

TC Document

I. Basic Information for TC

▪ Country/Region:	ECUADOR
▪ TC Name:	Indigenous and Inclusive Education in Ecuador
▪ TC Number:	EC-T1448
▪ Team Leader/Members:	Elacqua, Gregory Michael (SCL/EDU) Team Leader; Cotacachi Velasquez, Nestor David (SCL/GDI) Alternate Team Leader; Olsen, Anne Sofie Westh (SCL/EDU) Alternate Team Leader; Almeida Oleas, Natalia (LEG/SGO); Blasco, Ivana (SCL/EDU); Calahorrano Tirado, Karina Alexandra (CAN/CEC); Castro De Souza Marotta, Luana (SCL/EDU); Dugand Ocampo, Juan Carlos (VPC/FMP); Holguin Madrinan, Alejandra (SCL/SCL); Mendez Vargas, Carolina Patricia (SCL/EDU); Scannone Chavez, Rodolfo Andres (SCL/EDU)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	26 Aug 2020.
▪ Beneficiary:	Ministry of Education of Ecuador
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC Strategic Development Program for Social Development(SOC)
▪ IDB Funding Requested:	US\$300,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 Months
▪ Required start date:	15 October 2020
▪ Types of consultants:	Firms; Individuals
▪ Prepared by Unit:	SCL/EDU-Education
▪ Unit of Disbursement Responsibility:	SCL-Social Sector
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Diversity; Institutional capacity and rule of law; Social inclusion and equality

II. Objectives and Justification of the TC

- 2.1 The general objective of this project is to strengthen the centralized teacher allocation systems in Ecuador with a specific focus on indigenous teachers and intercultural bilingual schools.
- 2.2 Having an effective teacher can dramatically improve students' educational and long-term outcomes (Araujo et al., 2016; Chetty et al., 2014; Hanushek and Rivkin, 2012). Recent experimental evidence in Ecuador shows that the impact of effective teachers is significantly larger for disadvantaged students (Cerrando Brechas, 2018). However, teacher allocation in Ecuador – as well as in Latin America and the Caribbean (LAC) in general – is unequal. Empirical evidence shows that high-performing teachers tend to be assigned to more advantaged schools, while vulnerable schools such as indigenous and intercultural bilingual schools suffer more severely with shortage of teachers (Bertoni et al., 2020; Rosa, 2019).

- 2.3 In several LAC countries, the assignment of teachers to schools is also inefficient and not transparent. Teacher assignment systems often do not provide teachers with enough information on the available vacancies to allow them to make informed decisions. Teachers are more likely to be dissatisfied with their assigned school if they do not have enough information about their options, which can impact their effectiveness in the classroom (Jackson, 2012). Moreover, lack of information about vacancies also creates imbalances in supply and demand for teaching staff. Previously, in Ecuador more than one quarter of vacancies remained unfilled after teacher selection processes (known as *concursos*). Most of these vacancies are in low-income, indigenous, and intercultural bilingual schools. Existing evidence shows that teachers tend to avoid disadvantaged and remote schools (Bertoni et al., 2018; Boyd et al., 2005; Cabezas et al., 2011; Jackson, 2009). Moreover, monetary incentives, which have shown to be effective in attracting teachers to hard-to-staff schools, are not offered for teaching candidates applying to work in Ecuadorian schools. As a result, these vacancies are usually filled with less qualified temporary teachers. Evidence shows that in Ecuador the percentage of temporary teachers in indigenous schools is 1.3 times higher than that in non-indigenous schools (Bertoni et al., 2020).
- 2.4 To address these issues and improve equity, transparency, and efficiency in teacher allocation, Ecuador along with other school systems around the world have adopted centralized allocation systems (Elacqua et al., 2016). These centralized systems provide a unique opportunity to use new technologies such as Artificial Intelligence (AI) and Machine Learning (ML) to improve allocation processes and their outcomes (Agrawal et al., 2018). Moreover, AI can be paired with behavioral insights to improve the outcomes of allocation systems. Recent experimental evidence from Ecuador and Peru suggests that behavioral strategies can be effective at attracting teachers to hard-to-staff and remote schools (Ajzenman et al., 2019a; Ajzenman et al., 2019b).
- 2.5 Moreover, the COVID-19 crisis can impose challenges to a more equitable allocation of teachers across indigenous schools. This crisis could lead to an increase in the demand for teachers if there is a decrease in class size due to social distancing. Moreover, teachers might have to use distance learning tools to teach their students remotely. This TC aims to support the government to ensure that indigenous schools are staffed with teachers that are qualified and prepared to face these challenges.
- 2.6 As per request of the Ministry of Education, this TC will support the country's first Teacher Selection process for indigenous education. The general objective of this project is to strengthen the centralized teacher allocation systems in Ecuador with a specific focus on indigenous teachers and learning in bilingual schools. This TC will finance: (i) analyses on the applicants to indigenous schools and the profile of teachers currently working at these schools as well as learning outcomes and schooling inputs in intercultural bilingual schools compared to other schools across the country; (ii) analysis of the challenges imposed by COVID-19 on the allocation of teachers in indigenous schools and the challenges of implementing distance learning in indigenous communities and on the provision of education in rural and remote locations; (iii) assessments and improvements in the mechanisms for teacher assignment to indigenous schools in Ecuador; and (iv) further exploration of behavioral strategies to motivate teachers to work in more disadvantaged and indigenous schools often located in remote areas.

- 2.7 While our preliminary findings from the 2019 teacher selection process “Quiero Ser Maestro 6” in Ecuador suggest that behavioral techniques can improve efficiency and equity in teacher allocation, a more focused effort is needed to address significant teacher shortages in intercultural bilingual schools. Therefore, we propose to strengthen the online application platform used by teaching candidates in Ecuador to improve assignment of teachers to improve indigenous education.
- 2.8 These activities will be complemented by other TCs in the education division. The Technical Cooperation EC-T1385 in Ecuador and RG-T3443 (regional TC) have been supporting improvements in teacher allocation in hard-to-staff schools through behavioral sciences. This project is also aligned with the work of IDB’s fAIr LAC Responsible Artificial Intelligence for efficient and individualized provision of Social Services for all RG-T3450. The agenda outlined in this TC is also the education division’s priority for IDB LAB funding.
- 2.9 **Strategic alignment.** This TC is consistent with the Update of the Institutional Strategy (UIS) 2010-2020 (AB-3190-2) as it aligns with the objective of social inclusion and equality, institutional capacity and rule of law, and diversity as it seeks to make quality educational services accessible to all population, including the most vulnerable social groups, and it builds government’s capacity in recruiting teachers for indigenous schools in a more effective and equitable way. The Strategy for a Social Policy for Equality and Social Productivity (GN-2588-4), particularly by “improving school quality” and “addressing youth-at-risk”; and with the goal of “promoting learning and skills necessary for the region to reach its potential” of the Education and Early Childhood Development Sector Framework Document (GN-2708-5). The TC is also aligned with the third pillar of the Country Strategy of Ecuador 2018-2021: the deepening of the social advances achieved over the last decade, more particularly regarding the objective of ensuring access to quality public education. It is hence also aligned with objective 1 of the National Development Plan 2017-2021 to ensure a life of dignity with equal opportunities for all. In addition, the TC is aligned with the objectives of the Strategic Program for Social Development (OC-SDP) financed with Ordinary Capital (SOC) (GN-2819-1): (i) increase the relevance, quality and volume of Bank financing aimed at supporting to the social sector; and (ii) strengthen the efforts made by public institutions to be more effective and efficient in their social programs, focus on specific groups and the execution of social sector projects.

III. Description of activities/components and budget

- 3.1 **Component I: Diagnosis of current allocation mechanisms in indigenous and intercultural bilingual schools in Ecuador.** This component will produce: (i) a detailed diagnosis of the patterns of teacher assignment and will do a quantitative analysis of the educational resources (with focus on the training and preparation of teachers), learning outcomes, and teacher shortage in bilingual and indigenous schools in Ecuador; (ii) a qualitative analysis (including focus groups with teachers, interviews with administrators and other relevant stakeholders) to better understand the challenges of attracting teachers to intercultural bilingual schools. In our quantitative and qualitative analysis, we will investigate how the COVID-19 outbreak in Ecuador—the largest outbreak in Latin America—may have affected the supply of teachers to disadvantaged schools, in particular indigenous schools. We expect the results of this component will help us understand the patterns of teacher assignment

in intercultural bilingual schools in Ecuador and will inform the development of front-end technologies and behavioral interventions to be developed in Component II.

- 3.2 **Component II: Technical Assistance to improve Ecuador's teacher assignment system, with a focus on indigenous schools.** In this component, we will design the strategies based on behavioral economics to attract and retain teachers in indigenous and bilingual schools. These behavioral strategies will focus at making salient teachers' intrinsic and extrinsic motivations to work in these more vulnerable and remote schools. Although there is currently no extrinsic reward for teachers to work in indigenous schools in Ecuador, the government is interested in implementing monetary and non-monetary incentives to address shortage in indigenous schools. We will use data from our diagnosis to provide the Ministry of Education with specific technical advice on how to design these incentives more effectively and efficiently. The TC will produce communicational products (videos and text messages) to encourage teachers to apply to indigenous schools (includes socio-cultural adaptations in communication). Lastly, we will also assist the government with the exploration of distance learning resources for teachers and students, to provide education in intercultural bilingual schools and respond to the challenges that COVID-19 has brought. We expect the outcome of this component to be a reduction in teacher shortage and an increase in the number of qualified teachers allocated to indigenous schools.
- 3.3 **Component III: Evaluation and dissemination.** This component will fund: (i) an evaluation of the impact of the interventions developed in Component II on attracting and retaining teachers to indigenous schools; and (ii) a seminar to disseminate our results and showcase the use of behavioral science techniques to improve equity, transparency, and efficiency in teacher allocation systems. The results of this component include reliable evidence about the effectiveness of behavioral strategies in attracting teachers to indigenous schools and dissemination of this evidence to countries in the region that also struggle with the challenge of staffing vulnerable schools.
- 3.4 All knowledge products derived from this TC will be Bank's intellectual property. Knowledge products will be published through the Bank's web page and other means accounted for in the indicative budget.

Indicative Budget

Activity/Component	IDB/Fund Funding	Total Funding
Component I: Diagnosis of current allocation mechanisms in indigenous and bilingual schools in Ecuador	US\$100,000.00	US\$100,000.00
Component II: Technical Assistance to improve Ecuador's teacher assignment system, with a focus on indigenous schools	US\$150,000.00	US\$150,000.00
Component III: Evaluation and dissemination	US\$50,000.00	US\$50,000.00
Total	US\$300,000.00	US\$300,000.00

IV. Executing agency and execution structure

- 4.1 As requested by the government of Ecuador, the project will be Bank executed. The Education Division at IDB has experience carrying out successful behavioral interventions in education as well as a dense network of individuals and EdTech organizations that specialize in improving user experience in online platforms as well as applying AI and behavioral strategies in public policy. The Education Division (EDU) and Gender and Diversity (GDI), will co-execute the project. The Education Division at IDB has experience carrying out successful behavioral interventions in education as well as a dense network of individuals and EdTech organizations that specialize in improving user experience in online platforms as well as applying AI and behavioral strategies in public policy. The Gender and Diversity Division has extensive experience working with indigenous peoples and in the design and implementation of socio-cultural adaptations of policies and programs for development. Bank execution is hence recommended in order to ensure rapid procurement procedures and continuity of work. The activities will be supervised by the Team leader and there are no expected additional supervision costs.
- 4.2 All activities to be executed under this TC have been included in the Procurement Plan (see Annex IV) and will be contracted in accordance with Bank policies as follows: (a) AM-650 for Individual consultants; (b) GN-2765-4 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and; (c) GN-2303-28 for logistics and other related services.

V. Major issues

- 5.1 Regarding the interventions built on behavioral theories, there is a low risk that governments may become concerned that teachers will feel like they are being persuaded by the government to make decisions that may not be in their interest. Experiences from similar platforms in school districts in the United States and recent Randomized Controlled Trials conducted by the Bank in Ecuador, Peru and Brazil, show that these concerns can be overcome through close collaboration with the governments and clear communication to all stakeholders of the objectives of the teacher assignment systems. This risk will be mitigated through (virtual) missions, technical assistance, and a strong team dedicated to the project. The specific behavioral strategies will be determined in close collaboration with the government, attending to local needs. Moreover, the strong commitment of the government with the education sector, as well as the previous successful experiment in Ecuador, makes the project team confident that the proposed TC design is feasible.

VI. Exceptions to Bank policy

- 6.1 There are no exceptions to Bank policy.

VII. Environmental and Social Strategy

- 7.1 The ESG classification for this operation is "C".

Required Annexes:

[Request from the Client - EC-T1448](#)

[Results Matrix - EC-T1448](#)

[Terms of Reference - EC-T1448](#)

[Procurement Plan - EC-T1448](#)