

## Thematic Evaluation

# Review of IDB Support to Secondary Education: Improving Access, Quality and Institutions, 1995-2012

As all LAC countries reach near-universal primary/basic education, demand for access to higher levels of education is growing dramatically. LAC is also approaching a point in its demographic transition when youth aged 15-24 years will be at their highest numbers in both absolute and relative terms. If countries are able to improve education quality now, better-educated cohorts will enhance the Region's human resource profile for decades to come.

This evaluation seeks to determine the extent to which the Bank supported equitable access to secondary education, improvements in secondary education quality, and reforms of education institutions to improve management capacity. In addition, it describes the approaches taken and examines the results obtained.

The evaluation found that as the Bank's overall education financing for the Region increases, so does its role in supporting education policy reforms that will affect access, efficiency, and learning outcomes. The Bank has the potential to make significant contributions to improving secondary education outcomes for all students. However, educational disadvantage is deeper and more complex than the disparity in the numbers of schools with libraries, the conditions of the school building, or the availability of computers. More attention needs to be given to what works—that is, what strategies have been shown to improve student retention, completion, and achievement. Political dynamics need to be understood and taken into account in loan design, while at the same time recognizing that those dynamics also determine in part the role of the Bank (as discussed in detail in Chapter VI) and the extent to which inputs are used productively. In many LAC countries it is imperative to continue enhancing the management of the educational system at all levels, especially in the areas of results-based management, assessment, and monitoring and evaluation.

# **Review of IDB Support to Secondary Education:**

**Improving Access, Quality, and Institutions  
1995-2012**

Office of Evaluation and Oversight, OVE



**Inter-American Development Bank**

October 2013



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**RE-461**

## ACRONYMS

## ACKNOWLEDGEMENTS

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## ACRONYMS

ALI	Aligning Learning Incentives initiative
CAF	<i>Corporación Andina de Fomento</i>
CCT	Conditional cash transfer program
CDB	Caribbean Development Bank
CONAFE	<i>Consejo Nacional de Fomento Educativo</i> (Mexico)
EDU	Education Division
ENLACE	Engaging Latino Communities for Education
GDP	Gross domestic product
IDB	Inter-American Development Bank
LAC	Latin America and Caribbean
M&E	Monitoring and evaluation
OECD	Organization for Economic Co-operation and Development
OVE	Office of Evaluation and Oversight
PBL	Policy-based loan
PCR	Project Completion Report
PDL	Performance-driven loan
PISA	Program for International Student Assessment
Pp	percentage points
PPMR	Project Performance Monitoring Report
PREAL	<i>Programa de Promoción de la Reforma Educativa en América Latina y el Caribe</i>
PROEM	<i>Proyecto Emprender Foundation</i>
SDS	Sustainable Development Department
SEED	State Secretariat of Education (Paraná, Brazil)
SERCE	Second Regional Comparative and Explanatory Study (UNESCO)
TC	Technical cooperation
TIMSS	Trends in International Mathematics and Science Study
TVE	Technical and vocational education
UNESCO	United Nations Economic and Social Council

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The team would like to thank Emiliana Vegas (Division Chief EDU) and Jesús Duarte (interim acting Division Chief EDU) and their Education team for their collaboration and for comments and suggestions provided during the preparation of the document. The team would also like to thank the Country Offices, field-based Education Specialists and Operations Analysts for helping arrange the Country Case Studies in the following countries: Argentina, Brazil, Dominican Republic, Mexico, Paraguay, Peru, Trinidad and Tobago, and Uruguay. We also thank the Ministries of Education in these same countries for their time and cooperation during the Case Study missions.







# Executive Summary

**Between 1995 and 2012, the Inter-American Development Bank (IDB, or Bank) financed 80 education loans in Latin America and the Caribbean (LAC), of which 58 supported lower and/or upper secondary education either exclusively or non-exclusively. This evaluation examines this Bank support for secondary education to identify lessons and provide recommendations to strengthen future Bank performance.**

The evaluation gathered evidence through individual desk-based reviews of the 58 projects, nine country case studies, and a literature review. The case studies provided an opportunity to capture the large heterogeneity of conditions in the Region and to compensate for the shortage of information on results from some Bank documents. The case studies gathered data from Bank documents (Project Completion Reports, analytic studies, technical notes, and project documents), from a review of the literature, and from visits to seven of the countries.

This evaluation seeks to determine the extent to which the Bank supported equitable access to secondary education, improvements in secondary education quality, and reforms of education institutions to improve management capacity. In addition, it describes the approaches taken and examines the results obtained.

## CONTEXT

As all LAC countries reach near-universal primary/basic education, demand for access to higher levels of education is growing dramatically. LAC is also approaching a point in its demographic transition when youth aged 15-24 years will be at their highest numbers in both absolute and relative terms. If countries are able to improve education quality now, better-educated cohorts will enhance the Region's human resource profile for decades to come.

Countries in the Region score low on international achievement tests relative to other countries with similar characteristics. Furthermore, while some countries have succeeded in reducing the impact of socioeconomic factors on learning outcomes, the Program for International Student Assessment shows that, in the Region as a whole, the disparity in performance between poor and well-off students remains larger than any other region in the world. Elevated school-leaving rates (50%) at the transition from lower to upper secondary education mean that a large number of youths enter economic activity without the necessary knowledge and competencies to compete in the modern economy. At the same time, relatively high and increasing unemployment among youth has resulted in a high prevalence of “idle youth” (not in school and not working)—amounting to 20% of 15- to 18-year-olds in the Region—putting increasing pressure on social cohesion.

Spending has increased heterogeneously in the Region and now ranges from US\$289 per student in Guatemala to US\$5,235 in Barbados (at purchasing power parity in constant 2009 dollars). Public spending in upper secondary has become slightly regressive. Among secondary students in LAC, 21% are enrolled in private institutions, the highest share of any region worldwide. As the growth of knowledge-based economies creates increased demand for a more sophisticated labor force, retaining *all* secondary-age youth in school and providing them with quality education will enhance prospects for national competitiveness and growth while also reducing inequality, improving citizenship values and participation in civil life, increasing employability and wages, decreasing risky behaviors such as criminality, drug use, and teen pregnancy, and improving overall well-being for individual youth.

## BANK PORTFOLIO

The Bank is a major player in education financing in LAC, and its education lending portfolio has increased, especially since 2006. Between 1995 and 2012, the Bank’s Education Sector approved 80 loan operations amounting to US\$6.6 billion (growing at an average annual rate of 7%) in financing for education. Of these, 58 operations supported lower and/or upper secondary education (with 11 focused exclusively on the secondary level), with a total loan amount of US\$5.7 billion. In addition, between 2007 and 2012 the Bank approved US\$51.4 million in non-reimbursable technical cooperation funds to support loan operations, analytical work, and policy dialogue aimed at modernizing the Region’s Ministries of Education and building capacity at the national, regional, municipal, and/or community levels. Bank-financed projects supported activities aimed at improving access to education (infrastructure, scholarships), *quality* of education (teacher training, provision of learning resources, curriculum, extended school day, differentiated instructional models, school-improvement grants), and *institutions and school management* (decentralization, monitoring and evaluation, student assessment systems).

## EVALUATION FINDINGS

**Access.** Access-oriented interventions were funded in 85% of all education projects. These initiatives have generally been well accepted and have tended not to be hindered by political factors, as both political leaders and constituents appreciate the tangibles that supply-side and demand-side measures bring. Infrastructure has been the most common and largest expenditure in Bank-financed education projects. Other interventions include alternative delivery methods (community education, telesecundaria and distance education), adding of school shifts, and demand side interventions (scholarships and cash transfers). Despite high investment, results in infrastructure have produced less than anticipated increases in student enrollment. Less than half of projects with an access objective significantly achieved their outcome targets, and achievement of output targets is even lower. While access to lower secondary school is no longer the main challenge in most settings, provision of upper secondary schooling, especially in rural and remote areas, remains a challenge. As more countries move toward compulsory upper secondary education, additional financial resources will be needed to expand enrollment for both general and technical upper secondary education to underserved populations and areas, and the Bank has a role to play here.

Demand-side interventions were supported through four education sector projects providing monetary incentives, such as scholarships and payment of school fees, or non-monetary incentives, including school feeding. The Bank has provided significant support for conditional cash transfer programs through its social protection lending, though the programs have varied in their focus on secondary education.

**Quality.** Of the 58 loans examined, about 80% included objectives related to quality and the means to achieve it. Approaches to improve quality in secondary education have focused mainly on the provision of teacher in-service training, the availability of learning resources, curriculum reform, and an extended school day. Despite high repetition at the secondary level, very limited resources were directed toward remedial programs or other innovations to reduce repetition and dropout or bridge equity gaps. There is scant evidence that Bank investments in quality have resulted in higher student achievement, higher completion rates, or more effective teaching. Although about three-fourths of Bank loans supporting secondary education included activities to raise teacher effectiveness, the results have been measured overwhelmingly at the output level—number of teachers trained rather than impact on students. Educational materials have habitually been tracked as numbers of books delivered, of libraries established, or of computers distributed—without identifying who uses the resources, in what manner, in what amounts, and with what results. Further analysis is needed to establish links between teacher training and better teacher performance in the classroom or between teacher performance and student achievement. It is clear, however, that the provision of learning resources and technology alone does not ensure better-quality education; these inputs must be supplemented by teachers who are well trained in their use, and they need to be integrated into instructional practice in a meaningful way.

**Strengthening institutions.** Weak institutional capacity is among the most frequently cited challenges to the development effectiveness of Bank-supported projects. Though almost all Bank loans supported some form of institutional strengthening, it is unclear what impact this support has had, as many projects continue to suffer from poor project execution and monitoring and evaluation systems implemented as part of the projects have tended to be weak. Bank initiatives have focused on supporting decentralization efforts, strengthening school-level management capabilities of principals, increasing the effectiveness of community participation in school management, and improving overall monitoring and evaluation efforts of education ministries, including student assessment. Of 268 indicators of institutional strengthening in 31 completed projects, most were activities; only a handful could be considered intermediate outcomes or impacts of what was put into place. On a positive note, student assessment has increased greatly over the last two decades in LAC, often with Bank support, though it needs to be better institutionalized and integrated into policy discussions, planning, and operations.

**Conclusions and recommendations.** As the Bank's overall education financing for the Region increases, so does its role in supporting education policy reforms that will affect access, efficiency, and learning outcomes. The Bank has the potential to make significant contributions to improving secondary education outcomes for *all* students. However, educational disadvantage is deeper and more complex than the disparity in the numbers of schools with libraries, the conditions of the school building, or the availability of computers. More attention needs to be given to what works—that is, what strategies have been shown to improve student retention, completion, and achievement. Political dynamics need to be understood and taken into account in loan design, while at the same time recognizing that those dynamics also determine in part the role of the Bank (as discussed in detail in Chapter VI) and the extent to which inputs are used productively. In many LAC countries it is imperative to continue enhancing the management of the educational system at all levels, especially in the areas of results-based management, assessment, and monitoring and evaluation.

Drawing on the evidence presented in this evaluation, OVE has four recommendations to help enhance the effectiveness of future Bank support for secondary education:

- Focus Bank support much more centrally on improving the quality of secondary education, including investing more resources in understanding the root causes of poor-quality secondary education, determinants of student and teacher performance, and “what works” at the *secondary* level.
- With regard to access, focus Bank support more centrally on *upper* secondary, especially among vulnerable and disadvantaged populations.

- Put more emphasis on innovation and strengthen the knowledge repository to learn from and disseminate lessons of experience in secondary education, including on flexible delivery models for disenfranchised populations, alternative delivery models for harder-to-reach populations, cost-effective use of technology, and relevance and effectiveness of vocational education and training approaches.
- Produce PCRs with a full evidence base, showing what results were produced and why. Strengthen the measurement of results at the project level by setting a manageable number of realistic targets and markedly enhancing the tracking of outcomes and impacts attributable to each project.

## MANAGEMENT'S RESPONSE

### I. Introduction

Management thanks the Office of Evaluation and Oversight (OVE) for its “Review of IDB Support to Secondary Education: Improving Access, Quality and Institutions, 1995-2012” and the useful dialogue held during its preparation. We also welcome the evaluation’s findings and recommendations as we continue to work with our borrowing member countries in their efforts to enhance both the quality of and access to secondary education, while recording and disseminating the lessons learned from each project.

Management’s response to each of the evaluation’s recommendations draws mainly on the Sector Framework Document for Education and Early Childhood Development (GN-2708-2), approved by the Operations Policy Committee on May, 2013. This document highlights five Dimensions of Success closely linked to lines of action and concrete activities which are being already being implemented and monitored by the Education Division.

As paragraph 5.4 of document GN-2708-2 states: the Bank’s strategy in the sector is “...to achieve the goal of promoting effective teaching and learning by all children and young people in Latin America and the Caribbean, there are five Dimensions of Success that all education systems should aspire to achieve: (i) high student learning goals guide the delivery and monitoring of education services at all levels; (ii) new students come ready to learn; (iii) all students have access to effective teachers; (iv) all schools have adequate resources and are able to use them for learning; and (v) all children and young people acquire the skills necessary to be productive and contribute to society.” Where possible, Management has organized its responses with the actions and activities already underway within the Sector Framework Document (SFD) and if so instructed by the Board of Executive Directors, will implement recommendations in a manner to ensure their consistency with the SFD.

### II. Recommendations and Management’s Response

#### A. Recommendation 1

*Focus Bank support much more centrally on improving the quality of secondary education, including investing more resources in understanding the root causes of poor-quality secondary education, determinants of student and teacher performance, and “what works” at the secondary level.*



## B. Response 1

**Agree.** The recommendation is well aligned with the overarching goal of the Bank's activities in education over the next three years of "promoting effective teaching and learning for all children and young people in Latin America and the Caribbean". Several lines of action and activities embedded within the above-referenced Dimensions of Success (i), (iii) and (iv) are already helping to focus more centrally on improving the quality of secondary education. For example, the Bank will continue the work with countries on:

- a. A series of rigorous impact evaluations on crucial aspects of "what works" in education, especially at the secondary level;
- b. Establishing clear and useful standards for student learning and teacher performance, aligning them with the curriculum and evaluations;
- c. Transforming the teaching career to attract, develop, motivate and retain the best professionals.

## C. Recommendation 2

*With regard to access, focus Bank support more centrally on upper secondary, especially among vulnerable and disadvantaged populations.*

## D. Response 2

**Partially agree.** The issue of equity is addressed within the SFD which calls for not only "the design and implementation of education quality assurance systems at all levels of education, including compensatory policies and programs for students from vulnerable circumstances", but also investing in "initiatives that seek to close gender and ethnicity gaps in education". To that end, Management is already:

- a. Working with governments on the piloting and further scaling up of cost-effective ways of delivering quality education to harder to reach populations (students in vulnerable situations, socio-economic, and ethnic minorities, as well as students in disadvantaged rural areas);
- b. Carrying-out rigorous analyses of socio-economic, gender and ethnic gaps in educational performance.

Regarding OVE's recommendation to focus on upper secondary, we would like to highlight that as "the highest dropout rates occur at the transition from lower to upper secondary education",<sup>i</sup> we believe that the Bank should continue to work towards ensuring equal access to both levels of secondary education.

#### E. Recommendation 3

*Put more emphasis on innovation and strengthen the knowledge repository to learn from and disseminate lessons of experience in secondary education, including on flexible delivery models for disenfranchised populations, alternative delivery models for harder-to-reach populations, cost-effective use of technology, and relevance and effectiveness of vocational education and training approaches.*

#### F. Response 3

**Agree.** The issues related to the disenfranchised and harder-to-reach populations have been addressed in our response to the previous recommendation that highlighted the Bank's commitment to promoting greater equity in terms of access to secondary education. With the SFD, the Bank is also already committed to the lines of action to help countries: "leverage the potential of advances in information and communication technologies to facilitate student learning and to train and develop teachers, principals, and other education system personnel;" and "invest in programs that aim to use technology as a tool for improving learning outcomes". As the SFD also establishes, the Bank will promote "knowledge generation on the effectiveness and equity of various interventions on the education system side to facilitate the transition from secondary to postsecondary, and to the world of work, in particular for those groups facing greater challenges in the labor market, such as women, indigenous persons, and Afro-descendants".

To this end, the actions already outlined as responses (a) for Recommendation 1 and (a) and (b) for Recommendation 2 will serve these purposes.

#### G. Recommendation 4

*Produce PCRs with a full evidence base, showing what results were produced and why. Strengthen the measurement of results at the project level by setting a manageable number of realistic targets and markedly enhancing the tracking of outcomes and impacts attributable to each project.*

#### H. Response 4

**Agree.** Management is currently piloting its self-evaluation instrument to report project performance (Project Completion Report [PCR]) which has been redesigned to enhance its objectivity, transparency, and evidence base. With the new PCR, Management expects to be able to more fully document the causal chain linking project outcomes with outputs, as well as capture and disseminate the concrete lessons gleaned throughout the project. New PCR guidelines will be rolled out in January, 2014.

### **III. Looking Forward**

Management reiterates its commitment to serving the particular needs of each of its borrowing member countries in the secondary education sector, focusing on those priorities laid out in the SFD. Management will continue to monitor the implementation of the actions already determined in the SFD and as planned, will share with the Board of Directors the results of its mid-term assessment.

<sup>i</sup> Paragraph 1.5 of the “Review of IDB Support to Secondary Education: Improving Access, Quality, and Institutions, 1995-2012” RE-461.





## TOMOS GENERALES

COD. TS/983

## CIENCIAS SOCIALES

## CIENCIA TEC Y AMBIENTE

COD. TS/465

## COMUNICACION

The evaluation found that 74% of the secondary portfolio financed specific activities related to teacher effectiveness, largely in-service training; 71% supported the provision of earning resources, including textbooks, teachers' guides, instructional technology, and reference materials; and 66% invested in curriculum reform.

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# 1 Introduction and Evaluation Design

**The Inter-American Development Bank (IDB, or Bank) has always given high priority to supporting the improvement of education in the countries of Latin America and the Caribbean (LAC). Indeed, in the Eighth and Ninth Capital Replenishments, the Bank identified education as one of the priority areas for attention. The Bank's first education strategy dates back to 1979 (GP-86-2), and individual updates of the strategy for each level of education were required by the Eighth Capital Replenishment (1994). In that exercise (GN-2067) the Bank's objective for primary and secondary education was *"to improve quality and equity."***

In the recent Ninth Capital Replenishment, the Governors renewed their commitment to education, one of the pillars of the first sector priority ("social policy for equity and productivity"), by focusing on increasing the quality and relevance of education. The Education Guidelines developed in 2010 identify poor student learning as the primary educational challenge the Region faces.

In 2003, the Office of Evaluation and Oversight (OVE) assessed the Bank's strategies for supporting basic education (primary and lower secondary) in LAC, covering the period 1991-2000. The data in the evaluation largely confirmed that the policies recommended by the Bank's education strategy had been implemented, albeit to varying degrees, in the countries under study. In estimating the impact of various inputs on learning, the study validated the importance of adequate infrastructure and texts and learning materials. It also found that other, perhaps higher-level, reforms—such as increasing parental participation and enhancing managerial capacities at the various levels of the system—played a key role in the improvement of education systems.

This evaluation focuses on secondary education, including both lower and upper secondary education (see Box 1). This document presents the findings of OVE's review of the Bank's support for secondary education policies and systems in LAC since 1995, with a particular focus on access, quality, and institutions. The evaluation reviews the design, execution, and results of Bank-financed operations that support secondary education, seeks to identify factors that affect the success of different interventions in different contexts, and provides recommendations for future Bank support.

#### BOX 1. DEFINITIONS: EDUCATION LEVELS AND TRACKS IN LAC

- **Basic education.** The first eight to nine years of formal education, equivalent to completing lower secondary education.
- **Primary education.** The first five to six years of formal education. Primary education is compulsory in all LAC countries.
- **Lower secondary education.** The first two to three years of secondary education.
- **Upper secondary education.** The final two to four years of secondary school.

See Annex 1 for detailed information on the structure of secondary education by country. See Annex 2 for the main differences between primary and secondary schools.

The three most common methods of delivering secondary education are the following:

- **General/academic.** The curriculum focuses on developing general academic skills in the areas of language, sciences, mathematics, and humanities. All students are required to take certain core courses to graduate, although in many systems students may specialize in certain areas in the upper grades.
- **Technical vocational education (TVE).** TVE provides youth with knowledge and skills for performing specific types of jobs or occupations. Except in Mexico, TVE is offered at the upper secondary level.
- **Alternative models.** Offered outside conventional schools, generally to remote populations or groups that are not in school. Alternative models in LAC vary in their curriculum and teaching materials; the following models are common:
  - Distance education (Telesecundaria, radio, audiocassettes, computer-based)
  - Open learning (facilitators)
  - Community-based education

*Note:* Countries with compulsory lower secondary: AR, BA, BH, BE, BO, BR, CH, CR, CO, DR, EC, ES, GU, GY, ME, PE, PN, PR, UR, and VE. Countries with compulsory upper secondary: AR, BA, BH, CH, ME, PE, UR, and VE.

*Sources:* UNESCO (2012b); Di Gropello (2006); Holsinger and Cowell (2000); IDB (2011).



## A. RATIONALE FOR FOCUSING ON SECONDARY EDUCATION

As all LAC countries approach universal primary/basic education, demand for access to higher levels of education is growing dramatically.<sup>1</sup> At the same time, LAC is approaching a turning point in its demographic transition—that is, the numbers and percentages of youth of secondary school age (15–24 years) are at their highest point ever.<sup>2</sup> Better-educated cohorts will enhance the Region’s human resource profile for at least the next five decades.

The highest school dropout rates occur at the transition from lower to upper secondary education: on average, half of LAC youth exit the education system during the secondary years and seek to enter economic activity.<sup>3</sup> This means that the knowledge, competencies, and skills they have acquired at this early age largely determine their future opportunities. Meanwhile, the growth of knowledge-based economies, combined with globalization, creates increased demand for a more sophisticated labor force. Retaining youth in secondary school and helping them move to higher education will create a brighter future for individuals while enhancing prospects for national competitiveness and growth.

Relatively high and increasing unemployment rates among youth, combined with the high dropout rate, have resulted in persistently high proportions of “idle youth” (not in school and not working) in the Region—20% of youth aged 15 to 18 years. This group is increasingly putting pressure on social cohesion, and it contributes to the increasing crime rate and to the exposure to multiple risks that have social consequences beyond education.<sup>4</sup> Therefore, high-quality secondary education systems that attract youth to remain in school are increasingly important for avoiding social distress.

## B. EVALUATION DESIGN AND METHODOLOGY

The evaluation assesses approaches to and execution and results of Bank support for secondary education between 1995 and 2012. The evaluation questions were formulated on the basis of an extensive literature review before the evaluation was begun, and they coincide with the main areas covered in the Bank’s strategies and priorities. Definition of the questions then determined where to look for evidence and helped select the methods of analysis for the study.

The evaluation aimed to answer questions in three key areas:

- **Access.** To what extent does Bank support focus on equitable access to secondary education? What approaches has it supported to help close the coverage gaps, and what have been the results?

- **Quality.** To what extent does Bank support focus on improving the quality of secondary education? What approaches has it supported, and what have been the results? Have student learning and internal efficiency outcomes improved? Have learning gaps across groups (socioeconomic, urban/rural) narrowed?
- **Institutions.** To what extent has the Bank supported reforms of education institutions to improve management capacity? What have been the approaches and results?

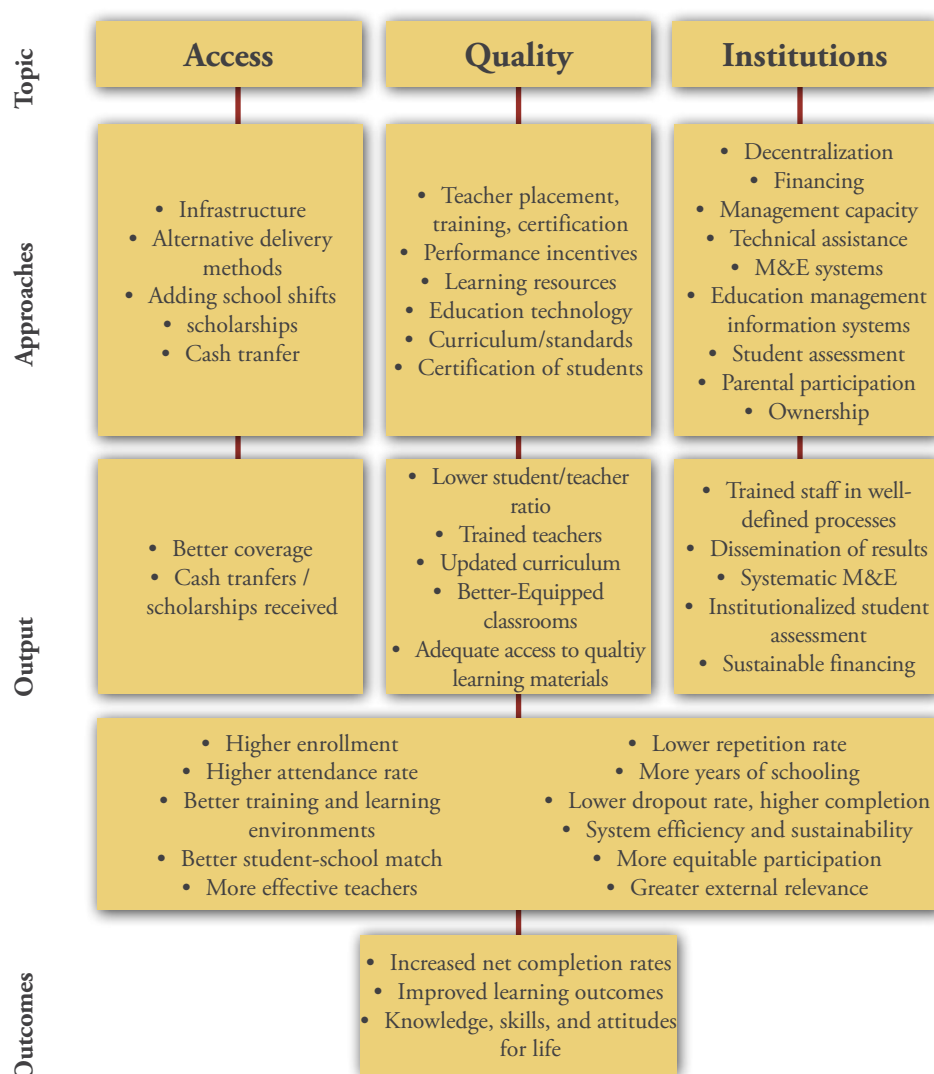
The data sources included the Bank's education lending portfolio, Bank and other international database systems, project evaluations and monitoring reports, and interviews with stakeholders and IDB staff. Given the complexity and heterogeneity of secondary education across countries, field-based case studies were used for an in-depth evaluation of Bank support in specific contexts: Argentina, Paraná Brazil, Dominican Republic, Paraguay, Peru, Trinidad and Tobago, and Uruguay. Desk-based case studies were conducted for Ecuador and Mexico (see Annex 3 for rationale for selection). A key strength of the case study methodology is that multiple sources and techniques were used in gathering data. The evidence was collected using the evaluation questions as a guide. The data gathered were largely qualitative, but quantitative material was also important—data obtained by the examination of databases, costs, outputs and outcomes, and test results used to support the claims of effectiveness of projects. Each country was treated as a single case, and the conclusions of each case were then used as information contributing to the whole study.

In addition to the field-based case studies, a database ("Evaluation Survey Instrument") in Microsoft Access was created to collect key education project document information—loan documents, Project Performance Monitoring Reports/Project Monitoring Reports (PPMRs/PMRs), Project Completion Reports (PCRs)—including all indicators reported in the results matrix reported in all available PCRs. The database information was used both to generate information on areas/levels/timing of Bank support and to evaluate achievement of results at the project level. Key information on execution bottlenecks and other lessons learned were also recorded in this database. This database was the main source of information for in the Portfolio Review chapter as well as an input to the other chapters. In addition to the education portfolio, the team reviewed relevant demand-side interventions (conditional cash transfer programs) supported by the Social Protection and Health Divisions (formerly Social Programs Divisions) and a small number of secondary TVE programs supported by the Labor Markets Unit.

The evaluation was complicated by the fact that PCRs are currently a weak instrument to gauge project impact. Judgments contained in PCRs are frequently not documented and are not always supported by data, and they have not been subject to regular validation by an independent source (though this is expected to change with a new Bank PCR system in 2014). Furthermore, PCRs provide a static profile of project accomplishments at the time of loan completion. In other words, they do not always

reflect the full assimilation of effect. In fact, case study missions conducted for this evaluation were able to collect ex-post data that contradicted PCR results (e.g., see Chapter V, Box 8). As such, information gathered during the case studies was used as the basis for findings where possible.

Figure 1 presents the conceptual framework of the evaluation. The evaluation is organized as follows: Chapter II discusses the general context of secondary education in LAC and reviews the Bank's education strategies. Chapter III reviews the Bank's lending portfolio and analyzes the trends in lending and technical cooperation for secondary education over the evaluation period (1995-2012). Chapters IV, V, and VI review the different approaches supported by the Bank to improve access, quality, and institutions of secondary education, respectively, analyzing the results of Bank work in these areas. Chapter VII concludes with recommendations suggested by the findings of the evaluation.



**FIGURE 1.1**  
Conceptual framework of the evaluation

# EL aprender nos Libera.

2



While some countries have succeeded in reducing the impact of socioeconomic factors on learning outcomes, the Program for International Student Assessment shows that, in the Region as a whole, the disparity in performance between poor and well-off students remains larger than any other region in the world.  
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# 2 Regional Challenges and Bank Strategies and Priorities

**Over the last two decades, LAC has made significant gains in the education sector. Primary education is nearly universal, and LAC has made more progress in access to secondary education than any other region in the world—in 2009 76% of students got at least some secondary education (net secondary enrollment) compared with 64% in 1999. In 2010, total secondary enrollment in LAC was 60 million students, and total TVE enrollment was 5.8 million.<sup>5</sup> Despite this encouraging news, challenges remain.**

## **A. REGIONAL CHALLENGES**

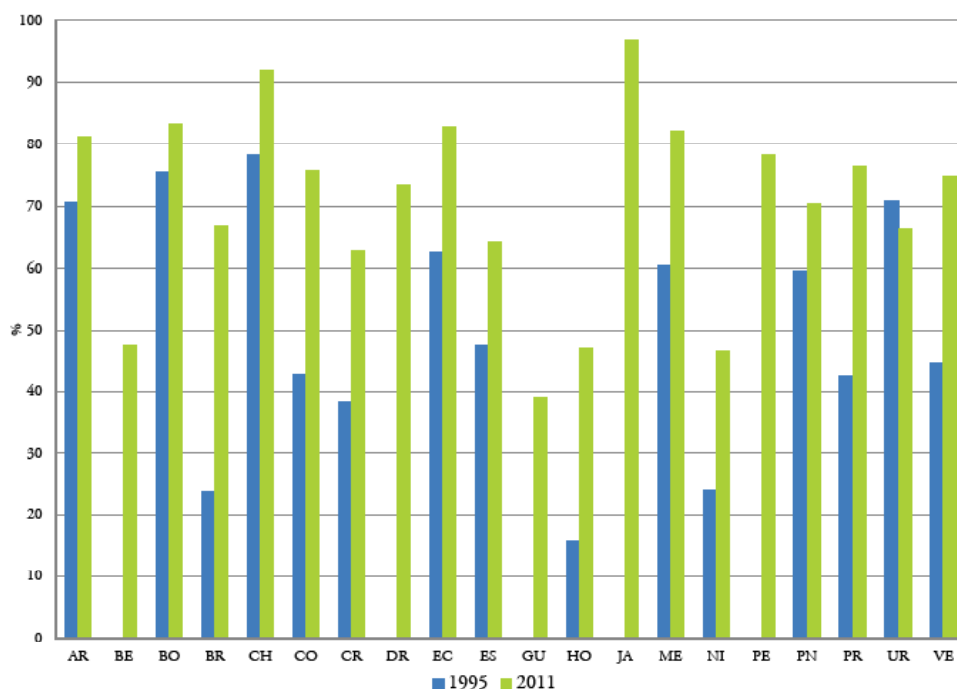
Overall enrollment rates mask disparities between groups: non-poor vs. poor, urban vs. rural, non-indigenous/non-Afro vs. indigenous/Afro, and, in a few countries, boys vs. girls.<sup>6</sup> As demand for secondary schooling rises, the educational system is incorporating increasing numbers of students from disadvantaged backgrounds who were previously denied access to secondary education. In many countries, school enrollment and attendance among the poor have been increased by conditional cash transfer programs that distribute welfare payments to families, provided their children attend school.<sup>7</sup> Thus the secondary cohort is now more economically, academically, and linguistically diverse than ever before.

Significant gains in completion of lower secondary have been made overall, and large heterogeneity across countries remains but appears to be shrinking, at least with respect to this topic. Brazil, Honduras, and Nicaragua made the largest relative gains in this time period in countries for which household survey data was available—and were also the countries that had the greatest room for improvement (see Figure 2).

**FIGURE 2**  
**Percentage of 18- and 19-year-olds completing at least 9 years of schooling, time comparison**

Source: IDB, *Sociómetro*

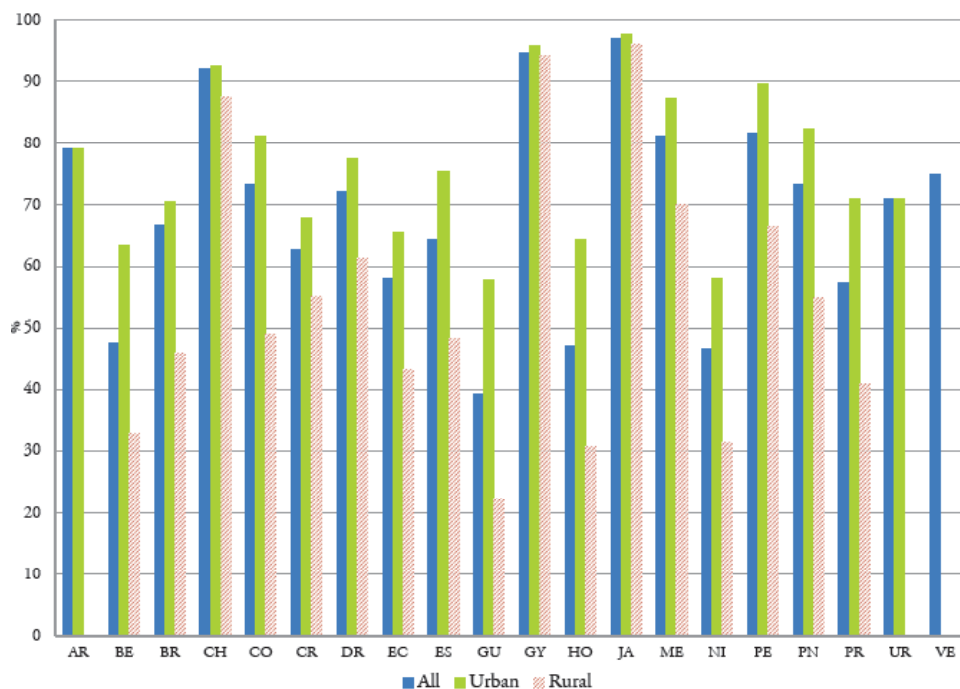
Note: Earliest year available refers to 1995 data with the exception of BO, BR, CH, CR, HO, for which data are from 1990; CO, VE (1991); ME (1993); and EC (1994). Last year available refers to 2011 data, with the exception of EC (2012); CR, ES, GU, ME, NI, PN, VE (2010); BR, CH, HO, PE (2009); DR, ME, PN, PR (2008) and BE, BO, JA (2007). Information is for 18- to 20-year-olds in EC, and for 15- to 24-year-olds in PE, PN, and VE.



**FIGURE 3**  
**Percentage of 18- and 19-year-olds Completing at least 9 years of schooling, most recent year**

Source: IDB, *Sociómetro*

Note: BO had no information available for the three indicators. Data for AR, CO, CR, EC, ES, GU, NI is from 2010. Data for is BR, CH, HO, PE, UR from 2009. Data for DR, ME, PN, PR is from 2008. Data for BE, JA, VE is from 2007. Data for GY is from 1999.

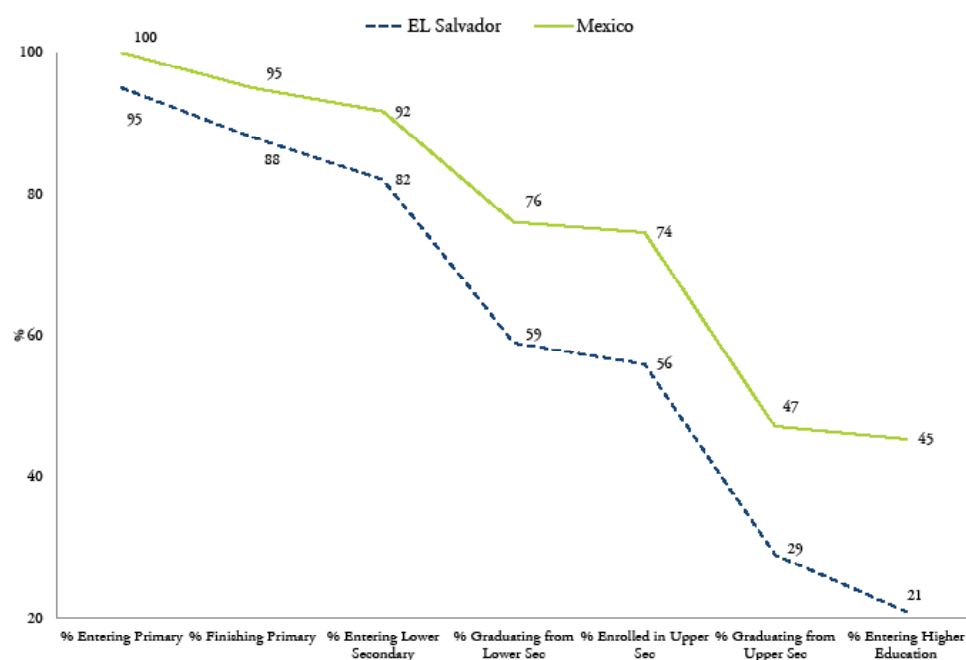




Regional disparities within countries by urban vs. rural status remain, underlining the large inequities across groups (see Figure 3). These relative differences are largest in Belize, Guatemala, Honduras, Nicaragua, and Paraguay. In addition, in all countries except Guatemala and Bolivia, girls are more likely than boys to finish secondary school (see Annex 5).

While access to lower secondary education has improved significantly, successful progression to upper secondary is low: rates of repetition are high, and school leaving is significant at key transition points. Many factors are associated with early school leaving: student socioeconomic conditions, lack of interest in and lack of relevance of the curriculum, violence and poverty surrounding the school, and severe internal inefficiencies.<sup>8</sup> Figure 4 contrasts this high attrition in two countries, highlighting the huge drops at key transition points: entering vs. graduating from lower secondary and entering vs. graduating from upper secondary.

Generally speaking, access to lower secondary school is no longer the main challenge, at least in urban areas; however, provision of upper secondary schooling, especially in rural areas, remains a big challenge. As more countries move toward compulsory upper secondary education, additional financial resources will be necessary to expand enrollment among marginalized populations, for both general and technical education. Disparities in infrastructure are especially large when contrasting private urban schools with public urban and public rural ones. Infrastructure affects not only access but also education quality. Issues of overcrowding and student-teacher ratios are also partly related to infrastructure.



**FIGURE 4**  
**Progression across education**  
**transition points,**  
**Mexico and El Salvador, 2010**

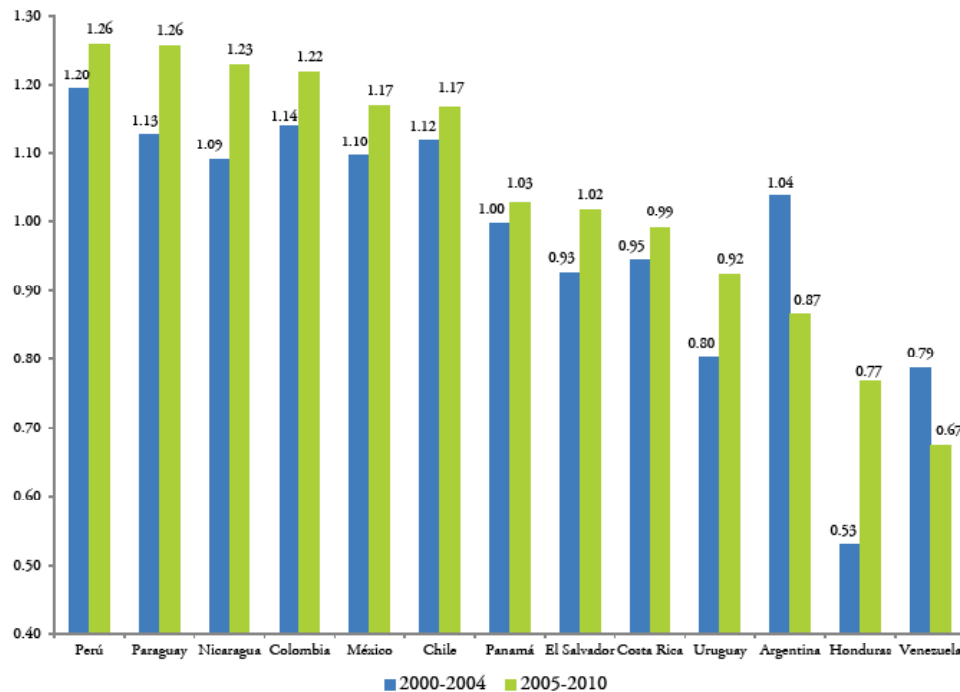
Source: IDB background work (2012).

Although LAC countries have made great progress in enrollment rates, improvements to quality lag behind. Improving education quality continues to be a challenging task,<sup>9</sup> and policy debates continue regarding which inputs to education should be included and how they should be measured.<sup>10</sup> Even with a specific input, the literature usually shows mixed evidence on the effects on education outcomes.<sup>11</sup> A range of factors affect learning outcomes: class size, the proportion and placement of professionally trained and qualified teachers, learning environments, the availability of instructional resources, curriculum, effective hours of instruction (limited by teacher absenteeism and multi-shift schools), parental support, and access to remedial and specialized services.<sup>12</sup> These factors are often more pronounced in schools in disadvantaged areas.

The relevance of secondary education is another key area of concern. Technical and vocational education (TVE) is often viewed as an option to facilitate labor market transitions. Based on household survey data, TVE represents about 38% of total upper secondary enrollment in 10 countries, with slight changes, both up and down, over the past decade. In most countries the returns to TVE appear to be higher than the returns to general upper secondary education and the gap between the two has increased since 2000 (see Figure 5). TVE relative returns are higher for males than for females. TVE is not necessarily seen as a second-class educational alternative: In half of the countries in our sample, the share of TVE students in the top decile of the income distribution is higher than the share in the poorest 30% of the income distribution.<sup>13</sup> In sum, the data suggest that TVE is an important option for upper secondary education and thus an important area of potential Bank investment. In the context of the worldwide shift towards competencies-based secondary education, the importance of TVE in the LAC Region, and the increasing relevance of general non-cognitive skills for TVE, this is the appropriate time for the Bank to review its strategy towards this sector.

IDB project documents frequently cite unqualified and inadequately trained teachers and lack of performance incentives as constraints to effective teaching. Many teachers lack clear standards of what students should be learning and achieving. Teachers' salaries are generally not competitive with those of other professions, and promotions have traditionally been based upon seniority rather than performance. This has resulted in a general compression of wages, a lack of resources for recruiting qualified teachers, and little incentive for innovation.

A general lack of accountability, disorganized schools, and poorly trained teachers mean that much education spending in LAC is wasted. Changing education systems to provide these things means having the political will to confront powerful teachers' unions and other parts of the education establishment to generate consensus for sensitive reforms and build coalitions. In recent years, some governments have taken measures, in consultation with teachers' unions and other interested stakeholders, to align incentives with teaching outcomes through performance-based remuneration structures, conditions for employment, and merit-based promotion.



**FIGURE 5**  
**Returns to TVE upper secondary vs. General/academic upper secondary**

Source: IDB background work (2012).

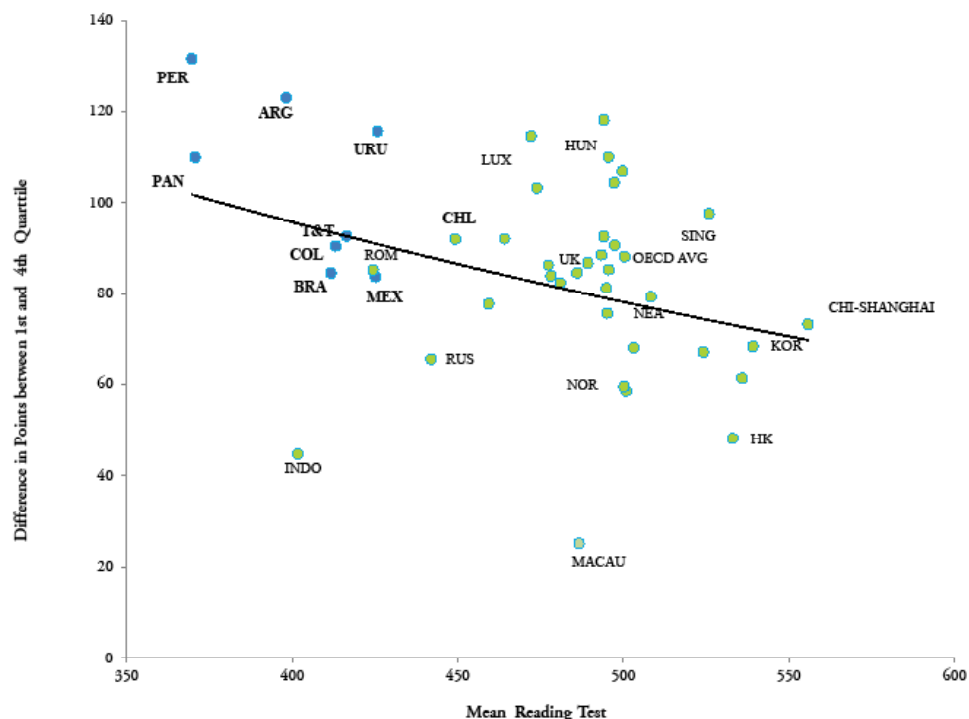
The Region lags behind other parts of the world on many indicators, including international test scores (Program for International Student Assessment, or PISA)—although the countries that participate in PISA are among LAC’s better educational performers on tests conducted by UNESCO.<sup>15</sup> While some countries have succeeded in reducing the impact of socioeconomic factors on learning outcomes, in LAC the disparity in performance between poor and well-off students remains large (see Figure 6).<sup>16</sup> Thus not only do countries need to improve their overall performance, but they also urgently need to adopt education strategies to reduce inequities in performance among students of different socioeconomic backgrounds.

Although student performance at the secondary level leaves much room for improvement, education spending has increased over the last decade in both absolute and relative terms. According to the United Nations Economic and Social Council, education spending in LAC countries (for which sufficient information is available) “grew from an average of 3.1% of GDP in 1990 to 3.6% in 2000 and to 4.2% in 2008. Given that between 1990 and 2008 the regional GDP almost doubled (3.4% per year, and 84% overall during the period), the absolute expansion in public spending on education in the Region was 5% per year or 140% over the 18 year period.”<sup>17</sup> At the secondary level, reported current expenditures per student vary from a high of US\$5,235 in Barbados (at purchasing power parity in constant 2009 dollars) to a low of US\$289 in Guatemala.<sup>18</sup>

**FIGURE 6**  
**Difference in mean reading scores between rich and poor students on PISA 2009**

Source: OECD (2010), PISA 2009, Vol. II, Table II.3.1.

Note: The horizontal axis represents the average mean score on the reading test for each country; the vertical axis shows the difference in mean reading scores of students at the top and bottom quarters of PISA's index of economic, social, and cultural status.



At the lower secondary level, spending is progressive in absolute terms; however, by the final years of upper secondary, enrollment among lower-income students drops. Consequently, the distribution of public spending becomes slightly regressive and concentrated among middle- and higher-income groups. In 2010, enrollment in private institutions as a share of total secondary enrollment across the Region was 21%, comprising mostly students from higher-income groups.<sup>19</sup>

For all countries, one challenge is how to pay for the growth in enrollment at the secondary level while simultaneously spending more effectively, including on decreasing inefficiencies and increasing learning. Thus countries need to scrutinize their financing of education to ascertain whether resources are allocated and used efficiently to achieve sector goals. In addition, they need to strike a balance among several priorities: the growing demand for secondary education, increased demand for preschool, improved quality of primary education, and expanded post-secondary opportunities.

To summarize, while significant gains in overall enrollment and completion of lower secondary have been made, the following challenges for secondary education remain: (i) poor-quality primary education, which does not sufficiently prepare students to advance and succeed at the secondary level; (ii) highly inequitable access to good-quality secondary education, especially upper secondary; (iii) low teaching standards and ineffective instruction; (iv) large inefficiencies in the system (high repetition and dropout rates), which consume scarce resources; (v) secondary programs that do not adequately prepare youth with the knowledge, skills, and competencies required for the world of work or higher education; and (vi) political constraints that make changes to financing, institutions, and quality particularly challenging and in some cases unfeasible.

## B. THE BANK'S EDUCATION PRIORITIES

In 1994, the IDB's Eighth General Increase in Resources provided for increased lending to the education sector, and that same year the Bank formalized its support in the Education Sector Policy (OP-743). The policy established three overarching objectives: (i) training, *"to contribute to the formation of technical and scientific skills... needed for economic and social development"*; (ii) equality of educational opportunities, to support *"conditions of fairness in access to education"*; and (iii) efficiency of investments, to rationalize planning and support *"essential reforms in content, teaching, [and the] organization and administration of programs, institutions and systems, in order to achieve more positive results."* To achieve these objectives, the policy mandated the development of different strategies by education level—higher education (1997), primary and secondary education (2000), and vocational and technical training (2000). At the request of the Board of Executive Directors, in 2006 the Sustainable Development Department (SDS/EDU) began updating and incorporating these strategies into a single Consolidated Education Strategy on Education and Training. However, the process was interrupted by the Bank's realignment and subsequent dissolution of SDS. Box 2 summarizes the Bank's policy and strategy instruments related to education.

**Box 2. EDUCATION POLICY AND STRATEGY INSTRUMENTS**

1994	1996	1997	2000	
SDS/SOC: "Education Sector Policy" (OP-743)	SDS/SOC: "Supporting Reform in the Delivery of Social Services: Sector Strategy" (GN-1932-1)	SDS/EDU: "Higher Education Strategy" (GN-1974-5)	SDS/EDU: "Strategy for Reforming Primary and Secondary Education in Latin America and the Caribbean" (GN-2067-3)	SDS/EDU: "Vocational and Technical Training: An IDB Strategy" (GN-1051-1)
2006	2007	2010-11		2013
SDS/EDU: "The IDB's Consolidated Education and Training Strategy" (never formally approved)	<b>Realignment -- EDU created</b>	SCL: "Social Sector Strategy for Equity and Productivity" (GN-2588-4)	SCL/EDU: "Education Guidelines" (GN-2614) (for Board's information only)	SCL/EDU: "Sector Framework for Education and Early Childhood Development"

As part of the Ninth General Capital Increase, the Board of Governors identified Social Policy for Equity and Productivity as one of five sector priorities and called for policy guidelines in specific areas, including education. The Sector Guidelines for Education (GN-2674), prepared by the Education Division (EDU) and sent to the Board for information in 2010, are intended to shape the Bank's dialogue with countries on education policy, the design and execution of operations, and the *"building of education-related knowledge and capacity in the Region."* To enhance the quality of education systems, the guidelines identify five priority areas for Bank action: (i) early childhood development services; (ii) teacher quality and learning environments; (iii) transition from school to work; (iv) compensatory education programs for at-risk populations; and (v) measurement of quality learning.

This evaluation finds that the guidelines present a strong diagnosis and that all five priority areas identified are highly relevant to regional sector challenges and, in particular, to positive student outcomes at the secondary level. However, the guidelines should also recognize and address the weaknesses of school management and overall institutional capacity in the sector, as almost all projects cite low client capacity as one of the main bottlenecks to successful implementation. One related ongoing challenge is the weakness of monitoring and evaluation systems implemented as part of projects, for which stronger institutions are needed. The guidelines also demonstrate little institutional memory. They should acknowledge and build more on the Bank's experience in specific areas, as understanding the Bank's capabilities is important to help focus future efforts.

The Bank recently consolidated its education policy, strategies, and operational guidelines into a single "Sector Framework Document for Education and Early Childhood Development" (GN-2708-2, approved July 2013; see Annex 6). As with the guidelines, this evaluation finds that the Sector Framework has a strong diagnosis based on the latest research, but it needs to strengthen its operational "lines of action" and ground them in lessons learned from the Bank's past experience. Also, considering the heterogeneity of the Region, the Framework is very general and does not specify where and under what conditions specific "lines of action" would be considered appropriate. In addition, it is not clear what has happened to the Bank's 2000 TVET strategy (GN-1051-1) and whether this Sector Framework replaces the TVE aspects of the 2000 strategy. Given the multi-sector nature of TVE (education, skills-training and employment), the Education Division and Labor Markets Unit need to work together on a joint approach. The Bank needs to review the TVE priorities in the 2000 strategy and decide whether the Bank should continue supporting traditional TVE focused on specific skills development, or focus instead on supporting efforts for transforming education systems so that they develop "21st century" generic skills that are relevant to a wide range of activities.

The third pillar of the Education Division's strategy focuses on the "school to work transition". In December 2012 the Bank's Education Division hosted its Regional Policy Dialogue on "Redefining schools in Latin American and the Caribbean:



Preparing youth for the school-to-work transition.” Education vice-ministers, other high-level national and regional ministry officials, and Bank education specialists engaged in a roundtable-style conversation about the most pressing challenges the Region faces in education reform. The main reflections are summarized in Box 3.

### BOX 3: VIEWS FROM THE REGION-REGIONAL POLICY DIALOGUE ROUNDTABLE SESSION

**Certification of competencies.** Various countries have begun using certification of competencies to address the mismatch between students’ career choices and what the market demands. In this context, a debate arose on whether the private sector should engage in the process, or if this would come at the expense of the State giving up its authority on policy. Should job-based competencies be the focus or should a broader view be adopted regarding the kinds of competencies a society requires, including citizenship-based ones? Regardless, the positive side of making alliances between the public and private sector should always be considered.

**Changing curricula and anticipating the future.** Even if the private sector engages in shaping secondary curricula, concerns about how fast labor market needs change must be taken into consideration. A curriculum is not a static document, but changing it has underlying implications (for instance, the difficulty of changing teacher practices associated with new curriculum). It is also important to build a “learning society,” where students learn the core knowledge and skills and prepare for a dynamic environment, with a curriculum adjustable to local needs that also promotes citizenship competencies. When planning curriculum reforms, planners need to think five years ahead, since this is how long it usually takes to roll out a new policy and/or law. Keeping up with the pace of change in society is a challenge for Ministries of Education.

**Students’ choice.** Even when ministries, government, and the private sector try to make a better match between what is offered in secondary school and labor market needs, some students will always prefer or choose professions that may not be aligned with those demands. Should less desirable technical tracks—for example, plumbing—then be eliminated, even if those skills are demanded?

**Organizational structure.** Just as ministries sometimes lack organization in terms of how to handle policy design, implementation, and evaluation, secondary schools also need more guidance in this matter. Excellent policies and guidelines may exist on paper, but implementation at the school level is complicated. Ministries—and the education system in general—could benefit from moving away from what they know how to do, to design more creative policies that might even question traditional approaches. For this to happen, a solid model, incentives, and a regulation system need to be established.

**Policy dialogue and evidence-based interventions.** While dialogue produced at the local level may promote alliances more easily, dialogue coming from the top may be more difficult to achieve but may also encompass broader objectives. Either way, more alliances and dialogue should take place. In addition, more evidence should be generated from *ex post* evaluations and pilots that show what works and what does not work for secondary education in the Region.

Overall, the Region has an educational environment in which students are not learning enough. To remedy this, more resources, effective teachers who teach how to learn rather than simply imparting knowledge and stronger alliances with other sectors need to be considered. Expectations must be set high for all students, and society must invest more in those that need it the most.

## Evaluación

1. ¿Con cuál de estos rasgos de los distintos animales te ves retratado?
2. Enumera del 1 al 10 el orden de los animales y sus características, según el parecido contigo.
3. En qué momentos de tu vida se manifiestan rasgos o comportamientos de tus tres primeros animales. ¿por qué?
4. Si tu vida continúa así como va ¿con qué tipo de animal te identificarás dentro de diez años, porque? ¿Cuál será tu cambio de actitud para que puedas mejorar?

# 3 Bank Support for Secondary Education: Portfolio Review

The external financing environment for education in the Region has changed little over the past 15 years.<sup>20</sup> Bilateral and multilateral financing amounts have increased slightly during this period: together the IDB, World Bank, Caribbean Development Bank (CDB), and *Corporación Andina de Fomento* (CAF) approved an average of US\$736 million per year for education sector loans in 2006-2012—3.8% more than during 2001-2005 (see Figure 7). OECD member countries represent about 80% of the total bilateral aid dedicated to education in the world; in LAC, the cooperation agencies of Spain, the United States, and Japan are the main purveyors of bilateral aid flows in the education sector.

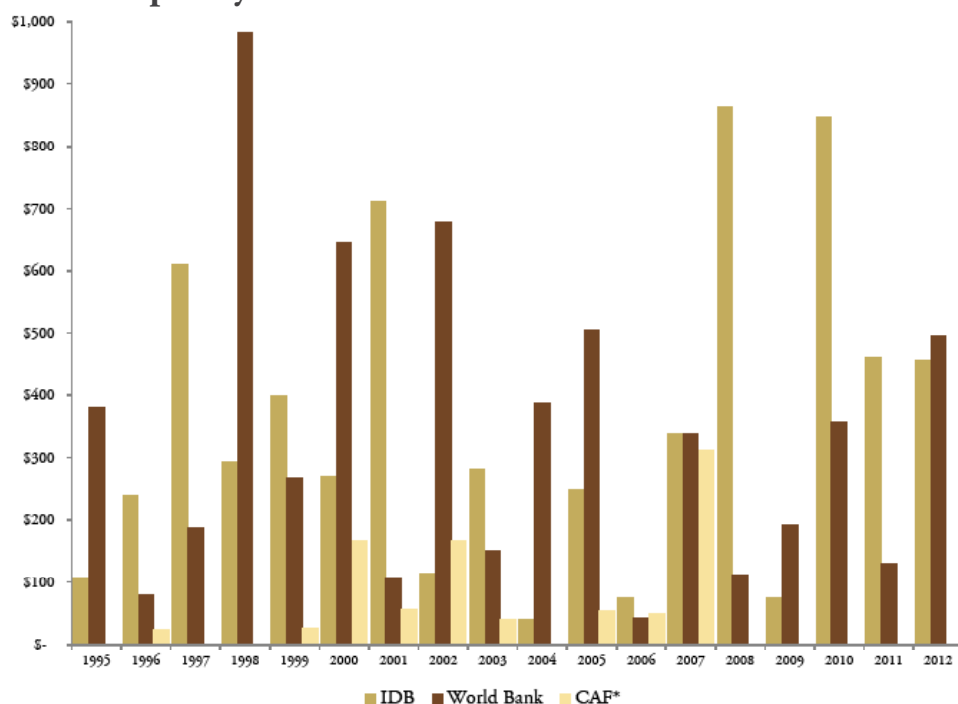


FIGURE 7  
Education financing for LAC  
by multilateral development  
banks, 1995-2011

Source: OPS (2012) and PISTA (2012), World Bank Projects and Operations database, CAF annual reports, CDB database.

Note: CAF data were obtained from the annual reports. Between 1996 and 2007, these reports included a classification for “schooling” loans. After 2007, education was included in the category “social services, health and education” and thus could not be disaggregated. The CDB data were obtained from CDB’s public database on approvals. Only operations approved in 2010 include the year of approval. The total amount of loans for education in 2010 was US\$1.2 million; operations before and after that year are not included.

The Bank has been and remains a major player in education financing in the Region, providing more than 60% of the multilateral development banks' funding. Moreover, since 2006 the Bank's lending portfolio in the sector has increased—more than 59% relative to 2001-2005, and 39% when compared to 1995-2000.

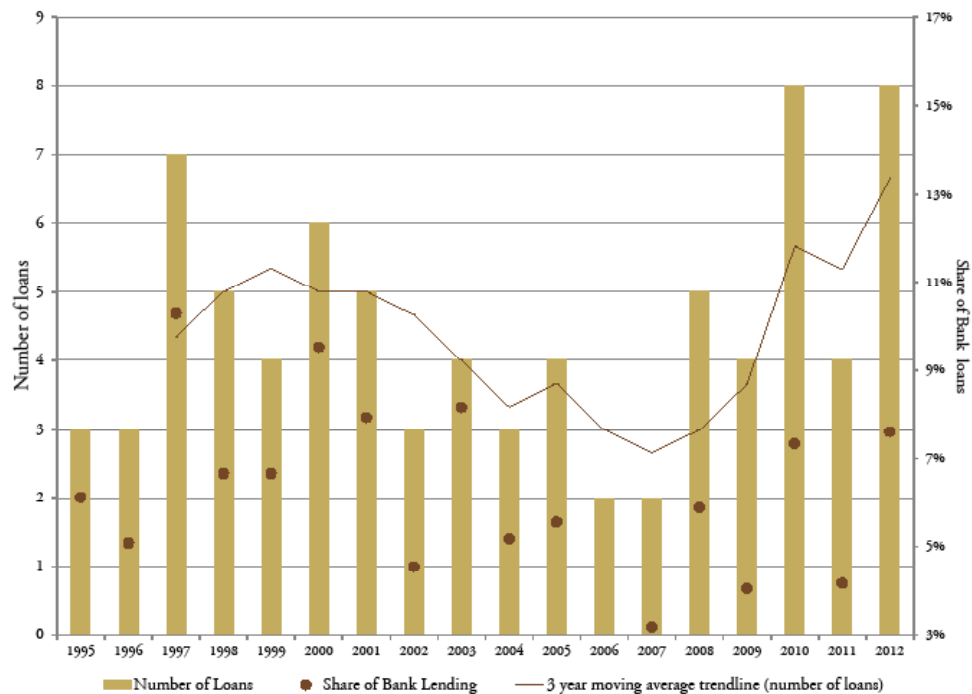
## A. EVOLUTION OF THE BANK'S EDUCATION PORTFOLIO, 1995-2012

The total number of education loans approved annually by the IDB has fluctuated significantly across the period analyzed (from two to eight per year), with an increase in the average number of approvals in the past five years (2008-2012) (Figure 8, Panel A). Lending for education—almost exclusively through investment projects—ranged from US\$75 million to US\$864 million per year, representing 7% of total Bank lending over the period (Figure 8, Panel B). Education lending dropped to its lowest levels during the Bank's realignment transition period (2006-2007).

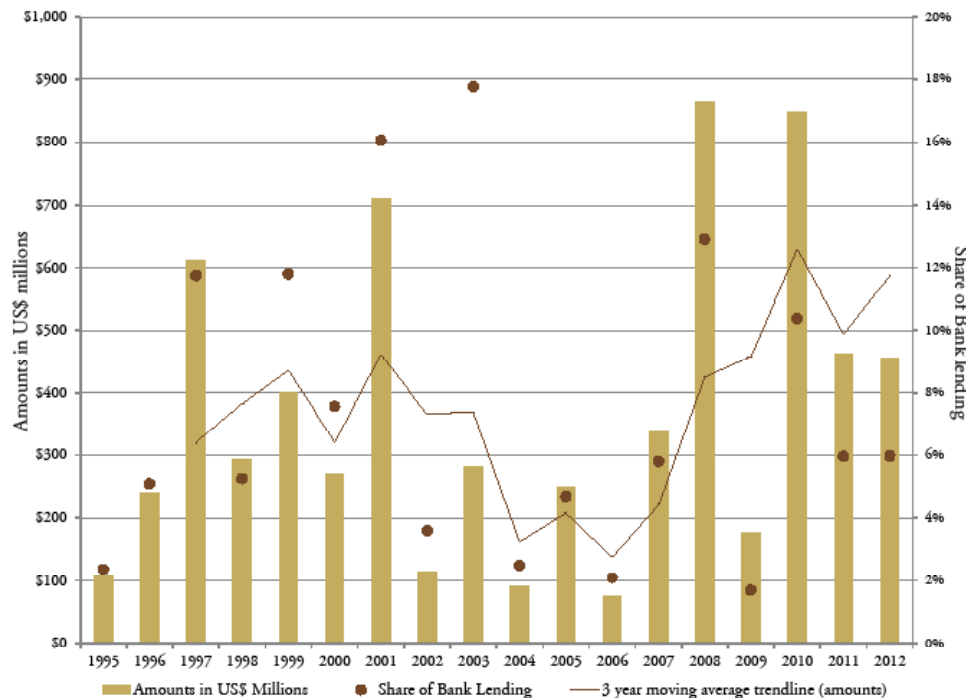
FIGURE 8  
Evolution of education sector  
lending portfolio, all levels,  
1995-2012

### Panel A. Number of Loans

Source: OPS (2012) and PISTA (2012).



Of the 80 education loans approved over the review period, this evaluation focuses on the 58 projects that provided support for lower or upper secondary education, including secondary TVE, either exclusively or non-exclusively (see Annexes 7 and 8). These 58 projects totaled US\$5.7 billion, which represents 72% of the total number of education loans and nearly 90% of the total amounts approved for education between 1995 and 2012. Only 11 of the 58 operations focused *exclusively* on secondary education<sup>21</sup> (see Figure 9). Six of these loans were concentrated in the 5-year period between 1996-2000.

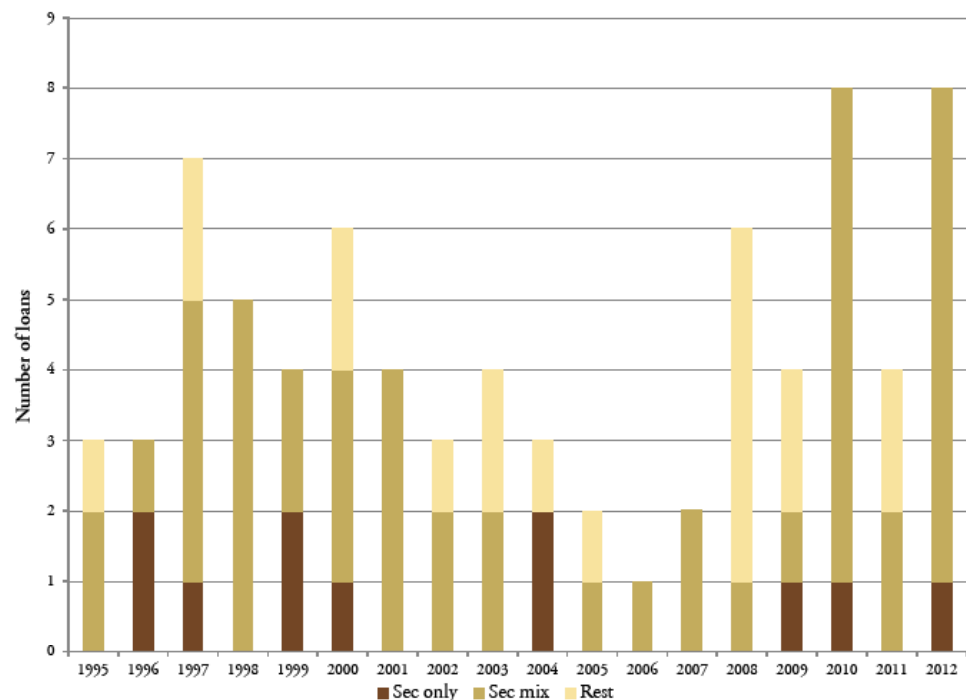


**FIGURE 8**  
**Evolution of education sector**  
**lending portfolio, all levels,**  
**1995-2012**

**Panel B. Loan Amounts**  
**(US\$ million)**

Source: OPS (2012) and PISTA (2012), World Bank Projects and Operations database, CAF annual reports, CDB database.

Note: Loan amounts refer to the original amount approved. The total number of education loans in the period includes 78 operations identified in PISTA as part of the SCL/EDU Division and two in-school education loans from SCL/LMK division. The Bank approved a US\$630 million loan for Argentina in 2008, and a second, for US\$492.5 million, in 2010.



**FIGURE 9**  
**Evolution of loans that**  
**support secondary education,**  
**1995-2012**

Source: OPS (2012) and Evaluation Survey Instrument, OVE (2012).

Note: This figure presents all education loans approved by the Bank between 1995 and 2012. "Sec only" refers to loans focusing exclusively on secondary; "Sec mix" refers to loans with at least one secondary component, and "Rest" refers to education loans with no support for secondary. The total number of loans presented in this graph (77) does not coincide with the number in Figure 7 because this analysis excludes loans that were cancelled before first disbursement (ES0159, VE0138, GU0131, CH-L1022, CH-L1055).

Support for secondary education is usually financed in the same project with support for other education levels (see Table 1). This approach is aligned with most education systems in the Region, where primary and lower secondary are often combined to comprise "basic" education, which is the mandatory amount of schooling.<sup>22</sup>



**TABLE 1. SECONDARY EDUCATION APPROVALS AS A SHARE OF ALL EDUCATION LOANS, 1995-2005 vs. 2006-2012**

Number of loans			
	Secondary only	Secondary mix	Rest
Number of Loans			
1995-2005	18%	59%	23%
2006-2012	9%	64%	27%
Change (percentage points)	-9	5	5
Loan amounts			
1995-2005	22%	71%	7%
2006-2012	8%	80%	12%
Change (percentage points)	-14	9	5

Source: OPS (2012) and Evaluation Survey Instrument, OVE (2012).

Note: "Secondary only" refers to loans focusing exclusively on secondary, "Secondary mix" refers to loans with at least one secondary component; "Rest" refers to education loans with no support for secondary.

**Technical and vocational education.** Of the 58 loans approved between 1995 and 2012 that supported secondary education, just over one-fourth supported in-school TVE: 15 loans (or 28% of total amounts approved for the 58 loans). Only two loans focused exclusively on TVE (BR0247 and BO-L1071).<sup>23</sup> In most LAC countries, the focus of the lower-secondary curriculum is general academics. One exception is Mexico, where a relatively small technical lower-secondary system operates. Academic, technical, and vocational options coexist in upper secondary. Bank support for TVE has been intermittent but reached a high point in 2012, when four projects were approved in a single year.

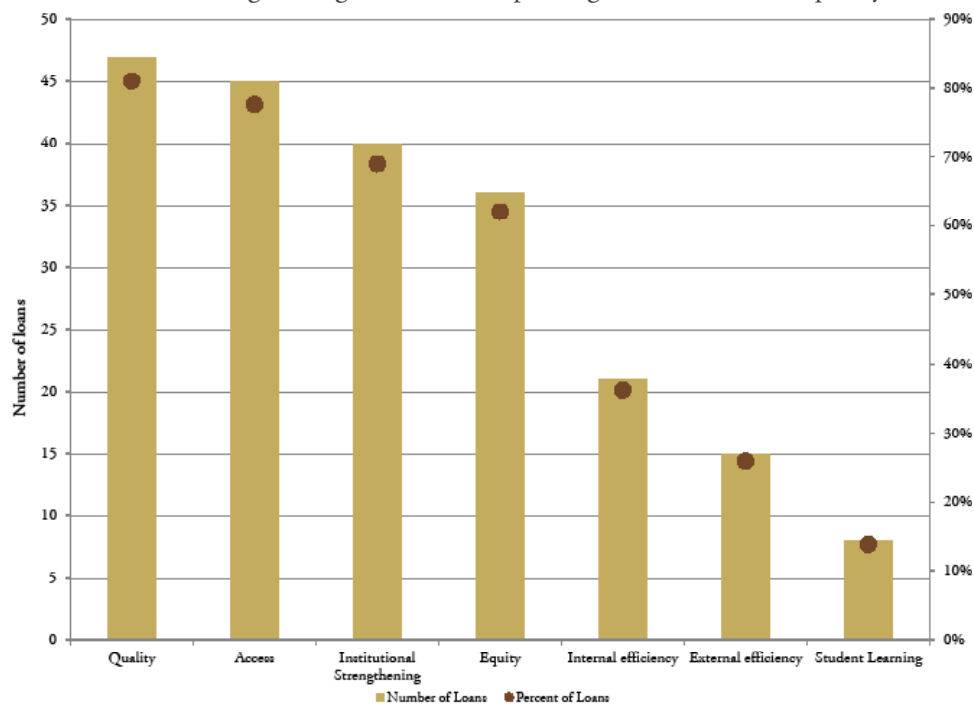
**Distribution by country.** Not surprisingly, the three countries with the largest GDP in the Region also claimed the largest share of Bank financing in secondary education (Argentina 31%, Mexico 15%, and Brazil 11%)<sup>24</sup> (see Annex 9). In terms of number of projects, Central America and the Caribbean have the largest number of loans per country.<sup>25</sup> In terms of per capita lending, the highest investments are concentrated in the Caribbean (Bahamas, Barbados, and Trinidad and Tobago) (see Annex 10).<sup>26</sup>

## B. SECONDARY EDUCATION LOAN OBJECTIVES

Most operations supporting general secondary and TVE include objectives that relate to improved access and quality (78% and 81%, respectively) (see Figure 9). Objectives to improve access mainly refer to capacity expansion, and objectives that relate to quality include in-service training for teachers (34%), provision of learning materials (26%), curriculum reform (22%), and a longer school day (10%).<sup>27</sup> Institutional strengthening, the third most commonly identified objective (69%), includes support for institutional reforms and capacity building as well as school governance,

management, and accountability. Student learning and efficiency (both internal and external) are mentioned less frequently.

Improved education for disadvantaged groups is mentioned in two-thirds of the loans, though there has been a decrease in focus on equity objectives over time (see Figure 10 and Annex 11). Equity objectives target groups disadvantaged by geographic location (rural and urban marginalized), gender, racial/ethnic background, socioeconomic status, and special learning needs. Among loans with an equity objective, most focus on institutional strengthening (91%) and improving access (83%) and quality (80%).



**FIGURE 10**  
**Objectives identified in projects**

Source: Evaluation Survey Instrument, OVE (2012).

Note: “Access” includes objectives that mention student enrollment/coverage, expansion and improvement of infrastructure, or demand-side incentives to increase enrollment. “Quality” includes objectives that mention the word *quality* as well as objectives referring to teachers, learning materials, curriculum reform, and a longer school day. “Student learning” includes objectives that mention *student achievement* or *learning*. “Internal efficiency” includes objectives referring to student repetition or grade progression, dropout, completion, and/or attendance. “External efficiency” includes objectives that refer to preparing students for transitions to labor markets, higher education, and society. “Institutional strengthening” includes objectives related to institutional reforms, capacity building, school management, and monitoring and evaluation. “Equity” includes objectives that mention the word *equity*, or that target disadvantaged groups based on geographic location, gender, racial/ethnic background, socioeconomic status, and special learning needs.

### C. SECONDARY EDUCATION LOAN EXECUTION

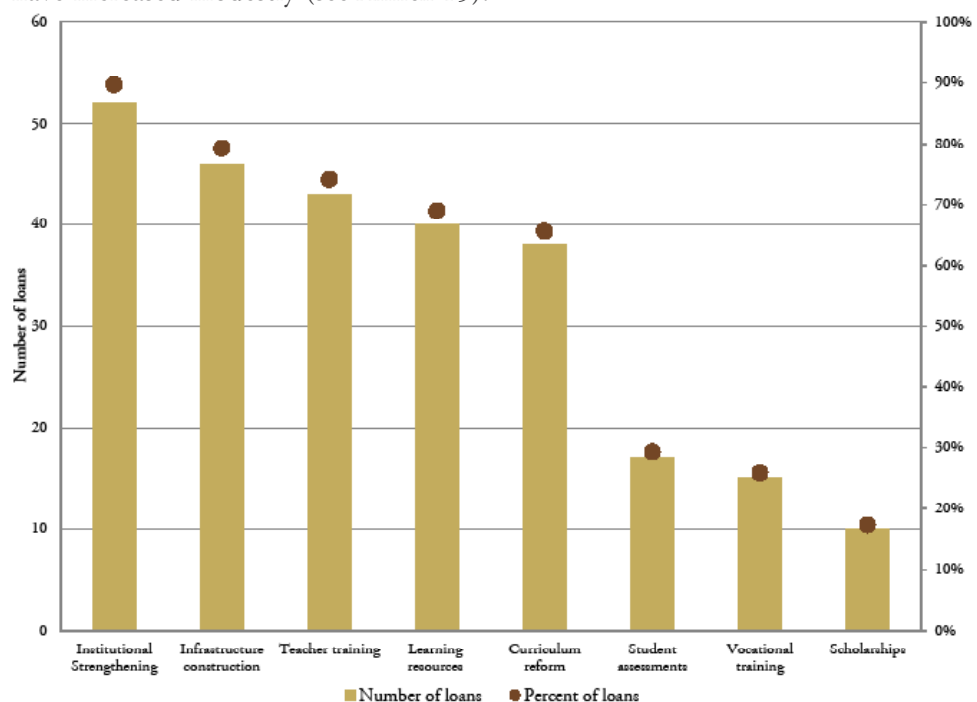
Of the 58 loans reviewed, more than half (31) are complete, and another quarter are more than 50% disbursed (see Annex 12). The average planned execution period was 4.8 years from approval; however, 77% of the loans were still in execution five years after first disbursement, and the average completed loan took 8.3 years to execute. Only 6% of completed loans disbursed “on time,” while 61% were delayed by 1–4 years, and almost one-third were delayed by 5–8 years. Still, there has been some improvement: the number of completed loans that required an extension of five or more years dropped from nine before to 2000 to only one since 2000 (41% to 11%; see Annex 13). Among the reasons for execution delays offered by PPMRs were procurement difficulties (21% of the loans) and limited execution capacity (19%) (see Annex 14). Among completed loans there was an average 15% cancellation of funds—nearly three times higher than the Bank norm of 5.9%. This result was driven largely by two large loans (BR0300 and ME0052) that each had more than a 50% reduction of funds.<sup>28</sup>

**Components by activity.** The most commonly supported activities were institutional strengthening (90%) and infrastructure construction and rehabilitation (79%), followed by teacher training, provision of learning resources, and curriculum reform (see Figure 11). This distribution is largely consistent with the classification of loans by objective. Activities that received the least attention were related to student assessment, vocational training, and the provision of scholarships.<sup>29</sup> Activities that focus on improving quality (mainly through teacher training, providing learning resources, and curriculum reform) and on strengthening institutions have received slightly less attention over time, while activities that focus on improving access (mainly through infrastructure) have increased modestly (see Annex 15).

FIGURE 11  
Distribution of loans by  
component topic

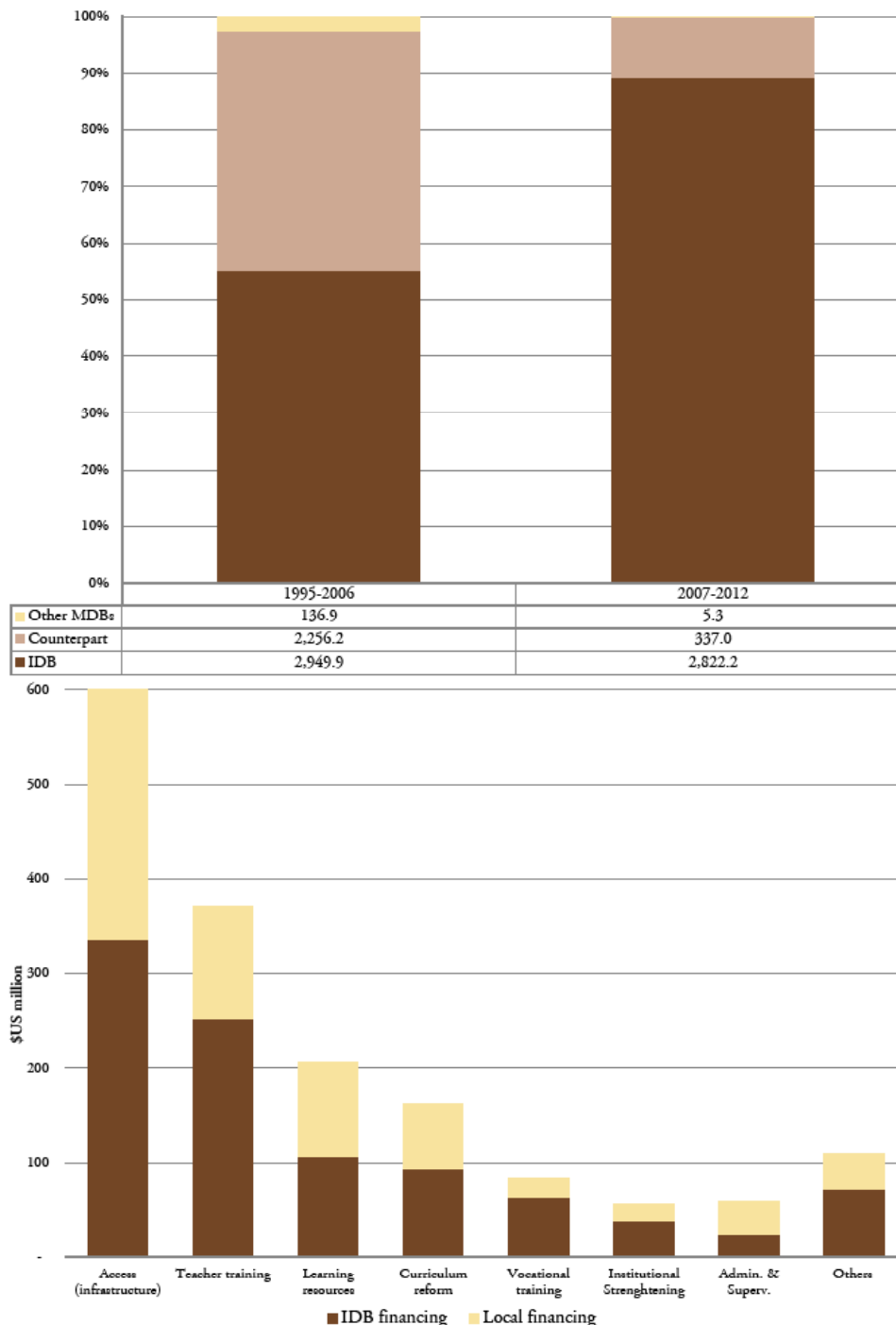
Source: Evaluation Survey Instrument,  
OVE (2012).

Note: Graph shows the number of loans  
that had at least one component in the  
given topic. Topic categories are not  
mutually exclusive.



**Overall program costs by financing source.** The relative importance of Bank financing at the project level has increased in recent years (see Figure 12)—a change that may be partly due to the post-realignment relaxation of counterpart financing requirements in the sector. This trend brings into question issues of program sustainability after loan completion, given that it may be more difficult for governments to absorb project costs related to ongoing maintenance and replenishment into their budgets if the budgets do not already include them.

**Components by cost.** In the 11 loans that focused exclusively on secondary education, it can be seen that the Bank planned to invest heavily in infrastructure, followed by interventions to improve quality (teacher training, learning resources, and curriculum reform) (see Figure 13). Activities that received the least amount of financing were related to vocational training and institutional strengthening.



**FIGURE 12**  
**Total program costs, by financing source (US\$ million)**

Source: OPS (2012) and Evaluation Survey Instrument, OVE (2012).

**FIGURE 13**  
**IDB and local financing of loans focusing exclusively on secondary education (n=11)**

Source: OPS (2012) and Evaluation Survey Instrument, OVE (2012).

Note: The category “Others” includes costs related to auditing, evaluation, financial costs and contingencies.

## D. PERFORMANCE OF THE BANK’S EDUCATION LOAN PORTFOLIO SUPPORTING SECONDARY

**Ex ante evaluability.** Evaluability of projects in *all* sectors is a recurring issue that the Bank is working to improve through various means (see, e.g., RE-379, OVE 2010). Although newer education loans generally display greater *ex ante*

evaluability than older ones (a change that may be due in part to the creation of the Development Effectiveness Matrix in 2009), the *ex ante* focus on results remains lower than expected (see Table 2). Additionally, for the period analyzed, OVE was able to retrieve information from only three projects in the universe that produced impact evaluations.<sup>30</sup>

**TABLE 2. *EX ANTE* EVALUABILITY OF SECONDARY EDUCATION LOANS**

Category	Loans approved 1995-2005	Loans approved 2006-2012
Number of loans	33	24
Share of loans with:		
• At least 80% of indicators with baseline value	3%	50%
• At least 80% of indicators with target value	12%	67%
• At least 80% of indicators with means of verification	15%	58%
• Cost-benefit analysis	15%	58%

Source: Evaluation Survey Instrument, OVE (2012).

Note: Loans total 57 because ES0110 did not have a results matrix.

Both the quantity and quality of indicators for measuring results varied significantly across loans.<sup>31</sup> Of the 31 completed projects, only 22 measured at least one related outcome at project completion. Outcomes focusing on enrollment and internal efficiency were more frequently measured than outcomes in other areas (see Annex 16).<sup>32</sup>

***Ex post achievement of results.*** The overall performance of education loans supporting secondary education, as measured by achievement of outcomes mentioned in PCRs, is low. Of the 22 completed projects that measured at least one related outcome, only 7 (32%) fully achieved at least 80% of their outcome targets. Moreover, it is not possible to attribute results to project objectives in all cases, since most outcome indicators are measured at a national level, while Bank projects often provided financing in narrower geographic areas. This also makes it difficult to establish a link between achievement of outputs and outcomes.

Although 89% of all indicators in completed loans were outputs, only six operations (19%) fully achieved at least 80% of their output targets, while the majority reported positive progress toward achievement of output targets (22 operations). Three operations (10%) did not achieve most of their outputs. Among outputs, an important share are binary indicators<sup>33</sup> (25%), which are usually easier to measure than non-binary indicators and thus are more likely to be fully achieved.



**Achievement of results of secondary-exclusive loans.** To verify the performance of secondary education loans, results were analyzed separately for the seven completed education loans that focused *exclusively* on secondary. The results are largely consistent with the analysis of the 31 completed loans that focused either exclusively or non-exclusively on secondary, showing overall low performance of all loans analyzed. Of the seven secondary-only loans completed, five achieved *at least one* of their outcome targets; however, most often loans did not achieve their outcomes and in some cases were not evaluable (see Table 3). In terms of outputs, no loan achieved at least 80% of its targets (see Annex 17). Often, loans made positive progress but, since the indicators had no target value, it was not possible to assess their performance.

**TABLE 3. OUTCOMES ACHIEVED OF COMPLETED LOANS FOCUSING EXCLUSIVELY ON SECONDARY EDUCATION (N=7)**

Project number	Total number of outcomes	Evaluable outcomes		Not evaluable outcomes	
		Achieved	Not achieved	Positive progress but with no target	No baseline
BR0167	5	1 (20%)	4 (80%)	0 (0%)	0 (0%)
BR0300	8	1 (13%)	4 (50%)	3 (38%)	0 (0%)
DR0112	3	2 (67%)	1 (33%)	0 (0%)	0 (0%)
ME0052	2	0 (0%)	0 (0%)	0 (0%)	2 (100%)
ME0250	4	1 (25%)	3 (75%)	0 (0%)	0 (0%)
TT0023	5	3 (60%)	2 (40%)	0 (0%)	0 (0%)
UR0107	5	0 (0%)	0 (0%)	3 (60%)	2 (40%)
Total	32	9 (25%)	14 (44%)	6 (19%)	4 (13%)

Source: Evaluation Survey Instrument, OVE (2012).

Note: This database only includes outcome indicators with final values (3 were excluded because they did not have a final value, which did not allow for assessment of progress). “Evaluable” outcomes could be either achieved, when the target was fulfilled or exceeded, or “not achieved,” when the target was not met nor had less than 50% progress. “Not evaluable” outcomes can also be separated into two categories: outcomes with positive progress but with no target, and outcomes with no baseline. ME0052 faced a major cancellation of funds from the counterpart.

## E. FINANCIAL INSTRUMENTS

While almost all education-specific lending was done through traditional investment loans, there were some exceptions: (i) a three-part programmatic policy-based loan (PBL) series in Jamaica, in which the second and third programs combined policy and investment components (hybrid),<sup>34</sup> (ii) conditional credit lines in the Dominican Republic and Argentina, and (iii) performance-driven loans in Paraguay and Guatemala. Given that there is only one example of an education-specific PBL, it

is difficult to evaluate whether PBLs are a more appropriate tool than investment loans to spur deep institutional reforms, although greater use of education PBLs under certain circumstances could be considered.<sup>35</sup>

**Education support through social sector policy-based loans.** Apart from the 58 education loans with support for secondary, financing for education was also provided through broad social sector, fast-disbursing funds. Between 1995 and 2012 the Bank approved 41 social sector policy-based loans—including regular PBLs, programmatic PBLs, and emergency lending facilities—amounting to US\$10.6 billion.<sup>36</sup> Of these, 36 (US\$10.4 billion) contained education-related policy conditions, of which most related to the protection of education spending (see Annex 18). Sixteen loans supported education policy conditions beyond protection of spending; however, only a handful of those specified the level of education targeted.

**Technical cooperation.** Between 2007 and 2012, EDU approved 120 technical cooperation projects (TCs) totaling US\$54.6 million,<sup>37</sup> of which 42 (US\$16.9 million) had some support for secondary education. In terms of the TC type, half (21) of the secondary TCs funded knowledge and capacity-building products, fewer than a third (12) financed operational inputs, and five supported study tours.<sup>38</sup>

The majority of TCs that supported secondary education financed in-depth studies to inform policy dialogue and project design, training through workshops and seminars, and monitoring and evaluation activities. To a lesser extent, they also financed pilots to test new approaches to teaching and learning before scaling up, study tours for decision-makers and project leadership to observe good practice, and technology products such as software and Internet platforms.

## F. SUMMARY

The Bank has been and remains a major player in secondary education financing in the Region. Between 1995 and 2012 the Bank approved 58 loans supporting secondary education, totaling US\$5.7 billion. Most operations took an integrated approach, supporting secondary education in the same project with support for other education levels. About one-fourth of these loans focused on in-school secondary TVE. Most often, project objectives and activities focused on improving access and quality.

**Loans faced long execution delays.** The average completed loan took 8.3 years to execute, often because of procurement difficulties and the limited institutional capacity of the executing agency. The quantity and quality of indicators for measuring results varied widely across loans, and *ex ante* focus on results was low,

although it improved over time. Overall performance as measured by achievement of outcomes was far from satisfactory, and it was not possible to attribute outcome results to project interventions in most cases, since most outcome indicators were measured at a national level while interventions took place in smaller geographic areas.



While standard school construction models remain the norm, during the review period the IDB supported some specialized models that simultaneously addressed both access and quality. Such is the case of the *Centros de Excelencia Media* in Dominican Republic, with classrooms not exceeding 36 students, day shifts only, facilities superior to regular school infrastructure, and a different pedagogical model. However, the model is not generalizable because of its very high construction and maintenance costs.

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# 4 Improving Equitable Access to Secondary Education: Challenges, Approaches, Results and Lessons

**IDB clients face challenges related to the need to expand secondary education to underserved populations in both rural and marginal urban areas. This chapter examines the main approaches and results of Bank-supported programs to improve equitable access to secondary education.**

## **A. SUPPORT FOR IMPROVING ACCESS TO SECONDARY EDUCATION: SCHOOL INFRASTRUCTURE**

Access interventions, which were funded in more than three-fourths of all projects, represent a significant share of total loan volume. About 80% of Bank education loans include “improve access” as an objective and finance access-related activities. Given the Region-wide support for increasing access to secondary education, and the political gains that come with building more and better schools, it is no surprise that infrastructure is the most common and largest expenditure in Bank-financed education projects.

The Bank has supported expanding access to secondary education through both supply-side and demand-side interventions. The main supply-side approaches supported are constructing new school facilities and institutes for teacher education; rehabilitating and/or expanding existing infrastructure; purchasing equipment; providing basic services such as electricity, water, and sanitary facilities; and implementing alternative delivery mechanisms such as distance education. The main demand-side interventions relate to monetary incentives, including scholarships and payment of school fees, and non-monetary incentives such as school feeding. Conditional cash transfer programs are an important demand-side intervention that the Bank has supported, although the programs are usually managed by the social protection portfolio and not the education portfolio.



**TVE.** Access to TVE has not experienced as much growth as access to general secondary education, except in Mexico and Uruguay. The main approaches supported by the Bank to expand access to the TVE track are improving infrastructure through the construction, rehabilitation, and management of TVE schools/centers; creating entrepreneurship development centers sponsored by the private sector in Bolivia and Brazil; providing education subsidies such as academic scholarships and internships in the labor sector in Mexico; and providing transportation to get students to and from TVE schools in Bolivia.

**Access reforms and infrastructure.** The largest expenditure category in loans that support secondary education is school infrastructure.<sup>39</sup> In addition, as was noted in OVE's 2003 Basic Education Evaluation and elsewhere, access-oriented reforms are popular, generally less challenging, and usually less hindered by political factors: both political leaders and constituents appreciate the tangibles that come with supply-side and demand-side measures. Despite this, only a very small share of loans achieved the majority of their access-related goals. Box 4 discusses barriers to the achievement of infrastructure goals.

#### **BOX 4. INFRASTRUCTURE: CHALLENGES, RISKS, AND LESSONS LEARNED FROM BANK-SUPPORTED PROJECTS**

While supporting school infrastructure may be generally simpler than implementing quality reforms, it also has its challenges. Those presented here were taken from case studies and Bank project documents.

- **Costs.** Costs in terms of both time and money are often cited as the biggest constraint to “ideal and appropriate” design. Adapting school design to regional and local needs and to conditions in a country requires consulting with stakeholders, especially school principals, which takes time. The design of school buildings also needs to take into account the curricular activities that will take place in the school; some designs are more costly than others. Central regulation/administration of regional infrastructure can help keep construction costs down through the development of prototype designs. The cost of pre-fab materials is lower in the short term, but faster depreciation and shorter life of materials are reasons for concern. Cost overruns during construction are often a result of procurement delays, inflation, and “scope creep”—unanticipated additional works, especially with rehabilitation.
- **Procurement issues.** School construction projects that are too big for local firms but not big enough to attract international firms are a particular concern of small countries. In addition, the Bank's procurement regulations, such as the presentation of externally audited financial statements, go beyond country requirements and stretch small contractors' capabilities.

- **Land acquisition and environmental issues.** Supervision reports often identify difficulty related to land acquisition as an obstacle to execution. Issues relate to property rights, environmental concerns, and finding ground appropriate for construction. For example, in one instance, because the Bank did not have enough control to ensure full environmental safeguard procedures, safeguards were not adhered to and risks were not fully identified before the construction phase; as a result, one school was built on inappropriate ground and never opened its doors.
- **Maintenance plans.** Few projects earmark adequate funds to support permanent systems for maintenance during project execution and beyond. Although a significant number of loans supported construction of new schools and rehabilitation of old facilities, only 10 cited plans to finance a maintenance strategy. Of these, little information about the results is available. The case study reports find that some schools received resources directly from the government to address their maintenance needs, but these transfers have been restricted to schools that have the legal requirements to receive and execute funds. The Trinidad and Tobago loan proposed a computerized system to track and anticipate school maintenance needs, but again, there is no information about its actual implementation status. In Paraná, *Dia-a-Dia Educação* allows the 32 regional centers to maintain communication in real time with the schools and with the State Secretariat of Education, allowing them to assess and respond to school maintenance and equipment needs. More Bank-supported projects need to put in place and strengthen maintenance plans to help ensure that infrastructure investments are maintained, before delayed maintenance becomes costly rehabilitation.

## B. ALTERNATIVE APPROACHES TO IMPROVING ACCESS TO SECONDARY EDUCATION

The Bank has financed alternative delivery models to reach disenfranchised populations, though with unclear results in most cases. The Bank has supported additional school shifts (Dominican Republic, El Salvador, and Nicaragua) to reach more urban youth who are unable to attend daytime shifts. In addition, the Bank has supported three different models: *Telesecundaria* (in El Salvador, Honduras, Mexico, and Nicaragua), community education, and distance education. These models provide practical alternatives to conventional models, particularly for those living in rural communities where secondary education is unavailable, and they provide flexible pathways for some marginalized urban youth. Costs are much lower than conventional schools, but the quality of the education provided remains a challenge. Table 4 presents the main features of the three models.

***Telesecundaria.*** *Telesecundaria* was created in Mexico in 19 to extend lower secondary school to small, remote communities through televised classes. At the end of the 2011-2012 academic year, 1.27 million students were enrolled in *Telesecundaria* in

Mexico—20% of the total secondary enrollment in the country.<sup>40</sup> The model has been used to expand education systems all over Central America,<sup>41</sup> and the Bank supported the expansion in four of these countries. While loan documents describe inputs in some detail, it is difficult to determine achievement of outputs, and no outcomes are reported. Box 5 shows the access-related results measured for these loans.

**TABLE 4. MAIN FEATURES OF THREE ALTERNATIVE DELIVERY MODELS SUPPORTED BY THE IDB**

	<b>Community Education</b>	<b>Telesecundaria</b>	<b>Distance Education</b>
<b>Countries</b>	Mexico	Central America	Honduras, Nicaragua
<b>Executing agency</b>	CONAFE	Ministry of Education	Ministry of Education
<b>Grades covered</b>	Pre-primary, Primary, Lower Secondary (focus on primary)	Grades 7-9	Grades 7-9
<b>Student age</b>	Children & Youth	Youth & Adults	Youth & Adults
<b>Geographic target</b>	Extreme Rural	Rural	Rural & Urban
<b>Setting</b>	Community Center	Room dedicated to program	Non-formal, home
<b>Content/ Curriculum, Program delivery mode</b>	Preschool, Primary & post-primary instruction with a community instructor	Broadcast instruction with auxiliary teacher	Theme specific, correspondence, non-presential, self-guided
<b>Teacher minimum qualifications</b>	High school graduate with a 1-year commitment	Varies	Extension worker
<b>Student pre-requisites</b>	Primary	Primary school	Some primary
<b>Certification received upon completion</b>	Lower secondary completion	Lower secondary completion	Varies

Source for CONAFE: "Reglas de Operación", *Diario Oficial de la Federación* (Miércoles 28 de diciembre de 2011)

#### **BOX 5. OUTPUT RESULTS FOR BANK-SUPPORTED TELESECUNDARIA PROGRAMS**

- **NI0090.** Target 1: 7,875 students would benefit from the program in the third year. Final value: 3000—not achieved (less than 50% progress). Target 2: 2700 students, at least 50% women, in the program would receive subsidies during 190 school days in the first, second, and third year. Final value: 1232—not achieved (less than 50% progress).
- **ES0108.** Target: Enrollment in distance education, through teleaprendizaje, would increase from 7157 to 24,000 students in rural areas in the third cycle. Final value: 23733—almost fully achieved.
- **ME0052.** Target 1: Average desertion rate of students: 6. Final value: 7—not enough information to evaluate results. Target 2: Percentage of students graduating would reach 83%. Final value: 77%—not achieved.

**Community education.** A second alternative supported by the Bank is community education. Mexico's *Programa de Educación Comunitaria* (ME0238) for community education, executed by CONAFE, provides educational services in areas where the Ministry of Education has no schools, targeting children and youth living in small and geographically isolated communities with under 500 inhabitants. The first phase of the program (2003-2008) focused on expanding the coverage of community education and improving the quality of the services. The second phase, *Constructores de equidad*, which became effective in December 2010, seeks to improve the performance of community education by providing training for and increasing the retention of instructors in basic schools as well as through a component, called *entornos seguros*, to increase the safety of instructors. The target of building 90 community centers was surpassed: 150 were built.

While the PCR does not report on outcomes, the results of the program can be gleaned by examining the performance of students of the CONAFE/community schools (as measured by the ENLACE standardized tests) across time. Although the gap in performance between community schools and the other schools was reduced between 2006 and 2010, community schools remain the lowest performers in Mexico's education system (see Table 5). Nevertheless, CONAFE results indicate a positive impact of the program, since the community centers serve those who previously had no access to secondary education.<sup>42</sup> During OVE interviews, CONAFE representatives mentioned the value-added of IDB support: (i) constant and high-quality technical dialogue, (ii) responsiveness to the needs expressed by the institution to improve the design of the project, particularly through dialogue with international experts on innovative features such as *entornos seguros*, (iii) the evaluation that supports the learning process, and (iv) the continuity of the program.

**TABLE 5. PERCENTAGE POINT (P.P.) CHANGE IN SHARE OF THIRD- AND SIXTH-GRADE STUDENTS WITH GOOD OR EXCELLENT RESULTS ON ENLACE TESTS**

Type of school	Progress in math 2006-2011	Progress in Spanish 2006-2011
Particular	+17.6 p.p.	+16.9 p.p.
General	+19.6 p.p.	+19.2 p.p.
Indigenous	+16.9 p.p.	+13.6 p.p.
CONAFE	+ 5.8 p.p.	+ 4.4 p.p.

Source: SEP (2011).

**Distance learning.** The third alternative approach, distance learning, is often used for remedial purposes, allowing students to finish their required courses and take certification exams on their own schedules, without the need of a classroom. Working youth and adults who have not completed their secondary degree are the main target of this education modality. This model generally lacks interaction in a classroom,

Many factors are associated with early school leaving: student socioeconomic conditions, lack of interest in and lack of relevance of the curriculum, violence and poverty surrounding the school, and severe internal inefficiencies.

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monitoring by teachers, and support services for students who are starting from a low base of skills or knowledge. Additionally, students who do not have access to appropriate technology cannot benefit from the courses.

In Honduras (HO0202) the Bank provided support to increase education coverage of the third cycle with flexible modalities such as *Sistema de Aprendizaje Tutorial* (tutorial system), *EDUCATODOS* (instruction through radio or cassette), and *Sistema de Educación Media a Distancia*, which combines provision of books with face-to-face activities during weekends. Another operation (HO0203) provided community centers with a “technology package,” a mix of computer, radio, software, and nontraditional instruments that generate electricity. At the output level, HO0203 achieved its targets of establishing 100 community centers of communication and knowledge, and using at least 30% of time in the centers for education purposes within 18 months of starting the project.

**Adding school shifts.** In some countries—for example, Dominican Republic, El Salvador, and Nicaragua—the Bank supported the government strategy of adding school shifts to increase access among urban-marginalized populations, provide more opportunities for out-of-school youth, and decrease crowding. While no outcomes for these projects are reported, the Dominican Republic case study revealed that adding



night shifts did expand access to youth who work during the day, but it also created other challenges for them: fear of getting caught in nighttime violence during the commute and electricity disruptions that reduce teaching time. In addition, adding a second or third shift generally results in reduced instructional time for all students, and an inability to leave instructional materials for basic or lower secondary education safely in the classroom.

### C. SPECIALIZED SCHOOL MODELS

While standard school construction models remain the norm, during the review period the Bank supported some specialized models that simultaneously addressed both access and quality. In Ecuador (EC-L1018), the Bank financed the construction of nine *Unidades Educativas del Milenio*, public schools constructed in rural, border, and urban/marginal areas. The goal was to implement an educational model that responds to local and national needs: innovative infrastructure and pedagogical resources, well-prepared teachers, and information technologies to support the learning process. The model involved constructing a school system from preschool through high school, all within one facility, and providing education in various languages. Although project implementation faced challenges, to date there are 16 such facilities functioning across Ecuador. There are no studies available that compare the performance of students in these schools with those in other institutions, and no information regarding their innovative pedagogical approach. However, the expansion of the model from the three that were originally planned to the current 16 would indicate that the model is popular and the construction costs not prohibitive.

In the Dominican Republic, four *Centros de Excelencia Media* were constructed to increase access and improve the quality of education. They have the following characteristics: classrooms not exceeding 36 students, day shifts only, more rigorous selection of teachers, facilities superior to regular school infrastructure, and a different pedagogical model. However, the model is not generalizable because of its very high construction and maintenance costs. More importantly, data supplied by the Ministry of Education for two of the four centers show that student performance is not higher than in standard public schools.

### D. BANK SUPPORT FOR SUPPLY-SIDE ACCESS INTERVENTIONS MANAGED THROUGH OTHER DIVISIONS: SOCIAL INVESTMENT FUNDS

The Bank financed more than US\$1 billion for social investment funds during the 1990s and early 2000s, of which an unknown share went toward the construction of schools in rural areas (see Annex 19 for details). A few studies assessed the results of this work. Paxton and Schady (2002) found that during 1992-1998,

the Peruvian *Fondo Nacional de Compensación y Desarrollo Social* was well targeted to poor districts and households and increased the school attendance of young children. Newman et al. (2002) assessed the impact of small-scale rural infrastructure projects in education, health, and water financed by the Bolivian Social Investment Fund. Education projects consisted of either repairing existing schools or constructing new ones, and usually included the provision of basic supplies for education. They had negligible effects on enrollment, attendance, and academic achievement; at the individual level only dropout rates were reduced. However, Heinrich and Lopez (2009) found that the higher a community's participation in a social investment fund, the higher the probability of school attendance in that community.

### **E. DEMAND-SIDE ACCESS: BANK SUPPORT FOR SCHOLARSHIPS, SCHOOL FEES, AND CONDITIONAL CASH TRANSFER PROGRAMS**

While EDU supervises few demand-side interventions, they have been successful. For example, an ex-post impact evaluation of Argentina's secondary-level scholarship program for youth at risk of dropping out (AR-L1038) found that scholarship holders' attendance has increased and grade repetition reduced, and their performance has improved.<sup>43</sup> In Ecuador (EC-L1018) the project paid school fees for basic education (the transfer was made directly to the schools, not the parents), contributing to an increase in net enrollment in basic education from 91% to 95%—approximately 81,000 students. The Bank is also supporting a municipal cash transfer program in Bogotá (CO-L1010), for which positive impacts have been reported in an impact evaluation,<sup>44</sup> and a school lunch program in the Dominican Republic, for which no outcomes have been reported.

The Bogotá project (CO-L1010) included a series of experiments to understand which parameters matter the most for impact on outcomes of interest, and the results were then used to improve the design of the program. From this experiment, the authors found that changing the timing of payments (i.e., paying part of the incentive after matriculating to the next grade) does not change attendance rates relative to the basic treatment but does significantly increase enrollment rates and thus grade progression at both the secondary and tertiary levels. They found that the form of the incentive and the timing mattered significantly. Experiments such as these are very relevant because they pilot low-cost and scalable alternatives to improve the efficiency of such programs.

**Conditional cash transfer programs.** Between 2000 and 2011, the Bank financed 42 loans that supported 20 conditional cash transfer programs (CCTs) distributed across 16 countries.<sup>45</sup> This added up to over US\$13.5 billion in lending, making the Bank the main financier of CCTs in the Region (see Annex 20).<sup>46</sup> CCTs, which provide cash benefits to parents for ensuring that their children attend school, have helped

reduce education inequality by increasing the enrollment rates and school attendance of poor children.<sup>47</sup> They have the dual objectives of simultaneously reducing short-term poverty (cash grants) and increasing human capital (conditions), but they vary sharply regarding the balance between these two objectives and also in their designs. This heterogeneity is reflected in significant differences in their target populations, incentives, conditions, and verification that conditions are met. The context in which these programs work also differs, making it hard to compare them and assess what strategies work best.

By design, most CCT programs in LAC aim to reduce gaps in access to education among school-aged children, thus improving equity. However, not all programs cover the secondary education level,<sup>48</sup> nor does the majority include incentives to improve indicators of efficiency such as grade repetition, transition from lower to upper secondary, and completion of the full secondary cycle, which are major challenges at this level.

While Bank-financed CCT programs did not have an objective to focus on improving the supply and quality of secondary education, many projects included a small component related to these areas. Supply concerns related to both quantity (stock and response to the CCT program) and quality. In some countries the supply response to CCT programs was included separately in education operations parallel to the CCT loans; however, there is more evidence of this coordination in the earlier projects of the review period. More recently, there appears to be less evidence of coordination between the CCT operations (SPH) and education operations (EDU), signaling room for improvement in this area between the SPH and EDU Divisions, especially as upper secondary school infrastructure in underserved areas is expanded and more CCTs are modified to address the main challenges at the secondary level.

Appropriate and timely evaluations and monitoring systems are essential sources of feedback to improve implementation and policymaking, and distinctions between effects on primary students and those on secondary students need to be made. Supporting monitoring systems and external evaluations on education-related results were among the most frequent components of IDB-supported CCTs.<sup>49</sup> However, only designing and supporting evaluations is not enough; and again, distinctions among primary and secondary-levels are important. Multiple PCRs mentioned the need for different types of evaluations and a different process for how these evaluations take place so that their results are more timely and better used in project design and policymaking. In addition, the CCT programs collect a wealth of administrative data, especially education-related information, which is not being analyzed and used for program improvements, especially at the secondary level where the heterogeneity of beneficiaries is largest.

Although IDB-financed CCT programs often achieved short-term outputs linked to the operation of the program, the results frameworks need to be improved to fully assess whether these projects achieved their objectives, and differential results across primary and secondary levels should be included. Projects largely accomplished goals regarding the establishment and expansion of CCT programs that are measured through short-term outputs (coverage). However, intermediate- and long-term goals related to their impact on human capital (one of the main objectives of the CCTs) need to be better defined, adequately included in the results framework, and effectively monitored. The weaknesses in the appropriate definition and monitoring of output, outcome, and impact indicators related to the final objectives of these projects is reflected in the following statistic: for 44% of the projects analyzed, the results matrix of the loan document did not include *any* outcome related to education access (enrollment), grade progression, or dropout.

Overall, according to the results of the impact evaluations reviewed, IDB-financed CCT programs have achieved their goal of increasing access to education, but there is no evidence of impacts on learning outcomes. These findings are consistent with the broad literature on CCT programs. In terms of short-term access, the impacts of IDB-supported CCTs range between 0 and +15 percentage points (pp) on school enrollment; between +0.3 and +10 pp on regular school attendance, and between -0.3 and -7.8 pp on dropouts. In terms of intermediate-term access and attainment the impacts range between +0.5 and +9.3 pp on grade promotion; between +4 and +23 pp on finishing a school level or graduating from high school, and between +0.1 and +0.5 years on school attainment (see Annex 21). Finally, none of the programs that measure learning outcomes finds a significant impact on this outcome for children of diverse ages: 15-21 years of age in Mexico (Behrman et al., 2005); second-graders in Ecuador (Ponce, 2008), and children at the end of high school in Colombia (World Bank, 2011).<sup>50</sup>

Evidence suggests that significant gains in school enrollment and attendance results affected by CCT programs are larger for students in secondary school, partly because there is more room for improvement at that level than at the primary level<sup>51</sup>—students at that level exhibit lower enrollment and school attendance, and higher dropout rates, than primary students. Studies are more likely to find no impacts on those children who have less room for improvement, in particular in primary school, where enrollment and school attendance are already high. For example, no school attendance impacts were found in primary school in one of the programs in Colombia (Attanasio et al., 2004), and on enrollment for children aged 6-11 in Mexico (Parker et al., 2007).

Nonetheless, secondary education could be made a stronger priority for the CCT programs in many countries. The regional education context has changed significantly in the past 15 years—many more students are accessing and attending lower secondary school now than before, and demand for upper secondary is increasing. While

many programs have evolved with and adapted to that change,<sup>52</sup> further program modifications could be made<sup>53</sup> to address increasing net secondary enrollments and the higher opportunity costs and different set of risks adolescents face relative to younger children. Further program revisions at the secondary level will require more analytical work by the countries and the Bank, more work to convince governments of the need to break the inertia of traditional program design and execution, and stronger collaboration among the social protection and education sectors both at the country level and within the Bank.

Increasing the engagement of Bank-supported CCT programs for support of the complete secondary cycle—with special incentives for timely grade progression, successful transition from lower to upper, and completion of the full secondary cycle—seems consistent with the challenges the Region faces and also with the evidence of where the largest impacts would be attained. Conducting pilot projects and rigorous evaluations to fine-tune CCT programs according to the specific contexts and challenges of individual target populations could improve program effectiveness in this area where the IDB can contribute significantly.<sup>54</sup> In addition, both creating an evaluation system for the accumulation of institutional knowledge about CCT programs in general<sup>55</sup> and assisting countries to better use their existing administrative data could help countries respond more effectively to challenges at different stages in the process. Given the long history of Bank support for CCTs, this would be significant value-added, both internally in the Bank and for countries seeking technical assistance.

## F. MEASUREMENT OF RESULTS ON ACCESS

Coverage-related outputs have been widely measured in projects financing infrastructure (e.g., schools and classrooms constructed). Of the 31 completed projects, 25 financed an access-related component (81%), of which 8 achieved their targets and an additional 15 made some progress towards their targets. On the other hand, while 25 of the 31 projects had an access-related component, 23 mentioned “access” in the main loan objective, and only 14 had at least one related, measurable *outcome* indicator. Of the 14 education projects that measured enrollment outcomes, only six achieved their goals, three made progress toward its targets, and the remaining five did not achieve their targets or were not evaluable. Among TVE projects, only Trinidad and Tobago reported on enrollment, for which it surpassed its target in 2011 (see Table 6). Procurement delays and institutional capacity were the reasons most cited in PPMRs for underachievement of infrastructure results. The case studies also found issues related to political constraints (sometimes mentioned in loan proposals) and perhaps unrealistic targets set at loan design given these political constraints, underlining the importance of appropriate project design.



National rates for both gross and net secondary enrollment for the Region increased significantly during the period. Enrollment outcomes reported in the PCRs were sometimes national-level figures. Results could be attributed to Bank-supported projects in some but not all cases, given that some projects targeted only specific regions. For example, the Trinidad and Tobago program, which was financed mainly with Bank funds, was a large, national-level reform that universalized full-day and full-cycle secondary school with significant infrastructure investments in underserved areas; thus the achievement of national enrollment targets is likely attributable in large part to the Bank-financed project. By contrast, one program in Uruguay reported on many outcome indicators that were not closely linked with project activities and thus could not be attributed to the project.

**TABLE 6. DISTRIBUTION OF COMPLETED LOANS BY ACHIEVEMENT OF OUTCOMES AND OUTPUTS (N=31)**

OUTCOME TOPIC: ACCESS	Loans with an objective on Access	Loans with at least one measured indicator on Access	Loan results		
			Achieved at least 80% of indicators	Some progress	Not achieved or not evaluable
<b>*Enrollment</b>	23	14	6	3	5

OUTPUT TOPIC: ACCESS	Loans with a component on Access	Loans with at least one measured indicator on Access	Loan results		
			Achieved at least 80% of indicators	Some progress	Not achieved or not evaluable
<b>*Infrastructure and equipment</b>	25	26	8	15	3
<b>*Scholarships</b>	5	3	2	0	1

Source: Evaluation Survey Instrument, OVE (2012).

Note: The analysis of achievement of results was not based on loan objectives because objectives were too broad in some cases and did not specify more detailed topic areas. For example, there were instances where loans financed an activity (e.g. institutional strengthening) and had an indicator measured in a given topic although that topic was not mentioned in the objective. On the other hand, and more commonly, there were cases where the topic mentioned in the objective had no indicators in the PCR to measure related activities and results. Among those that did present related indicators, they often lacked a final value in the PCR (84 indicators for completed loans) -- and thus were not included in the calculations, since the missing information made it impossible to assess progress.

## G. SUMMARY

Access interventions, funded in 80% of all projects, represent a significant share of total loan volume. There is limited evidence that this high level of Bank investment in inputs for access has resulted in higher enrollment rates in targeted areas. While achievement of output goals is better than that of outcomes, most projects did not significantly achieve their targets. Evaluation of results as a whole was challenging, partly because of lack of information on indicators, especially target values, by which

to evaluate progress. While procurement problems were commonly cited as the cause of infrastructure delays and lower achievement of results, issues related to political constraints and appropriateness of targets also need to be better factored into loan design.

IDB clients face challenges related to the need to expand secondary education to remote areas where low population density increases costs exponentially, and the Bank has responded to this need in seven countries. However, Bank support for alternative models of service delivery for hard-to-reach populations produced unclear results in most cases, making it difficult to evaluate the projects.

Public demand for secondary TVE has increased in recent years, and there is renewed support from the Bank for this area. Over the period 15 loans supported secondary-level TVE, of which 3 were approved in 2012 alone.

Bank-supported CCTs are widely used in the Region and have led to an increase in school enrollment and attendance among disadvantaged students. However, not all target secondary-level students, and many fail to address the main challenges at the secondary level: grade progression, transition from lower to upper secondary, and completion of the full secondary cycle. More could be done to strengthen the focus of the CCT programs at the secondary level.



# 5 Improving the Quality and Efficiency of Secondary Education: Challenges, Approaches, Results and Lessons

**This review estimates that Bank support for quality interventions amounted to at least US\$1.2 billion over the review period. Of the 58 loans examined, 80% included objectives related to quality and the means to achieve it. Overall, approaches to strengthen learning outcomes in secondary education reflected a high degree of relevance to the challenges faced by the sector and focused mainly on the provision of teacher training, curriculum reform, the availability of learning resources, and an extended school day. Despite high repetition and persistent equity gaps, limited resources were directed toward compensatory or remedial programs to reduce significant internal inefficiencies (including repetition and dropout) or to bridge completion.**

This chapter examines how the approaches identified in Bank programs contributed to three quality outcomes: student learning (improvements in achievement), internal efficiency (reduced repetition and higher completion rates), and equitable learning opportunities (narrowing the performance gap between advantaged and disadvantaged students). A major finding is that while growing investment in secondary coverage has contributed to increased enrollment, improvements in student learning lag behind.

## **A. BANK SUPPORT FOR IMPROVING QUALITY**

Various studies show a clear relationship between school conditions and student performance. According to Glewwe (2012), a well-maintained, fully equipped, and fully functioning school, combined with access to a library, has a positive effect on student performance. Because what goes on within classroom walls is as important as tangible activities like school construction, 81% of all loans supporting secondary education



subscribed to the general objective of “improved educational quality.” In terms of approaches, the evaluation found that 74% of the secondary portfolio financed specific activities related to teacher effectiveness, largely in-service training; 71% supported the provision of learning resources, including textbooks, teachers’ guides, instructional technology, and reference materials; and 66% invested in curriculum reform.

## 1. Improving teacher effectiveness

The shortage of qualified teachers was the most commonly identified constraint to quality education in Bank loans. Between 1999 and 2010, the active teaching corps in secondary schools across the Region grew from 2.8 million to 3.6 million.<sup>56</sup> The analysis of Bank operations reveals, however, that the placement of trained teachers has not kept up with enrollment expansion in all countries. For example, trained teachers made up roughly 60% of the secondary teaching staff in Guyana in 2000, and only 55% in 2007.<sup>57</sup> Jamaica and Trinidad and Tobago experienced a similar reduction during the expansion of lower secondary education in the 1980s. Intra-regional differences are also apparent. As of 2007, the year for which the most recent comparable data are available, the proportion of trained teachers in LAC secondary schools ranged from a high of 90% in Panama to a low of 38% in Belize.<sup>58</sup> In countries with large and diverse populations, such as Mexico, fewer trained teachers were placed in remote schools than in urban centers. Untrained and unqualified “teachers,” who had little preparation beyond secondary school, filled the gap between supply and demand.

The objective of improved student performance is closely linked to that of effective teaching. At a minimum, this requires that both teachers and teaching institutions meet core standards, and that incentives be aligned with teacher retention and performance.<sup>59</sup> Case study visits confirmed that the challenge of attracting and retaining academic high achievers as teachers, especially in the fields of mathematics and sciences, is widespread. Severe shortages of specialist teachers were also identified in second languages (Argentina, Dominican Republic, Ecuador, Trinidad and Tobago), and in nontraditional subjects like information technology (Argentina, Barbados, Brazil, El Salvador, Peru) and technology education (Trinidad and Tobago).

In some countries, teachers have been prepared in post-secondary programs and normal schools with low admission standards and the least accomplished professors. For example, in Colombia, only 6% of post-secondary teaching programs have “high-level accreditation,” and a recent analysis of panel data concluded that *“too many teachers are drawn from the bottom of graduating high school and college students, and students who enter the teaching profession have poor reading scores... [Furthermore]... young teachers have the worst performance in math and English among all the college youth in their generation, and teachers’ colleges contribute little or nothing to improving the competencies of these young teachers.”*<sup>60</sup> This example points to the low value-added of traditional teacher education. A number of operations also reported that pre-service programs suffer from poor infrastructure (Ecuador, Uruguay) and a heavy reliance on



limited and often outdated instructional resources (Brazil, Dominican Republic), and lag behind curricular reforms in terms of curricular models and instructional methods (Colombia, Peru).

**Approaches.** In almost all secondary loans, low-quality instruction was identified as a key challenge. Consequently, support for teacher professional development has focused largely, but not exclusively, on in-service training. Although a significant body of research has confirmed the relevance of teacher training to improved instructional quality,<sup>61</sup> the vast majority of Bank loans measured outputs rather than outcomes; thus little is known about the effectiveness of Bank support. For example, Parana's Secretariat of Education (SEED) confirmed that Bank-supported seminars and workshops, planned for 23,600 teachers, directors, and administrative staff and financed under BR-0167 reached 174,670 participants. In Barbados (BA-0009) more than 4,000 teachers and school administrators participated in short- and medium-term courses for basic and advanced IT mastery, but, because of delays associated with the procurement and installation of the computers, many teachers were unable to apply their newly learned skills in the classroom. In Ecuador (EC-L1018), 55,000 teachers were trained in the use of teachers' guides, but utilization was not tracked. In Trinidad and Tobago (TT0023), teachers' salaries were delinked from those of the civil service, which enabled base pay to float to a more competitive level; and to facilitate release time for in-service training, an effective and efficient scheme for the provision of substitute teachers was implemented. However, the impact of these measures on teacher performance was not tracked.

For some loans, promising improvements in teacher performance and retention have been documented. Mexico (ME0128) reduced the desertion rate of community-based teachers (from 22% to 17%) through the introduction of a strong program of incentives; and in Paraguay (PR-0117), the percentage of teachers who attended *Institutos de Formación Docente* and showed improved performance in the areas of language, math, natural science, and technology increased from 49% to 55%. Box 6 describes two other Bank projects aiming to raise teaching standards.

An ongoing challenge is the establishment and strengthening of accreditation systems for teacher professional development. In Peru (PE-0117, PE-0170), an accreditation system was established to ensure that pre-service training is delivered according to national standards, and a system of merit pay tied to teacher performance was initiated. Nonetheless, the case study mission considered the sustainability of the initiative to assess teacher performance to be at risk, given the absence of political will to continue the initiative. The Bank has also supported accreditation through its TC program. In the Dominican Republic, DR-T1053 supported the certification of teacher education programs offered by 25 universities. The case study visit was able to confirm that 20% of the programs complied with the requirements for certification.

**BOX 6. RAISING TEACHING STANDARDS: SUCCESSFUL ATTEMPT VS. UNSUCCESSFUL ATTEMPT**

**UR-0132, Secondary School and Teacher Training**, includes a component focused on strengthening and consolidating the teacher training system (*Sistema Unico de Formación Docente*) to increase the number and quality of secondary school teachers in the country. The consolidation of the training system took into consideration the various existing modalities (from distance education to in-school education) and the need to have permanent teacher training. New training modalities were designed, incorporating information technology. The combination of distance learning and in-school strategies permitted greater access, and a greater number of teachers earned formal qualifications. The project included the improvement of teacher training centers and the provision of libraries and network connectivity. Sixteen resource centers were established, a new regional teacher training center was built, and a national teacher training evaluation system was established, setting standards for all secondary school teachers. An educational management information system was also developed. The project surpassed its target of 7,000 teachers trained in the new curriculum by 80% (12,020 teachers received training).

**AR-0176, Secondary Improvement Program de Mejoramiento Secundario**. This loan included support for the Ministry of Education's plan to train 30,000 teachers in multimedia resources. The call to hire specialized agencies to conduct the training, which occurred in the last year of the project, was not successful because offers greatly exceeded the budget. Consequently, the training budget was entirely reassigned to the project component that focused on expanding school infrastructure.

The Bank financed the construction of teacher training facilities in six projects (AR-L1038, AR-L1108, BR-0167, HA-0038, PE-0116, UR-0107). In Peru, 22 *Institutos Superiores Pedagógicos* were strengthened with equipment, teacher training, and rehabilitated infrastructure. Uruguay constructed regional teacher training centers in six regions rather than have training conducted exclusively in Montevideo, thus enabling more individuals from other areas of the country to become teachers.

In Ecuador (EC-L1018), more than half a million children between the ages of 12 and 17 were out of school, partly because of the shortage of rural teachers and political difficulties that prevented the reassignment of urban teachers to underserved regions. With Bank support, a retirement incentive was introduced, resulting in the departure of approximately 5,000 teachers of retirement age and the appointment of more than 7,000 new teachers, who were selected through a systematic qualification process or “merit contest” and hired at lower cost. Many of the new teachers were placed in rural, indigenous, and border schools. Training for these teachers began at pedagogical institutions and continued for three years (two years of theory and classroom study and one year of rural practicum), culminating in a university degree. Most of the newly appointed teachers were not new to the teaching profession, but had been in the system on a contractual basis. This strategy not only helped to refresh the teaching corps, but also helped to address the demand for education by out-of-school youth.

The Aligning Learning Incentives (ALI) initiative (ME-T1114 financed the evaluation) revealed that performance-based incentives can produce a negative outcome if not properly structured. ALI was approved in 2009 with the objective of *“designing, implementing, and evaluating an incentive based structure, never before explored in Mexico or elsewhere, and aligning the efforts of school principals, teachers, and students to improve student achievement, especially among low income students and schools.”* The program randomly assigned 88 secondary schools with over 40,000 students to three treatment groups and a control group. The first group (T1) provided incentives to students, based on their performance on a math test designed for the program (for grades 10-12); the second (T2) provided incentives to math teachers only; and the third (T3) offered both individual and group incentives to students, teachers, and school administrators. An evaluation<sup>62</sup> found the largest average effects for T3, a smaller impact for T1, and none for T2. However, the impact analysis had to be adjusted to account for copying behaviors, since an examination of the answer patterns showed that part of the reason for higher test scores in the treatment group was the high level of cheating. After taking this into consideration, results *still showed* substantial program effects on student test scores. Caveon (2012)<sup>63</sup> analyzed whether there was evidence of unethical behavior in specific classrooms, comparing the schools (by treatment group) for both the ALI exam and the ENLACE exam, which had no incentives attached to performance. According to this evaluation, *“the effects of non-independent test taking appear to have overwhelmed positive educational effects, if any, that may have resulted from the ALI program.”*<sup>64</sup> Likewise, the report argued against providing incentives to administrators, since it has the *“undesirable effect of changing their behavior so they can violate security procedures.”* The program and its corresponding evaluation contribute to the scarce literature on the impact and efficacy of performance-based incentives to improve student learning.

## 2. Making curriculum more relevant

“Curriculum” is the fifth-largest area of expenditure in Bank-financed projects, amounting to at least US\$160 million over the review period. Bank loan documents most often cite the following shortfalls in existing curricula: (i) outdated, with an excessive number of subjects, which translates into superficial knowledge; (ii) not culturally relevant; and (iii) not well articulated with the world of work. Four clear trends characterize the evolution of the Bank’s approach to curriculum improvement at the secondary level over the review period: (i) movement from a broadly structured academic curriculum to a competency-based core curriculum; (ii) broad introduction of technology as a learning tool in education, and electronic literacy (e-literacy) as a core competency; (iii) transformation of libraries into multimedia centers where teachers and students gather to pursue research, active learning, and problem-solving; and (iv) lengthening of the school day to allow for additional time-on-task. More



Retaining all secondary-age youth in school and providing them with quality education will enhance prospects for national competitiveness and growth while also reducing inequality, increasing employability and wages, decreasing risky behaviors such as criminality, drug use, and teen pregnancy, and improving overall well-being for individual youth, among others.

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recently, the Bank has increased its focus on strengthening skills development through renewed support for TVE programs (see Annex 22 for summary of results on Mexico's PROFORHCOM programs).

According to PCRs, the Bank's secondary projects met 80% of their curriculum objectives; however, the case studies conducted for this evaluation showed mixed success. With Bank support, Paraguay's curriculum was reformed to reflect the cultural and linguistic diversity of the population, and programs were implemented to provide differentiated services to high-risk schools. By contrast, the reforms proposed by PROEM in Brazil were too politically sensitive and consequently not implemented. The resistance to changes to the secondary school curriculum was due to the elimination of all technical courses at the secondary level and a redefinition of the core curriculum. Likewise, Trinidad and Tobago's Secondary Education Modernization Program led the way to the consolidation of a general five-year secondary education for all students, the elimination of student tracking, institutionalization of a longer school day to facilitate additional time-on-task, and the introduction of Spanish as a core subject. Nonetheless, the move to general secondary education met with initial resistance from stakeholders, who associated the transfer of specialized TVE from the secondary to the post-secondary level with the elimination of job prospects. Uruguay also introduced a common core curriculum and longer school day with Bank support.



In Peru (PE-0116 and PE-0170), the Bank supported a reform of the basic education curriculum, including the introduction of complementary regional curricula to provide students with a common core of subjects and specific learning relevant to the geographical area where they live. The projects aimed to improve the quality of secondary education and increase its relevance to the world of work. PE-0116 focused on aligning TVE with the needs of the market and establishing a national system of TVE with active participation of the private sector. PE-0170, focused on upper secondary, included a component to support students' transition from lower secondary to upper secondary; but the government that followed the Fujimori presidency negotiated the cancellation of this component. The absence of baseline data and targets and the lack of a final evaluation do not allow conclusions regarding the effectiveness of the initiatives that were implemented. Honduras (HO-0141) piloted the Basic Education Center model in six institutes for grades 7-12. The pilot aimed to test a third-cycle curriculum combining basic and technical secondary education in marginal urban and rural areas of the country.

**Compensatory and remedial programs.** Significant disparities in the learning outcomes of children from different income groups suggest the existence of large inter-school and inter-regional variations. As access to secondary education expands and the proportion of low-income students in secondary schools increases, so will the need for targeted access to remedial, compensatory, and specialized instruction. Despite this dynamic, very few Bank-supported loans have included compensatory and remedial programs. Trinidad and Tobago had a successful reading program, but it closed. In Paraguay, bilingual instruction contributed significantly to improved internal efficiency, but the government had difficulty bringing the model to scale. The Bank has also supported efforts to address inequities by providing software and computer technology for learning and remedial instruction, and by supporting alternative models of community-based education in Mexico.

### 3. Learning resources

The provision of learning resources, including textbooks, classroom furniture, and technology, generally enjoys a high degree of support from school officials, parents, and political leaders. Yet, because many LAC governments have limited budgets to invest in research and education materials,<sup>65</sup> many schools do not have sufficient teaching materials, libraries are poorly equipped, and technology is not well maintained or replenished. For this reason, Bank investment, and in particular TC, is important to fund innovation. Nearly two-thirds of all secondary education loans earmarked resources for the provision of learning resources. Approaches supported by the Bank include procurement, production, and replenishment of print and digital materials for instructional purposes; reference materials for libraries and multimedia learning centers; instructional kits (in science, for example) for students and teachers; and technological infrastructure and software. The more successful interventions are those that accompany the supply of inputs with timely and sufficient training on their use (Box 7).



#### BOX 7. LEARNING RESOURCES: TWO EXAMPLES WITH DIFFERENT RESULTS

**Dominican Republic (DR-0101).** An added value to the improvement and relevance of basic education, including 7th and 8th grades, was the distribution of more than 21 million textbooks (exceeding the target of 15 million), library resources, and classroom aids to all public basic schools in the country. A textbook scheme was also institutionalized, thus ensuring the continued replenishment of critical learning resources to disadvantaged students. Seventeen teachers' guides were developed to support the delivery of the new curriculum. The guides were distributed to all basic school teachers, who also received training in their use. The interventions that were put in place should have improved the quality of education, but effects are not clear. Neither the country nor the Bank evaluated the effectiveness of the loan support, so it is difficult to attribute achievements to Bank actions.

**Peru (PE-0170).** The PCR reports that 6302 schools received textbooks, educational materials, libraries, and teacher manuals; however, this achievement may mask a more crucial issue. According to a field coordinator for the project (and consistent with observations during the case study visit) a number of schools that received instructional resources under the loan did not actually use them; in fact, many were still in their original boxes. If the indicator had been framed differently (say, "number of children using new textbooks in the classroom"), project managers would have a better tool to monitor progress toward the intended result.

**Computer technology.** Although many educational technology issues are still debated in the literature, policymakers' and parents' demand for computers has expanded rapidly. In fact, every loan in the portfolio of secondary operations includes resources to extend access to computers, either for instruction or for school management. The pattern of IT adoption generally follows three phases. The first wave of adoption typically involves *access* to stand-alone hardware for school administration, as an instructional resource for teachers, and for isolated skills practice (PE-0170). The second wave, *quality*, involves significant investment in networking infrastructure and Internet connectivity, generally in the context of educational reform, and the use of technology throughout the disciplines to achieve higher standards of teaching and learning (Barbados, Uruguay). The third wave focuses on establishing capacity to sustain *innovation*, developing knowledge management systems, and strengthening standards and certification requirements through policy. The case study for Paraná Digital provides a good example of lessons learned (Box 8).

Despite the Bank's significant commitments in this area, impact evaluations were conducted only in relation to the Peru and Barbados operations, neither of which demonstrated effects on student achievement. The sheer number and magnitude of such investments, combined with a lack of rigorous studies on their implementation and effectiveness, points to a potential for waste. Indeed, a review of PPMRs suggests that IT components are often behind schedule, or have to be significantly re-worked. If policy advice related to IT is to be credible, it needs to be backed by a rich analytical base of lessons learned, best practices, impact evaluations, and cost data.

**BOX 8. LESSONS LEARNED ABOUT IT INTEGRATION FROM THE PARANÁ CASE STUDY**

Training teachers and the technical/software and hardware maintenance teams was key to the successful implementation of the IT scheme in Paraná. The training of teachers to become part of the Paraná Digital initiative was instrumental in breaking the resistance to integrating technology into the instructional process. A visit by the OVE mission to the *Diretoria de Tecnologia Educacional*, reorganized and equipped by PROEM, provided ample evidence of how technology is ingrained into the system: educational content is continuously being developed and made available online for download by educators, parents, and students; all textbooks used by the system are available for download; teachers constantly submit new ideas to be transformed into instructional materials; and the Secretariat of Education (SEED) communicates in real time with the district offices (NREs) and with students, parents, and teachers regarding student and teacher performance, availability of training, school performance, student grades, and so on. All this and much more is available on the website *Dia-a-Dia Educação*,<sup>a</sup> which is updated daily by a team of 17 teachers who have become technology experts.

PROEM also established partnerships with federal and state agencies as well as with universities, development agencies, and the private sector, contributing to the construction of knowledge. Rather than start new initiatives, PROEM built upon existing ones that had proven to be successful. For example, the School Administration System that connected the SEED with NREs was expanded in the form of Paraná Digital, and the partnership with the private sector connected all of the 2,100 schools in Paraná with the NREs and the SEED, largely through the installation of fiber-optics technology. Most importantly, each of the 32 NREs has two full-time technology support staff (former teachers who have the interest and the profile) who are responsible for trouble-shooting issues related to software and hardware.

<sup>a</sup> *Secretaria da Educação do Paraná* (2013).

## **B. MEASURING PROJECT OUTCOMES**

Despite the breadth and relevance of Bank approaches to improving the quality and efficiency of secondary education, Bank projects monitored progress overwhelmingly at the output level (e.g., number of teachers trained, number of books distributed) rather than at the outcome level (e.g., achievement gains). Just over 10% of the projects that identified quality as an objective did so in the context of improved “student learning,” and another third mentioned internal efficiency (reduced repetition and dropout). Nonetheless, while improved learning and teacher effectiveness are both central to raising secondary completion rates, only 6 of the 31 completed loans included at least one relevant outcome indicator to measure student performance, and just five included at least one relevant outcome indicator to measure teacher performance. According to PCRs, even fewer operations (two in each case) met or exceeded their target by final disbursement (see Table 7). Barbados’ Education Sector Enhancement Program (BA-0009) is an example of an operation that exceeded its performance targets. The

loan established a target of a 10% increase in the number of students passing the terminal exam in math and English, but actually achieved a 53% gain in students passing math (from 36% to 55%) and a 20% gain in students passing English (from 50% to 60%). DR-0101 achieved the goal of improving student performance by more than 5% in national assessments in 8th grade. The case study for BR0030 used data from the national system of student assessment to confirm that learning targets were met. TT-0023 did not succeed in increasing the rate of CXC passes, and while it achieved the target of increasing the number of students passing the terminal ICT competency examination, it was not possible to determine whether secondary school graduates attained national certification of essential “skills and competencies” required for the workplace. UR-0132 made little progress in PISA achievement rates in math, and negative progress in Spanish and science.

**TABLE 7. DISTRIBUTION OF COMPLETED LOANS BY ACHIEVEMENT OF OUTCOMES AND OUTPUTS (N=31)**

OUTCOME TOPIC: QUALITY	Loans with an objective on quality	Loans with at least one measured indicator on quality	Loan results		
			Achieved at least 80% of indicators	Some progress	Not achieved or not evaluable
Teachers’ performance	11	5	2	1	2
Students’ performance	2	6	2	0	4
Internal efficiency	8	9	3	2	4
External efficiency	9	2	1	0	1
OUTPUT TOPIC: QUALITY	Loans with a component on quality	Loans with at least one measured indicator on quality	Loan results		
			Achieved at least 80% of indicators	Some progress	Not achieved or not evaluable
Teachers trained	24	24	7	11	6
Learning resources	25	20	7	9	4
Curriculum reform	23	18	14	3	1
Vocational training	6	6	3	0	3

Source: Evaluation Survey Instrument, OVE (2012).

*Note:* The analysis of achievement of results was not based on loan objectives because objectives were too broad in some cases and did not specify more detailed topic areas. Some loans financed an activity (e.g., institutional strengthening) and had an indicator measuring a topic that was not mentioned in the objective. More commonly, the topic mentioned in the objective had no indicators in the PCR to measure related activities and results. Those that did present related indicators often lacked a final value in the PCR (84 indicators for completed loans) and thus were not included in the calculations, since the missing information made it impossible to assess progress.





Learning among the disadvantaged is not well documented. This suggests that countries often lack an adequate evidence base to inform efforts to raise learning outcomes. Of the projects that identified learning outcomes as an objective, none included targets for disadvantaged populations. Many countries still do not generate the information they need to design solutions to improve low learning outcomes among the disadvantaged, and there has not been adequate experimentation with and evaluation of local solutions.

In 2010, total secondary enrollment in LAC was 60 million students, and total TVE enrollment was 5.8 million.

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In most cases, internal efficiency was either undocumented or not achieved. Mitigating high rates of dropout and repetition has been underemphasized in Bank loans. While nine completed loans included outcome indicators to track improvements in student completion, repetition, and dropout, only three (HO-0141, DR-0101, and ME-0052) achieved their targets by final disbursement. These results call into question the selection and quality of the indicators used and their relevance to operational activities, and highlight the imperative of properly calibrating indicators to capture the Bank's attribution to results.

In terms of outputs, by final disbursement, 7 of 24 completed loans achieved their targets for teacher training, 7 of 20 completed loans achieved their targets for the procurement and distribution of learning resources, and 14 of 18 completed loans achieved their targets for curriculum reform (Box 9 describes a successful project in secondary education reform). It is, however, important to consider that inputs are provided by a project with the objective of reaching specific outcomes. When a substantial level of inputs is provided but outputs and outcomes continue to be disappointing, it may become necessary to look deeper into the challenges the system faces and the adequacy of the inputs provided in relation to the attainment of the desired outcomes.

### Box 9. MEASURING THE RESULTS OF SECONDARY REFORM

BR-0167 supported initiatives to improve the quality of secondary education and reduce system inefficiencies. Although 80% of all secondary teachers were university graduates, high repetition and dropout rates suggested that there was little correlation between teachers' preparation and their effectiveness in the classroom. In Paraná's secondary schools, lack of adequate educational inputs was the norm, the curriculum was outdated, textbooks were virtually nonexistent, libraries and reference material were lacking, and schools that did have computers tended to use them for administrative purposes. In 1995, the State did not have adequate infrastructure to meet the demand for secondary education, and 64% of secondary school students were enrolled in the night shift for lack of better options.

BR-0167 was a very focused project, directed to the challenges and constraints faced by the system. With Bank support, the Secretariat of Education (SEED) was able to rehabilitate 581 secondary schools, construct 37 new ones, and expand 426 existing plants. The program also contributed to the reform of the secondary curriculum; the installation of approximately 1,000 science labs and 24,000 computers with basic computer programs for students and teachers to use as educational tools; the acquisition of over one million textbooks in mathematics, physics, biology, chemistry, and Portuguese, and reference materials for libraries; 1,700 school improvement projects; and approximately 400,000 instances of participation in short-term teacher training—seminars, workshops, and study groups—in technology and skills upgrading in science, math, and pedagogy. School principals and supervisors were also trained in organizational management, human and financial resource management, and strategic planning.

Of the 87 outputs identified by the Bank, 37% surpassed their target and only one was not met. The loan program also produced savings and other benefits derived from reduced repetition and dropout, improved teaching, revised curriculum, and strengthened institutional capacity. Nonetheless, according to the PCR, the project fell short of achieving its outcome targets. A subsequent comparison of baseline indicators and 2011 data collected during the case study mission confirmed the achievement and sustainability of the initiatives put into place with Bank support. For example, according to Bank estimates,<sup>a</sup> reducing dropout from an average 16.5% to 5% would have yielded savings of nearly US\$7 million per year. However, dropout rates are resistant and have a tendency to increase when the system expands. Following an increase in enrollment from 310,000 in 1998 to 409,489 in 2005 (the last year of the project), dropout rates rose to 19% in 2002. By 2011, following the assimilation of project inputs, the dropout rate fell to 6.7%. Likewise, reducing the repetition rate from 14% to 5% by the end of the program would have produced an additional savings of over US\$5.4 million yearly.<sup>b</sup> Although this indicator was not met at the end of the project, by 2011 the repetition rate showed improvement (11.7%).<sup>c</sup> Perhaps the most dramatic outcome of the program relates to secondary completion, which increased from 52% in 1998 to 58.1% on project completion, and 84.9% in 2011; however, student achievement, although improved, fell short of meeting its target.

<sup>a</sup> 1997 Bank estimate.

<sup>b</sup> 1994 Bank estimate.

<sup>c</sup> *Todos Pela Educação* (2013).



### C. SUMMARY

Despite the high degree of innovation and overall relevance of the Bank's approaches to improving the quality and efficiency of secondary education, there is scant evidence that Bank investments have resulted in higher student achievement or more effective teaching. While 74% of all secondary loans include activities to raise teacher effectiveness, results are mainly measured at the output level—number of teachers trained. How teacher training has affected student learning is unclear. Establishing links between training and better teacher performance or between teacher performance and student achievement requires further research. The provision of learning resources and technology alone does not ensure better-quality education; these inputs need to be supplemented by teachers who are well trained in their use, and complemented by efficient management.

A number of projects have generated, validated, and disseminated innovative solutions to the Region's secondary school challenges, but many spend considerable resources simply doing “more of the same”—especially with regard to in-service teacher training, technology, and materials provision. At the request of borrowers, computers have become ubiquitous in secondary loans, but there is little evidence of cost-effectiveness in relation to improved student learning. Weak or absent results-based management systems contribute to the continued inability to link specific outputs with student outcomes, thus limiting assessment of the Bank's effectiveness, which a richer set of performance indicators would address. If more effective innovations were to be identified, resources could be concentrated on replicating these activities rather than on funding large-scale ongoing operations that have not been shown to have sustainable impacts as implemented.



6

# COLÉGIO ESTADUAL DO PARANÁ



# 6 Strengthening Institutions and School Management

**This chapter examines how the Bank contributed to strengthening educational institutions and systems in the LAC countries in areas perceived to be essential to the efficacy and effectiveness of Bank projects. Approximately 80% of the 31 completed loans examined for this evaluation included one or more components on institutional reform or institutional strengthening. Among completed loans, capacity building was included in three-fourths, decentralization and school management in over two-thirds, monitoring and evaluation (M&E) in two-thirds, and student assessment in over one-third.**

In spite of this, weak institutional capacity is among the most frequently cited challenges to the development effectiveness of Bank-supported projects in education. Underperformance was observed in almost half of the loans with capacity-building components: 45% of those with decentralization and school management components; 48% of those with M&E components; and 25% of those containing student assessment indicators. Stronger education systems in the borrowing countries will be more efficient and more effective in implementing projects to increase equity of access and opportunities as well as the quality of the products delivered.

To increase the educational systems' capacity, the Bank has supported interventions in three broad areas: school management, monitoring and evaluation (M&E), and student assessment. The first area includes decentralization initiatives, school management, and improvements to regional and local administration. The second focuses on the ability of the institutions involved in the implementation of a project to monitor and assess the extent to which outcomes agreed upon in the loans are achieved. This requires M&E systems that include measurable indicators and collect and organize data to determine what interventions actually do and what outcomes result. The third area, student assessment, helps to keep the focus on improving student learning outcomes.

## A. SUPPORTING DECENTRALIZATION

At least 12 Bank-supported projects have included a focus on decentralized education administration. School autonomy is generally preferred over giving greater responsibilities for quality assurance to central managers. However, there is some evidence that decentralization may accentuate inequities, since poorer schools, districts, or municipalities are generally less prepared to manage new resources. A study in Argentina shows that decentralization had an overall positive effect on student performance, but that the improvements did not reach the poorest populations. This suggests that decentralization may have contributed to increasing inequality in educational results.<sup>66</sup>

Making comprehensive structural changes to an education system and navigating the political economy of education reforms are complex tasks, and results are achieved only over relatively long periods of time. In addition, determining what kinds of reforms will be most effective and what the Bank's role should be in this area has not always been clear, and the answers differ across borrowing countries. For example, in the reform component of a 2012 loan to Panama (PN-L1072), the Ministry of Education requested Bank financing for infrastructure only to expand enrollment (thus expanding equitable access), arguing that reforms of curriculum, teacher training (to improve quality), and other technical areas were the responsibility of the Ministry alone. By contrast, in Nicaragua, Trinidad and Tobago, and Uruguay, the Bank supported all aspects of the reform process.

Decentralization has taken different forms and is at different stages of implementation across LAC. For example, a Bank-supported project in Ecuador (EC-0125) made important contributions to decentralizing management of education. It created a school network program in 19% of rural schools, offering autonomy in school administration and resource management with the participation of parents and the community. Schools in the network achieved the targets of establishing a school government, a strategic plan, and a budget. However, a more robust system to monitor results is needed to provide adequate evidence of results achieved.

In Colombia (CO-0142), 57 regional education offices successfully conducted a diagnosis and designed an implementation plan to improve the management of education services. These regional offices achieved greater capacity in applying criteria for allocating resources to the local level, including enrollment, teacher-student ratio, and the location (rural or urban) of the school. They also succeeded in streamlining processes and establishing departments to plan and consolidate information systems. As a result, education statistics have been updated and used regularly.

Paraná (BR-0167) made all data related to the public education system accessible to all interested parties, thus encouraging greater participation by the local community and civil society in the educational process. Before the initiative was scaled up,

a pilot program on school autonomy supported by the Bank was conducted in 20 schools. The pilot involved the revision of roles and responsibilities of local organizations (e.g., school boards and parent-teacher associations) as well as the design and implementation of a decentralization strategy. The findings of the study were used to inform the statewide decentralization process that followed. Decentralization produced savings and increased the SEED's ability to manage the system through 32 regional centers.

In Mexico (ME-L1033), training was provided to central and subnational-level ministry staff to improve the management and the data analysis and dissemination capacity of the local actors.

Despite the efforts supported through a Bank-financed Secondary Education Program in Trinidad and Tobago (TT-0023), the decentralization of the education system is still unfinished, partly reflecting the lengthy timeline to implement such reforms. One important goal was to decentralize operational functions of the ministry by establishing eight regional education districts and introducing school-based management and school boards. However, only two regional educational district offices are currently able to provide decentralized services. Poorly defined incentives and rules for resource allocation may have led to politicization of the decentralization process, teachers are still appointed by the central ministry, and schools have no role in the decision-making process. The Ministry of Education still lacks an education management information system, and, although results from national tests were published under the Bank-supported program, there was no attempt to disseminate results at the school level and no policy or mechanism in place to provide school principals and teachers with direct feedback on test results or on any other performance indicators.

**Policy-based lending to support decentralization.** Bank support for decentralization was done almost exclusively through investment lending and TCs except in Jamaica, where the Bank supported a hybrid loan, combining a programmatic policy-based loan and investment component. The policy-based conditions in this project supported fundamental education reforms in decentralization, along with reforms in accountability, efficiency, and quality. While the PBL was not the sole momentum for the decentralization reforms, it helped reinforce the reform program and provided pressure to move the decentralization reform forward, given the government's urgent need to restructure its debt through the fast-disbursing loan. The investment funds necessary to finance the execution of the reform program came from both a parallel World Bank investment loan and an IDB TC project to facilitate the achievement of policy targets (JA-T1028 Support for Education Reform, US\$500,000).



## B. SUPPORTING SCHOOL MANAGEMENT

Regardless of the governance model, the management and leadership of schools by principals and others plays a vital role in education outcomes. Training and hiring of skilled school administrators can yield significant results. A 2005 study found that replacing an “average” school principal with an outstanding one in an average school could increase student achievement by over 20 percentage points.<sup>67</sup> The Bank supported improved school management in several case study countries.

Projects in the Dominican Republic (DR-0101, DR-0112) and Honduras (HO-0141), for example, achieved their goals of training directors in managing schools, planning, and reporting results. However, these achievements were measured at the output level—we know how many directors were trained, but there are no data on whether schools improved as a result of the training received.

In Paraguay (PR-0117), funds were transferred to communities and parent associations, which would decide how to use them to address the needs they had identified. The *Asociaciones Comunitarias Educativas* were created to provide a cost-efficient model for improving infrastructure and the delivery of materials at the school level. The initiative has proven easier to administer in rural areas, where community integration is greater than in urban areas. Some of the challenges encountered included tension between school management and ministry authorities, and an increased workload for principals and teachers.

In the Dominican Republic (DR-0101), community participation schools were established at the national level, extending both the functions and capabilities of parent associations. In Peru (PE-0170), the loan provided funding for the design and implementation of innovative projects at the school level in the areas of pedagogy and school management, surpassing targets in each area. In Trinidad and Tobago (TT-0023), in the absence of a systemwide mechanism to provide direct feedback on test results or other performance indicators, several principals took a strong leadership role, developing their own system of tracking and managing results.

**Continuous support for reform and capacity building.** In some case study countries it was found that while the Bank had done significant lending both in terms of number of loans and dollar amounts, it did not support a coherent loan program in which the various projects were well articulated and linked to one another. Argentina was one such case. However there were other cases of good practice in which the Bank provided significant and continuous support addressing the key issues in the country (see Box 10).

**BOX 10. EFFECTIVE MEDIUM- TO LONG-TERM SECTOR ASSISTANCE STRATEGY:****A GOOD PRACTICE EXAMPLE**

In Uruguay, the Bank has provided continuous support addressing the main issues for secondary education reform spanning a 20-year period across multiple changes in government and sector leadership. Support for transformation of both general and technical secondary education came via loans, TCs, and an active participation in the dialogue process. Two loans in the 1990s supported the expansion phase for universal coverage of lower secondary, curriculum reform of upper secondary (both academic and technical) to improve relevance, a more flexible trajectory for technical education students, extended school day, and teacher training. A \$500 million policy-based loan in 2001–2002 protected key social spending, including education, during the economic crisis while preventing a reversal of ongoing modernization efforts in the sector. A loan approved in 2010 supports strengthening the country's secondary education policies of access and retention of students and teachers. In addition, loans in SPH that support youth at risk complement those of EDU: they are improving internal efficiency through support for a bridge program that reintegrates youth aged 13–17 years into the formal secondary education system.

Several important elements contribute to positive results: (i) strong leadership by the sector authorities who started the reform process, with the support of two Bank loans, in the mid-1990s; (ii) the initial impetus of the reform was complemented by subsequent loans aimed at consolidating the reform of lower secondary and extending the transformation to upper secondary, with particular emphasis on building consensus for reform in the national agenda and learning from relevant models of secondary education worldwide through national workshops, international seminars, and study visits, thereby adding value to the design and favoring the sustainability of the reform; and (iii) consolidating a solid executing unit—with the continuity of a committed team—and developing a clear and streamlined framework for execution by means of operational rules granting a high degree of autonomy and agility to the executing unit. As a result, project execution in the sector can be considered positive in the context of the Bank's portfolio in Uruguay.

The country and the Bank now face the challenge of improving the efficiency of both lower and upper secondary. High school completion rates stagnated between 1991 and 2008. Uruguay ranks 7th in completion of 9th grade (71%, 25 percentage points lower than Chile) and falls much further in rankings by the percentage of teenagers completing the upper cycle of secondary education: only 36% finalized 12 years of schooling, 16 percentage points below the average for the Region. The gap in educational outcomes by social characteristics observed in secondary education remains one of the main constraints in education in Uruguay and challenges the education system's ability to achieve equal learning opportunity for all.

*Sources:* OVE case study mission, 2005 IDB Education Strategy.

**Using a performance-driven loan to build capacity.** Use of a performance-driven loan (PDL) for Paraguay Escuela Viva II (PR-L1028) did not respond to the budget logic in Paraguay, where the public management culture is based on process and not on accountability and results. The PDL required external certification of eligible expenses; this reduced monitoring costs for the Bank but did not produce significant changes for the Paraguayan government, which was required to register all records as if they were specific investment expenditures.

The PDL also requires external certification of goals achieved. This not only has an additional cost for the country but can generate disagreements among the parties (Bank, executor, external consulting firm), further increasing the complexity of the situation. Disbursements depend not only on the effectiveness of the execution, but on a third party's interpretation of the results of the execution. In Paraguay, the opinion of the third party that certified the results was different from that of the auditing firm that supported the eligibility of expenditure; thus a fourth partner was added to the conversation, increasing the risk of problems related to the reimbursement of expenses. Even though the PDL allowed more flexibility to adjust goals than a policy-based loan, it also followed an “all or nothing” approach—that is, no payment could be made until all goals of the agreement were fulfilled. This gave rise to delays in project execution.

Despite the negative aspects, the *Escuela Viva II PDL* helped Paraguay begin changing its focus to results, and it started to improve the programming capabilities of the executing agency and the development of tools and processes. The program now plans on the basis of intermediate results, not just inputs; quantifies the projection of the results in physical and financial terms (cost of producing each product); and measures progress toward final outcomes every six months

There was no provision for a midterm evaluation in the Escuela Viva design, but the evaluation was incorporated for 2013. The evaluation will assess whether the program is being implemented as designed, link results achieved to project activities, and explain deviations from the original design. The PDL may have been instrumental in initiating this change.

### **C. STRENGTHENING MONITORING AND EVALUATION**

If M&E is meant to be a true means of institutional strengthening and a way of improving the effectiveness of national investment, then the Bank's interest should be broader than simply tracking the inputs and outputs of loan funds—it should focus on moving governments' attention to identifying, among the many and sometimes politically appealing ways in which resources can be applied, those programs that keep what is known to be effective and that move the country forward. Secondary education is widely regarded as the lever for national progress in all countries in the

Region. M&E, properly implemented, can provide the population with evidence about where public resources have the greatest impact on national returns, if this evidence focuses on issues such as productivity, general welfare, and equity concerns. From the Bank's perspective, that could also include deciding on a set of three or four outcome indicators—for example, enrollment, grade progression, completion, performance on national tests—that all loans need to track from baseline to the end of the project.

For most projects in the case study countries, the primary M&E focus was on creating and establishing information systems for consolidating, monitoring, and reporting on education, physical, financial, and management indicators. It was difficult in many cases to detect clear evidence of decision-making based upon the results these systems provided. Only 3 of the 31 operations with an M&E component fulfilled conditionality related to implementation of the final project evaluation (DR-0125, ES-0083, UR-0107).

In Argentina, the first phase of the Program to Support a Policy on Improving Equity in Education – PROMEDU (AR-L1038) planned a package of evaluations to obtain inputs for subsequent tranches of the program. According to the loan proposal: *“In addition to the program monitoring and evaluation activities described in paragraph 3.11, a strategy has been designed to evaluate the main impacts PROMEDU is expected to have on the three core objectives: (i) secondary school coverage and completion by very poor youth (retention and graduation)....”* Because very few data were provided during the case study visit to the country, the mission team was unable to assess the benefits of the various project initiatives.

The indicators used in most loans, and reflected in the M&E systems that were established with Bank support, tended to be highly project-focused and/or project-specific. This limits the likelihood of sustainability or replication to other areas of the responsible ministries. Of the 246 principal project indicators listed for completed programs in the case study countries in the area of institutional strengthening, all but two reflect activities or quantify outputs, not outcomes. For example, DR-0125 lists as a principal indicator *“four teacher centers equipped with libraries and education management information systems”* but does not clarify what the results of this output should be. An appropriate outcome indicator would be how many people use the library and the education management information system, and for what reasons. While the Bank must track performance indicators of outputs, it must also include indicators of the desired institutional change. At the project design phase more attention needs to be paid to the statement of outcome indicators and the type and quality of data that need to be collected to assess their achievement.

#### **D. STRENGTHENING NATIONAL STUDENT ASSESSMENT SYSTEMS AND PARTICIPATION IN INTERNATIONAL ASSESSMENTS**

The expansion of educational services in LAC needs to be accompanied by a permanent effort to measure the quality of the services provided to, and the competencies developed by, the students. In 1995, the beginning of the evaluation period covered by this report, few countries had any national assessment systems in place. Over the last two decades, the Bank has supported LAC countries in strengthening their institutional capacity to develop national assessment systems for the basic and secondary levels of education. The results of these efforts have been mixed.

There is large variation in the type, regularity, and representativeness of student assessment systems and in the institutional arrangements under which they are administered. Chile, Colombia, and Mexico administer tests of academic achievement annually on a census or sample basis. Paraná discontinued its State Assessment Program (established by the World Bank and subsequently funded by the Bank under PROEM) but now participates annually in the federally funded national assessment program at both the primary and secondary levels. Other LAC countries periodically assess student performance with Bank support but lack a permanent program to sustain the capacity to do so. Many English-speaking Caribbean countries share a common curriculum and engage in annual assessments at the regional level; however, participation is voluntary. As a result of these variances, comparisons across LAC countries are difficult, and measuring trends in the Region's education systems can be a challenging task.

A national assessment system needs the technical expertise to develop valid and reliable test items, conduct item analysis, draw samples, administer tests, analyze test data, and disseminate results, and it must be able to reach all areas of the country to administer the tests. From an administrative perspective, a national assessment system should work closely with the Ministry of Education, but it needs independence so that political concerns do not interfere with technical decisions. Furthermore, the government's commitment to support such a system needs to be translated into a budgetary allocation that realistically reflects the work to be conducted. A national assessment system is expensive and is often the bearer of bad news. Careful examination of the technical expertise available and the commitment of the government, as reflected in budgetary allocations, should precede the establishment of a national assessment system. Programming assessment activities annually, rather than sporadically, may fit better with country-level budgetary cycles, as assessment costs are high and not easily assumed in a ministry's normal budget. Assessment systems will not prosper if they are dependent on project funds, and they will most likely disappear once the project ends.



In several countries the Bank has supported national assessments to measure math, language, and communication skills. In Paraguay, the IDB and the World Bank supported the establishment of the National Assessment Unit, but the Government was not able to sustain the same level of effort once the projects ended. In September 2012 the case study mission found that the unit had been moved to the Department of Planning, with only three of the original staff remaining, and that it performs little of its former function. Thus the resources spent on international consultants, scholarships for the unit's technical staff, test development, and operational costs, and all that was learned from conducting two national assessments, were mostly lost.

An alternative to establishing a national assessment system is for the Bank to support countries in participating in international assessments, such as the PISA and Trends in International Mathematics and Science Study (TIMSS). Participation in international assessments has at times been widespread: in 2009 11 LAC countries (Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Panama, Peru, Trinidad and Tobago, Uruguay, and Venezuela) took part in the PISA. Fewer countries participated in the 2012 PISA, in part because of budgetary limitations. For TIMSS, only Argentina, Chile, Colombia, El Salvador, and Honduras have participated in any of the rounds (1995, 1999, 2003, 2007, and 2011). On average, three LAC countries have participated in a given round of the TIMSS.

## **E. RESULTS**

The majority of completed loans examined for this evaluation included one or more institutional reform or institutional strengthening component. Of the 31 completed loans, capacity building was included in 26 operations, decentralization and school management in 13, M&E in 28, and student assessment in 10. Despite this support, weak institutional capacity was still among the most frequently cited challenges to the development effectiveness of Bank-supported projects in education. At least part of the reason is the relatively weak performance of Bank operations in all four indicators used by the Bank to track its contribution to institutional strengthening. For example, only 14 of the 26 loans that measured capacity building achieved at least 80% of their output indicators, and even fewer loans achieved their targets in decentralization and school management and M&E. Only loans with activities related to the institutionalization of student assessment practice had a better performance, as 9 of the 12 loans that measured this output achieved their targets (see Table 8).

**TABLE 8. DISTRIBUTION OF COMPLETED LOANS BY ACHIEVEMENT OF OUTPUTS (N=31)**

OUTPUT TOPIC: INSTITUTIONAL STRENGTHENING	Loans with a component on institutional strengthening	Loans with at least one measured indicator on institutional strengthening	Loan results		
			Achieved at least 80% of indicators	Some progress	Not achieved or not evaluable
Capacity building	26	25	14	7	5
School management	13	23	10	11	2
M&E system	28	21	13	4	4
Student assessment system	10	12	9	1	2

Source: Evaluation Survey Instrument, OVE (2012).

*Note:* The analysis of achievement of results was not based on loan objectives because objectives were too broad in some cases and did not specify more detailed topic areas. For example, some loans financed an activity (e.g., institutional strengthening) and had an indicator measuring a topic that was not mentioned in the objective. More commonly, the topic mentioned in the objective had no indicators in the PCR to measure related activities and results. Those that did present related indicators often lacked a final value in the PCR (84 indicators for completed loans) and thus were not included in the calculations, since the missing information made it impossible to assess progress.

## F. SUMMARY

The Bank's initiatives to support education reform have focused on supporting decentralization efforts, strengthening school-level management capabilities of principals, and increasing the effectiveness of community participation in school management. Decentralization efforts supported by the Bank have yielded both positive and negative results because of the complexity of the process, which involves structural, budgetary, and personnel issues. Furthermore, decentralization requires significant capacity building and needs considerable time to consolidate. For example, training principals in school management is relatively straightforward compared to increasing effective community participation, which requires adaptation to community conditions and make-up. Also, more attention needs to be given to the challenges in urban schools, where community cohesion tends to be more elusive.

M&E plans were not regularly established at the onset of projects and, as the case studies and PCRs show, even when M&E systems were established, they were often not sufficiently used as management tools during project implementation. Baseline studies, which could have allowed before-and-after comparisons, were rare, as was systematic, strategic medium- and long-term planning. In many of the case studies, insufficient evidence was found to substantiate the PCRs' claims of project "success." At the design phase of a project more attention needs to be paid to the statement of a small but powerful set of outcome indicators able to document change in the areas of priority—equitable access to and distribution of resources and quality of the educational product delivered.

Student assessment has increased greatly over the last two decades in LAC, often with Bank support, but it needs to be better institutionalized and integrated into ministry policy discussions, planning, and operations. It is important to note that more success is achieved when assessment activities are conducted annually, rather than sporadically (every three or four years, for example), to fit into the ministry's regular budgetary cycle. Unless a national assessment program is integrated into the ministry's or government's regular operations, Bank support that allows countries to participate in international assessments could be a viable alternative.



Trinidad and Tobago's Secondary Education Modernization Program led the way to the consolidation of a general five-year secondary education for all students, the elimination of student tracking, institutionalization of a longer school day to facilitate additional time-on-task, and the introduction of Spanish as a core subject.  
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# 7 Conclusions and Recommendations

**As the Bank’s overall amount of education financing for the Region increases, so does its role in supporting education policy reforms that affect access, efficiency and learning outcomes. The Bank has the potential to make significant contributions to improving secondary education outcomes for *all* students.**

However, educational disadvantage is deeper and more complex than the disparity in the numbers of schools with libraries, the conditions of the school building, or the availability of computers. More attention needs to be given to what works—that is, what strategies have been shown to improve student retention, completion, and achievement. Political dynamics need to be understood and taken into account in loan design, while at the same time recognizing that those dynamics also determine in part the role of the Bank (as discussed in detail in Chapter 6 on Strengthening Institutions) and the extent to which inputs are used productively. In many LAC countries it is imperative to enhance the management of the educational system at all levels, especially in the areas of results-based management, assessment, and M&E. Drawing on the evidence presented in this evaluation, OVE has four recommendations to help enhance the effectiveness of future Bank support for secondary education:

- Focus Bank support much more centrally on improving the quality of secondary education, including investing more resources in understanding the root causes of poor-quality secondary education, determinants of student and teacher performance, and “what works” at the secondary level.
- With regard to access, focus Bank support more centrally on *upper* secondary, especially among vulnerable and disadvantaged populations.
- Put more emphasis on innovation and strengthen the knowledge repository to learn from and disseminate lessons of experience in secondary education, including on flexible delivery models for disenfranchised populations, alternative delivery models for harder-to-reach populations, cost-effective use of technology, and relevance and effectiveness of vocational education and training approaches.
- Produce PCRs with a full evidence base, showing what results were produced and why. Strengthen the measurement of results at the project level by setting a manageable number of realistic targets and markedly enhancing the tracking of outcomes and impacts attributable to each project.





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- <sup>1</sup> UNESCO (2012).
- <sup>2</sup> Cárdenas *et al.* (2011).
- <sup>3</sup> Alfonso *et al.* (2012).
- <sup>4</sup> Cardenas, *et al.* (2011). Note that nearly all LAC countries rank 105 or worse (out of 144) on the World Economic Forum's Business Costs of Crime and Violence indicator. At the bottom of the list are Haiti (138), Trinidad and Tobago (139), Jamaica (141), Honduras (142), El Salvador (143), and Guatemala (144); and Mexico (135) and Ecuador (131) are not far above. Only Chile (78), Suriname (95), Barbados (74), and the Bahamas (not reported) rank below 105.
- <sup>5</sup> UNESCO (2012).
- <sup>6</sup> Authors' calculations using Sociometro 2013. See Annex 4.
- <sup>7</sup> Fiszbein and Schady (2009), Saavedra and Garcia (2012).
- <sup>8</sup> Alfonso (2012); TC Profile: RG-T2045: "Decreasing High Dropout Rate in Secondary Schools in LAC - What can we learn from Korea?"; Hanushek, Lavy, and Hitomi (2006).
- <sup>9</sup> Vegas and Umansky (2005)
- <sup>10</sup> Hedges *et al.* (1994)
- <sup>11</sup> For example, see Harris and Sass (2011) for a review of studies on teacher training and Bruns *et al.* (2011), pages 102 to 104, for a discussion on school-based management.
- <sup>12</sup> SERCE (2008); Glewwe *et al.* (2012); Duarte, Garguilo, and Moreno (2011); Angrist and Lavy (1999); and Urquiola (2006)
- <sup>13</sup> OVE Background Work, 2012. Countries where the percentage of TVE enrollment is higher in rich deciles include Chile, Guatemala, Paraguay, El Salvador, and Peru. Countries where the percentage of TVE is higher in poor deciles include Mexico, Honduras, Argentina, Uruguay, and Colombia.
- <sup>14</sup> Sawchuk (2011); Harris and Sass (2008); Bassi *et al.* (2012)
- <sup>15</sup> SERCE (2008)
- <sup>16</sup> OECD (2010)
- <sup>17</sup> UNESCO (2011).
- <sup>18</sup> UNESCO (2012b).
- <sup>19</sup> *Ibid.*
- <sup>20</sup> LAC has not benefitted from "innovative financing" as much as other areas of the world have. Financing of the education sector remains much the same, compared with innovations in the sectors of global health and climate change (e.g., GAVI in health and public-private partnerships in climate change). Aid sources such as DFID and CIDA have moved from a country-specific focus to a more regional approach. New (but small-scale) resources come from cooperation agreements, including with Spain and the Organization of Ibero-American States for Education, Science and Culture. Some countries have set up a fund from energy-related revenue to internally finance education—for example, Paraguay's FONACIDE. See Gottschalk (2012); World Economic and Social Survey (2012); OVE Country Case Study for Paraguay, 2012.

- <sup>21</sup> These loans are Modernization of Secondary Education (UR0107); Secondary Education Improvement–Parana (BR0167); Distance Education Program (ME0052); Secondary Education Program (TT0023); Middle Education Expansion and Improvement (BR0300); Secondary Education (DR0112); Middle Education and Labor Program (HO0202); Multiphase Skills-Based Human Resources Development Program (ME0250); Skills-Based Human Resources Development Program [PROFORHCOM II] (ME-L1039); Secondary and Technical Education and Teachers Training Support Program (UR-L1050); and Productive Communitarian Secondary Education (BO-L1071).
- <sup>22</sup> Lower secondary education attendance is compulsory for youth aged 12-15 years in 16 of the 18 LAC countries: Argentina, Bolivia, Brazil, Chile, Costa Rica, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Panamá, Paraguay, Peru, Uruguay, and Venezuela. Only in Honduras and Nicaragua is primary education still the only compulsory level.
- <sup>23</sup> The majority of projects supporting TVE are managed by EDU, with the exception of two supervised by the Labor Markets Unit (LMK) (both in Mexico).
- <sup>24</sup> During the period of analysis, Argentina received three loans, Mexico six, and Brazil three.
- <sup>25</sup> Dominican Republic received five loans, and Haiti, Honduras, and Uruguay four each.
- <sup>26</sup> Eleven loans that focus exclusively on secondary education are spread among eight countries; Mexico has three and Uruguay two.
- <sup>27</sup> Categories are not mutually exclusive.
- <sup>28</sup> If those two loans are excluded, the average cancellation of funds drops to 9%.
- <sup>29</sup> The provision of cash grants has been supported through conditional cash transfer loans under the SPH division (see section E in Chapter IV).
- <sup>30</sup> These evaluations are Heinrich and Cabrol (2005), Hinestroza *et al.* (2011), and Cristia *et al.* (2010).
- <sup>31</sup> For example, UR0132 had 63 indicators with a final value, of which 23 were outcome indicators, and BR0137 had 83 indicators with a final value, of which 5 were outcome indicators.
- <sup>32</sup> For instance, enrollment outcomes were measured in 14 of 31 completed loans and internal efficiency outcomes in 9 of 31 completed loans, whereas external efficiency, for example, was measured in only 2.
- <sup>33</sup> Binary indicators take the value of 1 if achieved and 0 if not achieved.
- <sup>34</sup> The policy conditions in this project supported fundamental education reforms in decentralization, accountability, efficiency, and quality. Investment loan funds from this hybrid, combined with TC funds (US\$500,000), facilitated the achievement of policy targets (JA-T1028, Support for Education Reform). A parallel investment loan from the World Bank also provided significant financing for activities to achieve the policy conditions.

- <sup>35</sup> For example, programmatic PBLs can create an opportunity for dialogue around medium-term reform programs. That said, education reforms in Latin America and the Caribbean are usually highly politically charged and thus very difficult to carry out in a short period of time: the more important the reform, the more controversy it will stir. The length of time it takes to carry out significant education reforms, combined with the huge investments required to do so, means that education PBLs would likely be more successful if done as a multiphase/multiprogram hybrid with an investment component (financed either by the Bank or by another party).
- <sup>36</sup> Social sector PBLs are currently led by SPH, and formerly by SO1, SO2, and SO3.
- <sup>37</sup> Because the Bank lacks systems to classify and track TC progress and results, this evaluation restricts its review of TCs to the most recent period, 2007-2012, which coincides with the creation of EDU and the most recent Education Strategy Guidelines.
- <sup>38</sup> The remaining four TCs were not under any category.
- <sup>39</sup> An attempt was made to aggregate the access/infrastructure-related outputs, but definition of indicators across projects was too heterogeneous to do so. E.g. sample of Access-related indicators: # Escuelas de Nivel Medio que han sido intervenidas contando con equipamiento mobiliario en todos los casos y mejoras para su funcionamiento; # Metros cuadrados de obra nueva para Escuelas de Nivel Medio y Superior; Expansión y mejor distribución de la oferta de enseñanza media; Recuperación y expansión de X escuelas recuperadas y adecuación del espacio físico con el nuevo currículo; # Aulas con reparaciones menores sistemas de dotación de agua para escuelas; # Nuevos cupos utilizados en las aulas habilitadas del cuarto ciclo.
- <sup>40</sup> *Secretaría de Educación Pública, Sistema Educativo de los Estados Unidos Mexicanos, Principales Cifras del Ciclo Escolar 2012-2013.*
- <sup>41</sup> García Aretio (2009).
- <sup>42</sup> OVE, Mexico CPE (2012).
- <sup>43</sup> Heinrich and Cabrol (2005).
- <sup>44</sup> Barrera-Osorio *et al.* (2010).
- <sup>45</sup> The countries were Argentina, Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, México, Nicaragua, Panama, Paraguay, Perú, and Trinidad and Tobago. A handful of countries had more than one CCT program.
- <sup>46</sup> The Division of Social Protection and Health (SPH), formerly the Division of Social Programs (SO1/SO2/SO3), supervises all national-level CCT programs financed by the Bank
- <sup>47</sup> Fiszbein and Schady (2009).
- <sup>48</sup> Just over half of the countries' CCTs cover the complete cycle of secondary education. Three cover primary and lower secondary (Argentina, Brazil, and Honduras), and four cover only primary students (El Salvador, Guatemala, Nicaragua, and Peru).
- <sup>49</sup> While Bank-supported impact evaluations have been carried out in many countries, some did not distinguish between results for primary and secondary school students, and others did not include secondary school students in the evaluation even when they were program beneficiaries.



- <sup>50</sup> Comparing the levels of these impacts is not appropriate because the evaluations vary considerably in terms of population targeted, population evaluated, evaluation methodologies, time periods included in the evaluations, and, of course, in all the factors related to the design of the programs and the context of the countries involved.
- <sup>51</sup> In spite of difficulties in comparing impact levels across programs, there is qualitative evidence of impact heterogeneity among younger versus older children (see, e.g., Gilligan and Fruttero, 2011, and Bedoya, 2013, for evidence in Brazil and Jamaica).
- <sup>52</sup> Jamaica, Colombia, Mexico and the Dominican Republic, for example, have all adopted a highly differentiated grant structure such that the amount of the cash grant increases with age and education level, among other innovations (graduation bonus, etc.).
- <sup>53</sup> E.g., countries that did not prioritize secondary education (Nicaragua, Guatemala, El Salvador, Peru) exhibit high primary net enrollment (between 92% and 97%) and low but increasing enrollment rates in secondary education (46% for Nicaragua, 50% for Guatemala, 58% for El Salvador, and 78% for Peru).
- <sup>54</sup> Some relevant questions to answer through these pilot projects and evaluations: (i) the appropriate level of the incentive for diverse populations; (ii) whether a uniform or a differentiated scheme would work best in diverse contexts; (iii) whether increasing the conditions or relaxing them is the most appropriate policy to increase school outcomes; (iv) what the best timings for the incentives are to address different schooling problems, and (v) whether there are any complementary measures that could improve the outcomes of those children who consistently do not comply with the conditions, or for whom the incentive seems to be less effective.
- <sup>55</sup> Some elements that this evaluation system could consider: (i) an improved definition of the evaluation agendas, consistent with the program/project timelines and their needs; (ii) additional monitoring and evaluation workshops provided at different levels of the organizations involved in the projects and within the IDB; (iii) increased use of implementation evaluations to support the impact evaluations, and particularly to identify and monitor risks for the project (and for the evaluation) and design the needed adjustments on time; and (iv) a knowledge system—for instance, a periodic publication on lessons learned based on the results of rigorous implementation and impact evaluations that allow for an appropriate assessment of outputs, outcomes, and impacts.
- <sup>56</sup> UNESCO (2012b).
- <sup>57</sup> Tsang *et al.* (2002).
- <sup>58</sup> *Ibid.*
- <sup>59</sup> Vegas and Umansky (2005).
- <sup>60</sup> Ñopo (2013).
- <sup>61</sup> See Behrman *et al.* (2012); Harris and Sass (2011); Vegas and Umansky (2005).
- <sup>62</sup> Behrman *et al.* (2012).
- <sup>63</sup> Caveon, Test Security (2012).
- <sup>64</sup> Non-independent test taking refers to students receiving assistance with answering exam questions (during or before the exam), communicating and sharing answers with other students, and using crib sheets with answers to test questions, among other behaviors.

<sup>65</sup> For example, in Paraguay the operational budget is highly committed to recurrent costs (92%), leaving little margin for investment, discretionary spending, research, or educational materials. In Peru, less than 1% of the school budget goes toward the procurement of textbooks and teaching aids.

<sup>66</sup> PREAL (2009).

<sup>67</sup> Marzano *et al.* (2005).