

TECHNICAL COOPERATION DOCUMENT

I. Basic information

▪ Country/Region :	ECUADOR/CAN - Andean Group
▪ TC Name :	Teacher Professional Development Program
▪ TC Number :	EC-T1351
▪ Team Leader/Members :	Yyannú Cruz Aguayo (team leader); Norbert Schady (co-team leader); Nicola Dehnen, Matias Martinez Von Der Fecht, Sara Ciner Schodt, Vania Pizano (SCL/SCL); Mariana Alfonso, Jesus Duarte (SCL/EDU); and Mónica Lugo (LEG/SGO)
▪ Taxonomy:	Client Support
▪ Date of TC Abstract authorization:	November 22 nd , 2016
▪ Beneficiary:	Ecuador
▪ Executing Agency:	Inter-American Development Bank through the Social Sector (SCL/SCL)
▪ Donors providing funding:	Japan Special Fund (JSF)
▪ IDB Funding Requested:	US\$ 500,000.00
▪ Local counterpart funding:	US\$ 100,000.00
▪ Disbursement period:	36 months (30 months execution)
▪ Required start date:	February, 2017
▪ Types of consultants:	Firm and individual consultants
▪ Prepared by Unit:	SCL/SCL
▪ Unit of Disbursement Responsibility:	SCL/SCL
▪ TC Included in Country Strategy:	Yes
▪ TC included in CPD:	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	This TC contributes to address the development challenge of social Inclusion and equality

II. Objectives and Justification

- 2.1 The general objective of this TC is to assist the Ecuadorian Ministry of Education (MinEduc) in improving the quality of basic education for all children, but especially those from poor and disadvantaged backgrounds. The TC will achieve this objective by addressing one of the greatest challenges common to education systems of countries across Latin America and the world: to improve the quality of in-service teachers to directly raise student learning and skills.
- 2.2 This operation builds on evidence generated by rigorous studies examining the impact of teacher quality on student learning outcomes, including the IDB's own groundbreaking longitudinal study, "Closing Gaps" (Cerrando Brechas)¹, which has contributed to our knowledge of the relationship between teaching practices and student learning. At a time

¹ See : ATN/OC-13003-EC; ATN/JF-133365-EC; ATN/OC-13782-EC; ATN/OC-14124-EC; ATN/OC-14450-EC; ATN/OC-15266-EC; ATN/OC-15468-EC; and ATN/OC-15690-EC.

when governments across Latin America and the Caribbean (LAC) are searching for effective professional development strategies to improve teacher quality, the outcome of this TC –an evidence-based, field-tested mentoring package for in-service teachers that includes implementation guidelines– will serve to inform education policy in Ecuador and the rest of the region.

- 2.3 The quality of an educational system depends in great part on the quality of its teachers. In countries across Latin America, most teachers fall far short of their potential to transform children's lives, and to date policy makers and governments have lacked the knowledge and tools to support in-service teachers in a way that produces improved student learning.² To this end, the specific objective of this TC is to develop and pilot an evidence-based teacher professional development program providing ongoing mentoring for in-service elementary school teachers to directly improve their pedagogical practices. This pilot is unique because it gives teachers individualized and specific support to improve practices in their classrooms, to foster more effective interactions with their students, and to make the most out of their day-to-day classroom experiences to maximize student learning in an ongoing mentorship context. Furthermore, the project fills an urgent need for rigorously and scientifically evaluated professional development programs that can show real improvements in teacher quality and disseminate the results for the benefit of other countries in the region, and the rest of the world.
- 2.4 The pilot will produce a stand-alone teacher mentoring package with step-by-step implementation protocols and training materials that may be implemented in Ecuador and throughout the region.
- 2.5 This TC offers a one-of-a-kind opportunity to pilot a high-quality and evidence-based yet scalable teacher professional development program aimed at improving student outcomes. This program is based on important findings from the longitudinal "Closing Gaps" study. Closing Gaps has been collecting first-of-its-kind panel data on the relationship between teaching quality and children's learning in public preschool and elementary schools in Ecuador for nearly six years. It has identified some of the specific teacher characteristics and practices that allow young, disadvantaged children, who enter school with profound deficits in their cognitive development, to close skills gaps with respect to more advantaged children as they advance through primary school.
- 2.6 Closing Gaps has generated key policy-relevant results that directly inform the design and content of the mentoring pilot. Some of these results are: (i) teachers have substantial impacts on children's learning outcomes (in math, language and executive function); (ii) teacher characteristics, on which much of the current selection, evaluation and compensation systems are based, account for very little of the variability in teachers' performance; (iii) other not commonly measured characteristics (including IQ and personality traits) are also poor predictors of teacher effectiveness; (iv) in contrast, teachers' classroom behaviors and practices are strongly associated with better learning outcomes; (v) all children benefit from a good teacher, with no distinction between girls and boys, or socioeconomic status, among others; and (vi) an effective teacher one year seems to also be effective in the subsequent year (both for the same subjects and across subjects); (vii)

² In 2016, the National Institute of Evaluation (INEVAL, in Spanish) evaluated all the teachers in the public system. The preliminary results indicate that only 20 percent of the evaluated teachers demonstrated to have an adequate level of disciplinary domain, and that their pedagogic skills allowed them to plan, execute and evaluate the learning process on a specific context (Source: INEVAL, 2017. Elementos del reporte sintético de SER maestro).

the effects of teachers in kindergarten, first and second grade have lasting impacts on children's learning outcomes.

- 2.7 This TC is consistent with the Update to the Institutional Strategy (UIS) 2010-2020 (AB-3008) and is aligned with the development challenge of "social inclusion and equality", as education is a catalyst to break the inter-generational poverty cycle and it helps to foster social mobility. This TC is also consistent with the Education and Early Childhood Development Sector Framework Document (GN-2708-5), especially in its third dimension – ensuring that all students have access to effective teachers. Its activities are embedded in one of the sectors considered as a priority in the Country Strategy for Ecuador 2012-2017. The activities to be financed in this TC will complement efforts currently underway by the Ministry of Education, as the TC is aligned with its current priorities of improving the professional development of teachers and school directors, promoting leadership that helps to increase the efficiency and quality of the educational services that are provided. Finally, this TC has also been developed in coordination with the activities of the recently approved loan 3726/OC-EC³.

III. Description of activities/components and budget

- 3.1 **Component 1. Selection, development and adaptation of training materials for mentors and teachers.** In close coordination with the Ministry of Education and in partnership with leading experts from the University of Virginia, the content and materials for the pilot will be fully developed and adapted to the Ecuadorian context, with applicability to a greater Latin American context. Materials will include mentor selection tools, full training sessions for mentors and introduction materials for teachers, week-to-week guides for mentor-teacher meetings, periodic retraining sessions, individualized materials for teachers, and supervision and administration materials.
- 3.2 Drawing on hundreds of hours of video footage from the Closing Gaps⁴ database, our team has identified numerous "teachable moments" of effective practices in elementary school Ecuadorian classrooms. Based on a similar successful resource in the U.S., those "moments" will be edited into 1-2 minute segments that will be included in the mentor's toolkit for working with teachers and also serve as a contextually appropriate video "library" to help teachers learn to observe and identify good practices before examining their own.
- 3.3 Materials also include the development of the training course for mentors which includes PowerPoint presentations, individual and group guided activities, and a yearlong Manual with week-by-week curriculum to support mentors throughout the program cycle. Additional activities include initial introduction and familiarization with training materials for teachers and guides to support their weekly activities, as well as monitoring and supervision materials

³ Some of the components of this loan were designed using results from Closing Gaps. Additionally, the execution of such components will use as inputs the evidence produced by the activities of this TC.

⁴ Closing Gaps has collected very rich data on teachers for over five years. In addition to standard information on years of experience, education, and contract status (tenured or not) the teachers were filmed teaching a class for an entire school day. These videos were coded to measure the interaction of teachers and students, using a protocol known as the Classroom Assessment Scoring System (CLASS, Pianta et al. 2007). The CLASS is a measure of a series of teacher behaviors that can collectively be described as "Responsive Teaching" (Hamre et al. 2014). The study also measured teacher IQ, personality, inhibitory control, and socio economic status during the teachers' formative years. For more information see: Maria Caridad Araujo, Pedro Carneiro, Yyannu Cruz-Aguayo, and Norbert Schady. 2016. "Teacher Quality and Learning Outcomes in Kindergarten". 2016. Quarterly Journal of Economics, Volume 131, Issue 3: 1415-1453

for program administrators to make sure that both mentors and teachers are adhering faithfully to the program.⁵

- 3.4 Final outputs from this component include: materials for training of mentors and for the mentoring program activities including power points, guided activities, individual session guides, video-based learning library, and supervision and feedback tools.
- 3.5 **Component 2. Implementation of a pilot to field-test, evaluate, and adjust all mentoring program materials, processes, and activities.** The pilot is structured as a randomized control trial. As such, it will provide valuable information on the effectiveness of the teacher mentoring package. Throughout implementation, measures of process learning and ongoing feedback will be developed to ensure the highest quality of program implementation, and that it achieves the desired outcomes: faithful intervention implementation, exceptionally trained mentors, higher quality teacher practices, and improved student outcomes in the classroom. To this end, we will recruit and work with a final group of ten highly qualified and trained mentors and 50 in-service teachers over the course of a school year. This component will finance the following activities: (1) Selection and recruitment of both mentors and teacher participants; (2) Activities for executing the pilot, including: training sessions for mentors, familiarization sessions for teachers, bi-weekly mentor-mentee sessions, feedback and learning sessions, and overall supervision and coordination of the pilot; (3) data collection and evaluation activities to measure the success of the program.
- 3.6 **Activity 1.** Randomized cluster sample selection, and design and application of instruments to select a sample of 15 outstanding teachers. For the selection of participating schools in the pilot, we will use a [randomized cluster sample selection](#). Derived from this selection we will identify 15 outstanding teachers (mentor candidates). Our team has completed an extensive literature review and engaged with various experts in the teaching quality field to compile a battery of tests to accurately identify candidates uniquely suited to be excellent mentors. From our sample of clusters described above (in the treated schools), we will evaluate all tenured teachers with the following tests: (i) a peer-nomination survey, (ii) the Big Five personality test, and (iii) an evaluation of Perceptions about Children. Based on the results of these tests, we will work with the MinEduc and the University of Virginia's Teaching and Learning Center to develop a quality index to rank teachers based on their responses, and then offer the top 15 performers the opportunity to participate in a [final screening](#) evaluation before beginning their formal training as mentors.
- 3.7 Outputs for these activities are: a randomized cluster sample selection for the pilot, mentor selection instruments, dataset with the results of the application of the selection instruments and quality index ranking, the list of ten fully vetted and uniquely qualified mentor candidates prepared to undergo a final mentor training. Finally, a randomly generated list of 100 teachers (50 who will be assigned to work with the trained mentors as part of the pilot program and 50 who will be assigned to a control group).⁶

⁵ It is important to point out that the program in its current form focuses on the interactions of teachers and students, that is, the way in which content is delivered from the teacher to the student. For the implementation as part of a national system it is important to assess if the teacher that will receive the mentoring also needs support in terms of content of a subject matter. This same system has been used in the US, for example, in combination with a curricula and also with content focus.

⁶ The power calculations we conducted indicate that if we collect data on 100 schools (50 treatment, 50 control), we can detect effect sizes of about 0.31 to 0.34 of a standard deviation. This applies to effects on students test

- 3.8 **Activity 2. Mentor training.** During ten days preceding the start of the school year 2017-18, the 10 mentor finalists will receive a rigorous and practical training from the University of Virginia and IDB teams, in coordination with the Ministry of Education, to prepare them to work individually with teachers during the pilot. The training will emphasize content knowledge, participatory activities, simulations, step-by-step guides for working through difficult issues with teachers, and a number of real-life practice opportunities so that mentors assume their responsibilities not only fully prepared but confident in their abilities and comfortable working with teachers. The training is intense in both duration and content to ensure that the mentors reach their maximum potential in their work with teachers, key to the success of the program.
- 3.9 The main output of this activity will be a final team of 10 highly trained mentors ready to begin their work with teachers over the course of the pilot.
- 3.10 **Activity 3. Pilot implementation.** Throughout the pilot implementation, we will collect preliminary effectiveness and feedback data and test and adjust all mentoring materials, processes, and supervision system. Each mentor will eventually work full-time with five teachers throughout the school year, building a supportive and sustained relationship over time. Teachers and mentors will meet for 90 minutes every two weeks in structured mentoring sessions that include time for individualized strength-based feedback and reflection as well as specific teacher-developed strategies and action plans for moving forward. Teachers will be filmed once every two weeks during 30 minutes of their choosing. The video footage will then be reviewed each week by the mentor, who will develop reflective activities and discussion questions to support the teacher in recognizing and building on his or her strengths in the classroom. The teacher will leave each bi-weekly mentoring session empowered with new information to improve student engagement and learning, and an individualized action plan developed in collaboration with the mentor to be put in place for the following week. Mentors will be in close and ongoing contact with pilot managers from the IDB and the University of Virginia to make sure that they are supported in successfully engaging each week with teachers and faithfully implementing the curriculum. Teachers will be evaluated using the CLASS assessment tool to closely track and monitor their progress. Periodic process evaluations will be conducted during the course of the pilot to measure fidelity of implementation and solicit feedback from mentors, teachers, and school administrators in the sample schools.
- 3.11 The final output of this activity will be a field-tested teacher mentoring program package of training and ongoing support materials, guided activities, implementation protocols, and supervision and evaluation guidelines ready to use in Ecuador and other Latin American and Caribbean countries.
- 3.12 **Component 3. Analysis and dissemination.** This component will cover costs related to data analysis as well as the cost of dissemination activities. The reports, working papers, presentations, etc., will be of free access, and will be disseminated through internal and external channels (including during the permanent dialogue with governments in the region). The target audience to disseminate the results comprises policymakers, education policy

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experts in the region, leading agencies that promote teaching quality, researchers in the field, among others.

- 3.13 The final output of this activity will be a working paper and a series of reports and presentations that will help to support the dialogue among policy makers in the decision making process to improve teacher quality.
- 3.14 The total amount requested for this TC is US\$500,000.00, and it will be financed by the Japan Special Fund (JSF). The MinEduc through its central and regional offices will provide fundamental in-kind resources for an estimated amount of US\$100,000 to carry out critical steps of the process: (i) official communications for principals, teachers, school administrators and key stakeholders in the study; (ii) logistic and supervision activities necessary for fieldwork; (iii) key information from administrative data to form the teacher sample; and (iv) time and labor from the 10 selected teachers who will become full-time mentors.

Indicative Budget (US\$)

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Component 1	100,000.00	50,000.00	150,000.00
Activity 1. Selection, development and adaptation of training and program materials for mentors and teachers	100,000.00	50,000.00	150,000.00
Component 2	375,000.00	50,000.00	425,000.00
Activity 1. Randomized cluster selection	125,000.00	-	125,000.00
Activity 2. Mentor training	50,000.00	-	50,000.00
Activity 3. Pilot implementation	200,000.00	50,000.00	250,000.00
Component 3	25,000.00	-	25,000.00
Activity 1. Analysis and dissemination	25,000.00	-	25,000.00
Total			US\$ 600,000.00

IV. Executing agency and execution structure

- 4.1 This TC will be executed by the Bank through the Social Sector Department (SCL/SCL), in close coordination with the MinEduc. One of the main reasons for the execution structure is that the Bank, in collaboration with MinEduc, has been developing various related activities that constitute the framework for the complex design and implementation of this pilot. Specifically, the longitudinal study Closing Gaps, a research project that rigorously evaluates the impact of teaching quality on learning outcomes in Ecuador, has been a key factor leading to this pilot. The Bank has thus developed a competitive advantage (coupled with the support and active participation of the MinEduc) in the design and execution of these activities. This execution structure is also the best way to ensure an agile and steady implementation of the activities in a timely fashion. For activities in the three components, the Bank will contract individual consultants, consulting firms and non-consulting services in accordance with the Bank's procurement policies and procedures.

- 4.2 Direct contracting is foreseen of The Curry School's Center for Advanced Study of Teaching and Learning (CASTL), at the University of Virginia, for component 1, and activity 2 and 3 from component 2, since the pilot is based on their own proven in-service training methods. For activities in component 2, direct contracting is foreseen of Habitus Millward Brown S.A. This recommendation is based on the need to ensure the correct application of the instruments, and taking advantage of their unique qualifications and experience developed from work on the Closing Gaps project. See paragraph 4.1.3 of GN-2765-1. While the Bank will be responsible for contracting, it will do so with technical input and in close collaboration with MinEduc. These arrangements have worked to ensure knowledge sharing and capacity building for the counterparts.
- 4.3 The TC execution will be under the supervision of a highly qualified team from the Social Sector Department (SCL/SCL). At the end of each year, a summary of the year's activities will be produced containing the information of the activities completed and the plan for the following year. Finally, the main findings will be presented on a final review at the end of the execution of the activities of the project.

V. Project Risks and issues

- 5.1 Specific implementation risks are considered low for all components. The selection of the cohort of mentors can become challenging as uncertainty regarding the objectives of this TC could generate tensions and resistance from teachers and school directors. In order to mitigate this risk and ensure adequate participation, communication and knowledge sharing activities will be carried out prior to beginning of the mentoring pilot (through workshops organized by the Ministry and the Bank). Additionally, the selection methodology that will be used is based on evidence from other programs that have been implemented with similar objectives. Using this objective methodology will also help us to ensure transparency in the selection process.
- 5.2 It is also possible that, because of the elections, there will be some changes in leadership of key officials at MinEduc. Nevertheless, given that this project is considered highly relevant by MinEduc., current officials are establishing the necessary agreements so that it continues as planned.

VI. Exceptions to Bank policy

- 6.1 None.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this TC is "C" according to the Environment and Safeguards Compliance Policy (OP-703). There are no potential negative environmental and/or social impacts associated with this TC anticipated (See [filters](#)).

Required Annexes:

- [Annex I – Government request](#)
- [Annex II – Results Matrix](#)
- [Annex III – Terms of reference](#)
- [Annex IV – Procurement plan](#)