TC Document

I. Basic Information for TC

▪ Country/Region:	Perú
▪ TC Name:	Innovating in Education at Scale using Technology
▪ TC Number:	PE-T1431
▪ Team Leader/Members:	Cristia, Julian P. (RES/RES) Team Leader; Mendez Vargas, Carolina Patricia (SCL/EDU) Alternate Team Leader; Arias Ortiz, Elena (SCL/EDU); Escobar Genes, Myriam Helvecia (RES/RES); Koh Lee, Anna (RES/RES); Messina Granovsky, Julian Santiago (RES/RES); Negret Garrido, Cesar Andres (LEG/SGO); Soldano, Miguel (OVE/OVE); Urquiola Ralero, Montserrat (RES/RES)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	N/A
▪ Date of TC Abstract authorization:	12 Nov 2019.
▪ Beneficiary:	Perú
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Korea Poverty Reduction Fund(KPR)
▪ IDB Funding Requested:	US$700,000.00
▪ Local counterpart funding, if any:	US$0
▪ Disbursement period (which includes Execution period):	30 months disbursement (24 months execution period)
▪ Required start date:	May 1, 2020
▪ Types of consultants:	Individual consultants and/or firms
▪ Prepared by Unit:	RES-Research & Chief Economist
▪ Unit of Disbursement Responsibility:	RES-Research & Chief Economist
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality

II. Objectives and Justification of the TC

II.1 This TC aims to support governments seeking to transform the delivery of educational services using technology.

II.2 Peru, like many countries in Latin America and the Caribbean (LAC), needs to drastically improve skills levels and reduce inequity in achievement to compete in an increasingly globalized and technological world. Unfortunately, academic achievement remains low and very unequally distributed (Bos et al., 2019). To boost learning levels, there is strong policy interest in exploring innovations that can exploit technological advances to improve educational outcomes at scale.

II.3 The Bank is advancing an ambitious agenda with the final goal of supporting governments seeking to transform the delivery of public services using technology. As part of this agenda, the Bank supported an innovative program in Chile called ConectaIdeas, aimed at improving math learning among fourth-grade students. Participating students practiced math exercises in an online platform during two weekly 90-minute learning sessions that took place in regular school time, supported by an external lab coordinator. The program employed an array of gamification

strategies including individual and group competitions. The evaluation of this pilot revealed that the program generated large effects on math learning (participating students improved their math learning 50% more compared to students that did not receive the program).

II.4 Due to the common interest in fostering innovation in education, the Bank and the government of Peru are collaborating in implementing a pilot of a modified version of the program tested in Chile in primary schools in Lima during 2020. These adjustments are necessary to ensure that the program is adapted to the local context of Peru. In addition, the program will be strengthened adding the following innovations to ensure high impacts on learning: (i) providing teachers with automatic, personalized reports about their students' academic achievement; (ii) sending text messages and reminders to parents to promote the use of the online learning platform at home; (iii) organizing motivational sessions for students to convey the idea that intelligence can be developed with study effort. This resulting new and improved program, called the School Support Program, is highly innovative because it integrates and exploits the synergies of novel technology interventions to support the key actors in the learning process.

II.5 These efforts can be further strengthened by using the knowledge and expertise that has already been developed in countries that are worldwide leaders in the area of technology in education. In particular, Korea has developed strong expertise in the use of technology and has implemented at scale several initiatives that are closely related to the interventions to be funded by the TC. For example, Korea has been implementing a large-scale program to promote the use of interactive digital textbooks to provide a more engaging student experience. Also, Korea has published a website to disclose useful educational information for parents and an educational portal (called Edunet) to support teachers. These large-scale public programs have been supported by a dynamic private sector that innovates using cutting-edge technology to better support learning. For example, private companies supply high-quality multimedia learning products to support and enrich the learning experiences of students, provide assessment tools to better monitor learning outcomes, and support teachers with materials and online training.

II.6 **Alignment.** The TC is consistent with the Bank's Update to the Institutional Strategy (UIS) 2010-2020, (AB-3008), and it is directly aligned with the "Social Inclusion and Equality" developmental challenge. The TC is consistent with the Country Strategy for Peru (2017-2021) (GN-2889) because it supports the Bank's strategic area of Institutional strengthening and delivery of basic services, specifically with the Bank's strategic objective of improving public management of social services by identifying effective educational models that can be scaled-up by the public sector; and with the Education and Early Childhood Development Sector Framework Document (GN-2708-5) specifically with the dimension 4 ("all the schools have adequate resources and are capable of using them for learning and skills development) and with dimension 5 ("all the children and young people acquire the necessary skills to be productive and contribute to society"). Moreover, the TC is consistent with the National Strategy on Digital Technology in Basic Education of Peru 2016-2021 that emphasizes the importance of experimentation, evaluation, and using data to guide public policy decision-making. This project is also aligned with IDB's fAIr, which is a platform to harness the power of Artificial Intelligence for social impact in Latin America and the Caribbean (LAC). Finally, this TC is consistent with the Korea Poverty Reduction Fund's main objective which aims to support poverty reduction and social development

activities, to benefit the most vulnerable and economically disadvantaged groups, because this TC promotes effective teaching and learning among disadvantaged students using digital tools.

III. Description of activities/components and budget

III.1 This TC involves the implementation of three components.

III.2 **Component I: Implementing the School Support Program at scale in Lima.** The project will fund the implementation of the School Support Program in 2021 in 80 public, primary schools in Lima. The implementation will take advantage of tablets that have already been distributed by the Ministry of Education that are under-used. The activities in this component will include: (i) content: aligning the online platform and related materials to the curriculum in Peru; (ii) human resources: hiring coordinators who will be responsible for training teachers and principals; (iii) management: implementation, monitoring, and integration of all activities. As part of the program, an experimental evaluation will be implemented to generate rigorous evidence regarding the effects of the program.

III.3 As part of the preparation process for the implementation of the School Support Program in 2020, a consultant firm, with strong expertise in technology in education, will be contracted to analyze the current version of the School Support Program. This consultancy will seek to draw from the unique expertise developed from the Korean experience regarding how to scale up effectively technology in education solutions. The consultancy will entail diagnosing key problems and proposing potential adjustments useful for the implementation of the School Support Program in 2020. In particular, the consultancy should explore in depth the content component (i.e. the learning platform). The emphasis in this component is due to the fact that potential improvements in the learning platform will not only be useful for the implementation of the program in Peru but also in other LAC countries.

III.4 **Component II: Developing a toolkit to facilitate the replication and scale-up of the School Support Program**. This component will fund the production of a toolkit containing conceptual frameworks, implementation guidelines, and tools useful to guide program managers regarding the implementation of the School Support Program. The toolkit, which will be produced as a Bank publication, will cover the following areas: infrastructure, content, human resources, and management. The toolkit will be developed to provide clear, concrete and practical information to the Ministry of Education of Peru to expand the implementation of the program beyond Lima, including recommendations for implementation in areas with limited access to internet.

III.5 **Component III: Promoting the dissemination of the toolkit and LAC capacity building.** This component will fund dissemination activities, such as an international workshop, to ensure the take-up of the toolkit (Bank document) in Peru and in other LAC countries. The main audience for the dissemination of the project findings are policymakers in LAC, private sector education leaders, academics, practitioners, and the general public

Indicative Budget

Activity/Component	Description	IDB/Fund Funding	Counterpart Funding	Total Funding
Component I Implementing the School Support	Analysis of the School Support Program based on	US$ 100,000	US$ 0	US$ 100,000

Program at scale in Lima	the Korean experience			
	Implementation of the adaptation pilot of the School Support Program in 2020	US$160,000	US$ 0	US$160,000
	Large-scale implementation of the School Support Program in 2021	US$ 210,000	US$ 0	US$ 210,000
	Data collection to measure the impacts of the School Support Program (baseline and endline)	US$ 80,000	US$ 0	US$ 80,000
Component II: Developing a toolkit to facilitate the replication and scale-up of the School Support Program	Analysis of the adaptation pilot and large-scale implementation	US$ 65,000	US$ 0	US$ 65,000
	Production of thematic chapters of the toolkit (infrastructure, content, human resources and management)	US$ 50,000	US$ 0	US$ 50,000
Component III: Promoting the dissemination of the toolkit and LAC capacity building	Design and implementation of dissemination campaign	US$ 35,000	US$ 0	US$ 35,000
Total		**US$ 700,000**	**US$ 0**	**US$ 700,000**

IV. Executing agency and execution structure

IV.1 By request of the Ministry of Education of Peru, this TC will be executed by the Bank, consistent with Appendix X of the Operational Manual for TC Products (GN-2629-1). The letter from the client is included as Annex I. The National Strategy on Digital Technology in Basic Education of Peru 2016-2021 recognizes the limited impact on learning and development of digital competencies of previous interventions in the last twenty years, such as the One Laptop per Child (OLPC) program, that aimed to improve access to technologies and connectivity. On the other hand, the Bank has developed strong expertise in the area of technology for learning from the coordination of the evaluation mentioned above in Chile and the coordination of related pilots in Lima, Peru. Moreover, the Bank has also edited a book on how to use technology for math learning and a Technical Note on how to promote effective programs in technology in education (RG-T2634). This accumulated expertise will be exploited to ensure a strong implementation of the TC and to ensure that the findings from this project are embedded in future Bank operations, policy dialogue, and are used to

promote capacity building in countries in LAC that are seeking to use technology for learning effectively.

IV.2 Responsibilities for supervision and monitoring this operation will fall on RES/RES and SCL/EDU, including regular meetings with counterparts and consultants, as well as supervision missions. All these activities will be coordinated with the country office. The Team Leader is Julian Cristia at RES/RES and the Alternate Team Leader is Carolina Mendez at EDU/CPE as the focal point in COF Peru. The TC will be implemented over a period of 30 months

IV.3 **Procurement.** The Bank will contract individual consultants, consulting firms and non-consulting services to carry out the activities described. The activities to be executed are included in the Procurement Plan and will be contracted in accordance with Bank policies as follows: (a) AM-650 for Individual consultants; (b) GN-2765-1 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and; (c) GN-2303-20 for logistics and other related services. The resources of this TC will not be complementing the administrative budget of RES/RES, SCL/EDU or CPE.

V. Major issues

V.1 A risk associated with the implementation of the School Support Program is that the target schools may not meet the necessary technological conditions. To tackle this risk, the selection of schools to participate in the program will include an initial screening followed by an in-depth technical visit to make sure that the internet bandwidth is sufficient for the learning activities and that the tablets operate with high reliability. This mitigation strategy was applied in the pilot in Chile and allowed to ensure that the basic technological conditions needed for program implementation were met.

V.2 Another risk is that the spread of the COVID-19 could generate disruptions in the regular schedule of classes in the schools participating in the adaptation pilot in 2020 and the large-scale implementation in 2021. In particular, the start of the 2020 school year in Peru has already been delayed from March,16 to March 30. The nature of the intervention, that involves the use of technology to promote learning, is particularly well suited to tackle this risk. In particular, as part of the School Support Program, students are expected to access the online learning platform from home and to solve math exercises that are aligned to the curriculum. Hence, if indeed there are disruptions in the regular schedule of classes, the model of intervention will be temporarily modified to focus on the use of the platform at home. This will involve assigning exercises to students to review past concepts and communicating with parents, through text messages, to promote the use of the platform at home.

V.3 One of the goals of this project is to produce material aligned with the Peruvian curriculum to use at the platform. Also, as the component II mentions, the project will develop a toolkit to facilitate the replication and scale-up of the School Support Program. The Bank will hold intellectual property rights for all the educational material produced under this project. However, we will share it with the government, so they can expand the implementation of the program beyond Lima. Additionally, we will take some actions to avoid that the government becomes dependent on the platform and provide them with assistance in case they want to scale up. Actions include, work closely with the technical teams at the Ministry of education and provide technical support to assist them in scaling the program in case they decide to do it. We will continue to offer technical support if needed up to two years after the end of the TC.

VI. Exceptions to Bank policy

VI.1 This TC does not involve any exceptions to Bank policy.

VII. Environmental and Social Strategy

VII.1 There are no environmental or social risks associated with the activities outlined in this operation; therefore, its environmental classification is "C".

Required Annexes:

Request from the Client_84935.pdf

Results Matrix_8412.pdf

Terms of Reference_14881.pdf

Procurement Plan_41514.pdf