TC Document

I.   Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	From Korea to LAC: Promoting sustainable Digital Transformation in Education
▪ TC Number:	RG-T4578
▪ Team Leader/Members:	Gabriela Gambi (SCL/EDU) Team Leader; Arias Ortiz, Elena (SCL/EDU) Alternate Team Leader; Lopez Gelb Loren Viviana (SCL/EDU); Bonilla Merino Arturo Francisco (LEG/SGO); Hyeri Mel Yang (SCL/EDU); Blasco, Ivana (SCL/EDU); Castro Vergara Nicolas (SCL/EDU); Forero Pabon Maria Tatiana (SCL/EDU) Hyeri Mel Yang (SCL/EDU); Blasco, Ivana (SCL/EDU); Castro Vergara Nicolas (SCL/EDU); Forero Pabon Maria Tatiana (SCL/EDU); Ela Diaz Diaz Koritza (SCL/EDU); Sonia Mariel Suarez Enciso (SCL/EDU); Michelle Leonor Moreno (ITE/IPS)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	09 Jul 2024.
▪ Beneficiary:	Honduras and Peru
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Knowledge Partnership Korea Fund for Technology and Innovation(KPK)
▪ IDB Funding Requested:	US$600,000.00
▪ Local counterpart funding, if any:	US$0
▪ Disbursement period (which includes Execution period):	24 months
▪ Required start date:	01 Nov 2024
▪ Types of consultants:	Individual firms and consultants
▪ Prepared by Unit:	SCL/EDU-Education
▪ Unit of Disbursement Responsibility:	SCL/EDU-Education
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2024-2030:	Social inclusion and equality; Institutional capacity and rule of law

II.   Objectives and Justification of the TC

2.1   **Objectives.** This project aims to support the ministries of education of Peru, and Honduras and the region indirectly in accelerating the digital transformation of their education systems with quality and equity. By leveraging Korea's expertise and technical support in this area, the project will develop a comprehensive Digital Transformation of Education (DTE) set of tools tailored to the unique needs of each country. The specific objectives are: (i) to develop and deploy a digital transformation diagnostic toolkit for education systems; (ii) to establish a DTE roadmap with a mapping of potential Korean solutions from the public and private sectors; and (iii) to organize a high-level dialogue in Korea with multi-stakeholders to showcase opportunities.

2.2   **Justification.** Digital skills are crucial for students and youth as they enable continuous learning, adaptability, and the ability to seize growth opportunities in a rapidly changing world (Suarez Enciso et al., 2024). These skills are transferable

across various settings and are essential for employability, economic growth, and social inclusion. They help bridge the digital divide, providing marginalized youth access to information, education, and resources, thereby reducing social disparities (OECD, 2020). However, in Latin American and the Caribbean (LAC) countries only 33% of young people are on track in digital skills development, according to UNICEF's global databases on information and communication technology (ICT) skills (SDG Indicator 4.4.1), which falls behind the world average of 42% (The Education Commission & UNICEF, 2022). Regarding connectivity, evidence suggests that a 10% increase in school connectivity can boost GDP per capita by 1.1%, highlighting the significant economic benefits of improving digital access for students and educators (The Economist Intelligence Unit, 2021).

According to the annual Broadband Development Index report, "Digital Divide in Latin America and the Caribbean", the digital gap in Honduras is characterized by limited broadband infrastructure and low internet penetration, particularly in rural areas, which hinders digital inclusion efforts. In contrast, Peru has made notable progress in expanding broadband access, yet significant disparities remain between urban and rural regions, affecting overall digital equity. Both countries continue to face challenges in achieving comprehensive digital connectivity and literacy (IDB, 2023). In particular, about 70% of Honduran teachers indicated a need to improve their digital skills for online teaching (IDB, 2022). In Peru, the per capita exercise of digital citizenship was 1.75 (8 being the maximum level and 0 the minimum), and 47.5% of the population did not exercise any of these capacities at all (DS 157-2021-PCM, 2021).

2.3   The IDB Education Division's digital transformation strategy for Education 4.0 focuses on two pillars—management and pedagogy—to leverage digital technologies and foster educational change from the classroom to policy levels. A crucial first step in this process is having a comprehensive diagnostic assessment, which helps determine a country's starting point. This understanding allows for creating a contextualized roadmap tailored to its specific needs. The management pillar includes a methodology to assess the maturity of Educational Information and Management Systems (EMIS) – SIGED (Arias Ortiz et al., 2021), while the pedagogical pillar is supported by Edutec Guide, a formative-diagnostic to assess teachers' and schools' digital maturity level (Gottlieb et al., 2024). This approach ensures that transformation efforts are aligned with each country's unique context, promoting better learning opportunities and efficient management.

2.4   Korea's advanced digital education system positions it as a critical partner able to share lessons learned with LAC. The country has come a long way in its digital transformation in education since the early 2000s, which has led to the adoption of emerging technologies such as AI, big data, and virtual reality to enhance teaching and learning experiences. Today, two thirds of Korean youth and adults have ICT skills, according to SDG 4 indicators that, together with robust infrastructure, and positive public sentiment toward technology utilization, have enabled it to actively promote digital-based education. Since the announcement of the Ministry of Education's "1-Million Digital Talent Fostering Policy (2022-2026)," the government has been actively advancing the digital transformation in response to technological advancements. Collaborative partnerships have also been established with various actors within the government and the private sector, such as the Digital Platform Government Committee, the Ministry of Science and ICT, the Digital Education Association and the Edtech Industry Association.

2.5   Primary reasons for LAC region's significant challenges in developing digital skills among youth are due to limited connectivity, inadequate digital proficiency among educators, and governance gaps in education systems. Many rural and underserved areas lack the infrastructure necessary for equitable digital access, while teachers often struggle to integrate technology into their teaching due to the absence of systematic assessments and training opportunities. Additionally, fragmented and underdeveloped EMIS hamper the collection of reliable data, limiting effective policy implementation. Addressing these challenges requires comprehensive investment in infrastructure, teacher training, and governance reforms. Tools such as the Guia Edutec, which offers self-assessments for teachers and evaluates the digital maturity of school systems, are already helping to identify and address these gaps. In addition, this TC aims to establish a DTE roadmap for beneficiary countries, which will align LAC's digital education strategies with proven solutions from Korea. By facilitating strategic matchmaking between LAC and Korea's advanced DTE solutions—such as AI, big data, and virtual learning platforms—the TC aims to promote sustainable improvements in digital education. This collaboration will support the region in overcoming its digital challenges, fostering innovation, and ensuring long-term transformation in its education systems.

2.6   **Beneficiaries**. Peru and Honduras' educational systems will directly benefit from this TC, as both beneficiary countries have requested operations with DTE components. In 2021, Honduras launched the National Program for Digital Educational Transformation (PNTED), focused on the digital upskilling of teachers and students, which has received a very positive response from Honduran public education ecosystem. This project will be aligned with the preparation of the HO-L1251 operation "Rural Education Transformation Program in Honduras", whose general objective is to support the Government increasing access and improving education quality in preschool, primary, and secondary levels in targeted rural areas. Particularly this TC supports its second component, which focuses on enhancing teaching and learning processes in rural areas of Honduras. This will be achieved by improving foundational skills in reading and mathematics by integrating digital platforms and resources, and by fostering digital skills development among students and teachers. In Peru, the Ministry of Education launched the National Strategy on Digital Technology in Basic Education and the National Plan for Competitiveness and Productivity. This TC also establishes synergies with ongoing initiatives in Peru, including PMESUT (Program for Improving the Quality and Relevance of University and Technological Higher Education Services, after its acronym in Spanish), focusing on digital upskilling in public universities. Direct beneficiaries include the ministries of education in both countries, 100 schools in Honduras and 25 universities in Peru.

2.7   The products developed through this technical cooperation will be relevant not only for the beneficiary countries, but also for LAC. The creation of open virtual platforms for diagnostics in pedagogical and management pillars will provide valuable tools countries in the region can adopt. Additionally, mapping potential solutions with the support of critical Korean public and private sectors to address common digital transformation needs will produce a resource available to all countries, fostering exchanges between Korea best practices and the region challenges.

2.8   **Strategic alignment**. The Program is consistent with the IDB Group's Institutional Strategy: Transforming for Scale and Impact (CA-631) and is aligned with the strategic objective of reducing poverty and inequality (paragraph 4.4), as it seeks to leverage digital technologies to identify gaps and design targeted solutions that lead to improved

access to quality education. The Program also aligns with the operational focus area on "Social protection and human capital development" by contributing to skill formation (paragraph 5.16.3) and integrating digital technologies into education, which promotes the development of digital skills that are increasingly important in the modern workforce.

2.9   Finally, by fostering cross-border collaboration and knowledge sharing with Korean stakeholders in the education sector, the Program also aligns with the IDB's "Regional integration" focus area (paragraph 5.27), leveraging international expertise to address local challenges. In addition, TC is aligned with the Skills Sector Framework (GN30123) in the strategic line "Leverages the use of technology to increase access and equity to skills development opportunities and improve the efficiency of skills development systems." This alignment is driven by the development of tools that improve access to digital resources and encourage their effective use, to improve both skills development and the overall efficiency of education systems.

2.10   In the two beneficiary countries, the objectives of this TC are aligned with the IDB Group's Country Strategies by fostering digital transformation in education to improve its quality. The TC aligns with the Country Strategy with Peru 2022-2026 (GN-3110), which aims to boost hybrid and inclusive learning modalities and introduce equity and efficiency into the school management system (paragraph 3.27). In Honduras, the Country Strategy 2019-2024 (GN-2944-2) highlights innovation and the use of new technologies to achieve greater relevance and efficiency in interventions, emphasizing the expansion of digital connectivity and ICTs (paragraph 3.26). Notably, the Program aligns with the Country Strategy's priority area of human capital accumulation, the aim to improve the quality and coverage of education, particularly for vulnerable populations, by enhancing digital skills and addressing institutional challenges and harnessing information technologies (paragraph 3.15). Finally, this TC aligns with objectives of the Knowledge Partnership Korea Fund for Technology and Innovation (KPK) of sharing best practices of Korea, especially in technology and innovation, which incorporates technical capacity building, ICT and innovation.

III.   Description of activities/components and budget

3.1   **Component 1. Development and deployment of DTE toolkit (US$ 200,000).** This component is focused on developing and deploying a digital transformation diagnostic toolkit for education systems. It will finance the following activities, among others needed: (i) improve DTE methodologies and usability to assess the maturity of existing systems, technical adoption, and competency levels in beneficiary countries. This will be achieved by engaging a consulting firm specializing in online platform development to design and improve the SIGED 2.0 platform[1] and the Edutech Guide platform[2]. During the execution of the Edutech Guide platform, the personal data of participating teachers, including their names and email addresses, will be collected, but no confidential information will be gathered; (ii) deployment of the developed toolkits in beneficiary countries (100 public elementary schools in Honduras and 25 public universities in Peru) and design of DTE plans for each country. This will involve

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[1] The initial methodology for assessing the maturity level of educational management systems (SIGED in Spanish, *sistemas de información y gestión educativa*) was developed by IDB as part of RG-T3008.
[2] Guia Edutec is an open-source tool initially developed by CIEB (Centro de Inovação para Educação Brasileira). Since 2023 the IDB has been piloting it in some educational systems (Manizales and Palmira, Colombia; Honduras; Nicaragua) as part of RG-T4069.

consulting services developing three distinct scenarios, each outlining a DTE vision with high, medium, and low-intensity estimates.

3.2 **Component 2. Establishment DTE roadmap, opportunities data base and matchmaking (US$ 265,000).** This component aims to establish a DTE roadmap, once the countries select a scenario (from previous component) based on policy priorities and local context, with a data base of potential Korean providers followed by a matchmaking of potential Korean solutions from public and private sectors. It will finance the following activities, among others needed: (i) Designing the DTE roadmap, which is an institutional development plan in alignment with the preferences and priority areas of beneficiary countries, as determined by the selected scenario, through the engagement of a consulting service ; (ii) data base of Korean public and private service providers in various DTE-related areas classifying them with respect to the specific needs of beneficiary countries, to be carried out by a Korean consulting service; and (iii) identification of a key enabling DTE roadmap for each country, followed by the strategic matching of country needs with relevant Korean solutions and/or providers, facilitated by a Korean consulting service.

3.3 **Component 3. Corporate roundtable, high-level meetings, and showcasing results (US$ 135,000).** This component focuses on creating multi-stakeholders exchange, knowledge and business opportunities between Korean, Honduras and Peru counterparts that could be useful to the whole region. It will finance the following activities, among others needed: (i) organization of policy dialogue event, including high-level discussions and a corporate roundtable, in Korea, with participation of Peru and Honduras officials, among others. This study tour will involve multiple stakeholders such as Korea Trade and Investment Promotion Agency (KOTRA), and others, to showcase collaboration opportunities with LAC counterparts and it will be organized by Korean consulting services; and (ii) the dissemination of knowledge through the preparation of supervision reports, which will be published online as technical notes. These reports will be shared online as a public good, promoting best practices across the LAC region for education policy makers and practitioners. This will be done in collaboration with consulting services from both Korea and LAC.

3.4 **Budget**. The total cost of this TC is US$600,000 to be financed by the KPK-Knowledge Partnership Korea Fund for Technology and Innovation. There is no local counterpart.

Indicative Budget

Activity/ Component	Description	IDB/Fund Funding	Counterpart Funding	Total Funding
Component 1	Development and deployment of DTE toolkit	200,000	0	200,000
Activity 1.1	Virtual SIGED 2.0 and Edutech Guide platforms	85,000	0	85,000
Activity 1.2	Pilot of diagnosis through virtual platforms	75,000	0	75,000
Activity 1.3	Digital transformation scenarios built and budgeted	40,000	0	40,000
Component 2	Establishment national DTE roadmap and opportunities matchmaking	265,000	0	265,000

Activity 2.1	Mapping of relevant DTE solutions in Korea	50,000	0	50,000
Activity 2.2	National DTE roadmaps designed	40,000	0	40,000
Activity 2.3	Strategic matchmaking of relevant Korean solutions and DTE roadmaps	175,000	0	175,000
Component 3	Korea-Beneficiary corporate roundtable, high-level meetings, and showcasing results	135,000	0	135,000
Activity 3.1	Corporate roundtable and high-level dialogue	110,000	0	110,000
Activity 3.2	Final report with lessons learned and recommendations for LAC	25,000	0	25,000
Total		**600,000**	**0**	**600,000**

3.5 This TC will allow the development of synergies with other important projects in execution related to the integration of technology for improving learning. In particular, with RG-T4069 within which the Edutec Guide methodology was tested in Colombia, Honduras and Nicaragua, reaching over 7,000 teachers and 500 schools. In addition, it will be coordinated with RG-T4470, which aims to support education systems of LAC countries in accelerating their digital transformation through the creation of references and best practices to help them ensure equitable access to and intentional use of digital resources to improve learning outcomes and secure educational trajectories.

IV. Executing agency and execution structure (estimated length: 1 page)

4.1 **Executing Agency.** This TC will be implemented by the Bank through its Education Division (SCL/EDU) at the request of beneficiary countries. This is consistent with Appendix 10 of the Operational Directives for Technical Cooperation Products (as amended Annex 2 of OP-619-4), which identifies the need for strong institutional, operational, and technical capacity for the implementation of activities contemplated within technical cooperation. Given its technical-operational knowledge and experience in TC issues, SCL/EDU is in the best conditions to fulfill the aforementioned functions, due to: (i) support that this TC will give to the development of products linked to the Memorandum of Understanding with the World Bank on the axe of digitalization for education; (ii) the regional nature of TC, which includes various countries in the region as indirect beneficiaries of the activities; and (iii) the opportunity to generate and disseminate new knowledge and tools to educational systems of the region.

4.2 As the executing agency of TC, the Bank will be responsible for: (i) coordinating the agencies involved in the execution of TC, including the Ministries of Education; (ii) identify the studies and technical work necessary for the execution of the TC; (iii) select and hire consultants to provide the necessary services. The work in the countries will be carried out in close coordination with the Representations as well as with the ministries of education involved.

4.3 The expected outcomes of the digital transformation program will focus on equipping beneficiary countries with a robust foundation for transforming their education sectors through: i) the design and strengthening of digital tools that will provide countries with a comprehensive diagnostic and assessment of their digital systems; ii) the development and budgeting of tailored digital transformation scenarios. The expect

result is to provide each beneficiary country with a concrete, actionable plan for implementing digital transformation in their education sector. Additionally, they will explore potential opportunities with Korean stakeholders that match the needs identified. To support these efforts, a database of potential providers will be made available, ensuring that countries have the resources needed for decision making.

4.4 **Intellectual Property.** The knowledge products generated from Bank-executed activities within this technical cooperation will be the property of the Bank and may be made available to the public under a Creative Commons license. However, if specific request of the beneficiaries occur, in accordance with the provisions of AM-331, the intellectual property of said products may also be licensed through specific contractual commitments that shall be prepared with the advice of the Legal Department.

4.5 **Acquisitions**. All acquisitions to be executed under this Technical Cooperation have been included in the Procurement Plan (Annex IV) and will be contracted in accordance with the applicable policies and regulations of the Bank as follows: (a) Hiring of individual consultants, as established in the Standard on Complementary Workforce (AM-650) and (b) Contracting of services provided by consulting firms in accordance with the Institutional Procurement Policy (GN-2303-33) and its Guidelines.

4.6 **Execution Period**. It is estimated that the project will have a duration of 24 months for its execution and disbursements, counting from the date of approval of this TC.

V. Major issues

5.1 As it is a TC that exclusively produces report and study documents, which will be carried out through individual consultancies and firms contracted by the Bank, no substantial fiduciary, macroeconomic or accountability risks were identified.

5.2 Despite the above, two potential low-level risks are identified. One is that mobilizing the education community to answer online questionnaires and systematic assessments for diagnosis is often challenging. Based on SCL/EDU's extensive experience in developing regional questionnaire-based tools, it is planned to implement an effective communication plan, as well as various strategies to promote the participation of teachers and school staff through different means. The communication strategy will consist of disseminating ready-available graphic and audiovisual templates that can be adapted to each educational system, promoting the use of diagnostic platforms by users in each country where it is applied.

5.3 The main risk associated with this TC is related to cultural and language gaps that could hinder the exchange between technical teams in South Korea and LAC. The institutional capacity between Korea and beneficiary countries could also become an obstacle to working together. To mitigate these risks, both the Bank and Korea will pay special attention to ensure solutions and providers are adapting to local context, in addition to having members with cultural and linguistic knowledge of both sides. In addition, a detailed work schedule will be agreed that includes a scheme of virtual meetings. Another associated risk involves the challenges of coordinating with Korean agencies, which can be mitigated by establishing a robust governance structure between the organizations, incorporating periodic meetings and monitoring mechanisms to ensure more effective coordination between teams.

VI. Exceptions to Bank policy

6.1 No exceptions are foreseen.

VII. Environmental and Social Aspects

7.1 This Technical Cooperation is not intended to finance pre-feasibility or feasibility studies of specific investment projects or environmental and social studies associated with them; therefore, this TC does not have applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

Required Annexes:

Request from the Client_71915.pdf

Results Matrix_67264.pdf

Terms of Reference_42000.pdf

Procurement Plan_64494.pdf