

TECHNICAL COOPERATION PROFILE

AUGUST 7, 2008

I. BASIC PROJECT DATA

Country:	Mexico
Program name:	Aligning Learning Incentives (ALI)
Program number:	ME-T1114
Team members:	Ana Santiago (SCL/EDU), Team Leader; Marcelo Cabrol and Claudia Cox (SCL/EDU); and Juan Carlos Perez-Segnini (LEG/SGO)
Date of Request:	July 7, 2008
Beneficiary:	Ministry of Education (SEP)
Executing Agency:	SCL/EDU
Financing plan:	IDB (ORC-SOF): US\$ 1,350,000 Local: US\$59,150,000 Total: US\$60,500,000
Technical and basic responsibility:	SCL/EDU
Tentative dates:	QRR: August, 2008 PRE: September, 2008

II. BACKGROUND AND PROBLEM STATEMENT

- 2.1 The Ministry of Education has requested the Bank's support in developing a study of an incentive based structure, never before explored in Mexico or elsewhere, to align the efforts of school principals, teachers, and students in order to improve student achievement. This study will be an important input to the ongoing policy dialogue with Mexico, and will be instrumental for the country's implementation of the *Reforma de Educación Media Superior* (REMS) recently launched by the Mexican government, as it will provide information of cost-effective ways to increase school performance.
- 2.2 The main objective of REMS is to tailor high school education to include the basic competencies and skills needed for the current economic and social challenges faced by the country, based on three principles: (i) recognizing all modalities and subsystems of high school education; (ii) improving the pertinence and relevance of all curricula; and (iii) easing the transit between systems and schools. Further, REMS will concentrate on four axes: (i) common curricula based on competencies; (ii) regulation of different supply modalities; (iii) improving school quality, student achievement, and easing the transit between systems and schools; and (iv) designing an implementing a certification model. Within existing programs the Reform aims to adjust existing scholarship schemes to ensure permanence, graduation, and enrollment in higher education.

- 2.3 Following the Ministry's request, this operation will support a detailed study of incentive structures to improve school performance. It will combine quantitative methods with qualitative approaches to determine which factors underlie good results, as well as compare the cost-effectiveness of the different alternatives.
- 2.4 **Justification for use of resources from the Social Fund.** The proposed project lays out an innovative design to improve school performance in Mexico. The findings will be an important input for SEP as they implement the REMS; they should also provide insights to other countries adopting similar results-based strategies. This proposal is in line with the Social Fund's objectives (GN-2426-3) insofar as it will enhance upstream investment lending in Mexico, and beyond to improve the quality, equity and relevance of secondary education in Mexico and other countries in the region

III. PROGRAM OBJECTIVE AND DESCRIPTION

- 3.1 **Objectives.** The objective of this operation is to design, implement, and evaluate an incentive based structure, never before explored in Mexico or elsewhere, to align the efforts of school principals, teachers, and students in order to improve student achievement.
- 3.2 **Description.** The operation's three main components are: (i) design and implementation of the incentive structure; (ii) evaluation of the pilot through the application of a common survey instrument in a sample of schools over time and different treatment options; and (iii) dissemination of results.
- 3.3 **Component 1. Design and implementation of the aligned learning incentives** (US\$47,280,000). The first component will design and implement a structure of aligned incentives for principals, teachers, and students focusing on improving the achievement of high school students. This program is expected to be an attractive cost-effective option for high schools as it will create synergies within the school towards the improved achievement objective. The proposed pilot will contain three incentive components.
- 3.4 **Individual-student level-rewards.** Rewards to individual students in each of the three grades (10, 11 and 12) who achieve well-defined achievement targets on standardized external mathematics examinations, that will be developed for this project based on grade specific curricula and calibrated to the ninth grade ENLACE test (this component will constitute on average 80% of students benefit).
- 3.5 **Class-level rewards.** Rewards to mathematics teachers (in all three grade levels) and all students in their classes, based on the overall performance of students on the standardized external examinations developed for this project (this component will constitute on average 20% of the student awards, and 80% of the mathematics teachers awards).

- 3.6 **School-level rewards.** Rewards to principals, mathematics teachers and other subject teachers, based on an overall measure of the improved performance of students in external mathematics examinations developed for this project (this component will constitute 100% of the awards for principals, 100% of the reward for teachers of classes other than mathematics, and 20% of the awards for mathematics teachers).
- 3.7 The Government of Mexico will finance the incentives-based payments, while the IDB will finance the technical assistance required for the design and implementation of ALI.
- 3.8 **Component 2. Evaluation** (US\$12,800,000). This component will include all activities related to the impact evaluation of the pilot study over a three year period. Amongst the activities are the design and validation of the survey instrument, statistical and econometric analysis to guarantee an adequate sample design to observe the impact of different incentive structures, training of enumerators, data collection, database processing, data analysis, statistical and econometric analysis, and paper writing.
- 3.9 The evaluation will be based on a randomized treatment design, with five groups: (i) student only incentives; (ii) teacher and director only incentives; (iii) student, teacher and director incentives ; (iv) student, teacher and director incentives with incentive more tilted towards teachers and less towards students; and (v) no incentives (the control group). The evaluation will focus on multiple outcomes that include: (i) dropout rates between 10th and 11th, and 11th and 12th grades, grade progression rates, high school graduation rates, university attendance rates, and test score performance, measured either as a continuous variable and/or in terms of the four categories described above. Grade progression rates, the high school graduation rate and the rate of planned university attendance will be observed for all children. However, the test score outcome will only be observed for children who take the test. Because the tests will be administered in school, the test score outcome will not be observed for children after they drop out of school.
- 3.10 The IDB will finance all technical assistance, analysis and academic papers; the Mexican Government will finance data collection and database processing.
- 3.11 **Component 3. Dissemination** (US\$370,000). This component will support a series of activities to disseminate the results of Components 1 and 2. The ALI incentive program and its comparison with student-only and teacher-only incentive schemes is likely to be of widespread interest. Therefore the project will have regular dissemination meetings both in Mexico and at the IDB in Washington and interim reports, as well as later in the project in more academic settings. The initial meetings and reports will focus on program design. Subsequent meetings and interim reports will discuss progress and issues in program implementation and preliminary results in terms of the outcome measures. In the final year of the project, there will be larger dissemination

meetings to discuss the overall results of the analysis of three years of program operation, as well as a final report on the overall project evaluation.

IV. COST AND FINANCING

- 4.1 The total cost of the TC is US\$60,500,000. Of the total amount, US\$1,350,000 will be charged against the resources of the Special Program for Employment Poverty Reduction and Social Development in Support of the Millennium Development Goals (ORC-SOF); and US\$59,150,000 will be local contribution in kind (see Annex I Detailed budget).

Table IV-1. Budget US\$

	IDB	SEP	Total
Component 1: Design and implementation	250,000	47,030,000	47,280,000
Component 2: Impact evaluation	840,000	11,960,000	12,800,000
Component 3: Dissemination	210,000	160,000	370,000
Contingencies	50,000		50,000
Total	1,350,000	59,150,000	60,500,000

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 This operation was requested by the Mexican Government in a memorandum dated July 7th, 2008. It will be executed by SCL/EDU by request of the Mexican Government. SCL/EDU will be responsible for the administration of resources from the ORC-SOF, including the contracting of specialized consulting services in accordance with IDB Policies for the Contracting of Consultant Services (GN-2350), the coordination of activities, and reports to the Bank. SEP will be responsible for all aspects of project management and all administrative aspects of local resources.

VI. MAJOR ISSUES

- 6.1 There are no major issues associated with this project.

VII. ACTION PLAN

- 7.1 Preliminary work on the design of the incentive system and impact evaluation will take place prior to the approval of this operation. SEP will work with existing administrative data sources.
- 7.2 SCL/EDU will have the technical responsibility for this operation. It will collaborate with SEP to prepare a Plan of Operations and all corresponding TOR. The expected approval date for the TC is September 2008.

VIII. ENVIRONMENTAL AND SOCIAL STRATEGY

- 8.1 No negative environmental or social effects were identified and the TC has been classified as a "C" according to the Safeguard Classification Tool. No

environmental impact is foreseen as the initiative is limited to analytical work. No Bank resources will be used to finance investments in infrastructure of equipment.

(ORIGINAL SIGNED)

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Chief SCL/EDU

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Approval: _____
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**ALIGNING LEARNING INCENTIVES
(ME-T1114)**

DETAILED BUDGET US\$

Description	IDB	SEP	Total
Component 1: Design and Implementation	<u>250,000</u>	<u>47,030,000</u>	<u>47,280,000</u>
Experiment Design	200,000	-	200,000
Existing administrative data analysis	50,000	-	50,000
Full-time coordinator and assistant	-	30,000	30,000
Incentive payments	-	47,000,000	47,000,000
Component 2: Impact Evaluation	<u>840,000</u>	<u>11,960,000</u>	<u>12,800,000</u>
Impact Evaluation Design	100,000	-	100,000
Sample design	70,000	-	70,000
Survey design and validation	100,000	-	100,000
Training of enumerators	60,000	-	60,000
Instrument application, data cleaning and processing	-	11,960,000	11,960,000
Data analysis	160,000	-	160,000
Statistical and econometric analysis	150,000	-	150,000
Evaluation reports	200,000	-	200,000
Component 3: Dissemination	<u>210,000</u>	<u>160,000</u>	<u>370,000</u>
Dissemination meetings	40,000	50,000	90,000
National seminars	40,000	50,000	90,000
International seminar	80,000	30,000	110,000
Publication of results	50,000	30,000	80,000
Contingencies	<u>50,000</u>	-	<u>50,000</u>
Total	<u>1,350,000</u>	<u>59,150,000</u>	<u>60,500,000</u>