TC ABSTRACT

I.   Basic Project Data

▪ Country/Region:	ECUADOR/CAN - Andean Group
▪ 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; CALAHORRANO TIRADO, KARINA ALEXANDRA (CAN/CEC); DUGAND OCAMPO, JUAN CARLOS (VPC/FMP); SCANNONE CHAVEZ, RODOLFO ANDRES (SCL/EDU); BLASCO, IVANA (SCL/EDU); MENDEZ VARGAS, CAROLINA PATRICIA (SCL/EDU)
▪ Taxonomy:	Client Support
▪ Number and name of operation supported by the TC:	N/A
▪ Date of TC Abstract:	27 Mar 2020
▪ Beneficiary:	Ministry of Education of Ecuador
▪ Executing Agency:	INTER-AMERICAN DEVELOPMENT BANK
▪ IDB funding requested:	US$300,000.00
▪ Local counterpart funding:	US$0.00
▪ Disbursement period:	36 months
▪ 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):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality ; Institutional capacity and rule of law; Diversity

II.   Objective and Justification

2.1   The general objective of this project is to strengthen the centralized teacher allocation systems in Ecuador with a specific focus on indigenous teacher and 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 (e.g. 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, and to those where they are needed the most such as in indigenous and bilingual schools (Bertoni et al., 2018; 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 remain unfilled after the teacher selection processes. Most of these vacancies are in disadvantaged, indigenous and bilingual schools.

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 the allocation process and its outcomes (Agrawal et al., 2018). Moreover, AI can be paired with behavioral insights to improve the outcomes of the allocation systems. Recent experimental evidence in Ecuador and Peru also 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 As per request of the Ministry of Education, this TC will support the first Teacher concurso 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; (i) assessments and improvements in the mechanisms for teacher assignment to indigenous schools in Ecuador, (ii) further exploration of behavioral strategies to motivate teachers to work in more disadvantaged and indigenous schools often located in remote areas.

2.6 While our preliminary findings in from the support provided to the teacher concurso Quiro Ser Maestro 6 in Ecuador suggest that behavioral techniques can improve efficiency and equity in teacher allocation, though with significant room to continue improving, our work also shows significant teacher shortage in bilingual and indigenous schools. Therefore, we propose to strengthen the front-end technology, especially with a focus on indigenous education.

III. Description of Activities and Outputs

3.1 **Component I: Component I: Assessments and improvements in the mechanisms for teacher assignment in indigenous education in Ecuador.** This component will produce i) a quantitative and qualitative analysis of teachers applying and working in indigenous schools in Ecuador; ii) a diagnosis of the current mechanisms in teacher assignment to indigenous schools, including a quantitative and qualitative diagnostic of learning and schooling inputs at indigenous schools in Ecuador

3.2 **Component II: Component II: Technical Assistance to teacher assignment, with a focus on indigenous schools.** This component will introduce behavioral interventions in the national teacher recruitment system in order to attract and retain effective teachers in remote and indigenous schools, piloting different intrinsic and extrinsic motivations through the platform

3.3 **Component III: Component III: Evaluation and dissemination.** This component will fund (i) a causal evaluation of the effectiveness of the interventions in improving equity and efficiency in the allocation of indigenous teachers across intercultural bilingual schools and (ii) a seminar to disseminate results and showcase the use of behavioral science techniques to improve equity, transparency, and efficiency in teacher allocation systems.

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Component I: Assessments and improvements in the mechanisms for teacher assignment in indigenous education in Ecuador	US$125,000.00	US$0.00	US$125,000.00
Component II: Technical Assistance to teacher assignment, with a focus on indigenous schools	US$125,000.00	US$0.00	US$125,000.00
Component III: Evaluation and dissemination	US$50,000.00	US$0.00	US$50,000.00
Total	**US$300,000.00**	**US$0.00**	**US$300,000.00**

V. Executing Agency and Execution Structure

5.1 The project will be Bank executed.

5.2 The project will be Bank executed, since the interventions financed through this TC are highly innovative pilots, and bank execution is recommended in order to ensure rapid procurement procedures. These pilots could be of great interest to other countries in the region. Thus, ensuring that the Bank is involved in the design and implementation process will increase the probability of replicability in other countries. Additionally, 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.

VI. Project Risks and Issues

6.1 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 RCTs 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 frequent 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.

VII. Environmental and Social Classification

7.1 The ESG classification for this operation is "undefined".