

TC ABSTRACT

I. Basic project data

▪ Country:	Ecuador
▪ TC Name:	Closing the Gap III: Impact of the quality of the teachers in students
▪ TC Number:	EC-T1282
▪ Team Leader/Members:	Yyannú Cruz Aguayo (Team Leader, SCL/SCL); Norbert Schady (Co-Team Leader, SCL/SCL); Julien Hautier (EDU/CEC); Bernardita Sáez (LEG/SGO); Maria Teresa Soto-Aguilar (VPC/FMP); and Sandra Guillermo (SCL/SCL)
▪ Indicate if:	Client Support
▪ If Operational Support TC, give number and name of Operation Supported by the TC	
▪ Reference to Request: (IDB docs #)	
▪ Date of TC Abstract:	February 5, 2014
▪ Beneficiary:	Ecuador
▪ Executing Agency and contact name	IDB - Yyannú Cruz Aguayo
▪ IDB Funding Requested	US\$2,400,000
▪ Local counterpart funding, if any	
▪ Disbursement period	30 months
▪ Required start date	03/01/2014
▪ Types of consultants	Firm and individual consultants
▪ Prepared by Unit:	SCL/SCL
▪ Unit of Disbursement Responsibility:	SCL/SCL
▪ Included in Country Strategy (y/n);	No
▪ TC included in CPD (y/n):	Yes
▪ GCI-9 Sector Priority:	Social Policy for Equity and Productivity

II. Objective and Justification

2.1 This Technical Cooperation (TC) is motivated by two salient features of education outcomes in Latin America and the Caribbean (LAC). First, in Latin America, differences in cognitive development between children from poor and less poor households emerge early. In Ecuador, by the time they are five years of age, the poorest children are on average one and a half years behind their better off counterparts in terms of their cognitive development (Paxson and Schady 2007; Schady et al. 2013). The second salient feature of education systems in LAC is the fact that students from the region perform dismally on international tests compared to students from other countries with similar income levels: less than five percent of children in Latin America reach the score of the average student in East Asian countries on the PISA international tests (Levy and Schady 2013). A key factor that might explain the low performance of Latin American students on international tests is the poor quality of teaching, which is widely recognized as a policy priority for the educational sector in the region. Besides home environment, teachers are the most important factor affecting student learning. The effort to assess the determinants of high quality teaching and ways

to improve it has led in recent years to a great deal of research and policy experimentation. Numerous studies have aimed at measuring teaching quality; nevertheless, there is no consensus yet on what the best measures of effective teaching are.

- 2.2 The general objective of this TC is to identify which characteristics of teachers allow young, disadvantaged children, who enter school with profound deficits in cognitive development, to close their skills gaps. Therefore, the TC is aligned with the Bank's GCI-9 priority of "Social policy for equity and productivity", in the strategic area of "raising the quality and equity of education." Additionally, this TC contributes to the Bank's GCI-9 goal of programs for "small and vulnerable countries." The goal of this TC is also strongly linked to specific goals mentioned in the Country Strategy for Ecuador 2012-2017, which identifies Social Development as one of the main areas for Bank Intervention.
- 2.3 The specific objective of this TC is to continue a project, "Closing Gaps", which evaluates different dimensions of teacher quality. This TC is unique in its design as it resolves the complicated identification challenges that have plagued most evaluations of teacher effects by randomly assigning students to the different sections of their grade within the same school. In 2012, through an agreement and with the support of the Ministry of Education (MinEduc), approximately 15,000 children entering kindergarten in 204 schools were randomly assigned to their teachers. At the beginning of the academic year, an assessment of each child's baseline level of development was performed. Each classroom was later filmed during an entire school day, and the resulting videos were coded following the Classroom Assessment Scoring System(CLASS), an instrument that evaluates teachers on three dimensions: socio-emotional support; classroom management; and instructional support. Subsequently, at the end of the school year, a set of 13 tests were applied to all children in the sample. The instruments were intended to assess early literacy and math skills, as well as executive function. Additionally, household surveys for each child were also collected. Simultaneously, 100 additional schools were visited in order to obtain a representative sample at the regional level and to begin to structure a national benchmark for the 204 schools of the study.
- 2.4 The project has very important policy implications for Ecuador and other countries in the region, for the design of effective teacher selection and evaluation systems, targeted in-service teacher training programs, and for compensatory educational programs for disadvantaged children, among others. For this reason, and taking into account the feedback received from leading international experts in the field, the MinEduc and IDB teams decided to extend the project to the next school years. The first extension, school year 2013-2014, had two main objectives: (i) to follow the original teachers of the study assessing the learning outcomes of their new cohort of kindergarten students-; and (ii) to assess the development of the study's original cohort of students as they finish first grade in February 2014. At the beginning of the school year all students, in both grades, were randomly assigned to their teachers -the random assignment was verified in subsequent visits-, and baseline tests were collected for the new cohort of students. Video coding based on CLASS and end-of school year tests will be concluded in February 2014. Additionally, cognitive ability and personality tests are currently being applied to the original teachers of the study, these instruments belong to a comprehensive battery of potential instruments to measure teaching quality proposed to and approved by MinEduc.
- 2.5 The study has been subject to wide dissemination at different levels. Meetings have been carried out regularly with the Minister of Education of Ecuador and his team, both in Quito and at the IDB headquarters in Washington, D.C. The MinEduc, with support from the IDB team, has conducted several workshops with the principals and teachers from the participating schools. In 2013, the Bank

hosted a workshop with leading experts on teaching quality, which, in addition to multiple presentations at international conferences, have given the project a unique exposure to top quality feedback.

- 2.6 It is critical that the study be extended into the 2014-2015 school year for at least four reasons: (i) it is important to establish whether any short-term teacher effects on children's learning and development observed after the first years of formal schooling are maintained over time: do gains persist over time? Are the teacher effects amplified? Or, rather, are the gains fleeting and fade out?; (ii) it is important to establish how having a better teacher in one grade interacts with having an effective teacher in the following grades. Is the effect additive, or, rather, is there complementarity in teacher quality, so that a good teacher in first grade can build on the effects of an effective kindergarten teacher and so on; (iii) the experimental design of the project will allow us to keep on testing the battery of alternative instruments to evaluate teacher quality, in order to identify the potential of these instruments to measure effective teaching, an important task, relevant not only for Ecuador but for the region in general; and (iv) to establish whether "teacher effects" are stable from one year to another: does teaching quality vary from year to year? Is a "good" teacher "good" in different school-years?

III. Description of activities

- 3.1 **Component 1: Randomization and verification of randomization compliance.** At the beginning of the school year 2014-2015 (May 2014), the original group of children will be randomly assigned to their new teachers as they begin second grade –, while a new group of children starting kindergarten will be randomly assigned to the original teachers of the study (Activity 1). In order to verify the compliance of this assignment, each school will be visited at different points in time during the school year (Activity 2).
- 3.2 **Component 2: Measuring teacher quality.** Teachers will be filmed and the resulting videos will be coded using the CLASS protocol (Activity 1). A subset of the additional instruments to measure teacher quality will be applied to a proportion of the teachers in the study (Activity 2). Data collection will be completed by February 2015, and CLASS coding will be completed by March 2015.
- 3.3 **Component 3: Measuring child development and learning.** A baseline of cognitive development will be obtained for the new cohort of children starting kindergarten with the original teachers of the study (Activity 1). Additionally, as part of this component, the set of tests (math, reading and executive function) to measure learning/development outcomes for children in the sample will be developed/reviewed/piloted (Activity 2). These tests will then be applied at the end of the school year (Activity 3). Finally, administrative information and information on each individual student's behavior will be collected using specialized questionnaires for the teachers (Activity 4). All data collection is expected to be completed by February 2015.
- 3.4 **Component 4: Supervision, capacity building, analysis and dissemination.** This component will finance a number of activities that are critical for the completion and dissemination of this work, specifically: (i) technical supervision and support throughout the application of the CLASS instrument in Ecuador, (ii) capacity building on CLASS with team and counterparts; (iii) processing and analysis of the data collected; and (iv) dissemination activities (Activity 1).

IV. Budget

Indicative Budget

Component/Activity	Description	IDB/Fund Funding	Counterpart Funding	Total Funding
Component 1/Activity 1	Randomization at enrollment	\$200,000		\$200,000
Component 1/Activity 2	Randomization Verification	\$100,000		\$100,000
Component 2/ Activity 1	CLASS application	\$285,000		\$285,000
Component 2/ Activity 2	Application of teacher quality tests	\$55,000		\$55,000
Component 3/ Activity 1	Baseline test- kindergarten	\$200,000		\$200,000
Component 3/ Activity 2	Development/review learning outcomes tests	\$40,000		\$40,000
Component 3/ Activity 3	Application learning outcomes tests	\$1,350,000		\$1,350,000
Component 3/Activity 4	Administrative /behavioral data collection	\$70,000		\$70,000
Component 4	Supervision, data analysis and dissemination	\$100,000		\$100,000
			Total	\$2,400,000

V. Executing agency and execution structure

- 5.1 This TC will be Bank executed. In agreement with the MinEduc, the Bank has executed all the TCs that funded to the first two years of this project.
- 5.2 The Bank will procure the goods, services and consulting services required by the Project in accordance with Bank policies contained in documents GN -2349-9 and GN-2350-9, respectively.

VI. Project Risks and issues

- 6.1 Implementation risks are considered low. We identified two risks. First, there is a risk that the fieldwork may encounter delays to its completion. In this particular study, there is limited space for delays given that the data collection activities must finish at the end of the school year. Secondly, there is a risk that a few school principals/teachers/parents might not comply immediately with the random assignment. In those cases, the Ministry of Education has committed to mediate and correct any deviations from the assignment.

VII. Environmental and Social Classification

- 7.1 In accordance with the Policy OC-703, given the nature of the operation's objectives and scope of activities, no environmental negative impacts are anticipated and a classification "C" is proposed (see [filters](#)).