, mountainous areas. The

shift-based approach employed by the project only focused on instructional time, unlike the state funded Kindergartens, which operated as a full-day care facility with half time spend for sleeping and meals arrangements, ultimately increasing the overall cost. Under the shift-based models supported by the project, each shift lasted for approximately three hours, which allowed expanding the coverage because schools offered two, or sometimes, three shifts per day. The program was offered through newly established community-based kindergartens and school-preparation classes attached to the existing schools. For establishing community schools, the project required contributions from local authorities (Aiyl Okmotu), which not only reduced the cost for the project, but also created a shared ownership over the project. Since the school preparation classes were opened at the existing school facilities, they did not entail additional costs related to maintenance of the building but required the existing primary level teachers to undergo training for teaching preparatory program. The salary costs under both models were covered by the public budget. The following table demonstrates that both approaches used by the project offered a more cost-efficient way to provide ECE services, compared to the traditional model of state funded kindergarten based on the cost per student. To make it more comparable the table includes the cost per student per hour since the length of the programs differs. The project funded cost-efficient ways to increase pre-primary coverage, however, the most important evidence of cost efficiency of the used approaches is supported by the enrollment data as discussed in paragraph 25. The shift-based approach demonstrated an efficient use of scarce resources while ensuring countrywide coverage.

Table 2. Cost Per Student Based on Type of Preschool Institution (in Kyrgyz som, utilities are not included)

	Half-day approach funded by the project (3 hours)		**Traditional full day State Kindergarten (8 hours)**
	School Preparation Classes	**Community-based Kindergarten**	**State Kindergarten**
Rural/cost per hour	4,435/1,478	9,474/3,158	37,820/4,727
Urban/cost per hour	4,015/1,338	7,661/2,553	33,286/4,160

32. Due to efficient procurement and timely disbursement, the project accumulated savings, which allowed establishing of additional 550 preparatory classes and 20 CbKs; training of 210 mentors/methodologists; but most importantly, piloting a PCF model, which would inevitably increase the internal efficiency of preschool spending and ensure future sustainability once the PCF is rolled out countrywide**.** There was no turnover in PIU staff during the project implementation, which could impede the project's efficiency or delay procurement. Annex 4 provides more details on the project's unit costs, which were comparable to similar projects, with the account for the exchange rate fluctuations. The total cost of furnishing a school preparation program class was approximately $871, while the cost of establishing a CbK totaled $1,689. The difference in cost can be explained by the age mix normally enrolled in a CbK, which will require various types of furniture and equipment for children ages 3-6. Although the unit cost for the preparation class is generally higher for most items, the total number of items purchased under the KEEP is double the number of items purchased under the FTI project, which was necessary to ensure enough number of preparation classes are opened nationwide. As per Annex 3, the actual allocation of funds by component was generally in line with the amounts at approval, with the exception for Component 2, due to reallocation of resources to carry out activities agreed at the project's extension.

Economic benefits

33. Following the estimations in a study by Psacharopoulos and Patrinos (2010), which demonstrated that an increase in standard deviation for cognitive ability resulted in approximate 17 percent to 22 percent increase in earnings, one can calculate the impact of the Kyrgyz Early Learning Project (KEEP) using the effect size for language and cognitive development (see annex 6, Box 6.2). On average, the increase in earnings for children who attended the full-year preparatory program under the project will be between 17.3 percent and 22.4 percent (see annex 4 for details on estimations). The assumption does not guarantee that the outcome will be the same for all children as it will depend on many other social and economic factors, but at least this evidence looks compelling enough to be used as an incentive to further engage parents in preschool education and influence the Government's decision-making process with regard to ECE budget and policies. According to OECD report (2017), attending a preschool demonstrated a positive impact for the Kyrgyz students' learning achievements at the age of 15, who scored higher if they had attended preschool, therefore, extending the coverage of the school preparation program to nearly universal was well worth the investment.

34. **The efficiency is rated Substantial** due to the cost-effective approaches used by the project to increase enrollment: both preparatory classes and the CbKs were much less costly compared to funding a full-day state facility based on the per-student cost. Use of existing school facilities to expand preschool classes and training of existing teachers also contributed to achieving objectives at a reduced cost. Moreover, the results of the EDI demonstrated the gain in knowledge and skills among the targeted beneficiaries, which adds value to the system's efficiency. Finally, the results of the PCF pilot will further increase the system's efficiency and equity once scaled up nationwide.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

35. The overall outcome rating is Highly Satisfactory due to High Relevance, High Efficacy and Substantial Efficiency. The project was still highly relevant at closing and the design addressed the main areas where the funds were most needed, that is, provided equal coverage to improve school readiness, especially in underserved communities. The project achieved its PDO with all indicators exceeding or meeting the targets, demonstrated achievements beyond the PDO showing the evidence of improved learning skills in children. Finally, the introduced shift-based schooling, which only focused on instructional time, allowed to increase the coverage at unprecedented levels.

E. OTHER OUTCOMES AND IMPACTS

Gender

36. The historical data suggest that the Kyrgyz Republic sustained gender parity in the education system overall, including preschool. Therefore, the project did not specifically target enrollment of girls but monitored the key indicators to stay gender-sensitive and ensure that no changes took place during the project implementation

Institutional Strengthening

37. The project supported a number of interventions, which improved institutional capacity of the education system: (a) the project has laid the foundation for the continuous revision of teacher training programs using the CLASS tool and the assessement of learning achievements (EDI); (b) the evaluation of the PCF pilot in preschool education helped revise the per-student cost formula, which would improve the budget planning process both at the national and regional levels; (c) the Inclusive Education Model used for integrating children with SEN within the school preparation program was adopted and will be used nationwide; and (d) the Republican Teacher Training and Retraining Institute adopted improved in-service training courses for preschool teachers and deputy directors and mentors. The revision of the legal and regulatory framework allowed for introduction of long-lasting improvements of the ECE policy development, teacher preparation, and M&E system.

Mobilizing Private Sector Financing

38. Not applicable

Poverty Reduction and Shared Prosperity

39. Expansion of CbKs targeted the poorest communities, using criteria such as a poverty map and enrollment data. While the financing for the school preparation program supports the MOES' policy of national coverage, rural areas, particularly remote and small villages lacking any preschool services, benefited more. The expansion of CbKs targeted the districts with the highest incidence of poverty, absolute poverty numbers, and lowest preschool enrollment – all considered, for a broad, regionally and ethnically balanced distribution of project funds to avoid any misconception of favoring specific regions or social groups during implementation.

40. Children from different social backgrounds, ethnic communities, urban areas, or rural, remote regions, as well as children with SEN have reached, if not the same, at least close to starting point for admission to Grade 1.

Other Unintended Outcomes and Impacts

41. Approbation of the 'Mentorship' course (one-on-one training for teachers) was conducted and 210 methodologists from district education departments, regional institutes of education and methodical centers, and the Republican Institute of Advanced Training were trained to provide pedagogical support to teachers regularly. In addition, the training was attended by 50 teachers from higher education institutions, who received modernized methodologies to further include into the existing pre-service educational programs.

42. The storybooks in Russian and Kyrgyz languages (8 titles total), developed under the project, were submitted to the XIV CIS Member States International Competition among publishers and won the first place for quality and content.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

43. Considering the low coverage rates and limited project funding, the project design focused on identifying a cost-effective manner of increasing the availability of preschool centers, as well as promoting the quality of services delivered. The project used the results of the previous assessments to target resources in poor, remote, and difficult-to-reach regions and focused on groups requiring additional support to achieve the goal of improved school readiness.

44. The preparation team followed these principles:

- Used extensive evidence derived from (a) sector work jointly undertaken by the World Bank and OECD (lessons from PISA published in 2010), (b) evaluated pilots and results of the implementation of FTI grants, (c) findings of the System Assessment and Benchmarking for Education Results (SABER) in ECD, and (d) the Kyrgyz Poverty Map (2013);
- Extensively used key lessons learned from innovations in the region and around the world;
- Closely coordinated with the ongoing and planned assistance in education by other donors under a program of coordinated support that covers the entire education system
- Recognized the need for selectiveness and targeting of interventions, as well as the need to minimize recurring costs to ensure future sustainability of interventions
- Built-in participatory approach to reach out to remote impoverished areas while establishing CbKs. The local communities and authorities were required to join forces to find a building and contribute to the efforts in establishing and running a CbK in the area.

B. KEY FACTORS DURING IMPLEMENTATION

45. **Close partnership between the MoES and the World Bank.** The strong relationship between the MoES and the World Bank helped address any outstanding issues and follow-up in a short time line. The recommendations highlighted in the Aide Memoires would be put into action by the next supervision mission**.**

46. **The project's proactive communications and advocacy plan.** Raising awareness of the benefits of the ECE, the project's goals, and the preschool curriculum objectives were key in reaching the targets of the PDO. As a result, the demand for the preschool education drastically increased over the project's implementation. To assess the level of satisfaction with the program among the key beneficiaries, the EDI tool, which was primarily focused on assessing children's readiness for school, was modified at a later stage to include a module to measure parents' perceptions of their children before and after the intervention.

47. **Design that promoted participatory approach.** Engaging community-based governing bodies, parents and local authorities generated a shared ownership over the process of establishing community-based preschools. All CbKs were refurbished with monetary or in-kind contributions from the local authorities and communities.

48. **Strong M&E design and implementation.** Adherence to the M&E plan with proper baseline and follow-up implementation ensured availability of reliable data**.** The results of the evaluations were used during implementation to further enhance and improve the project's outputs. Moreover, the project's M&E system has been integrated into the MoES system.

49. **Donor coordination** through the Local Education Group was strong, and the project implementation was reinforced by coordinated activities among donors within the Government Education Strategy and action plans (Early Grade Reading Assessment [EGRA]; U.S. Agency for International Development [USAID]; surveys, capacity-building, and advocacy activities; United Nations Children's Fund [UNICEF]).

50. **Savings incurred due to efficient procurement,** which allowed for training additional teachers and personnel, establishing additional CbKs, and funding a PCF pilot.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

51. Improving the Government's capacity to report on the quality of preschools, accessibility, affordability, and enrollment was of paramount importance during the design of the Results Framework. The indicators chosen for the PDO were achievable. The Results Framework was set to (a) monitor the main outputs of the interventions, including teacher training, delivery of the learning packages, and approval of the model for SEN children; (b) monitor the achievement of the expected key results, such as extension of coverage among targeted populations in CbKs and school preparation classes to ensure equal learning opportunities at the start, including in mother tongue; (c) assess teaching and learning practices used by training certified teachers; (d) introduce student readiness assessment tool; and (e) evaluate the project's implementation by an independent third party.

52. Adaptation and introduction of two internationally recognized, independent measurements were designed to be supported by adequate training and follow-up coaching.

M&E Implementation

53. The effectiveness of the training and the use of learning materials was monitored through two rounds of sample-based classroom observations (baseline and follow-up). These observations used a standardized coding protocol to record improvements in critical teaching practices.

54. The standardized measurement tool of learning outcomes adapted to pre-primary interventions (EDI) was also implemented in two rounds (baseline and follow-up) and provided valuable insights regarding the quality of the full-year preparatory program. The finalized instrument was applied to a cohort of children participating in the CbKs in schools in 13 districts in the 2015/16 school year twice: first in November 2015 and then in February/May 2016.

55. M&E was supported by independent third-party evaluations, which were organized in the form of surveys and undertaken twice during the project implementation. The surveys were based on the sample of

300 schools and included questionnaires for students, teachers, parents, local administrations, and other stakeholders**.**

56. The project used a peer approach in training and trained the first cohort of teachers who further disseminated the knowledge to other regions. The MoES staff went through adequate training to implement and monitor the implementation of the EDI and CLASS tools.

M&E Utilization

57. The M&E data were used to inform the project on the effectiveness of the implemented interventions. The data were regularly used to report on the implementation status and results and were reflected in the corresponding Implementation Status and Results Reports (ISRs). The M&E data were found to be reliable with both baseline and follow-up rounds implemented. The teacher practice observation tool, CLASS, contributed to evaluating the success of the project and also played an instrumental role in improving teacher in-service training.

58. The MoES has closely used the data available during the project and taken necessary steps to improve ongoing activities, such as teacher training, curriculum revision, and development of TLMs. The planned sequence of the rounds of EDI and CLASS instruments' implementation ensured the applicability of the results in improving the quality of preschool curriculum and teacher training. Both instruments are formally approved by the MoES for further use nationwide. The data were used not only to inform the decision making but also to demonstrate progress to the public and the key stakeholders.

Justification of Overall Rating of Quality of M&E

59. **The overall quality of the M&E is rated as High.** The M&E design and its integration into the existing routines of the MoES was implemented smoothly and proved its sustainability by the end of the project. The Results Framework adequately measured the indicators leading to the PDO achievement in terms of increased equity of ECE coverage (by tracking enrollment of children from most disadvantaged backgrounds/areas, monitoring provision of services in mother tongue and inclusion of children with special needs) and improved quality of teacher practices through the adapted teacher observation instrument. The project built the M&E capacity of the MoES, regional education departments and teachers to implement the instruments. The M&E Framework not only provided data to assess the results chain but went beyond the PDO to measure the learning outcomes which contributed to higher level outcomes. Both instruments introduced under the project - EDI and CLASS – provided sufficient evidence to help shape policies and improve quality of ECE.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

60. The project was classified as Category B for its moderate environmental impact which triggered Environmental Assessment (OP/BP 4.01). The project funded installation of latrines and wash stands in the newly opened CbKs as well as necessary preparations of the site for installation. Their environmental impact was considered limited to dust and noise and the dumping of construction wastes and materials. No land acquisition or resettlement of people was required.

61. To minimize any adverse environmental impact, an Environmental Management Framework (EMF) was prepared to outline environmental assessment procedures with mitigation measures; consultations also took place as part of the process. The EMF was disclosed to the public through the MoES website and the World Bank's InfoShop. A site-specific checklist for Environmental Management Plans (EMPs) was prepared before any works were initiated. An individual EMP for each site was developed and implemented after consultations with local stakeholders. During implementation, a regional safeguard team conducted a review of the project sites, which confirmed that the renovated facilities, ongoing constructions, and treatment of waste materials were implemented in compliance with the procedures highlighted in the EMF and the state environmental standards.

62. The fiduciary team carried out regular reviews and reported no major issues in terms of compliance with financial management and procurement standards, except for minor delays in the beginning of the project implementation. Post reviews were regularly conducted at different intervals on a sample basis.

63. The environmental, social, and fiduciary risks were rated as Moderate during implementation.

C. BANK PERFORMANCE

Quality at Entry

64. The quality at entry for the project is rated as Satisfactory. The preparation team had an adequate mix of skills to design the operation in line with the key national strategies and the World Bank's documents. The team extensively consulted with major partners and considered the lessons learned from interventions implemented by other organizations. Based on the analysis of the political and economic situation before appraisal and the consultations, the World Bank identified key areas to address to increase enrollment in preschool, particularly for children from poor households, children with SEN, ethnic minorities, and children from rural and hard-to-reach areas. The preparation team identified the risks and mitigation measures in the Operations Risks Assessment Framework annexed to the Project Appraisal Document (PAD) (annex 4 of the PAD). Lessons learned from previous projects implemented by the World Bank or other developmental agencies were all considered.

Quality of Supervision

65. **The rating for quality of supervision is Satisfactory.** There were eight supervision missions including a midterm review mission. The World Bank's team provided a proactive approach in technical and operational support throughout the project. The fiduciary team was based in the region and provided regular support to the counterpart. The ISRs reflected the progress made by the project: the project was rated as Satisfactory throughout the cycle, except for once in the beginning of the implementation, when the project was downgraded to Moderately Satisfactory, but then upgraded back due to satisfactory performance.

Justification of Overall Rating of Bank Performance

66. Based on the points above, the overall rating to World Bank Performance is Satisfactory**.**

D. RISK TO DEVELOPMENT OUTCOME

67. The overall risk was rated as Moderate by project closure. The Implementation Completion and Results Report (ICR) team concurs with the rating and agrees that the major concerns in this regard are the country's volatility to external shocks and the effect the volatility may have on the budget. Although many interventions were institutionalized by closing, there are still certain areas which will require further regular monitoring and adjustments, such as the teacher training program as well as scaling up of student learning assessment (EDI) and teacher practice observation (CLASS) instruments.

V. LESSONS AND RECOMMENDATIONS

Lessons Learned

Project specific

68. **Lesson 1.** The simplicity of the project design and the PDO increased the chances of the project's success, as the project followed a well-focused results chain of outcome indicators and outputs to monitor equity, quality and efficiency of the interventions.

69. **Lesson 2.** Proactive communication and advocacy played an important role in increasing awareness of the project's objectives and key interventions to ensure active participation by various beneficiary groups (parents, teachers, school administration, methodologists, etc.). This has been particularly important under the establishment of community-based centers since contributions from the local communities were required in order to receive project funds.

70. **Lesson 3.** Class observation tool changed the perception toward the assessment of teachers' practices and shifted the paradigm among teachers from complying with requirements to seeking and incorporating the feedback into their daily practice. Once the teachers realized that the CLASS observation does not present a threat to their work, they were more willing to participate and incorporate the feedback and methodologies into their daily routine.

General

71. **Lesson 1.** Community-based preschools are a low-cost and effective alternative when the Government is determined to provide equitable access to education for children in remote, impoverished areas. Expansion of preschool models, particularly in economically disadvantaged districts, provided ethnic minorities and poor children with an equal start and demonstrated remarkable gains among children who had never been exposed to preschool education.

Recommendations

72. **Recommendation 1.** Keeping the PDO statement concise and supported by measurable results are the key drivers for success.

73. **Recommendation 2.** Establishing proactive communication and advocacy from the start create a trusting relationship with the key stakeholders and beneficiaries.

74. **Recommendation 3.** Establishment of community-based pre-schools could be recommended to the countries with existing social structures of communities seeking to increase the enrollment rates, particularly in poor and hard to reach regions**.** Engaging community-based governing bodies, parents and local authorities generated a shared ownership over the process of establishing community-based preschools.

75. **Recommendation 4.** The pre-primary education can and must use a standardized test to measure the student readiness for school and teacher practices. Governments should be encouraged to adopt reliable and recognized instruments, such as the ones used by the project.

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Annex 1. Result Framework and Key Outputs

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: To increase equitable access to preschool education, and to establish conditions for improving its quality.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased enrollment in the full-year school preparation program	Number	0.00 01-Apr-2014	80000.00 31-Dec-2017	0.00 31-Dec-2017	116985.00 30-Jun-2018

Comments (achievements against targets): Exceeded. In Year 1, the target value of 70,000 children was exceeded by 64% and totaled 114,451; in Year 2, the values exceed by 84% above the target - 75,000 children planned vs 137,886 enrolled; in Year 3, the enrollment was 46% above the target. The total number of children covered by the preparation program in three years totaled 369,322 (or 64 percent above the target value).

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased enrollment in community-based kindergartens in targeted communities	Number	0.00 01-Apr-2014	10000.00 31-Dec-2017	0.00 31-Dec-2017	10000.00 30-Jun-2018

Comments (achievements against targets): Achieved. The CbKs served communities in the poorest, hard-to-reach, and mountainous areas offering the program to the most disadvantaged children in their mother tongue.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased quality score of teacher pedagogical practices among training-certified teachers who follow the school preparation program	Percentage	0.00 01-Apr-2014	5.00 31-Dec-2017	0.00 31-Dec-2017	10.00 30-Jun-2018

Comments (achievements against targets): Exceeded. The target was measured in two rounds of sample-based surveys: between the first and the second rounds (2015–2017), the teacher's quality score has increased by 10 percent, exceeding the original target of 5 percent. The second round demonstrated an increase in key areas of teaching practice: a large effect for emotional support (9.81 percent) and classroom organization (10.56 percent) and a medium effect for instructional support (8.61 percent).

A.2 Intermediate Results Indicators

Component: Expansion of quality pre-primary education

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00 30-Apr-2014	261423.00 30-Jun-2017	0.00 30-Jun-2017	558481.00 30-Jun-2018
Female beneficiaries	Percentage	0.00	50.00	0.00	72.00

		30-Apr-2014	30-Jun-2017	30-Jun-2017	30-Jun-2018

Comments (achievements against targets): Both core targets exceeded their original targets. The project's direct beneficiaries counted as the total number of teachers/school staff trained and the number of children enrolled in the full-year preparation classes and CbKs. The percentage of girls and boys was 48.5% and 51.5% respectively; and of adult females and adult males was 95% and 4% respectively. The percentage for all female project beneficiaries is 72%.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Gender Parity Index for pre-primary Gross Enrollment Ratio	Number	1.00 01-Apr-2014	1.00 31-Dec-2017	0.00 30-Jun-2017	1.00 30-Jun-2018

Comments (achievements against targets): Achieved. As per Edstats, gender parity is not an issue for the country. Thus, the project monitored the indicator to make sure the GPI remained the same during implementation.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Percentage of school preparation classes that received a package of essential teaching-learning materials.	Percentage	0.00 01-Apr-2014	100.00 31-Dec-2016	0.00 30-Jun-2017	100.00 30-Jun-2018

Comments (achievements against targets): Achieved. All schools that offered preparation program were provided with the essential packages of teaching and learning materials - 2,779 classes total in all 2,204 schools. The quality of the learning materials has been recognized as high by a national contest.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of schools supplied with learning materials developed for SEN children	Number	0.00 01-Apr-2014	100.00 31-Dec-2017	0.00 30-Jun-2017	100.00 30-Dec-2018

Comments (achievements against targets): Achieved. The pilot was implemented in one district. All schools within that district received required learning materials.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of newly established kindergarten	Number	0.00 01-Apr-2014	100.00 31-Dec-2018	0.00 30-Jun-2017	120.00 30-Jun-2018

Comments (achievements against targets): Exceeded. 120 CbKs established vs 100 planned; with 16 CbKs located in the hardest to reach, mountainous areas.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Share of groups in newly established kindergarten who operate in Uzbek	Percentage	0.00 01-Apr-2014	9.00 30-Dec-2017	0.00 30-Jun-2017	10.50 30-Jun-2018

Comments (achievements against targets): Exceeded. In addition, the improved quality of learning materials in the mother tongue has been

recognized by stakeholders.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Share of groups in newly established kindergarten who operate in Kyrgyz language	Percentage	0.00 01-Apr-2014	62.00 30-Dec-2017	0.00 30-Jun-2017	87.70 30-Jun-2018

Comments (achievements against targets): Exceeded. The proactive communication on the importance of ECE resulted in increased demand for ECE services and parents' engagement.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Percentage of newly established kindergartens that received a package of essential teaching-learning materials	Percentage	0.00 01-Apr-2014	100.00 31-Dec-2017	0.00 30-Jun-2017	100.00 30-Jun-2018

Comments (achievements against targets): Achieved. All CbKs received their essential package of teaching and learning materials. The total number of learning materials produced in Kyrgyz, Russian and Uzbek languages is 50,346. Improved quality has been widely recognized by stakeholders and by the National contest.

Component: Improved policy, programs and system effectiveness

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at

				Target	Completion
Percentage of preparation program teachers certified to teach the preparation program	Percentage	0.00 01-Apr-2014	90.00 31-Dec-2016	0.00 30-Jun-2017	100.00 30-Jun-2018

Comments (achievements against targets): Exceeded. Due to increased enrollment the project the actual number of trained teachers was 5,210 versus planned 3,300. Teachers were selected from the pool of primary education teachers and kindergarten assigned to teach the preparation program.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Model evaluated for integrating children with special education needs within the school preparation program	Yes/No	N 01-Apr-2014	Y 31-Dec-2017	30-Jun-2017	Y 25-Oct-2017

Comments (achievements against targets): Achieved. Model evaluated and recommended for implementation nationwide.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of teachers and school social workers trained for the SEN model of the school preparation program	Number	0.00 01-Apr-2014	150.00 31-Dec-2013	0.00 30-Jun-2017	244.00 30-Dec-2017

Comments (achievements against targets): Exceeded. 244 teachers and social workers improved their skills in screening and working with children with SEN.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Percentage of the newly established kindergarten teachers certified as having successfully completed the course financed under the Project.	Percentage	0.00 01-Apr-2014	90.00 31-Dec-2017	0.00 30-Jun-2017	100.00 30-Jun-2018

Comments (achievements against targets): Exceeded. The increased number of CbKs required training additional teachers. All teachers hired for new CbKs successfully completed the training.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
EDI introduced and used to monitor readiness	Yes/No	N 01-Apr-2014	Y 30-Dec-2017	 30-Jun-2017	Y 30-Jun-2018

Comments (achievements against targets): EDI results implemented in two rounds (baseline and follow-ups) and showed increased scores in key areas of development among children enrolled in preparation program and CbKs. The instrument was formally adopted by the MoES to be used nationwide.

B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1	
Outcome Indicators	Increased equitable access to preschool education (i) Increased enrollment in the full-year school preparation program (ii) Increased enrollment in community-based kindergarteners in targeted communities
Intermediate Results Indicators	1. Direct project beneficiaries 2. Female beneficiaries 3. Percentage of school preparation classes that received packages of essential teaching and learning materials 4. Number of schools and kindergartens supplied with learning materials developed for SEN children 5. Number of teachers and social workers trained for SEN model of the school preparation program 6. Model evaluated for integrating children with special needs within the school preparation program 7. Number of newly established kindergartens 8. Share of groups in newly established kindergartens who operate in Uzbek 9. Share of groups in newly established kindergartens who operate in Kyrgyz 10. Percentage of newly established kindergartens which received a package of essential teaching and learning materials
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	• 22,779 newly opened preschool classrooms equipped with learning materials, furniture, teaching support materials, and so on • 120 newly opened CbKs equipped with teaching-learning materials, furniture, sanitary facilities

	• 33 schools are enabled to accept children with special educational needs through provided teacher-learning materials and trained personnel
Objective/Outcome 2	
Outcome Indicators	Enhanced conditions for the improved quality of preschool education (i) Increased quality score of teacher pedagogical practices among training-certified teachers who follow the school preparation program
Intermediate Results Indicators	1. Percentage of preparation program teachers certified to teach the preparation program 2. Percentage of newly established kindergarten teachers certified as having successfully completed the course financed by the project 3. EDI tool that tracks children learning outcomes is introduced and used 4. CLASS observation tool is used to enhance knowledge and skills of teachers 5. PCF model piloted and recommended for further scale up
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	• 310 teachers are trained to work at CbKs with the focus on mixed age groups • 8,140 teachers and administrators trained to deliver preparatory program with improved practice methodology • 210 methodologists trained to provide one-one-one mentorship **to teachers throughout the year** • 244 teachers/administrators trained to deliver the new curriculum for children with SEN • Legal and regulatory framework pertaining to preschool policy, financing, and inclusive education is revised

	• ELDS and the preschool curriculum are aligned and revised including learning and teaching materials. • Classroom observations to assess the quality of teaching-learning processes (CLASS) and tracking of child progress against the school preparation program's learning standards (EDI) are piloted and adopted by the MoES to use nationwide. • Model on inclusive education approved and included in the National Concept for Inclusive Education • Per-capita financing model is piloted and revised and recommended for national scale-up

Annex 2. Bank Lending and Implementation Support/Supervision

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Dingyong Hou	Task Team Leader
Joseph Paul Formoso	Senior Finance Officer
Andrea C. Guedes	Senior Operations Officer
Adam Shayne	Lead Counsel
John Otieno Ogallo	Senior Financial Management Officer
Gabriel C. Francis	Program Assistant
Irina Goncharova	Procurement Specialist
Nagaraju Duthaluri	Lead Procurement Specialist
Gulmira Sultanova	ET Consultant
Gerard Peart	Operations Consultant
Supervision/ICR	
Dingyong Hou/Gulmira Sultanova	Task Team Leader(s)
Irina Goncharova	Procurement Specialist(s)
Aliya Kim	Financial Management Specialist
Sujani Eli	Program Assistant
Rustam Arstanov	Environmental Safeguards Specialist
Rebecca Emilie Anne Lacroix	Social Safeguards Specialist
Aliya Bigarinova	ICR primary author

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY13	14.625	136,958.86
FY14	2.125	55,601.29
FY18	0	4,621.75
Total	**16.75**	**197,181.90**
Supervision/ICR		
FY14	7.575	100,642.67
FY15	22.475	227,726.89
FY16	30.867	89,530.58
FY17	22.775	143,346.78
FY18	32.362	153,639.34
FY19	8.257	217,554.30
Total	**124.31**	**932,440.56**

Annex 3. Project Cost by Component

Components	Amount at Approval (US$M)	Actual at Project Closing (US$M)	Percentage of Approval (US$M)
Component one: Expansion of quality pre-primary education	11.60	11.23	97
Component Two: Improved policy, programs and system effectiveness	0.34	0.66	194
Component Three: Communications and implementation support	0.76	.80	105
Total	**12.70**	**12.70**	**99.7**

Annex 4. Efficiency Analysis

1. The cost-benefit analysis of the project was not conducted during appraisal. However, the authors widely used the international evidence available on the cost-effectiveness of the preschool education and its impact on learning outcomes at later stages. The PAD extensively laid out the benefits of investing in ECE from the perspectives of reducing poverty and building human capital and used PISA 2009 results to support the arguments. The efficiency of the project at ICR was analyzed from the points of its cost-effectiveness and economic benefits.

Project Cost-Effectiveness

2. As stated in the background section, the large inefficiencies of the pre-primary level in Kyrgyz Republic were due to the Government's predominant support of state kindergartens, which operated for extended hours and offered a combination of education and daycare services. The World Bank's Public Expenditure Review of the Kyrgyz Republic (2014) indicated that the preschool coverage could multiply four-fold without increasing the costs if the system shifted from the model of state kindergartens and reduced the space used for cafeteria and sleeping purposes.

3. The project financed the model and technical assistance aimed to support the transition toward a shift-based preschool education, which operated on a half-day basis and extended the services to the most disadvantaged children who had no exposure to ECE, particularly in rural and remote, mountainous areas. The shift-based approach only focused on instructional time, unlike the state funded Kindergartens, which operated as a full-day care facility with sleeping and meal arrangements, ultimately increasing the overall cost. Under the shift-based models supported by the project, each shift lasted for approximately three hours, which allowed expanding the coverage because schools offered two, or sometimes, three shifts per day. The program was offered through newly established community-based kindergartens and school-preparation classes attached to the existing schools. For establishing community schools, the project required contributions from local authorities (Aiyl Okmotu), which not only reduced the cost for the project, but also created a shared ownership over the project. Since the school preparation classes were opened at the existing school facilities they did not entail additional costs related to maintenance of the building but required the existing primary level teachers to undergo training for teaching preparatory program. The salary costs under both models were covered by the public budget. The following table demonstrates that both approaches used by the project offered a more cost-efficient way to provide ECE services, compared to the traditional model of state funded kindergarten based on the cost per student. To make it more comparable the table includes the cost per student per hour since the length of the programs differs. The project funded cost-efficient ways to increase pre-primary coverage, however, the most important evidence of cost efficiency of the used approaches is supported by the enrollment data as discussed in paragraph 25. The shift-based approach in delivering ECE demonstrated an efficient use of scarce resources while ensuring countrywide coverage.

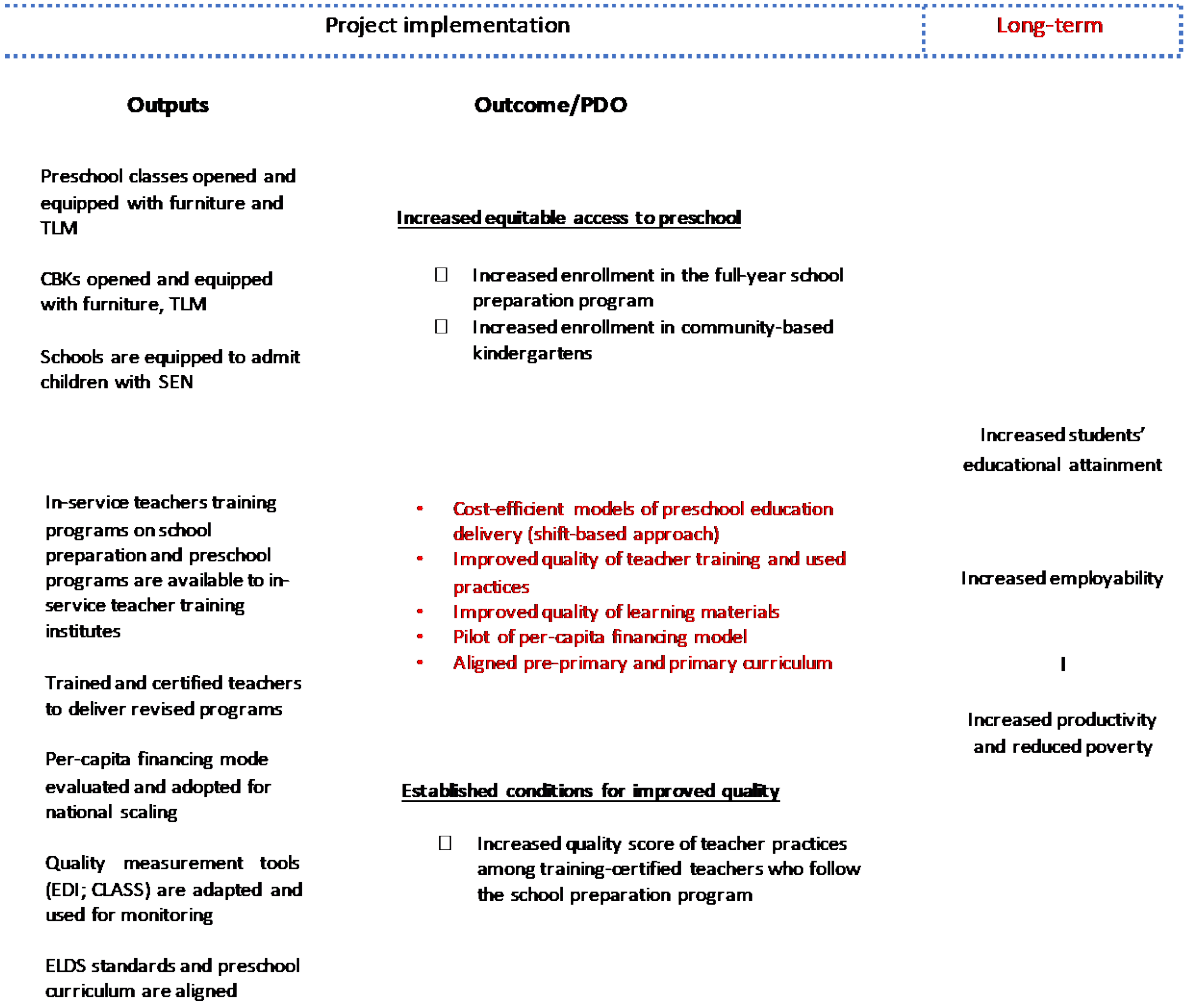
Table 4.1. Cost Per Student Based on Type of Preschool Institution (in Kyrgyz som, utilities not included)

	Half-day approach funded by the project (3 hours)		Traditional full day State Kindergarten (8 hours)
	School Preparation Classes	Community-based Kindergarten	State Kindergarten

Rural/cost per hour	4,435/1,478	9,474/3,158	37,820/4,727
Urban/cost per hour	4,015/1,338	7,661/2,553	33,286/4,160

4. Efficiency of the operation was also evidenced by the savings accumulated due to efficient procurement and timely disbursement. The requested extension for only 6 months allowed using those savings to enhance the project's impact (increased teacher quality score of 10 percent achieved versus 5 percent planned) and establish additional 550 preparatory classes and 20 CbKs but, most importantly, pilot a PCF model, which would inevitably increase the internal efficiency of preschool spending and demonstrate future sustainability. The outcomes which contributed to the efficiency of the system are specified in figure 4.1.

Figure 4.1. Economic Benefits Based on Theory of Change



5. The project's unit costs were in line with the costs for similar projects in the past, with the account for the exchange rate fluctuations. The total cost for furnishing a school preparation program class was

approximately $871. The cost of establishing a CbK is double of the the preparation classroom cost, but that is explained by the age mix normally enrolled in a CbK, which requires various types of furniture and equipment (see table 4.2 and 4.3 below). Also, even though the unit cost for the preparation class is generally higher for most items, the total number of items purchased under the KEEP is double the number of items purchased under the FTI project (for details see tables 4.2 and 4.3 below), which was necessary to ensure enough number of preparation classes are opened nationwide.

Table 4.2. Cost of school preparation classroom

Comparison of two projects										
		FTI (July, 2011)			FTI (July, 2012)			GPE (April, 2015)		
#	Item	Number	Unit cost (USD)	Total (USD)	Number	Unit cost (USD)	Total (USD)	Number	Unit cost (USD)	Total (USD)
1	Student desk with chairs	18,828.00	54.50	1,026,126.00	10,020.00	47.85	479,457.00	26,748.00	40.60	1,085,968.80
2	Chalkboard	1,569.00	51.14	80,238.88	1,002.00	47.50	47,595.00	2,229.00	51.00	113,679.00
3	Cupboard cabinets	3,138.00	130.00	407,940.00	2,004.00	118.75	237,975.00	4,458.00	135.73	605,084.34
4	Teacher desk and chair	1,569.00	56.91	89,283.98	1,002.00	52.25	52,354.50	2,229.00	61.00	135,969.00
	Total:		**292.55**	**1,603,588.86**		**266.35**	**817,381.50**		**288.33**	**1,940,701.14**
Comparison per classroom										
		FTI (July, 2011)			FTI (July, 2012)			GPE (April, 2015)		
#	Item	Number per classroom	Unit cost (USD)	Total per classrom (USD)	Number per classroom	Unit cost (USD)	Total per classrom (USD)	Number per classroom	Unit cost (USD)	Total per classrom (USD)
1	Student desk with chairs	12.00	54.50	654.00	10.00	47.85	478.50	12.00	40.60	487.20
2	Chalkboard	12.00	51.14	613.68	1.00	47.50	47.50	1.00	51.00	51.00
3	Cupboard cabinets	2.00	130.00	260.00	2.00	118.75	237.50	2.00	135.73	271.46
4	Teacher desk and chair	1.00	56.91	56.91	1.00	52.25	52.25	1.00	61.00	61.00
	Total:		**292.55**	**1,584.59**		**266.35**	**815.75**		**288.33**	**870.66**

Table 4.3 Cost per Community-based Kindergarten

GPE (August, 2016)				
#	Item	Number	Unit cost (USD)	Total (USD)
1	Children display shelf - Train shaped	1	185.00	185.00
2	Bookshelf	1	60.00	60.00
3	Activity board for motor skills development	1	27.50	27.50
4	Children chair	25	11.00	275.00
5	Children trapezoid activity table	12	17.00	204.00
6	Children study table	2	16.00	32.00
7	Bench	5	18.50	92.50
8	Locker	5	80.00	400.00
9	Cupboard	5	38.00	190.00
10	Teacher's desk	1	36.00	36.00
11	Teacher's chair	1	14.00	14.00
12	Bookcase	1	83.00	83.00
13	Wardrobe	1	50.00	50.00
14	Magnetic dry-erase board	1	40.00	40.00
Total				**1,689.00**

Economic benefits

6. There is extensive literature available on private returns in education, and the one which has data available specifically for the Kyrgyz Republic indicates that the private return to another year of schooling for the country is 8.7 percent (Montenegro and Patrinos 2014). A recent PISA report (OECD 2017) demonstrated that students who had attended preschool performed better at the age of 15 than their peers who did not. Furthermore, those who spent two or three years in preschool scored 35 percent higher than those who did not. Attending a preschool demonstrated a positive impact on the Kyrgyz students' learning achievements at the age of 15[16], as indicated in the PISA report of 2009 – students who participated in preschool education for one year scored on average about 2 percent higher.

7. The correlation between the earnings and the cognitive skills attainment was demonstrated in a study by Psacharopoulos and Patrinos (2010), which estimated that an increase in standard deviation for cognitive ability resulted in approximate 17 percent to 22 percent increase in earnings (Table 4.3). Based on this estimate and the results of the EDI assessment conducted under the project, one can calculate the impact of KEEP using the effect size of 1.02 for language and cognitive development (see annex 6, Box 6.2). On average the increase in earnings for the children who attended the full-year preparatory program under the project will be between 17.3 percent and 22.4 percent.

Table 4.4. Estimated Returns to a Standard Deviation Increase in Cognitive Skills

Country	Estimated Effect	Source
Chile	0.17	Patrinos and Sakellariou (2007)
Ghana	0.14–0.30	Glewwe (1996)
Ghana	0.05–0.07	Jolliffe (1998)
Kenya	0.19–0.22	Boissiere et al. (1985), Knight and Sabot (1990)
Pakistan	0.12–0.28	Alderman et al. (1996)
Pakistan	0.25	Behrman et al. (forthcoming
South Africa	0.34–0.48	Moll (1998)
Tanzania	0.07–0.13	Boissiere et al. (1985), Knight and Sabot (1990)
Average	0.17–0.22	

Source: as cited in Patrinos and Psacharopoulos (2010).

8. The assumptions do not guarantee that the outcome will be the same for all children enrolled under the project as it will depend on many other social and economic factors as they grow up, but at least this evidence is compelling enough to be used as an incentive for parents' further involvement and the Government's decision making with regard to ECE budget and policies. Extending the coverage of the preschool program to nearly universal across the country was a worthwhile investment in ECE.

16 PISA 2009

Annex 5. Kyrgyz Republic Ministry of Education and Science comments (MES Comments re ICR GPE Attached

/Unofficial translation/

the World Bank Office
in the Kyrgyz Republic

The Ministry of Education and Science of the Kyrgyz Republic expresses its gratitude for submitting the World Bank Implementation & Completion Report on the Kyrgyz Early Education Project (Global Partnership for Education in the Kyrgyz Republic (GPE) – 3 (P132490)) and fully supports the highly satisfactory assessment of the Project outcomes.
With a close cooperation of the Ministry of Education and Science of the Kyrgyz Republic, the World Bank, local self-government authorities, schools, parents and Rayon Education Departments, it was possible to attain the Project objectives on the increase of equal access to pre-school education, as well as provide favorable conditions for improving its quality. In addition, the Ministry of Education and Science especially notes that it was possible to significantly exceed the target indicators of coverage and satisfaction of the project beneficiaries. Timely awareness of the population about the benefits of early child development, as well as the Project goals and objectives, has played a key role in high results achieving.

Moreover, the results of piloting and introducing new measurement tools, making possible to assess the teaching and learning practice, and children's readiness to school, have impacted on the boosting the quality of training programs in general. Following the results on introducing the assessment tools, the Nariste School Preparation Program influenced the children’s school preparation and quality of trainings delivered to the teachers. Improving the evaluation system at the class and school levels became an important and necessary step for the alterations in the education sector.

With regards to the significant project contribution, children with special education needs have been covered under the School Preparation Program. It has been reflected in the developed inclusive education model.

It should be noted that the close partnership between the Ministry of Education and Science and the World Bank contributed to solving various issues and monitoring the situation within a limited time.

The Ministry of Education and Science of the Kyrgyz Republic is grateful to the World Bank for strong cooperation during the Project implementation and hopes for fruitful cooperation in the future.

Deputy Minister **N. S. Dzhusupbekova**
National World Bank Project Coordinator

Annex 6. Supporting Documents

1. Supplemental information is included in this Annex to support the arguments and data included in the main text of the ICR.

PDO 1 Increased equitable access to preschool education

2. The table below demonstrates the enrollment in school preparation classes in the most disadvantaged regions of the country. The project reached out to enroll all children, otherwise neglected by the system with the total coverage of 93 percent.

Table 6.1. Enrollment in preparation classes in the regions with the highest poverty rate

	2015-2016			2016-2017			2017-2018		
	Batken	Jalalabad	Naryn	Batken	Jalalabad	Naryn	Batken	Jalalabad	Naryn
Number of students enrolled in preparation classes	10,110	21,730	5,870	13,351	30,230	7,900	11,541	26,226	6,894
Number of children from poor households	4,165	9,800	2,230	4,940	9,734	2,986	4,674	8,549	2,013
Percentage from the poorest households	36%	45%	38%	37%	32%	38%	40%	33%	29%
Poverty rate	41%	45%	38%	37%	32%	38%	40%	33%	29%

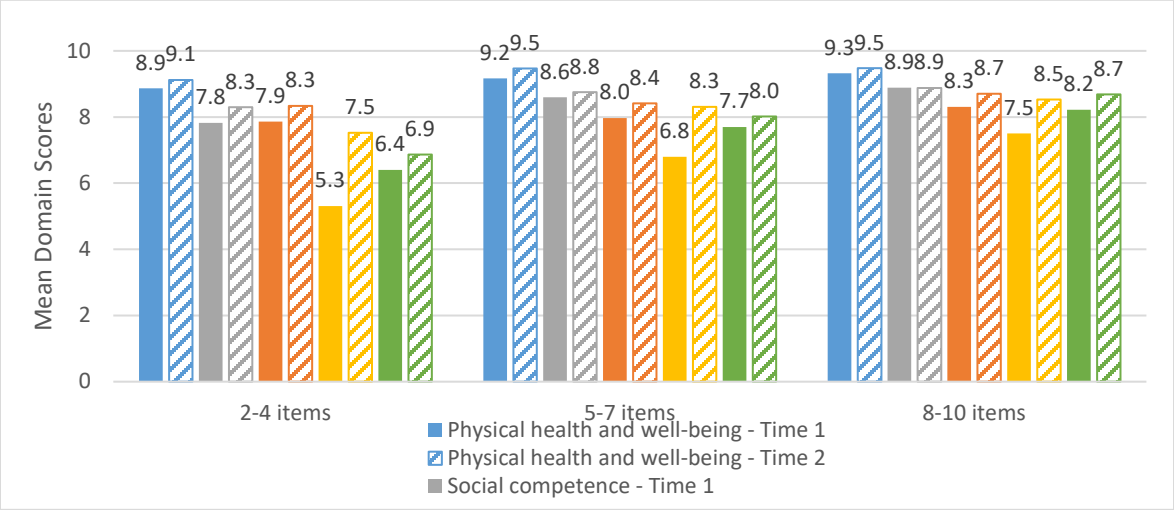
Source: MoES data

3. The result presented in the graphs below support the evidence that the project not only delivered on the PDO indicator 1, which was to decrease inequalities in access to preschool education among the most vulnerable groups but went beyond to improve the quality of learning for those children enrolled into preparation classes.

4. The EDI measurement showed that children demonstrated particularly large improvements in the language and cognitive development domain, consistent across all groups and schools. While children improved in all domains to some extent, their abilities in this particular area have increased more than in any other one. Since this domain is representative of the beginnings of academic achievement (reading and math skills), it could be suggested that after participating in the CbKs, children would be on a better path to achieving proficiency in these areas than they were before the project implementation. The estimated effect size for key domains between the two rounds has demonstrated an average increase in all five domains: physical well-being (0.29), social competence (0.35), emotional maturity (0.28), language and cognitive development (1.02), and communication and general knowledge (0.38).

5. The following figure 6.1 demonstrates that the gains for children from the most disadvantaged households are higher in comparison to children from families with relatively more material assets in two of the EDI domains, Social Competence and Language and Cognitive Development (number of items is used as a proxy for material wealth). In the Social Competence domain children from the most disadvantaged households saw an increase in the mean scores from 7.8 to 8.3, an increase of 0.5, whereas the children from economically better off families maintained a consistent mean score of 8.9. The children from the most disadvantaged families also demonstrated large gains in the Language and Cognitive Development domain, the mean score increasing from 5.3 to 7.5, an increase of 2.2, whereas the children from economically better off families also saw an increase but at a lower rate, going from a mean score of 7.5 to 8.5. These outcomes support the finding that children's participation in CbK's is a contributing factor in decreasing the disparities and inequalities between children from different socioeconomic environments.

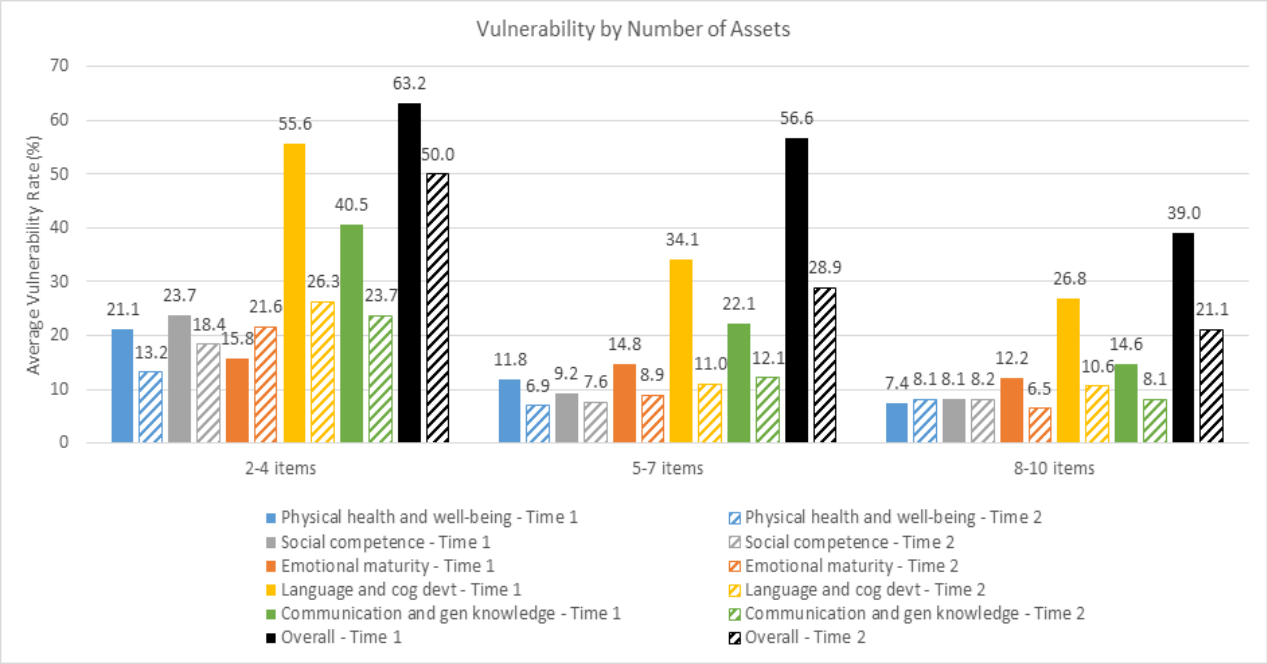
Figure 6.1. Results of EDI Measurements by Households' Wealth



Source: Monitoring progress report on the objectives of the Kyrgyz Early Education Project (KEEP): Results of the Early Development Instruments, prepared by Offord Center for Child Studies of McMaster University (Canada).

6. The graph below (figure 6.2) further continues to support the findings that children's participation in CbK's contributes to the reduction in disparities across income groups. Vulnerability rates of children in the most disadvantaged households decreased in all domains with the exception of Emotional Maturity between 5.3 percentage points in the Social Competence domain to 29.3 percentage points in the Language and Cognitive Development domain. Children from families with the most material assets saw relatively consistent outcomes in two domains and deceases in vulnerability in Emotional Maturity, Language and Cognitive Development, Communication and General Knowledge and in overall vulnerability. The rates of decrease in vulnerability were more significant for disadvantaged children in all domains with the exception of Emotional Maturity and Overall Vulnerability, supporting the program's effectiveness in the reduction of inequalities among groups based on material wealth.

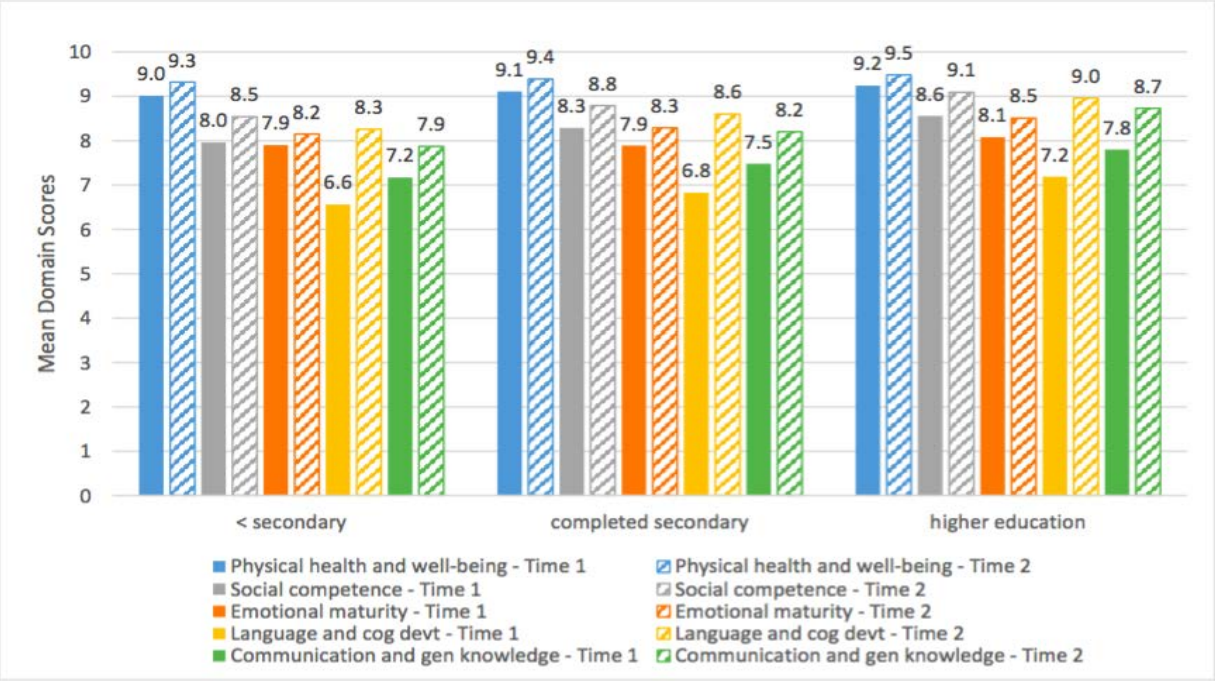
Figure 6.2. Vulnerability by Number of Assets



Source: Monitoring progress report on the objectives of the Kyrgyz Early Education Project (KEEP): Results of the Early Development Instruments, prepared by Offord Center for Child Studies of McMaster University (Canada).

7. The next graph (figure 6.3) also provides additional the evidence that the project reduced disparities for the most disadvantaged children by mother's level of education. Although the increase in scores by the level of mother's education was the highest for children with mothers who had higher education, the decrease in overall vulnerability was highest in the group of children whose mothers had completed secondary education (50% to 25%). Children whose mothers had less than secondary education had the second largest decrease (55% to 32%), followed by the children whose mothers had higher than secondary education (40% to 20%).

Figure 6.3. EDI Measurement Results by Mother's Level of Education



Source: Monitoring progress report on the objectives of the Kyrgyz Early Education Project (KEEP): Results of the Early Development Instruments, prepared by Offord Center for Child Studies of McMaster University (Canada).

8. It is very important to note that the conclusions are limited by the lack of a comparison group of children who did not participate in CbKs. Some improvement in the EDI scores from the beginning to the end of kindergarten would have happened due to developmental maturation over the intervening months. However, even with these limitations of the analysis, the finding that all mean domain scores improved across all groups observed in the study is still meaningful for the program as it suggests that children participating in the CbKs followed a favorable developmental trajectory over the time frame of the program. It is important to continue the assessment and further align it with EGRA and PISA reports as recommended by the Offord Center.

Established conditions for improving preschool quality

Teacher quality improvement

9. Table 6.2 demonstrates the results of the CLASS observations done in 2017/18. T-test and Cohen's D were used to measure the differences in CLASS scores between the two rounds. The results indicate that there were significant differences in all three domains between Fall 2017 (Time 1) and Spring 2018 (Time 2) because the P-values were all less than 0.05. Cohen's D demonstrates that the differences reflect a large effect for emotional support, a medium effect for classroom organization and a small effect for instructional support[17].

[17] Small effect = 0.2; Medium Effect = 0.5; Large Effect = 0.8

Table 6.2. Results of CLASS Observations in 2017/18

Dimension		Mean	Effect Size
Emotional support	Time 1	5.40	P = 0.000
	Time 2	5.93	Cohen's D = 0.93
Classroom organization	Time 1	4.83	P = 0.000
	Time 2	5.34	Cohen's D = 0.53
Instructional Support	Time 1	2.44	P = 0.041
	Time 2	2.65	Cohen's D = 0.28

Source: Classroom observation summary results. MoES

Description of the Key Assessment Tools

10. *Early Development Instrument (EDI)* was developed and is provided by the Offord Centre at McMaster University in Ontario, Canada. The EDI is a rating-type assessment for measuring school readiness of a population of children across five domains:

- Physical health and well-being
- Social competence
- Emotional maturity
- Language and critical thinking skills
- Communication skills and general knowledge

11. *Classroom Assessment Scoring System (CLASS)* was developed by the University of Virginia's Curry School and Center for Advanced Study of Teaching and Learning to assess classroom quality in infant–Grade 12 classrooms. CLASS is a standardized observational instrument that objectively describes multiple dimensions of teaching across a range of grades and contexts.

Some of the main benefits of CLASS:

- Provides programs, schools, and districts with reliable, valid data on teacher effectiveness
- Creates a common language about effective teaching practices across subject areas and grade levels
- Helps teachers better understand how their interactions in the classroom affect student learning
- Documents improvements in the effectiveness of teachers' interactions with students

12. Together, these two instruments represent an important first step to develop a sustainable M&E system that is critical to ensure quality of childhood education interventions.

Key Project Documents

- Aide Memoires 2014–2018
- Borrower's ICR
- Monitoring Progress on the Objectives of the Kyrgyz Early Education Project (KEEP): Results of the Early Development Instruments, Final report 2018

- Impact Evaluation 2018
- Project Appraisal Document 2014
- Project Implementation Status and Results Reports 2014–2018

Other Documents

- Dearing, E., K. McCartney, and B. A. Taylor. 2009. "Does Higher Quality Early Child Care Promote Low-Income Children's Math and Reading Achievement in Middle Childhood?" *Child Development* 80 (5): 1329–1349. https://www.jstor.org/stable/25592075?seq=1#page_scan_tab_contents.
- Jennings, J. L., & DiPrete, T. A. (2010). Teacher effects on social and behavioral skills in early elementary school. *Sociology of Education*, *83*(2), 135-159.
- Montenegro, C. E., and H. A. Patrinos. 2014. "Comparable Estimates of Returns to Schooling Around the World." World Bank Policy Research Working Paper Series 7020.
- OECD. 2017. *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, OECD Publishing, Paris. https://read.oecd-ilibrary.org/education/starting-strong-2017_9789264276116-en#page4
- Patrinos, H. A., and G. Psacharopoulos. 2018. "Returns to Investment in Education: A Decennial Review of the Global Literature." Policy Research Working Paper. No. 8402. World Bank, Washington, DC. World Bank. https://openknowledge.worldbank.org/handle/10986/29672 License: CC BY 3.0 IGO.
- Patrinos, H. A., and G. Psacharopoulos. 2010. "Returns to Education in Developing Countries." In *International Encyclopedia of Education*, edited by P. Peterson, E. Baker, and B. McGaw, 2: 305–312. Oxford: Elsevier.
- World Bank. 2013. *Kyrgyz Republic. Early Childhood Development*. SABER Country Report. Washington, DC: World Bank.
- World Bank. 2014. *Kyrgyz Republic - Public Expenditure Review Policy Notes: Education*. Public Expenditure Review (PER). Washington, DC: World Bank. http://documents.worldbank.org/curated/en/569291468047043684/Kyrgyz-Republic-Public-expenditure-review-policy-notes-education.
- World Bank. 2018*. Kyrgyz Republic: From Vulnerability to Prosperity: Systematic Country Diagnostic. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/516141537548690118/Kyrgyz-Republic-From-Vulnerability-to-Prosperity-Systematic-Country-Diagnostic.*

MAP


KYRGYZ REPUBLIC
KAZAKHSTAN
UZBEKISTAN
TAJIKISTAN
CHINA
BISHKEK
Kara-Balta
Tokmok
Kirov
Talas
Tunuk
Toktogul
Kara-Kul
Tash-Kumyr
Jalal-Abad
Osh
Kyzyl-Kiya
Gul'cha
Sulyukta
Batken
Sary-Tash
Daraut-Korgan
Chaek
Naryn
At-Bashy
Kara-Say
Balykchi
Cholpon-Ata
Tyup
Karakol
Barskaun
Enilchek
Shyirak
Peak Pobedy 7439 m
Lake Issyk-Kul
Lake Sonkul
Lake Charyi-Kel'
Toktogul Reservoir
Kungey-Alatau Mts.
T i a n S h a n
CHUI
TALAS
JALAL-ABAD
NARYN
OSH
BATKEN
ISSYK-KUL
Chu
Chatkal
Naryn
Kurshab
Kyzyl Suu
Aksay
To Shymkent
To Burylbaytal
To Ushtobe
To Panfilov
To Tashkent
To Bukhoro
To Murghab
To Hotan
0 25 50 75 100 Kilometers
0 25 50 75 Miles
72E
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78E
80E
70E
42N
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44N
SEPTEMBER 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.
KYRGYZ REPUBLIC
SELECTED CITIES AND TOWNS
OBLAST CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
OBLAST BOUNDARIES
INTERNATIONAL BOUNDARIES
IBRD 33430