

TECHNICAL COOPERATION PROFILE

NOVEMBER 20, 2007

I. BASIC PROJECT DATA

Country: Haiti
Program name: Pilot of the One Laptop per Child Model
Program number: HA-T1093
Team members: Emma Näslund-Hadley (SCL/EDU), Team Leader; Claudia Cox, Aimee Verdisco, and Sophie Makonnen (SCL/EDU); Guilherme Sedlacek (OVE/OVE); and Javier Jimenez (LEG/SGO).
Date of request: October 4, 2007
Beneficiary: Ministry of Education and Vocational Training (MENFP)
Executing agency: Ministry of Education and Vocational Training (MENFP)
Financing plan:
IDB (ORC-SOF): US\$3,000,000
OLPC Foundation: US\$2,000,000
Presidency Carry Over: US\$ 100,000
Total: US\$5,100,000
Technical responsibility: SCL/EDU
Included in Board approved TC Program: No
Tentative dates: Board: February 2008

II. BACKGROUND AND PROBLEM STATEMENT

- 2.1 Prompted by the increasing availability of sophisticated technologies at falling prices and allured by the promise technology holds for accelerating progress in education, many countries in the Region have sought Bank support for programs that incorporate technology in the teaching-learning process. Most recently, governments have expressed interest in utilizing existing budgets for education technology in more child-centered ways, particularly for one-to-one computing. This poses a particular challenge for poor countries, where infrastructure, teachers, and other critical inputs are lacking.
- 2.2 The XO laptop was designed by the One Laptop Per Child (OLPC) Foundation as an educational device to be implemented under these conditions. The machines are sized for children and include a number of innovations, including open source software, allowing children and teachers to create and invent; energy efficiency, accommodating solar or human power; mesh networking, facilitating online interaction; and a hermetic seal to make it resistant to water and dirt.
- 2.3 Government efforts to improve the learning of Haitian children in primary school include the use of public-private partnerships to leverage resources to the education sector. This proposed Technical Cooperation (TC) will be co-financed by the Bank

and the OLPC Foundation. It lays out an innovative design to ascertain the cost-effectiveness of the OLPC model, while at the same time improving the quality of education through more traditional inputs. This is in line with the Social Fund's objectives (GN-2426-3) insofar as it will enhance upstream investment lending in Haiti and beyond in the use of ICT to improve the quality and relevance of education through country programming. Through the provision of technical assistance to support the identification of alternative investments in the education sector and the attainment of the Millennium Development Goals (MDGs), the proposed TC meets the eligibility criteria of the Social Fund.

III. PROGRAM OBJECTIVE AND DESCRIPTION

- 3.1 **General Objective.** The overall objective of this initiative is to test the efficiency of one-to-one computing in a context of extreme poverty by piloting it in public and non-public schools in Haiti.
- 3.2 **Specific Objective.** The specific objective is to implement the OLPC model in Haiti, comparing results along the following dimensions: (i) cost-effectiveness and value added of OLPC in the teaching-learning process; (ii) generation of child-centered learning; and (iii) sustainability of investment. In achieving its objectives, the Project will consist of four components:
- 3.3 **Component I. Sampling.** The proposed Project will finance the design of the sampling matrix for the selection of urban and rural communities in which the pilot will be implemented. The matrix will consist of approximately 40 communities and 60 schools. Implementation of the pilot will be sequenced, allowing for ongoing evaluation and comparison between groups of schools receiving the XO laptops at the beginning and at the end of the pilot. Attention will be given to teacher and student profiles, infrastructure and school size in an effort to ensure comparability across sample communities. The interventions will cover the entire primary cycle, benefiting some 19,000 students and 500 teachers.
- 3.4 **Component II. Development of inputs.** The Project will finance the development of quality inputs for the pilot. Specific packages of inputs will be designed to support the introduction of XO laptops in schools, including solutions for connectivity and security, the identification of teacher training needs, development of content in Creole, and a maintenance and repair plan. These interventions will be complemented with texts and didactic materials, as well as investments in infrastructure and non-IT equipment.
- 3.5 **Component III. Intervention.** The Project will finance the acquisition of inputs required for the implementation of the pilot. The Project will also finance technical support at the school level, collaborating with the regional MENFP inspectors. A one-month pre-pilot will be implemented and monitored in three schools prior to the approval of this TC. After making necessary adjustments to the model, a 12-month pilot will be implemented simultaneously in all schools covered by this TC.

- 3.6 **Component IV. Evaluation.** The Project will finance an evaluation tool to determine: (i) the cost-effectiveness of new technologies in improving learning as measured by an international standardized test; (ii) the pedagogical model, contrasting child-centered and teacher centered learning; (iii) the teaching environment, including classroom management and gender relations in the classroom; and (iv) the sustainability of the model in terms of the durability of the investments.
- 3.7 The evaluation will be both qualitative and quantitative. The quantitative evaluation will consist of the application of a standardized test. The standardized test will be a translated version of the math and language tests applied to third and fourth graders as part of the second round of the Latin American Laboratory of Education Quality (SERCE). These tests will be applied ex-ante and ex-post. The qualitative evaluation will consist of the continuous observation of classroom practices and changes in pedagogy. An independent external firm will be contracted to carry out all phases of the evaluation, including the creation of the baseline, the continuous observation and the final evaluation. A log-frame will specify the indicators to be monitored and evaluated.

IV. COST AND FINANCING

- 4.1 The total cost of the Project amounts to US\$5.1 million (see [Annex I](#)). Of the total amount, US\$3.0 million will be financed through the Special Program for Employment, Poverty Reduction and Social Development in Support of the Millennium Development Goals (ORC-SOF); US\$100,000 will be financed by the Presidency Carry Over Budget; and US\$2.0 million will be financed by the OLPC Foundation. The application of the first standardized test will be financed through the TC Assessing Education Quality (HA-T1063).
- 4.2 The investment per school was calculated based on the resources necessary for the implementation of the experimental package, including: US\$188 per laptop; US\$3,000 for connectivity and other infrastructure needs; US\$188 per teacher for training (assumes 1:1 ratio with hardware); US\$1,500 for repair and maintenance. Additional costs include US\$190,000 for the development of content in Creole.

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 The executing agency of the proposed TC is the Ministry of Education and Vocational Training (MENFP), which has a long track record of executing Bank operations. The Bank's Representation in Haiti (EDU/CHA) will have the disbursement responsibility, and the technical responsibility will be shared between the Education Division (SCL/EDU) and EDU/CHA. The OLPC Foundation will be responsible for providing technical assistance for the duration of the Project. See Annex II for further details on execution responsibilities.
- 5.2 The capacity of the MENFP for the procurement of the operation has been assessed as high risk, therefore all the procurement processes to be carried out

will be supervised by the Bank on an ex-ante basis. The execution of procurement and contracting will be carried out in accordance with the *Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank* (GN-2349-7 and current version) and the *Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank* (GN-2350-7 and current version) and the Annex Ad Hoc. The Procurement Plan is attached in Ad [Annex](#).

- 5.3 The OLPC Foundation is co-financing the proposed project through the provision of 10,000 XO laptops. For this contribution OLPC's procurement policies will apply. In addition to the XO laptops financed by the OLPC Foundation, the Bank will procure 7,000 XO laptops in accordance with the provisions in Policy GN-2349-7 (Cl. 3.6(c), the XO laptops for this project on a sole-source basis from the OLPC Foundation. A request for an eligibility waiver for the 7,000 financed with Bank resources is hereby submitted since the manufacturer is located in China. The OLPC Foundation is the sole manufacturer and distributor of the XO laptop, which was designed to provide children in developing countries with sufficiently affordable access to new channels of learning. The monetary value of the laptop for this project is US\$188 per laptop.

VI. MAJOR ISSUES

- 6.1 The execution of this project in a context such as Haiti presents logistical challenges, including limitations in distribution capacity, connectivity, security and human resources. The noted limitations in execution capacity of the MENFP add further complication. The disbursement period thus will be 18-months, that is 6 months longer than the stipulated disbursement period of ORC-SOF. To test the efficiency of one-to-one computing, a sufficiently large subset of the population must have access to the XO laptop. The required investments in equipment and infrastructure will exceed 30%, and an exception to Bank policy will be necessary.

VII. ACTION PLAN

- 7.1 [Annex II](#) details the Action Plan for the implementation of the proposed TC. As it indicates technical responsibilities will be shared between SCL/EDU, EDU/CHA, OLPC Foundation and the MENFP, all of which will collaborate on the preparation of the Plan of Operations and all corresponding TOR. The Board is expected to approve the TC by February 2008.

VIII. ENVIRONMENTAL AND SOCIAL STRATEGY

- 8.1 No negative environmental or social effects are anticipated with this TC and has been classified as a "C" according to the Safeguard Classification Tool. Investments in equipment will be environmentally sound and include solar and manpowered energy. The XO laptops meet standards for the reduction of hazardous substances.

**PILOT OF THE ONE LAPTOP PER CHILD MODEL
(HA-T1093)
DETAILED BUDGET**

Components	Presidency Carry Over	Social Fund	OLPC	Total
I. Project Coordination	0	<u>300,000</u>	0	<u>300,000</u>
IT Coordinator	0	100,000	0	100,000
Project Coordinator	0	200,000	0	200,000
II. Sampling	0	<u>20,000</u>	0	<u>20,000</u>
Consulting Services	0	20,000	0	20,000
III. Dev. Inputs	0	<u>696,336</u>	0	<u>696,336</u>
Creole OLPC Content	0	190,000	0	190,000
Didactic Materials	0	180,000	0	180,000
Training	0	326,336	0	326,336
IV. Intervention	<u>100,000</u>	<u>1,568,000</u>	<u>2,000,000</u>	<u>3,638,000</u>
IT Support, Maintenance and Repair	100,000	0	0	100,000
Equipment and connectivity	0	1,568,000	2,000,000	3,538,000
V. Evaluation	0	<u>400,000</u>	0	<u>430,000</u>
Field Observation	0	200,000	0	200,000
Qualitative assessment and analysis	0	200,000	0	230,000
VI. Contingencies	0	<u>15,664</u>	0	<u>15,664</u>
Total	<u>100,000</u>	<u>3,000,000</u>	<u>2,000,000</u>	<u>5,100,000</u>

**PILOT OF THE ONE LAPTOP PER CHILD MODEL
 (HA-T1093)**

IMPLEMENTATION PLAN

Activities	Responsibility			
	SCL/EDU	EDU/CHA	OLPC Foundation	MENFP
Continuous technical assistance.	Project duration.	Project duration.	Including maintenance and repair of laptops (project duration).	
Standardized Test	Contract and supervision of OREALC/Santiago (1 st quarter).			
Sampling and baseline.	Supervision of evaluation firm (1 st quarter).			Contracting of evaluation firm. Provision of school census data.
Content development.	Supervision of consultant to develop materials (1 st quarter).			Contracting of consultant to develop materials. Provision of curricular guidelines and related materials.
Design of treatment group inputs.			1 st quarter.	
Design of non-ICT inputs.	1 st quarter.	1 st quarter.		
Teacher training.	Supervision of specialized teacher training agency.			Contracting of specialized agency (2 nd and 3 rd quarter).
Rehabilitation of infrastructure.	2 nd quarter.	2 nd quarter.		
Distribution of quality packages and laptops.	2 nd quarter.	2 nd quarter.		
Classroom observation.	Supervision of evaluation firm (2 nd through 6 th quarter).			
Evaluation.	Supervision of evaluation firm (6 th quarter).			

PROJECT PROCUREMENT PLAN

Model A - for specific projects

General information

Country: Haiti

Borrower: Government of Haiti

Executing agency: Ministry of Education and Vocational Training (MENFP)

Project name: Pilot of the One Laptop per Child Model

Project and loan contract numbers: HA-T1093

Brief description of the project's objectives and components: The objective of the project is to test the efficiency of one-to-one computing in a context of extreme poverty by piloting it in public and non-public schools in Haiti. The Project will consist of four components the first one being sampling of approximately 40 communities, the second and third components will consist of development and distribution of quality inputs for schools and the fourth component of an evaluation tool.

Estimated date of project approval by the Board of Executive Directors: February 2008.

Estimated date of signature of the technical assistance: 30 March 2008

Estimated date of the final disbursement: March 2009

A. Introduction

Procurements for the proposed project will be carried out in accordance with the *Policies for the Procurement of Works and Goods Financed by the Inter-American Development Bank* (GN-2349-7), of January 2005; and the *Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank* (GN-2350-7), of January 2005, and with the provisions established in the loan contract and this procurement plan.

B. Procurement plan

The procurement plan for *Pilot of the One Laptop per Child Model* which covers the project in its entirety¹ has been agreed between the Bank and the Ministry of Education and Vocational Training. The plan, which is summarized in Appendix 1, indicates the procedure to be used for the procurement of goods, the contracting of works or services, and the method of selecting consultants, for each contract or group of contracts. It also indicates cases requiring prequalification; the estimated cost of each contract or group of contracts; the requirement for prior or post review by the Bank; and estimated dates for the publication of specific procurement notices and completion of the contracts included in this project. The procurement plan will be updated annually or whenever necessary or as required by the Bank.

¹ The first 18 months of project execution are counted from the date of publication of the general procurement notice, or the first specific procurement notice published following approval of the loan, whichever is earlier.

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Project Procurement Division (DEV/PRM)

The procurement plan is available at the Ministry of Education and Vocational Training.. It is also available on the Bank's website: [Project procurement information](#).

C. Project procurement

The following is a general description of the procurement planned for the proposed project.

Works procurement: The works to be contracted include the following: *[describe the general type of works]* N/A

Goods procurement: The goods to be procured for this project include the following:

- 1) Didactic material for all 60 schools
- 2) Connectivity and Energy equipment
- 3) Procurement of 7,000 XO laptops
- 4) Procurement of 10,000 XO laptops by the OLPC Foundation

Project goods requiring ICB will be procured using the SBDs issued by the Bank. Procurement subject to NCB and PC will be undertaken using bidding documents agreed upon with the Bank.

The capacity of the MENFP for the procurement of the operation has been assessed as high risk, therefore all the procurement processes to be carried out will be supervised by the Bank on an ex-ante basis. The execution of procurement and contracting will be carried out in accordance with the *Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank* (GN-2349-7 and current version) and the *Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank* (GN-2350-7 and current version) and Annex Ad Hoc.

The OLPC Foundation is co-financing the proposed project through the provision of 10,000 XO laptops. For this contribution OLPC's procurement policies will apply. In addition to the XO laptops financed by the OLPC Foundation, the Bank will procure 7,000 XO laptops in accordance with the provisions in Policy GN-2349-7 (Cl. 3.6(c)), the XO laptops for this project on a sole-source basis from the OLPC Foundation. A request for an eligibility waiver for the 7,000 financed with Bank resources is hereby submitted since the manufacturer is located in China. The OLPC Foundation is the sole manufacturer and distributor of the XO laptop, which was designed to provide children in developing countries with sufficiently affordable access to new channels of learning. The monetary value of the laptop for this project is US\$188 per laptop.

Procurement of non-consulting services:

Non consulting services for the project include:

- 1) Connectivity and maintenance and repair

Inter-American Development Bank
Project Procurement Division (DEV/PRM)

Procurement of consulting services: Consulting services for the project include:

- 1) Training for teachers
- 2) Development of didactic in Creole content for computers
- 3) Consulting services for sampling
- 4) Evaluation

The consulting firms to be hired for the project will be selected using the standard request for proposals (RFP) issued by the Bank, or an RFP satisfactory to the Bank in cases where the standard RFP is not applicable. Individual consultants will be selected bearing in mind the provisions established in chapter V of the policy in document GN-2350-7.

Short lists of consultants for consulting services estimated to cost less than US\$200,000.00 equivalent per contract, may consist entirely of national firms.

Operating expenses: The following operating expenses will be financed by the Bank:

- 1) Project Coordination team

Project operating expenses to be financed by the Bank may be contracted using the executing agency's procedures that have been previously reviewed by the Bank and classified as satisfactory.

Others: *[Indicate whether there is any special provision for scholarships, grants, acquisition of land, claims, and rights of way necessary for project execution, etc. Indicate how the procurements mentioned in this section are to be carried out]. N/A*

Advance contracting and retroactive financing: *[Describe arrangements for advance contracting and retroactive financing included in the project, if any]. N/A*

D. Bank review of procurement decisions

All contracts will be subject to prior review by the Bank in accordance with Appendix 1 of the policies for the procurement of works and goods and the selection of consultants, respectively.

E. Domestic preference

Bids offering goods originating in the borrower's country will receive a 15% price preference in contracts requiring international competitive bidding, as established in Appendix 2 of the procurement policies. *[This section needs to be verified to ensure that it agrees with the provisions of the loan contract.] N/A*

Appendix 1

Procurement Plan²

Country: Haiti

Borrower: Government of Haiti

Executing agency: Ministry of Education and Vocational Training (MENFP)

Project name: Pilot of the One Laptop per Child Model

Project and loan contract numbers: HA-T1093

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Estimated date of signature of the technical assistance: 30 March 2008

Estimated date of the final disbursement: March 2009

² All project contracts should be included, even if not financed by the Bank, indicating the source of funding in each case.

Project: Pilot of the One Laptop per Child Model
Project number: HA-T1093
Period included in this Procurement Plan: From: 04/07 until 06/09

Ref. No. ³	Description and type of the procurement contract	Estimated Contract Cost (US\$000)	Procurement method ⁴	Review (ex-ante or ex-post)	Source of financing and percentage		Pre-qualification ⁵ (Yes/No)	Estimated dates		Status ⁶ (pending, in process, awarded, cancelled)	Comments
					IDB %	Local/ Other %		Publication of specific procurement notice	Completion of contract		
	1. Goods										
	○ Good 1 Didactic material for all 60 schools	180,000.00	NCB	Ex-ante	100%		No	April-08	September-08		
	○ Good 2 7,000 XO laptops	1,316,000.00	DC	Ex-ante	100%		No	April-08	December 08		
	○ Good 3 10,000 XO laptops (co-financing)	1,880,000.00	DC	Ex-ante	100%	100% (OLPC)	No	April 08	December 08		

³ If a number of similar individual contracts were to be executed in different places or at different times, these can be grouped together under a single heading, with an explanation in the comments column indicating the average individual contract amount and the period during which they would be executed. For example, an education project that includes school construction might include an item “school construction” for a total of US\$20 million, and an explanation in the comments column such as: “This encompasses some 200 contracts for school construction averaging US\$100,000 each, to be awarded individually by participating municipal governments over a three-year period between January 2006 and December 2008.”

⁴ **Goods and Works:** **ICB:** International competitive bidding; **LIB:** limited international bidding; **NCB:** national competitive bidding; **PC:** price comparison; **DC:** direct contracting; **FA:** force account; **PSA:** Procurement through Specialized Agencies; **PA:** Procurement Agents; **IA:** Inspection Agents; **PLFI:** Procurement in Loans to Financial Intermediaries; **BOO/BOT/BOOT:** Build, Own, Operate/Build, Operate, Transfer/Build, Own, Operate, Transfer; **PBP:** Performance-Based Procurement; **PLGB:** Procurement under Loans Guaranteed by the Bank; **PCP:** Community participation procurement. **Consulting Firms:** **QCBS:** Quality- and Cost-Based Selection **QBS:** Quality-Based Selection **FBS:** Selection under a Fixed Budget; **LCS:** Least-Cost Selection; **CQS:** Selection based on the Consultants’ Qualifications; **SSS:** Single-Source Selection. **Individual Consultants:** **NICQ:** National Individual Consultant selection based on Qualifications; **ICC:** International Individual Consultant selection based on Qualifications

⁵ In the case of new Policies it applies only for Goods and Works. In the case Old Procurement Policies it applies for Goods, Works and Consulting Services.

⁶ This column “Status” should be used for retroactive procurement and for procurement plan updates.

Ref. No. ³	Description and type of the procurement contract	Estimated Contract Cost (US\$000)	Procurement method ⁴	Review (ex-ante or ex-post)	Source of financing and percentage		Pre-qualification ⁵ (Yes/No)	Estimated dates		Status ⁶ (pending, in process, awarded, cancelled)	Comments
					IDB %	Local/ Other %		Publication of specific procurement notice	Completion of contract		
	2. <u>Civil works</u>										
	3. <u>Non-consulting services</u> o <u>Non consulting Service 1</u> Connectivity and maintenance and repair	352,000.00	ICB	Ex-ante	100%		No	April 08			
	4. <u>Consulting services</u> o <u>Consulting services 1</u> Training for teachers o <u>Consulting services 3</u> Development of Creole OLPC content o <u>Consulting services 4</u> Sampling services o <u>Consulting services 5</u> Evaluation	326,336.00 190,000.00 20,000.00 400,000.00	QBS CML DC QBS	Ex-ante Ex-ante Ex-ante Ex-ante	100% 100% 100% 100%		No No No No	April-08 April-08 April-08 April 08	June-09 August-08 August-08 June-09		

Appendix 2

Capacity of the executing agency and supervision of procurement by the Bank

Assessment of the executing agency's capacity to administer procurement

The Project Coordinating Unit (PCU) will be responsible for carrying out project procurements. Having assessed the capacity of the executing agency (Ministry of Education and Vocational Training) to carry out the procurement actions, the Bank rates the overall risk to the project arising from the administration of procurement as average.

Significant deficiencies identified and corrective actions agreed upon are summarized below:

Deficiencies	Corrective action	Completion date	Comments
Lack of experience with the overall public procurement and with Bank's policies	Training by the Country Office in Haiti with the launching of the operation	April 2008	COF has given trainings on a regular basis

Frequency of procurement supervision

Procurement will be done with prior review and in order to build capacity of the PCU training will be given at the launching of the project.