



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

EDUCATION AND EARLY CHILDHOOD DEVELOPMENT
SECTOR FRAMEWORK DOCUMENT

EDUCATION DIVISION

JUNE 2016

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ABBREVIATIONS

LAC	Latin America and the Caribbean
IDB	Inter-American Development Bank
WB	World Bank
TC	Technical Cooperation
DEM	Development Effectiveness Matrix
ECD	Early Childhood Development
IIEP	Education Planning International Institute (for its acronym in Spanish)
LP	Loan Proposal
LRR	Loan Results Report
MOOC	Massive Online Open Course
NSG	Non-sovereign guaranteed
OCDE/OECD	Organisation for Economic Cooperation and Development
OEI	Organization of Iberoamerican States
OVE	Office of Evaluation and Supervision
PMR	Progress Monitoring Report
PISA	Program for International Student Assessment
PRIDI	Regional Project on Child Development Indicators (for its acronym in Spanish)
PCR	Project Completion Report
SCL/EDU o EDU	Education Division
SCL/SCL o SCL	Social Department
SFD	Sector Framework Document
SG	Sovereign Guaranteed
TERCE	Third Regional Comparative and Explanatory Study
ICT	Information and Communications Technology
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Organization for Education, Science and Culture
UNICEF	United Nations Children's Fund

I. THE SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF THE CURRENT REGULATIONS AND THE INSTITUTIONAL STRATEGY (2010-2020)

A. The Education and Early Childhood Development Sector Framework Document as part of the existing regulations

- 1.1 This document replaces the Sector Framework Document (SFD) of Education and Early Childhood Development (GN-2708-2), approved by the Operations Policy Committee (OPC) on May 21st, 2013, in line with the provisions of paragraph 1.20 of the document “Strategies, Policies, Sector Frameworks, and Guidelines at the IDB” (GN-2670-1), which establishes that SFDs are to be updated every three years.
- 1.2 This SFD is one of the twenty SFDs prepared under document GN-2670-1, which together provide a comprehensive vision of the region's development challenges. The Education and Early Childhood Development SFD complements the Social Protection and Poverty SFD (relating to human capital development); the Health and Social Protection SFD (in comprehensive ECD priorities, which include maternal-infant health, cognitive, socio-emotional and physical development in early childhood and nutrition, as well as the health of children and school-age adolescents); the Labor SFD (in the development of labor-market relevant skills); the Citizen Security and Justice SFD (in youth and risk-prevention policies); the Gender and Diversity SFD (to achieve cultural adaptation of services with a perspective of gender and ethnic origin); and the Fiscal Policy and Management SFD (to promote efficiency in education spending). This SFD is also framed within the Bank's five sector strategies, in particular, it relates to the Strategy on Social Policy for Equity and Productivity (GN-2588-4).

B. The Education and Early Childhood Development Sector Framework Document and the IDB's Institutional Strategy

- 1.3 The Education and Early Childhood Development Sector Framework Document is consistent with the Institutional Strategy Update 2010-2020 (AB-3008), which recognizes social exclusion and inequality and low levels of productivity and innovation as the region's structural and emerging development challenges that the Bank needs to address. This SFD guides the Bank's work on the development of cognitive, socio-emotional and physical skills from early childhood through to the completion of formal schooling.

II. INTERNATIONAL EVIDENCE ON THE EFFECTIVENESS OF EDUCATION POLICIES AND PROGRAMS AND IMPLICATIONS FOR THE IDB'S WORK

- 2.1 **To guarantee countries' development and social welfare, it is necessary not only that children and young people attend school, but that they successfully acquire the learning and skills they need to succeed throughout life** (Pritchett L., 2015; Vegas and Petrow, 2008). The quality of education is a key factor in countries' economic development (Hanushek and Woessmann, 2012; Barro, 2001) and in narrowing the learning gaps between students from different geographical, socioeconomic, racial, and ethnic backgrounds (Reardon, 2013; Reardon, 2011).
- 2.2 **The factors that affect learning and the acquisition of skills can be grouped into three main categories: (i) factors on the side of the student, household and environment; (ii) factors on the side of the school; and (iii) factors on the side of the education system** (Vegas and Petrow, 2008). This section summarizes the principal findings in the international literature on the factors that affect student learning and skills' development according to these three categories. Clearly, to achieve high, equitable, and relevant learning children need to attend and remain in school.
- 2.3 **On the side of the student, household and environment**, there are three fundamental factors that affect student learning: (i) the family's educational level and socioeconomic status; (ii) health and nutrition in early childhood; and (iii) access to quality early childhood development programs.
- 2.4 **The family's educational level and socioeconomic status affects the availability of resources to stimulate learning, such as books, and cognitive stimulation.** Socioeconomically vulnerable households tend to have fewer of these resources, which has negative consequences on the poorest children's learning (Lareau, 2011; Woessmann, 2004; Woessmann, 2003; Kirsch, de Jong, Lafontaine, McQueen, Mendelovits, and Monseur, 2002; Lareau, 2000; Casassus, Froemel, Palafox, and Cusato, 2000).
- 2.5 Parents' role and their involvement in their children's education are key to produce better skills and student learning outcomes. Parents can help children with their school work, motivate them to learn, enroll them early in the education system, and encourage them to complete their education. Many children who grow up in poor households receive limited stimulation and this is extremely important for all dimensions of development: cognitive, linguistic and communicational, socio-emotional, motor and physical, etc. (Hart and Risley, 1995). Additionally, due to a lack of information about the benefits of assisting to preschool, many parents, particularly from the lowest socioeconomic status, do not enroll their children in this level (Schady, 2012; Lareau, 2000). At the same time, they do not encourage their children to remain in school, preferring that they begin to work at an early age to supplement the family income (Cardoso and Verner, 2006). Indeed, children whose mothers did not finish primary school have a much higher probability of dropping out of the education system, of having lower cognitive development, and of yielding lower student learning outcomes (Paxson and Schady, 2011).

- 2.6 Programs supporting parents to improve the quality of interactions with their children have an impact on children's cognitive and socio-emotional development and help them enter school ready to learn, as well as to obtain greater lifelong educational and economic benefits (Gertler, et al., 2013). Offering parents information about the economic returns of high quality education and of the effectiveness of the schools that their children attend along with appropriate practices to support their learning, influences parents' behavior and improve their children's performance (Ganimian and Murnane, 2016).
- 2.7 **There is consensus that the period that goes from the prenatal stage to approximately six years of age is critical for children's development** (Berlinski S. and Schady, N., 2015; Heckman, 2006; Leseman, 2002). Children's health and nutrition affects their physical, socio-emotional, and cognitive development; delays in early childhood can have a negative impact on school trajectory and outcomes in adult life. Moreover, health problems and malnutrition in early childhood are also more prevalent among the lower socioeconomic status (Grantham-McGregor, et al., 2007; Alderman, Behrman, Lavy, and Menon, 2001; Rothstein, 2004; Gould and Herman, 2003; Harris, 2002). Recent evidence indicates that the effects of an adverse environment during early childhood persist throughout life (Knudsen et al. 2006).
- 2.8 **High quality early childhood development programs boost children's intellectual and social development and help them enter primary school ready to learn** (Heckman, 2006). Despite increases in investment in early childhood development internationally, the focus has been placed on expanding access more than improving the quality of services. Evidence shows that increasing access to low-quality programs does not produce the expected results in efficiency and equity (Britto, Boller, Yoshikawa, 2011). On the contrary, quality preschool education geared towards disadvantaged children can have a life-long impact on beneficiaries' earnings and can reduce crime (Elango, Luis Garcia, Heckman y Hojman, 2015; Schweinhart, Montie, Xiang, Barnett, Belfield, and Nores, 2005). These programs are also more cost-effective than other education policies (Heckman, 2006, Glewwe, P., 2013).
- 2.9 **On the school side**, teachers are the most important factor for students to learn and acquire the necessary skills. They are followed by investment in physical resources (school infrastructure and equipment) and resources that support learning, such as books, teaching materials and technology, which, among other things, are necessary to create the right conditions for children to learn.
- 2.10 **A growing body of research suggests that teachers are the main factor on the school side in helping to improve student achievements, ensuring equality of learning opportunities, and ultimately, contributing directly to a country's economic growth** (Hanushek and Rivkin, 2012; Hanushek 2011; Kane and Staiger, 2008). There is evidence that exposure to a high quality teacher during a school year produces improvements in students' learning of between 0.2 and 0.3 standard deviations. This magnitude can exceed the one produced by a 10-student reduction in class size, and is equivalent to a year of learning (Rivkin, Hanushek and Kain, 2005). Apart from improvements in cognitive skills, exposure to high quality teachers affects children's ability to

control their thoughts, actions, and emotions, which is essential for the learning process (Araujo, Carneiro, Cruz-Aguayo and Schady, 2016). Effective teachers also have positive impacts on their students' opportunities to access higher education and even on their future earnings (Chetty, Friedman and Rockoff, 2014; Chetty et al., 2011; Hanushek, 2009).

- 2.11 **Despite the well documented evidence of the impact of teachers on education quality and countries' economic growth, research has shed less light on the aspects of teaching that lead to higher student learning outcomes.** Variables that are easy to measure have not been empirically associated with performance. For example, years of teaching experience have not been linked empirically with student performance. Similarly, only the first years of experience in the classroom influence teachers' quality (Hanushek and Rivkin, 2006; Rivkin, Hanushek and Kain, 2005). By contrast, teachers' knowledge of their subject, measured by scores obtained on tests and accreditations (in a fairly demanding teacher accreditation system), have positive effects on student achievement, particularly in mathematics (Clotfelter, Ladd, and Vigdor, 2007).
- 2.12 **Recent research has explored the impact of various teaching policies on higher student achievement.** In recent years, several impact evaluations have been run on teaching policies. The lessons learned from these evaluations can be grouped into the eight categories described below (Vegas and Ganimian, 2013).
- 2.13 **Clear goals for teachers.** Top-performing education systems set clear student learning standards or goals to guide teachers on what students should know and be able to do after completing each school grade (Jaimovich, 2016; Mourshed and Barber, 2011). These standards also include the skills that an effective teacher should demonstrate in order to ensure that his or her students learn in the classroom. In this regard, top-performing education systems also instruct their teachers on how they can help their students achieve these standards, and give them the tools they need to teach curriculum content. This is the case, for example, of Ontario (Canada), Finland, South Korea, Singapore, and the Commonwealth of Massachusetts (United States). These goals for teachers should be aligned with national student learning standards, the school curriculum, and mechanisms for monitoring and evaluation.
- 2.14 **Attracting the best into teaching.** Countries that consistently score high in the international learning assessments make efforts to attract the best people into teaching, which is one of the factors associated with good teacher performance (Barber and Mourshed, 2007). In countries with top-performing education systems, teaching is often regarded as a prestigious profession by society. In South Korea, for example, education majors accept only the top 5% best-performing secondary graduates, and as a prerequisite to work in public schools, they have to pass a national teaching exam after graduating from university (Schwartz and Mehta, 2014). Similarly, in Finland, only one in ten candidates are accepted on teaching courses. Also, Finnish secondary graduates rate teaching as the country's most admired profession (Sahlberg, 2011).

- 2.15 Although there are variations, socio-economic status, employment status and earnings, as well as level of professional development in the teaching career, can all influence expectations among the best graduates of secondary education and their expectations of becoming a teacher (Park and Byun, 2015). Salary increments (Nagler, Piopiunik and West, 2015), scholarships for teacher candidates (Alvarado et al., 2012; Glazerman et al., 2013; Henry et al., 2012), and the progression of salary increases (Hendricks, 2015; Grissom and Strunk, 2012; Vegas and Umansky, 2005) can have a positive effect on attracting qualified candidates into teaching.
- 2.16 **Preparing teachers with useful training and experience.** Appropriate training, both before entering the classroom and while in service, is important to improve teacher effectiveness (Clotfelter, Ladd, and Vigdor, 2007). At present, there is insufficient evidence to assert that any one type of training is better than another, but it is known that teacher education should entail a balance between pedagogical tools and specific content (Kane, Rockoff, and Staiger, 2006). Impact evaluations on *Teach for America*¹ show that the teachers of the program achieved student learning outcomes similar to those of teachers who graduated from teaching degree courses. This suggests that traditional teacher training programs do not necessarily give better results than other, shorter, training programs (Christophe, Elacqua, and Martinez, 2015). *Teach for America's* experience also shows that allowing new teachers to join the profession via alternative routes can help alleviate teacher shortages without affecting quality or raising costs, particularly in the case of specialized subjects such as mathematics, physics, and chemistry (Bruns and Luque, 2015).
- 2.17 Induction courses that support new teachers and provide them with mentors to facilitate their transition to the teaching practice have demonstrated to be effective (Glazerman, Isenberg, E, Dolfin, S. Bleeker, M., Johnson, A., Grider, M. & Jacobus, M, 2010; Papay et al., 2012). Initiatives of this kind include Scotland's teacher induction program, which devotes 30% of the time of the first year of teachers to professional development activities with individual mentors (European Commission, 2010). Successful experiences of teaching practice increasing students' participation in the classroom and in which teachers become facilitators of the learning process have recently been launched (Lemov, 2014; Lemov, 2010). These practices are contrary to activities in which students are passive, simply copying down from the blackboard and repeating. These activities have proven to be ineffective at improving student learning outcomes (Bruns and Luque, 2015).
- 2.18 **Matching teachers' skills with students' needs.** Education systems should create teacher assignment systems that ensure that the most effective teachers teach in the areas where their skills are most needed (schools in districts serving vulnerable populations). Assigning the best teachers to the schools that serve the most vulnerable population improves students learning and narrows the achievement gaps by socioeconomic status (Cannata, 2010; Boyd, Lankford,

¹ *Teach for America* is a US program recruiting recent university graduates with top academic grades to teach for two years in public schools serving vulnerable population groups. The program provides three months of teacher training to these young professionals and gives them support during the time they spend in schools.

Loeb, and Wyckoff, 2005; Hanushek, Kain and Rivkin, 2004; Ingersoll 2002). Teachers' skills need to be suited to teaching children with different cultural and linguistic experiences and diverse skills, ranging from those with special needs, including physical disabilities and learning impairments, to the exceptionally talented.

- 2.19 **Leading teachers with strong principals.** These studies suggest that school leadership is another important factor in schools that influences student achievement. Consequently, recruiting and retaining high quality principals can have positive impacts on learning (Branch, Hanushek, and Rivkin, 2013; Grissom, Kalogrides, and Loeb, 2012). However, there is little evidence of how to ensure that principals acquire the skills that are necessary to perform their role (Leithwood, Seashore, Anderson, and Wahlstrom, 2004). Good principals tend to attract and retain good teachers, ensure proper compliance with the curriculum, and foster discipline in the school (Christophe, Elacqua, and Martínez, 2015; Boyd et al. 2009; Ingersoll 2002; Ingersoll 2001). Moreover, teachers value principals who have classroom experience (Ballou and Podgursky, 1995). Principals can also create a sense of community within the school, making teachers feel valued and relieve their anxiety from external pressures (Mulford, 2006). Successful education systems tend to invest in training programs for principals that enable them to lead processes of school improvement and exercise instructional leadership (Mourshed and Barber, 2011).
- 2.20 **Monitoring teaching and learning.** By monitoring educational outcomes, such as student learning, it is possible to identify groups and schools that are not achieving adequate results, so that corrective action can be taken in time. For this reason, successful education systems are able to determine precisely what their students are learning, what their teachers are teaching, and how they are teaching it. Data collection and measurement allows identifying flaws within the education system that hinder effective teaching and learning. Additionally, a number of studies have found a positive relationship between the existence of systems to monitor teacher performance and effectiveness and student performance. For example, a rigorous impact assessment in India found that it is possible to reduce teacher absenteeism using a system that monitors teacher effort (Duflo, Hanna and Ryan, 2012). One case worth to highlight is the DC Impact program in Washington, D.C., which established a teacher performance assessment system that allows for teachers rated as ineffective to leave the district, while those who remain improved their performance (Dee and Wyckoff, 2013). Another study found that teachers change their teaching practices when they face accountability mechanisms, partially explaining improvements in student performance (Rouse, Hannaway, Goldhaber and Figlio, 2013; Elacqua et al., 2015).
- 2.21 **Supporting teachers to improve instruction.** Policies that foster “best practices” sharing among teachers and colleagues in the educational community tend to have positive impacts on learning. Other types of professional development, such as mentoring and joining teacher support networks, are also positively associated with teacher performance (Rockoff, 2008). In particular, support and guidance is needed to help the less skilled achieve minimum levels of instruction (Ganimian and Murnane, 2016). Similarly, some studies have also

shown that offering detailed instructions to teachers (scripted teaching) on how to teach curriculum content has led to improvements in student learning (He, Linden, and MacLeod, 2009; McEwan, Murphy-Graham, Torres Iribarra, Aguilar, and Rápalo, 2015).

- 2.22 **Motivating teachers.** International evidence on the impact that applying monetary and non-monetary incentives have on student learning outcomes is mixed. Many countries have implemented across-the-board increases in teachers' pay, but the evidence suggests this is costly and ineffective as a means of improving student learning (Hanushek and Rivkin, 2007). However, economic incentives have proven to be effective at attracting qualified teachers in key subjects, such as mathematics and science (Steel, Murnane and Willett, 2010). Some countries have experimented with differences in teacher pay-for-performance, but with mixed results. The evidence suggests that pay-for-performance systems may be effective when they entail easily measurable actions that are under the teacher's control are rewarded, such as coming to work (Ganimian and Murnane, 2016; Muralidharan and Sundararaman, 2011; Rau and Contreras, 2011; Lavy 2002; Mizala and Romaguera, 2005). Unfortunately, complex and difficult-to-measure activities, such as classroom teaching practices, are much more difficult to motivate through incentives (Ganimian and Murnane, 2016). Moreover, the relative size of the incentive can have an effect on its impact. Indeed, some systems have introduced substantial financial incentives for teachers based on student achievement. However, in many cases "high-stakes incentive schemes" have had unintended consequences, such as collusion between teachers to alter the results of learning measurements (Jacob and Levitt, 2003). Finally, non-monetary incentives, such as recognition and professional development opportunities, are also incentives that can be used to retain and attract the best to the teaching profession.

- 2.23 **Investment in infrastructure is a necessary condition for creating an environment that fosters learning. However, it needs to be accompanied by the right education policies to make the most of the investment** (Glewwe, Hanushek, Humpage, and Ravina, 2011). In developing countries, investments in ensuring that buildings meet minimum conditions for teaching and in equipping schools have an impact on student performance (Glewwe and Muralidharan, 2015; Baker, Goesling, and LeTendre, 2002; Heynemann and Loxley, 1983). The factors that show a significant positive relationship between school infrastructure and educational outcomes (particularly school attendance) include: the availability of teaching support areas (libraries, science labs, etc.), connection to public electricity and telephone services, and the availability of drinking water, sanitation, and an adequate number of restrooms (Cuesta, Glewwe, and Krause, 2015; Duarte, Gargiulo, and Moreno, 2011). Additionally, the quality of schools' walls, floors and roofs can also have a positive impact on school attendance (Cuesta, Glewwe, and Krause, 2015). Finally, there are certain aspects of the architectonical design promoted by sustainable schools or "green schools" that can affect students' and teachers' health, learning and productivity, such as: the quality of the breathing air, the classroom acoustics, and adequate temperature and illumination Committee to Review and Assess the Health and Productivity Benefits of Green Schools y National Research Council, 2007).

- 2.24 **The use of textbooks in the classroom has been found to be associated with better student performance** (Glewwe, Humpage, and Ravina, 2011; Harbison and Hanushek, 1992). Interventions that accompany providing textbooks and workbooks with other structured teaching components improve student learning.
- 2.25 **Evidence on the use of information and communication technologies (ICT) in schools is mixed.** There has been a lot of experimentation and research in recent years on the use of ICTs to improve educational outcomes. The core conclusions of these trials have been that ICTs can help prepare students for the new challenges of a labor market where it is essential to know how to use computers and in narrowing the digital divide between rich and poor students. However, they are not the magic solution to achieve higher student learning outcomes (Angrist and Lavy, 2002). ICTs are useful when they complement teaching work, but not when they replace it (Barrow et al., 2009; Malamud and Pop-Elches, 2010). However, when education interventions in which technology resources contain "guided" use (i.e., clear objectives accompanied by materials and teacher education), they can achieve significant effects on learning. In their analysis of evidence from impact evaluations on technology programs in education, Arias Ortiz and Cristia (2014) found that programs of "guided use" increase student learning around 20% of a standard deviation. By contrast, programs that do not contain guides on how to use technology to foster learning did not achieve impacts (Arias Ortiz and Cristia, 2014; Fairlie and Robinson, 2013). Moreover, interventions in which the software adapts to students' needs are the most effective (Banerjee et al. 2007; He, Linden and McLeod, 2009).
- 2.26 **There is a positive relationship between the amount of time students spend at school and student learning** (Fitzpatrick, Grissmer, and Hastedt, 2011; Fashola, 1998; Battistin and Meroni, 2013; Black, Somers, Doolittle, Unterman, and Grossman, 2009). Many education systems have adopted a policy of extending the number of hours students spend in school. This has a dual goal: improving student learning and reducing the time children and young people spend out of school exposed to risk factors while their parents are at work. It is noteworthy that lengthening the school day seems to have an effect on risk behaviors, reducing the incidence of teenage pregnancies and crime involvement (Kruger and Berthelon, 2009; Pires and Urzúa, 2014).
- 2.27 **Reducing the size of the class is an attractive policy for teachers, but is not cost-effective.** Smaller classes have an impact in terms of improved learning in kindergarten and the first grades of primary schooling, and for students with limited resources (Krueger, 2003). However, this is an extremely costly policy and of limited effectiveness (Hanushek E. A., 2002) compared, for example, to other policies, such as making quality ECD more widely available (Glewwe 2013). The teacher's quality is a key factor in the effectiveness of a policy of reducing class sizes. Large groups of students work well when the teacher has an adequate mastery of the subject and controls discipline in the classroom (West and Woessmann, 2003). Low quality teachers achieve better results with smaller classes.
- 2.28 **On the education system side,** its institutional architecture and regulations have an impact on the quality of the education services and student learning

outcomes. There are three types of complementary policies that education systems use to organize the provision of education services to students: free market policies; accountability policies, and policies to decentralize education management to intermediate levels, or even to schools.

- 2.29 **According to market theory, state regulation limits schools' responsiveness to parents', students', and communities' interests and, ultimately, contributes to low student performance and inequality of learning.** Likewise, this theory holds that service provision from the public sector creates a monopoly where schools have a guaranteed student presence regardless of their performance, and incentives are organized top-down, burying schools in red tape (Chubb and Moe 1990; Friedman 1964). Schools consequently have limited incentives to innovate, produce high quality education, respond to parents' demands, or allocate funding efficiently. Education systems that adopt market-based policies aim to achieve improvements by replacing monopolies and top-down incentive structures by market education systems through subsidies per student or vouchers.
- 2.30 Market mechanisms could improve the equity of the education system by promoting school choice, which allows low-income parents and those who belong to minority groups to choose their school of preference. This is an option which is normally only available for parents from advantageous socioeconomic backgrounds. The goal would be for parents to decide on taking out their children from low performing schools and enroll them in higher quality ones. This could improve student learning and reduce segregation (Jencks 1998). Some critics have pointed out the limitations of market mechanisms. For example, parents with lower education attainment have less time, resources, and information to make informed decisions than better-off families (Schneider et al., 2000). In order for market mechanisms to function effectively, it is crucial that there is adequate information available on school quality, access to transportation for students who live far from good schools, and regulations to prevent schools from selecting students. And there must be no barriers for families from different socioeconomic backgrounds to be accepted at the schools of their choice.
- 2.31 **OECD studies that compare the results of learning outcomes from public and private schools find that market reforms have had mixed results** (Christophe et al., 2015, Epple et al, forthcoming). Moreover, some studies have found that these reforms have not improved systems' productivity but have tended to increase segregation between schools based on students' socioeconomic status (Macleod and Urquiola, 2013). In some countries, after controlling for students' socioeconomic background and selection biases, attendance to private Catholic schools is associated with higher levels of performance than to public schools (Jeynes, 2012). **The current in systemic policies suggests that accountability is the most effective mechanism for stakeholders (e.g., parents and legislators) to monitor the activity of schools, teachers, and principals and improve performance.** This type of reform includes setting standards, aligning the curriculum with these standards, implementing evaluations and disseminating their results, making schools accountable, and penalizing schools that consistently perform poorly, while rewarding those that perform well (Figlio and Loeb, 2011). The aim of these

policies is to increase school supervision by parents and government to raise their quality (Jacob, 2005). Along the same lines, the most recent studies emphasize the importance of quality assurance systems to provide support to schools that underperform and enable them to comply with student learning standards (Jaimovich, 2016).

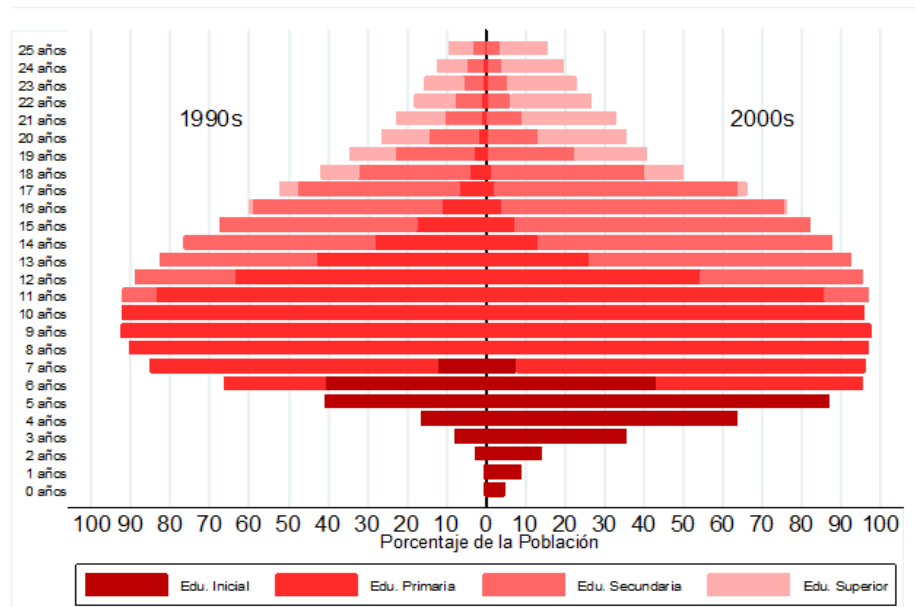
- 2.32 There is a growing body of literature on the effects of accountability reforms on student performance, schools, and teacher behavior. The evidence suggests that underperforming schools respond to accountability pressures and improve their student performance (Burgess and Arias Morales forthcoming; Allen and Burgess, 2012; Rockoff and Turner, 2008; Jacob, 2005). Additionally, research also finds that underperforming schools change their educational and teaching practices and policies significantly when faced with accountability mechanisms (Rouse et al., 2013). Nevertheless, there is also evidence that policies of this kind can induce schools to adopt inappropriate strategies, such as switching groups of students taking tests (Cullen and Reback, 2007), narrowing the curriculum (Hannaway and Hamilton, 2008), teaching to the test (Borko and Eliot, 1999), and cheating (Jacob, 2005).
- 2.33 **The third current includes policies geared towards decentralizing the provision of education services to regional or local governments, or sometimes even to schools (school autonomy).** These measures follow the logic that local-level service provision is more closely aligned with parents' and students' preferences than any policy coming from the central authorities. Although there is a vast amount of literature that describes decentralization and school autonomy processes (Winkler and Gershberg, 2000; Umansky and Vegas, 2007), there is little rigorous evidence on the impact of these policies on the behavior of schools and student learning outcomes (International Initiative for Impact Evaluation, 2015).

III. THE MAIN CHALLENGE FOR THE REGION

- 3.1 **The main challenge that Latin American and Caribbean countries face is to improve learning for all their children and youth to ensure that they have the skills they need to maximize their potential in the workplace, enjoy a healthy life, and make a productive contribution to society.** Although the countries of the region have managed to increase education coverage at all levels over the last two decades, student learning remains low, uneven, and irrelevant to the labor market demands.
- 3.2 **In the past decades, the region has made significant progress in terms of access to education at all levels.** Figure 1 presents the regional averages for attendance rates by age and educational level² over the 1990s and 2000s. A significant rise in enrollment rates can be seen on all levels, with primary education achieving universal coverage, and preschool, secondary, and tertiary education increasing significantly.

² The attendance rate is calculated from household survey responses to the question whether they attended school or not.

Figure 1: Regional average attendance rates by simple age and educational level



Source: IDB calculations using household surveys.³

Note: Graph only available in Spanish

- 3.3 **Over the last two decades, primary schooling has become almost universal in the region, and secondary education enrollment coverage has risen from 69% to 77% (Alfonso, Bos, Duarte, and Rondón, 2012; CIMA, 2015).** It is also worth highlighting that new students joining the system are drawn from the lowest income quintile, which is evidence of a substantial improvement in the equity of access to education in the region. Gross rates of enrollment⁴ in postsecondary education also rose dramatically, from 17% in 1991 to 43% in 2012 (EdStats, 2015).
- 3.4 **However, although there has been progress on access to preschool education in the region, the region still falls behind OECD countries.** In the early nineties, very few children took part in early childhood development (ECD) programs. Only 3% of two-year-olds and 8% of three-year-olds attended ECD programs, whereas in 2012 approximately 14% of children aged two and 35% of children aged three did so (Alfonso, Bos, Duarte, and Rondón, 2012)⁵. Despite progress made, challenges remain in the case of coverage of early education services compared to developed countries (Mateo y Rodríguez-Chamussy, 2015; Araujo, López-Boo and Puyana, 2013). The gross enrollment ratio for preschool education in developed countries is 88%, whereas the percentage in the region is

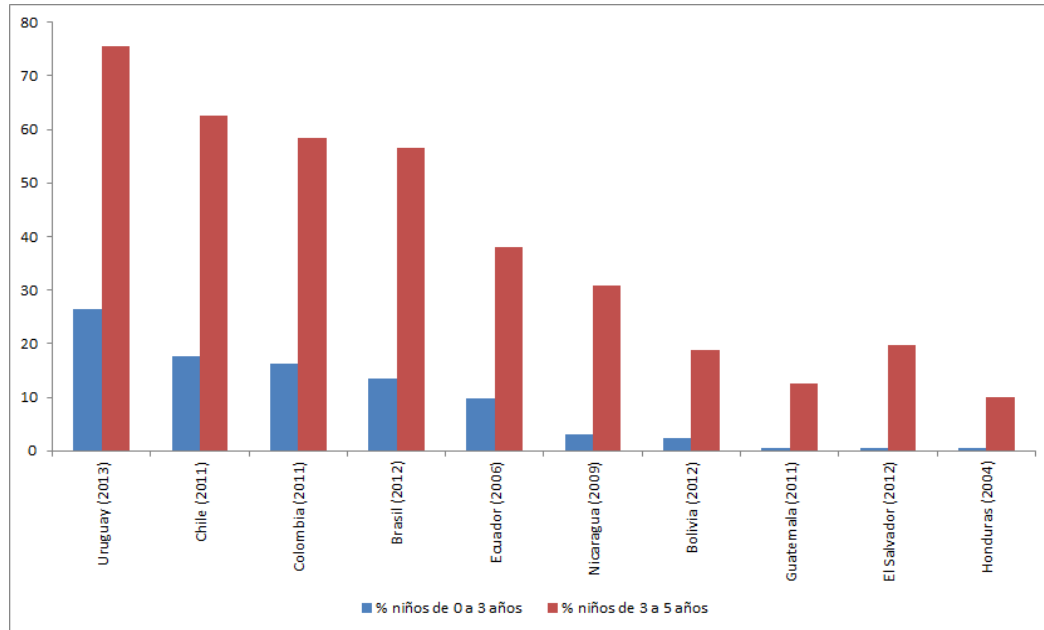
³ The figure includes data available for the following countries: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Panama, Paraguay, Peru, Dominican Republic, Uruguay and Venezuela.

⁴ The gross enrollment ratio is the ratio between the number of students enrolled in a given educational level and the total population of the age attending that level multiplied by 100.

⁵ Total ECD coverage also includes programs run by other governmental and non-governmental institutions. This SFD focuses on preschool education programs.

74%. Preschool education coverage is also highly unequal across the countries of the region (see Figure 2).

Figure 2: Net enrollment rate in pre-primary education and childhood development centers, by age in various countries of LAMC

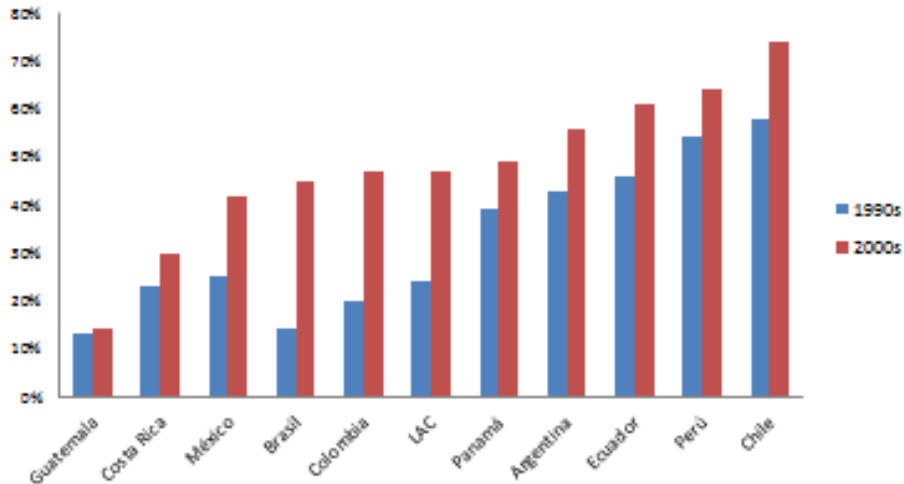


Source: Vegas and Jaimovich, 2015.
Note: Graph only available in Spanish

3.5 Challenges persist regarding education system retention and graduation, in particular in the case of lower and upper secondary. Almost half of the students who begin primary school leave before finishing secondary (Bassi, Busso, and Muñoz, 2015, Figure 3). Although graduation rates have improved and school dropouts have decreased, the fact that the quality of education remains low and that salary returns have stagnated, shows that students are less interested in remaining in the school system and that the opportunity cost of staying in school has risen. Thus, it is doubtful that the improvement trend will continue over the medium term (Bassi, Busso, and Muñoz, 2015). In Argentina, the upper secondary graduation rate is only 43%, in Mexico 48%, and in Brazil 61%; Chile is the only country with a higher graduation rate from upper secondary education, where it is 82% (CIMA, 2015). Moreover, dropping out of school is higher among disadvantaged students. Just 53% of students from the poorest quintile in the region complete secondary education, compared with 82% of students in the wealthiest quintile. These differences in terms of socioeconomic status are found in Uruguay, where 38% of students in quintile 1 graduate, compared with 74% in quintile 5. In Brazil these percentages are 25% and 60%, respectively (CIMA, 2015). A possible reason behind the relatively high Chilean secondary graduation rates is the perception among a majority of Chilean citizens that tertiary education leads to social progression. For example, a survey applied to recent high school graduates in Concepción, Chile, revealed that nearly 80% of them hoped to study at a highly selective university (Gonzalez 2014). According to

CASEN study, in Chile, approximately 7 out of 10 students are the first generation of their families to pursue an academic degree in a tertiary education institution (Observatorio Social 2015). Additionally, there are data available that support the perception that attending to a university is a mechanism for social mobility: in Chile, the private returns of a title of tertiary education compared with returns of secondary education are among the highest of the world.

Figure 3: Evolution of secondary graduation rates, 1990-2000s



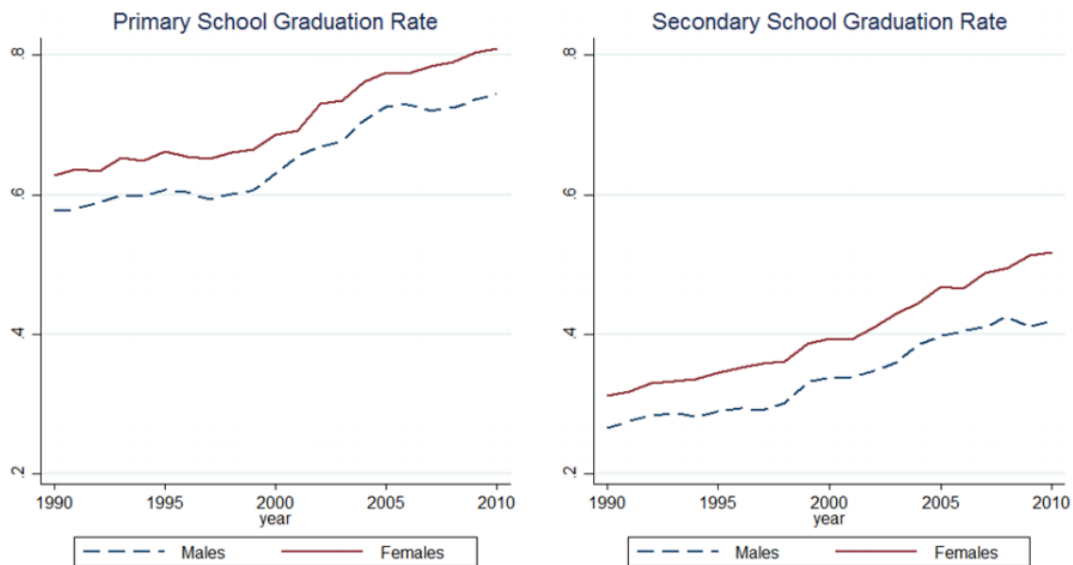
Source: Bassi, Busso and Muñoz, 2015.

- 3.6 **Furthermore, school dropout is even higher among students who come from disadvantaged households.** In the region, 53% of students from the poorest quintile complete secondary education, while 82% of the richest quintile does so. Gaps by socioeconomic status are the highest in Uruguay where 38% of the students from the first quintile graduate, compared with 74% of students from the fifth quintile. In Brazil, these percentages are 25% and 60% respectively (CIMA 2015). Other factors associated with dropping out of school in the region include students needing to work to help support their family, teen pregnancies, involvement in crime and drug use, being too old, grade repetition, and poor performance in previous years (Fernandes, 2009/2010; Gremaud, 2010; Florez and Soto, 2007). Between 25% and 32% of the youth population aged between 12 and 14 years exhibits risk behaviors, such as dropping out of school, early parenthood, unemployment, drug addiction, or having been arrested (UNICEF, 2008). Finally, the region has a high percentage of inactive youth who neither work nor study (De Hoyos, Popova y Rogers 2016).
- 3.7 **Non-formal or flexible education modalities are an alternative for students who drop-out from secondary school because they allow them to finish this level in an accelerated timeframe or outside of school hours.** Several countries, particularly those in Central America, have experimented with this type of modalities in secondary education with mixed results. Creating Quality

Assurance Systems that verify the relevance of the curriculum and teacher quality is key to ensure the quality of this type of education.

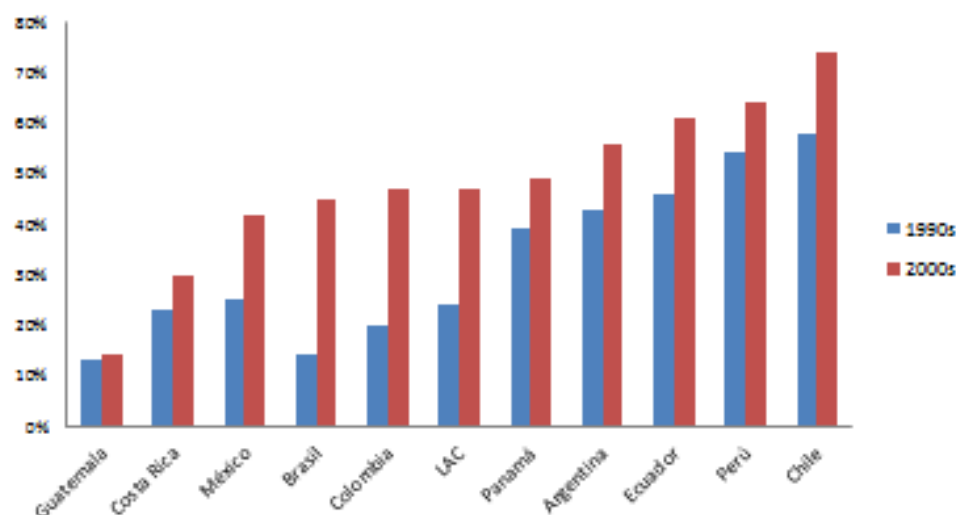
- 3.8 In terms of gender, countries in the region do not show marked gaps between boys and girls in attendance and dropout rates.** In the countries of the region, there are no gender differences in primary education attendance rates. At the secondary level, some countries (such as Uruguay, the Dominican Republic and some Caribbean countries) present gender differences in attendance in favor of girls. On average, in Latin America, 73% of girls with a secondary education school-age attend this level compared to 70% of boys. In the particular case of the Caribbean, there is also a difference in attendance in favor of girls. In this sub-region, lack of data makes it difficult to measure precisely gender differences in terms of attendance. Gender gaps are also reflected in graduation rates from secondary education. In Latin America, secondary graduation rates are higher for women than for men and the gap between these two groups has expanded over time (Bassi, Busso and Munoz 2015, Figure 4).
- 3.9 Public spending on education has increased** (see Figure 4). Between 1999 and 2012 the percentage of GDP invested in education rose from 4.5% to 4.9% on average across the region, coming close to the developed-country average of 5.4% (UNESCO, 2015a). Some countries, such as Brazil, Costa Rica, Cuba, and Jamaica currently spend close to 6% of GDP on education (EdStats, 2015; CIMA, 2015; OECD, 2013a). Social policy on early childhood represents a cumulative 0.5 to 1.6% of GDP in the region's countries (UNICEF, IPE, OEI 2015).

Figura 4: Brecha de genero de graduación por nivel (promedio de ALC)



Fuente: Bassi, Busso y Munoz 2015

Figure 5: Public spending on education as a percentage of GDP

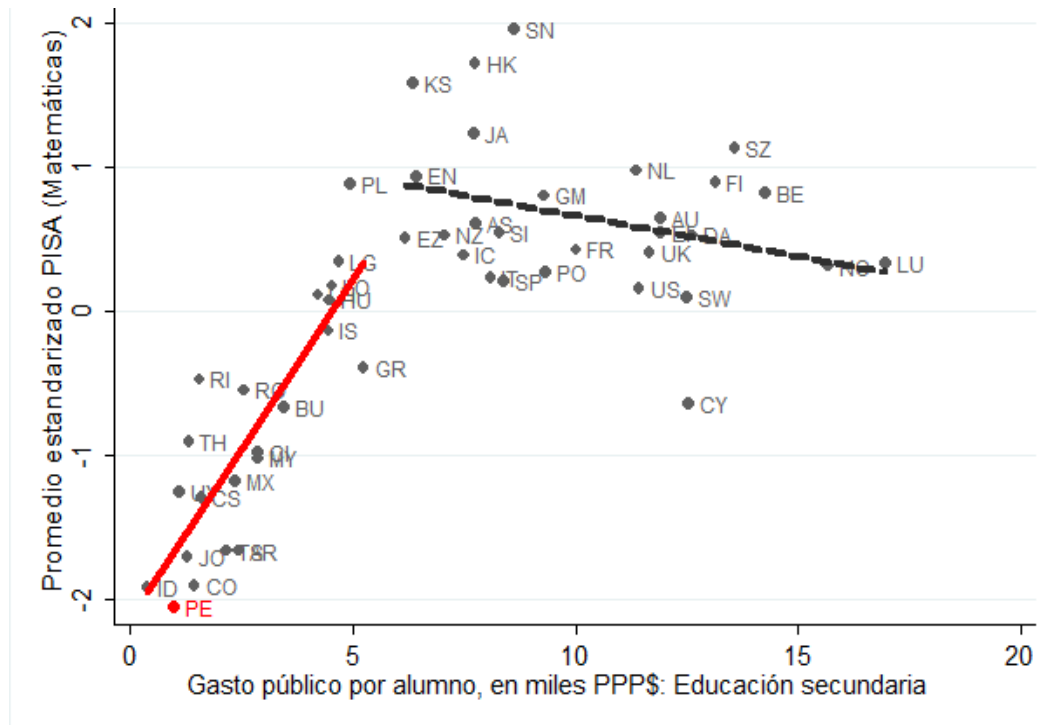


Source: UNESCO 2015a.

- 3.10 **Spending per student has also increased, though it is still low in comparative terms.** In primary education, the average spending per student in Latin America was US\$300 in 1999 compared to US\$6,000 in OECD countries (Alves and Elacqua, 2016). This investment in the region is twenty times lower than that of OECD countries. In 2012, the average spending per student on primary education in the region increased to US\$1,200,⁶ which was only 6 times less than that in the OECD during that same year -US\$7.20 (UNESCO, 2015a). It is worth noting that the relationship between expenditure per student and learning is not the same in countries with different investment levels in education. A recent study using data from the Programme for International Student Assessment (PISA) and spending on secondary education shows that in countries with low investment per student (including the Latin America and Caribbean countries), did not produce high levels of learning (Vegas and Coffin, 2015). In this group of “low expenditure” countries, the increase in the expenditure per student has a positive association with learning (see the red line in Figure 6). By contrast, in countries that spend US\$6,000 or more in secondary education per student every year, the relation between expenditure per student and learning is not statistically significant (see the black line in Figure 5).

⁶ Ordinary public expenditure per primary school student (unit cost) in constant 2011 dollars at purchasing power parity (PPA).

Figure6: Expenditure per student and grades in mathematics reported in PISA 2012



Adapted from Vegas and Coffin (2015)
Source: OECD 2015 and UNESCO 2015a
Note: Graph only available in Spanish

- 3.11 **Furthermore, in many countries public spending in education is still regressive.** Countries invest a higher proportion on tertiary education per student than on primary or secondary education. For instance, Brazil invests less than US\$ 8,000 in primary and secondary education and nearly US\$ 10,000 in tertiary education. This policy mostly benefits children and youth from better-off socioeconomic households (OECD, 2015).
- 3.12 **Both learning and skill levels of Latin American students are very low.** Out of the 65 countries that participated in the 2012 Program for International Student Assessment (PISA)⁷, 8 Latin American nations ranked in the lower third of the distribution. In considering the three tested subjects individually (reading, mathematics and science), Chile scored the highest of all Latin American countries, while Peru was last (Bos, Ganimian, and Vegas, 2013a, Figure 7). The student learning levels are also low when compared with the average of the OECD and countries with a similar per capita income level, as is the case of Russia, Turkey and some Eastern European and Asian nations (CIMA, 2015; Bos, Rondón, and Schwartz, 2012).

⁷ The Program for International Student Assessment (PISA) is a survey applied by the OECD every three years and it is addressed at 15 year-old students of the participating countries in order to measure their performance in three subjects: mathematics, reading and science. The last PISA test was run in 2012, counting on the participation of 65 countries of the world, eight (8) of which were Latin American.

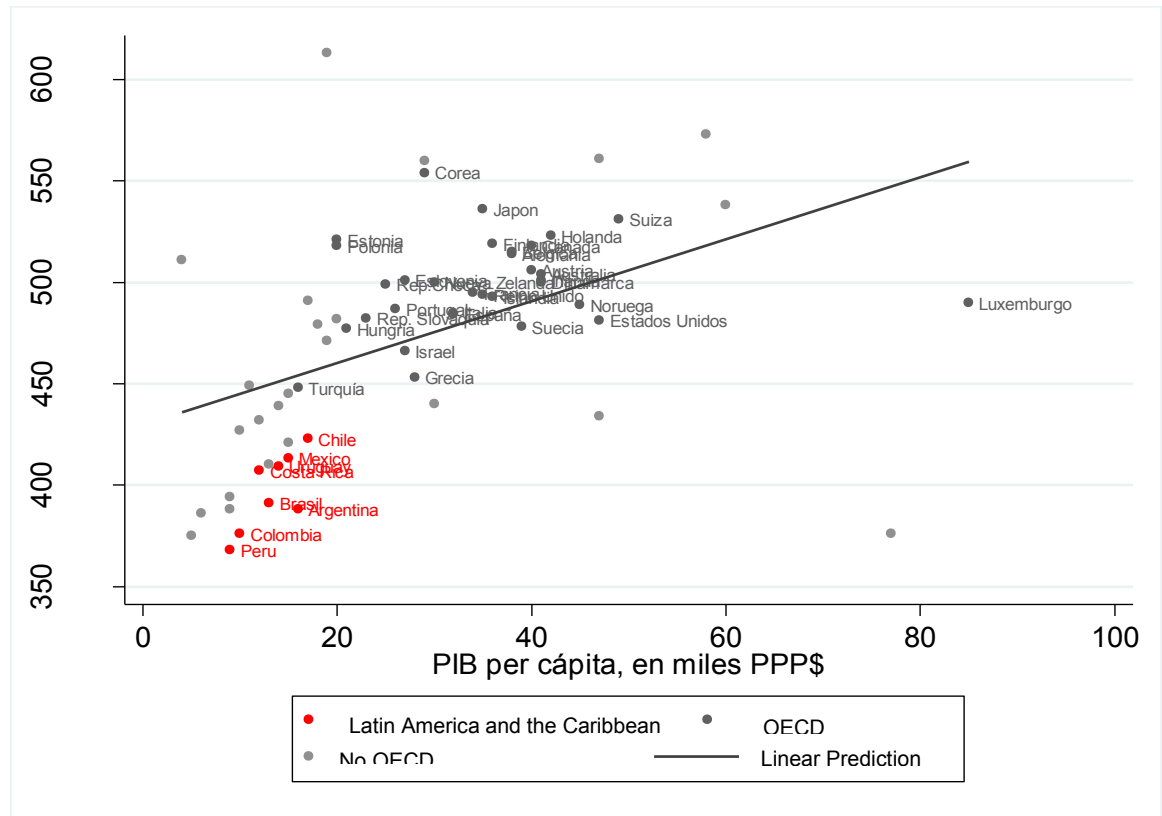
Figure 7: Ranking of countries according to the results of the reading test, PISA 2012



Source: Bos, Ganimian and Vegas (2013a).

- 3.13 **The student results are low when compared to those of countries with similar income levels.** As evidenced in Figure 8, the results of LAC countries (illustrated in red) in PISA 2012 are lower than what their GDP per capita would predict. For instance, Turkey -with a GDP per capita similar to that of Chile- has better average scores in PISA than Chile. Likewise, students in countries as South Korea and Japan have higher results than what their GDP per capita would predict.

Figure 8: Scores for mathematics in PISA 2012 and per capita GDP



Note: GDP per capita adjusted by the parity purchasing power, in constant 2005 dollars

Source: OECD 2013a

Note: Graph only available in Spanish

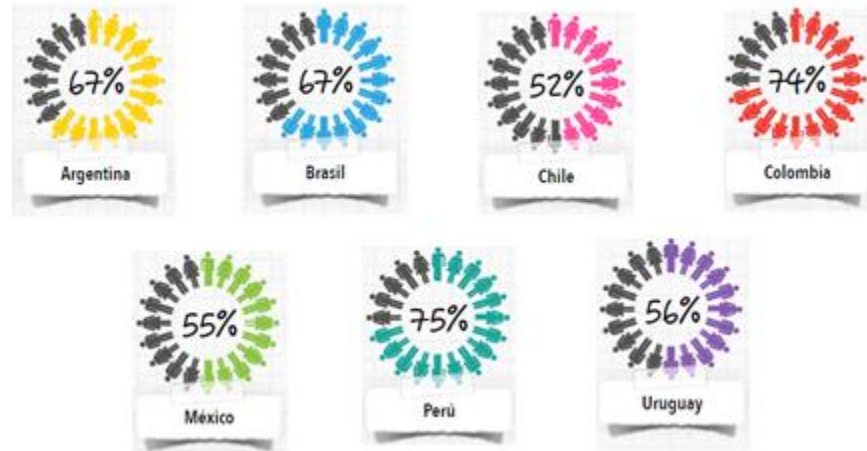
- 3.14 **A high percentage of Latin American students are unable to acquire the basic skills.** According to the results of PISA 2012, in mathematics, 63% of Latin American students do not reach level 2, which is considered by the OECD as the minimum threshold in order to reach basic skills for successful development,⁸ while 52% of students do not reach these levels in reading and 55% do not reach it in science (CIMA, 2015). These figures vary by country, as illustrated in Figure 9. The results of the Third Regional Comparative and Explanatory Study (TERCE)⁹ show similar results. Nearly half of the Latin American students do not have an adequate score in reading and mathematics and only 5% of the six-graders have an outstanding performance. Similarly, the results of the Third Trends in International Mathematics and Science Study (TIMSS) applied in 2011,

⁸ The PISA test ranks educational systems and students according to a scale of 6 performance levels, where 1 is the worst and 6, the best. According to the OECD, those who fall below level 2 in any subject that is assessed lack the basic skills.

⁹ Third Regional Comparative and Explanatory Study (TERCE, for its acronym in Spanish) is an evaluation that measures student learning that was carried out in 2012. It included 15 Latin American countries and the State of Nuevo Leon, Mexico. The performance in mathematics, reading and natural sciences of boys and girls attended third and sixth grade was measured. The participants are: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.

Chile, the only participating Latin American country, performed below average and ranked 37 out of the 50 participating countries (TIMSS, 2011). In the Caribbean region, only 35% of secondary level students who took the mathematics test of the Certificate of Secondary Education of the *Caribbean Examination Council* in 2013 managed to pass. In turn, 6% had an outstanding performance, while almost 56% recorded low performance levels (CIMA, 2015).

Figure 9: Percentage of students who do not reach the basic level (level 2) in mathematics in PISA 2012

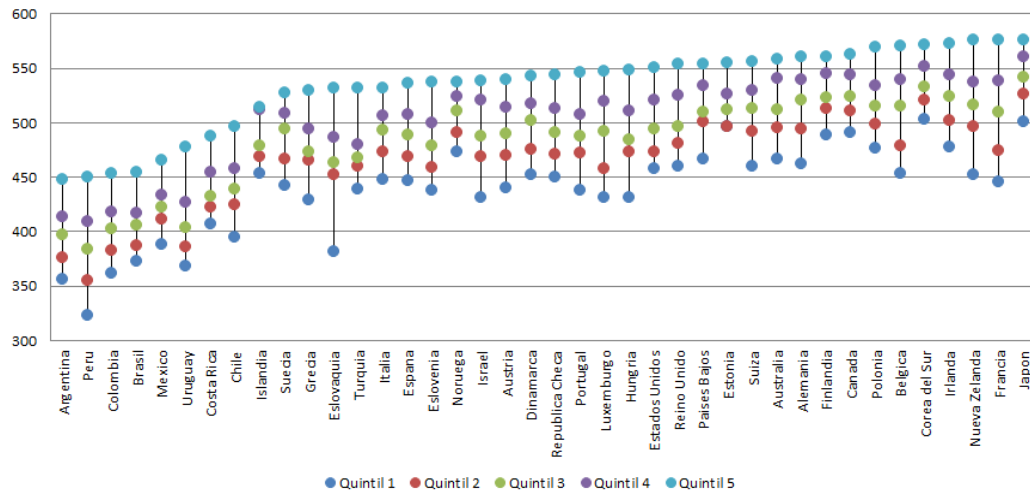


Source: Bos, Ganimian and Vegas 2014a. Calculations based on OCDE / PISA 2012 data.
Note: Graph only available in Spanish

- 3.15 **The inequality evidenced in the region as to student learning and skills by socioeconomic level is quite significant.** In the countries of the region, the gap by socioeconomic level in Mathematics PISA results averages 85 points. The poorest students lag nearly two school years behind their richest peers in mathematics, science and reading (Bos, Ganimian and Vegas, 2014d). Furthermore, the learning levels of the best performing students in Latin American countries are lower than those of students with the worst results at the top-performing education systems (see Figure 10). Approximately 1% of the Latin American students obtain noteworthy results in international mathematics and language tests. Additionally, the countries with high student learning results have more students with an outstanding performance. Whereas less than 1% of Latin American and Caribbean students have an outstanding performance in mathematics, in Shanghai, China¹⁰ - the education system with the highest performance- 55% of the students reach this remarkable level (Bos, Ganimian and Vegas, 2014b). Continuing the comparison, the best performing students in Latin America and the Caribbean obtain lower scores than the worst performing students in Shanghai, China or South Korea (CIMA, 2015).

¹⁰ Shanghai, China is the educational system with the highest performance in PISA.

Figure 10: Reading results in PISA 2012, by country and income quintile

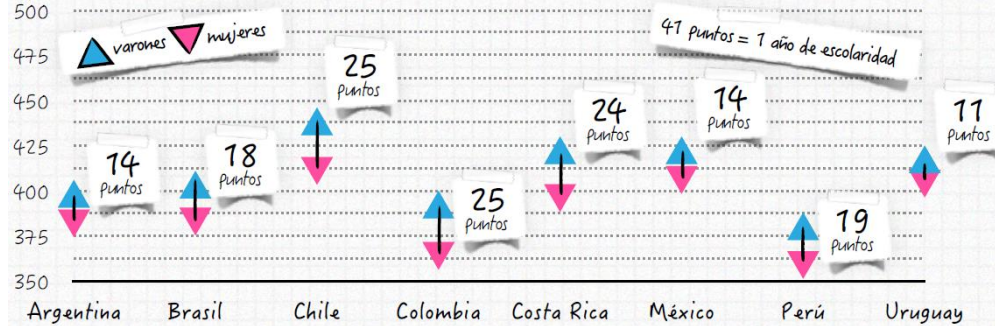


Source: OECD 2013b.

Note: Graph only available in Spanish

- 3.16 **There are also gender gaps in student learning and skills.** Similarly to international trends, in the Latin American countries that participated in PISA 2012, the young women of the region obtained higher scores in reading, while the young men had a better performance in mathematics. The gap is narrower or negligible in the area of science. Among the 65 countries that participated in PISA 2012, Colombia, Chile and Costa Rica rank among the five with the widest gender gaps in mathematics (see Figure 11). In those countries, the gap is 25 points, which is equivalent to more than half a school year. At the same time, Argentina and Uruguay have the widest gaps in the region in favor of women in reading, with 38 and 35 point gaps respectively, which is the equivalent of one school year (Bos, Ganimian and Vegas, 2014d). At the same time, it is clear that these gender gaps reflect the self-perceptions regarding skills. According to PISA survey data, women tend to believe that they are less capable of solving math problems and experience higher anxiety when doing math than do their male peers. Women also reported losing patience at higher rates than their male counterparts when they trying to solve a math problem (Bos, Ganimian, and Vegas, 2014c).

Figure 11: Performance gaps between boys and girls in the average Math score of PISA 2012

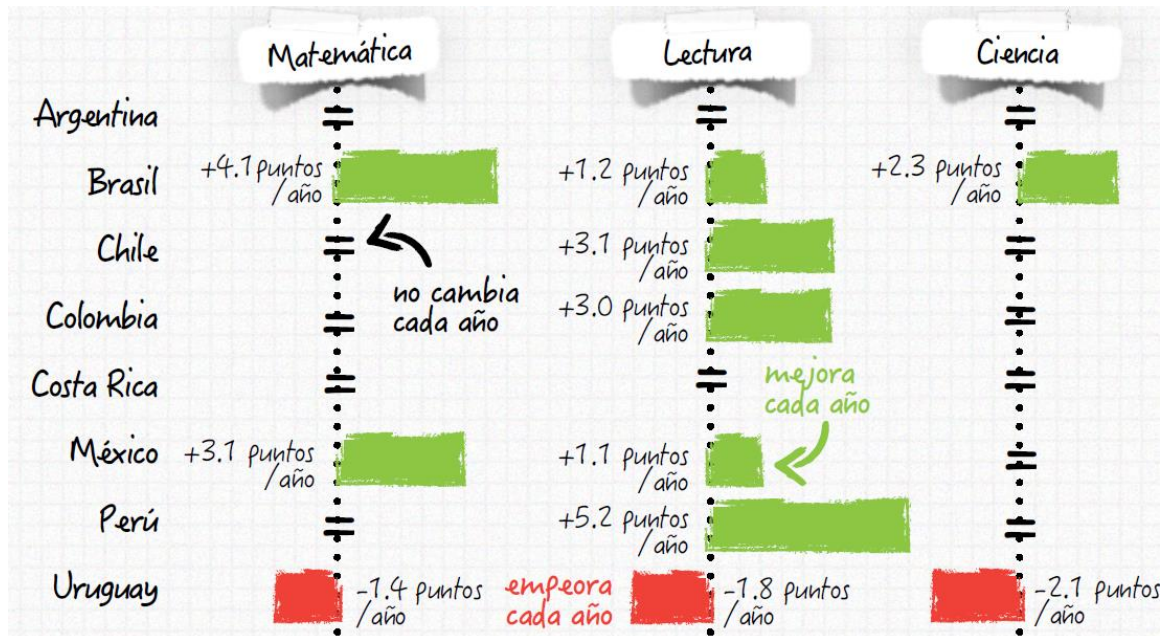


Source: Bos, Ganimian and Vegas 2014c. Calculations based in data from OECD/PISA 2012.

- 3.17 **The gaps between students from rural and urban areas, as well as from different ethnic backgrounds, persist.** In the case of the region, students of urban schools had an average score of 402 in the TERCE mathematics test while those in rural areas posted a result of 352 points, a difference which is equivalent to approximately one school year (CIMA, 2015). At the same time, the learning gap between indigenous and non-indigenous students is very pronounced, mostly in Nicaragua, Paraguay, Panama and Peru, even after accounting for variation attributed to socioeconomic level difference among students (UNESCO, 2015b). The strongest association is evidenced in sixth grade where the learning gap between indigenous and non-indigenous students of the same socioeconomic level is 28 points (UNESCO, 2015b).
- 3.18 **The citizen skills of the students of the region are quite limited.** In the International Civic and Citizenship Study (ICCS)¹¹ conducted in 2009, 6 Latin American countries ranked in the lowest third of the distribution. Chile was the country in the region with the best performance and 19% of its students obtained scores that classified them as level 3 out of the 5 of the test, which ICCS considers a holistic knowledge of the basic citizenship concepts. However, in Mexico, Guatemala, Colombia, Paraguay and Dominican Republic, these percentages account for 10%, 5%, 11%, 7% and 1%, respectively. These scores are low, especially when compared with the highest ranking countries: Finland, Denmark and Sweden, where 58%, 56% and 40%, respectively of the students have level 3 performance results (IEA, 2009).
- 3.19 **It is worth stating that several countries in the region have improved their scores in the international learning tests, indeed a positive outcome.** Between the year 2000 and 2012, Brazil and Mexico were among the five countries that had the most improved average score in mathematics, increasing by 35 and 28 points respectively. These improvements are equivalent to two thirds of a school year in OECD countries. Likewise, Chile and Peru were among the 10 countries that improved the most in reading skills: Chile went up 32 points, an improvement of almost one schooling year and, Peru, 57 additional points, or the equivalent of two school years. On average, during this period of time, the countries of the region improved by the equivalent of one school year in the three assessed subjects (see Figure 12). These trends are consistent with national evaluations (Elacqua and Alves, 2016). However, even the countries that are better positioned in the ranking and that are improving faster would need several decades in order to reach the current OECD average. Brazil would require 27 years of improvements in mathematics, 18 years of improved reading in Chile, and 39 years of improvement in science in Argentina to reach their OECD peers would need 39 years in science (Bos, Ganimian, and Vegas, 2013b).

¹¹ The International Civic and Citizenship Study (ICCS) is a test conducted by the International Association for the Evaluation of Educational Achievement (IEA) for measuring the knowledge and understanding of students on civic-mindedness and citizenship.

Figure 4: Change in student results in PISA 2000 and 2012 in the LAC participating countries



Source: Bos, Ganimian, and Vegas, 2013b.
Note: Graph only available in Spanish

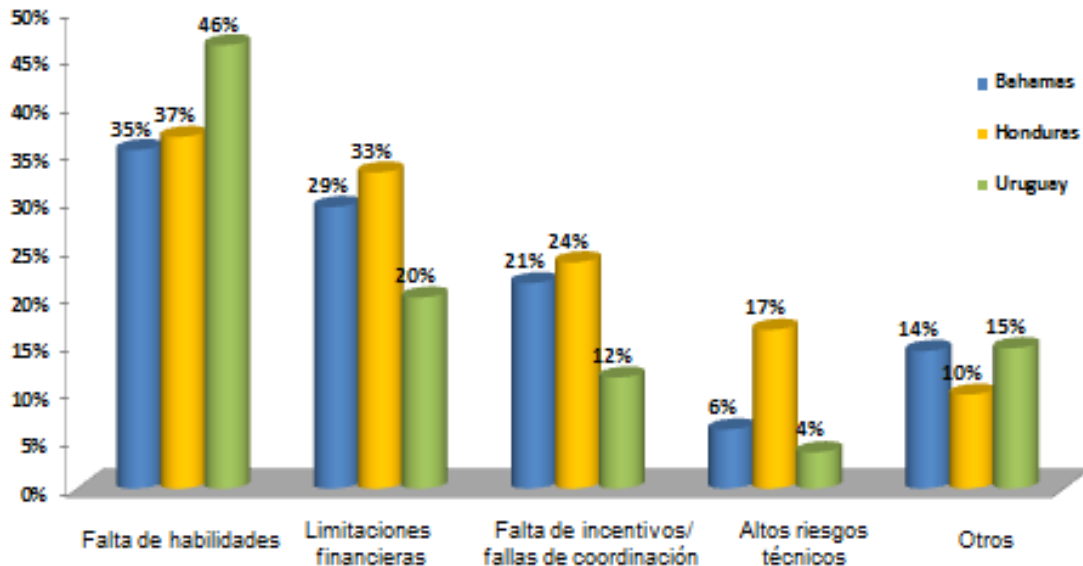
- 3.20 **Some countries have been able to narrow the learning and skill gaps as related to socioeconomic levels.** For instance, between PISA 2003 and PISA 2012, Brazil and Mexico decreased the differences in mathematics scores between rich and poor students by 23 and 30 points, respectively. These reductions resulted from improvements in the performance of the poorest students (Bos, Ganimian, and Vegas, 2014d). These two education systems were able to achieve the most significant improvements for their poorest students, facilitating an additional year of learning compared to their previous results.

3.21 There is not enough information in the region about gaps in learning for students with physical and learning disabilities. These disabilities can produce significant gaps in achievement and skills that potentially perpetuate across the school trajectory of students and throughout their professional lives. It is important that education systems have mechanisms to identify students that lag behind and then design specific interventions to serve them. These interventions range from specialized teachers, and adapted curriculum and didactic materials to schools of easy access.

- 3.22 **Learning levels and skills are inadequate for the new social demands.** Different studies report that employers in the region are unable to find trained employees that meet the new demands of the labor market (Manpower Group, 2015). Certain studies have documented a disconnection between the skills taught in school and those demanded by the labor market. They have also pointed out that student learning levels are inadequate (Bassi, Busso, Urzúa, and Vargas, 2012). For instance, in an IDB study which asked leaders from 1,200 companies in Argentina, Chile, and Brazil about their hiring experiences, 88%

stated that they were facing difficulties in finding employees having the adequate skills when they graduate from high school (Bassi, Busso, Urzúa, and Vargas, 2012). This study also evidenced that socioemotional skills are the most highly valued by employers. In the case of a similar survey carried out in the year 2008 in the English speaking Caribbean countries, the companies that were surveyed also expressed difficulties in finding candidates with the required skills and knowledge (Blom and Hobbs, 2008). These difficulties are even more pronounced in Latin America than in other regions. In fact, 12.5% of the companies that were interviewed for a study of the International Financial Corporation (IFC) answered that the lack of training and skills is the first obstacle that they face, while in Sub-Saharan Africa this percentage is only 3.2% (IFC, 2013). Finally, the lack of skills is the most important factor that limits a company's capacity to innovate, as reported by the business leaders from different countries in the region (see Figure 13).

Figure53: Reasons that limit innovation, as reported by companies in different countries, 2012



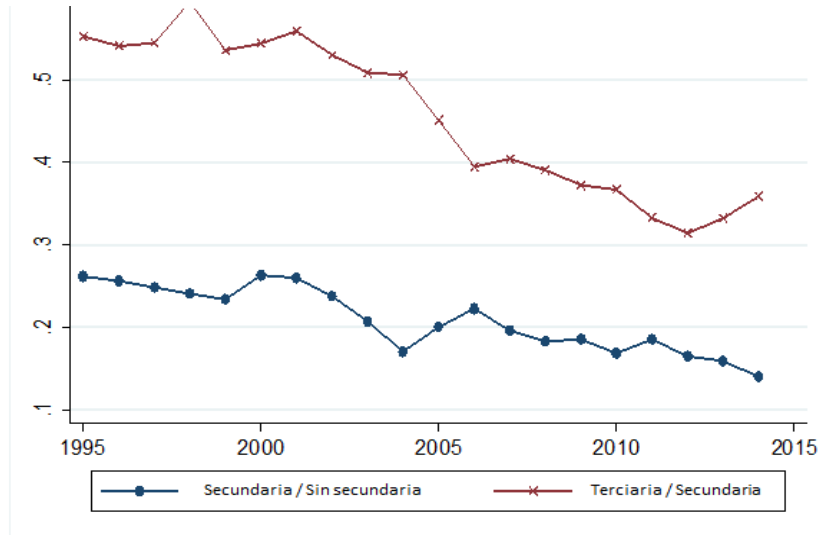
Source: Survey of Skills of the IDB, 2012

Note: Graph only available in Spanish

- 3.23 **The rates of return to secondary and higher education are dropping in the region** (Aedo and Walker, 2012). The rates of return to secondary and tertiary education vis à vis the rates of return to incomplete primary education, have dropped in the past two years in the case Argentina, Bolivia, Chile, Dominican Republic, Ecuador, El Salvador, Panama, Paraguay and Venezuela (Lustig et al., 2013) (see Figure 14, in the case of Argentina, and Figure 15, in that of Chile). Different studies have explored the reasons for the drop in the rates of return to education in the region. They can be categorized into six trends that are not mutually exclusive: (i) a decrease in the relative demand for workers with advanced skills (Levy and López-Calva, 2016); (ii) an increase in the supply of

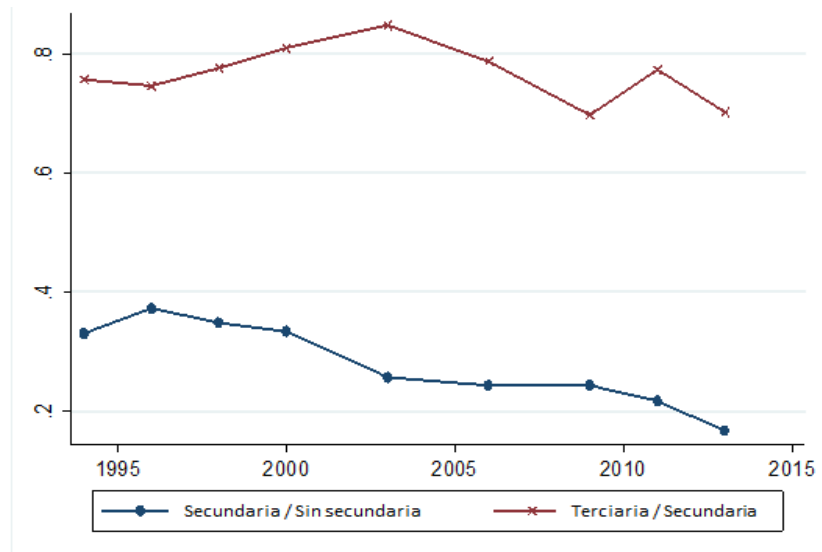
workers with advanced skills; (iii) and increase in the minimum salaries and unionization rates that benefit low-income workers more than those who earn a higher income (Lustig et al., 2013); (iv) a disconnect between the skills taught in school and those demanded by the labor market (Bassi, Busso, Urzúa, and Vargas, 2012); (v) a drop in the quality of secondary and higher education (Aedo and Walker, 2012); and (vi) a wider access to alternative secondary and higher education for people who are not adequately trained (Urzúa, 2012).

Figure 6: Evolution of the rate of return to education in Argentina



Source: UNESCO Institute for Statistics, 2015

Figure 7: Evolution of the rate of return to education in Chile



Source: UNESCO Institute for Statistics, 2015

- 3.24 **A recent study on the rates of return to technical education has evidenced that in the case of the workers who only completed secondary education, those who pursued technical-professional studies tend to earn a better income in the labor market than those who completed a secondary education program with a major in humanities.** However, the workers that pursue higher education studies have better rates of return in the market than those with a technical-professional secondary education (Bassi and Ñopo, 2013). These results suggest the need for research on the role played by technical-professional education in producing the skills that are demanded by the labor market, especially at the level of secondary education.
- 3.25 **In many countries of the region, technical-vocational education has a negative connotation and it is perceived as a low quality option for those students who have a low academic performance (Székely, 2015).** While these figures vary by country, in Mexico, for instance, only 5% of the parents would like their children to pursue technical-vocational studies, while the remaining 95% of parents who prefer their children to enroll in higher education programs. As such, few Mexican middle and secondary education students express technical-vocational training as their first choice after graduating. Conditional Transfers programs, on the other hand, have increased demand for technical high school programs as low-income students now have financial support to enroll in these programs. (Bobba and Pariaguana, 2015). In the case of Chile, technical secondary education students demonstrate lower educational performance than those of arts and science programs (Farías and Carrasco, 2012).
- 3.26 **Despite those challenges, efforts are being made in the region for improving the quality of technical-vocational education and its significance for the labor market.** The Caribbean countries developed a Technical-Vocational Qualifications Framework that sets forth the skills that young people must acquire at the different levels of technical-vocational education programs (Blom and Hobbs, 2008). This framework, adopted by several countries, takes into account labor market demands and the context of the Caribbean. On the other hand, in Colombia, a process for the reform of the Tertiary Education System (SNET, for its acronym in Spanish) is under way. One of the main purposes of this effort is to improve the interaction between technical-vocational education and the labor market. It aims to facilitate closer coordination with the demands of the productive sector and enhancing communication with the higher education system (Ministry of Education of Colombia, 2015). In 2015, the Chilean government introduced a draft law for the reform of technical-professional education that would induce improvements in the quality and relevance of this education sector for the labor market. Nevertheless, there is still no empirical evidence showing the results of these programs and reforms or any other similar results in the region. Without a doubt, this research topic requires further exploration.
- 3.27 **The findings of the Latin American and Caribbean literature are mostly consistent with the international evidence. One exception is the impact of pay-for-performance incentives offered to teachers based on student results.** Student learning levels are related to student-based factors such as their household and environment, as well as school-based factors generated by the education system. The following section shows the evidence of the region in that

respect in the same order in which they were presented in the international evidence.

- 3.28 In the case of student-based factors, their household and environment, health and nutrition during early childhood can affect student learning and the lifelong development of Latin American children and young people (Berlinksi and Schady, 2015).** For instance, there is evidence from Guatemala that malnutrition reported among children aged 2 and 3 is correlated to employment and income levels in adulthood (Crookston et. Al, 2011). Data from Peru also show that malnutrition in early childhood and subsequent stages affects cognitive development. The few available studies in Latin America and the Caribbean that assess the impact of preschools, show that they are often of poor quality and do not improve consistently child development, especially among the youngest children (Berlinksi and Schady, 2015). For example, evidence from Bolivia and Colombia indicates that attending preschool has only a moderate effect on the development of children over 4 years and not significant for children under 4 years (Behrman, Cheng and Todd, 2004; Bernal and Fernandez, 2013). On the other hand, Rosero and Oosterbeek (2011) find that, in Ecuador, the preschool centers subsidized by the Child Development Fund (OFID) produced negative effects on cognitive development. Finally, a study that evaluates the impact of new preschools created in Colombia as part of the reform of early childhood services did not generate improvements in nutrition, cognitive or emotional development, compared with Community Homes (Bernal, 2014)¹².
- 3.29 The household's socioeconomic level also affects education outcomes.** In this respect, a study conducted in Ecuador with 3,000 preschool students living in poverty showed that both the family economy, and the education level of the parents are related to a higher degree of cognitive development in early childhood (Schady et al, 2014; Paxson and Schady, 2007).
- 3.30 Stimulation at home and interactions with the parents are important in Latin America and the Caribbean.** Recently, the IDB created an instrument for measuring the development of children with ages ranging between 24 and 59 months, as well as for understanding factors that affect their development. After applying it to 8 thousand children from four Latin American countries (Costa Rica, Nicaragua, Paraguay and Peru), results showed that when they reached the age of 5, the gap in cognitive development between children of the poorest socioeconomic quintile and those of the richest one was 8 months. This gap was 13 months in language skills and 19 months in motor capabilities. (Verdisco, Cueto, Thompson and Neuschmidt, 2015). Interventions where parents are included and taught how to better stimulate their children could be help reduce this gap. In Jamaica, a study that taught mothers to stimulate their children and interact with them in order to improve their socio-emotional and cognitive skills found increases in their income of 50% on average twenty years later (Gertler et al, 2013). In Colombia, an intervention that combined psychosocial stimulation

¹² Although preschool education sometimes has not had positive effects on children, they can provide positive spillovers to facilitate the participation of women in the labor force (Matthew -Berganza and Rodriguez , 2016).

with a supplement of micronutrients administered during periodical visits to the houses, showed that stimulation did have an effect on the cognitive development, while nutrition did not have any effect whatsoever on the development or health of the child (Attanasio et al, 2014).

- 3.31 **The results of the international investigations on the importance of preschool education have been confirmed in Latin America and the Caribbean.** The expansion of preschool education services in Uruguay led to an advantage of almost one third of a year in learning levels compared to students who did not enroll in preschool programs (Berlinski, Galiani and Manacorda, 2007). In Argentina, one year of preschool education increased the average test scores in mathematics and Spanish in third grade (Berlinski, Galiani and Gertler, 2006). In Chile, a recent study showed that preschool education offered mixed results with respect to lifelong learning levels and outcomes. This highlights the significance of ensuring high quality early childhood services (Araujo, Carneiro, Cruz-Aguayo and Schady, 2016; Noboa-Hidalgo and Urzúa, 2012). Likewise, the teachers who are specialized in preschool education are usually subject to more flexible regulations, earn lower salaries than those of their peers teaching in other grades and have a lower degree of academic training, which might affect teaching quality at this educational level (Verdisco and Ñopo, 2012). Despite the international and regional evidence that points at the importance of a good quality preschool education, there are few interventions aimed at compensating for the deficiencies faced by disadvantaged students before going entering to the education system. Also, the scope of these interventions is limited.
- 3.32 **In the case of factors inherent to the school and within the international context, in the region, the teacher is the most important factor for student performance.** A recent IDB study carried out in Ecuador reported that an effective teacher may be able to close the learning gaps between students coming from socioeconomically rich and poor households (Araujo, Carneiro, Cruz-Aguayo, and Schady, 2016). Hence, in the region, it is also necessary to attract, develop and retain highly qualified individuals into the teaching profession. Below, there is a description of the situation in the region in terms of the **8 teacher policy goals** associated with improvements in student learning levels (Vegas and Ganimian, 2013) is offered as follows.
- 3.33 **Setting clear student learning goals for teachers.** Currently, only some countries in the region have adequate teaching performance standards or have made efforts in order to communicate them to their teachers. In 2003, Chile adopted the *“Marco para la Buena Enseñanza”* (Good Teaching Framework), which contains a clear and concise profile of what the teachers must know and what they are expected to do in the classroom. Chile has also implemented 20 criteria that rule the practice of this profession (Santiago, Benavides, Danielson, Goe, and Nusche, 2013). On the other hand, Peru also established its *“Marco del Buen Desempeño Docente y Rutas de Aprendizaje”* in 2012 (Framework for Good Teaching Performance and Learning Pathways). In the case of the Dominican Republic, the bylaws of the Teaching Regulations were approved in 2013 and the Professional and Performance Standards for Teaching Certification and Development were established in 2014 (PREAL, 2015). Similarly, national consultation processes are underway in Guyana for designing the professional

standards of the teaching profession, which will guide teachers' training and evaluation efforts (Ministry of Education of Guyana, 2014).

- 3.34 **Attracting the best into the teaching profession.** Several countries have implemented merit-based decisions for improving selectivity and transparency when accepting candidates willing to join the teaching profession. Among them, Ecuador - "*Quiero ser Maestro*" (I Want to be a Teacher), Mexico - "*Concurso de Oposición para el Ingreso a la Educación Básica*" (Merit Contest for Being Admitted to Primary Education), Colombia - "*Concurso Profesor*" (Teachers' Merit Contest), Peru - "*Concurso de Nombramiento del Docente*" (Merit Contest for Appointing Teachers) and El Salvador - "*Evaluación de las Habilidades Académicas y Pedagógicas*" (Assessment of Academic and Teaching Skills). These initiatives usually include a test that measures the knowledge of the teachers in the subject that they will be assigned, as well as other measures for identifying capabilities required for being admitted to the profession. Although these initiatives are a step in the right direction, still more than 30% of third and sixth grade professors are externally chosen by authorities without regional public merit-based considerations (Duarte, Bos and Moreno, 2012). Similarly, in Central America, the method for assigning teaching positions does not follow either rigorous selection criteria (PREAL, 2015).
- 3.35 Besides the selection mechanisms, most of the countries are not able to attract the best high school graduates into teaching. For instance, in Colombia, the average score obtained by Engineering students in the State Test or in the admission exam required by the different university degree programs is 71.2, while in education it is 51.2 (Barrera-Osorio, Maldonado and Rodríguez, 2012). Also, in Colombia, the grades of students admitted into Education programs are 14.5% lower than those of students that apply for other disciplines (Barón, Bonilla, Cardona and Ospina, 2014). In Brazil, the scores of students applying for the degree programs in Law and Engineering are 36% higher than those of students who will pursue Education studies. In Medicine, the difference is even greater and the scores of the candidates are 50% higher than the scores of those who will study Education (Bruns and Luque 2015).
- 3.36 Recently, some countries have been experimenting with initiatives for attracting highly qualified professionals into Teaching. For instance, the program "*Elige Educar*" (*Choose to Teach*) -implemented in Chile in 2009- combines a campaign in the mass communication media with a scholarship granted to top-performing High School graduates who want to become teachers. This experience paved the way for the "*Beca Vocation de Profesor*" (Teacher Vocation Scholarship) (BVP, for its acronym in Spanish) implemented by the Chilean government. This program included salary increases and further professional growth opportunities in order to attract high level professionals into teaching (Bassi and Covacevich 2012). As a result, there has been an increase both in the positive social acknowledgment of the teaching profession and in the number of students with an outstanding performance who study Education (Alvarado, Duarte and Neilson, 2012). Other similar efforts include the "*Beca Vocación de Maestro*" (Teacher Vocation Scholarship) implemented in Peru and the "*Beca Ser Pilo Paga para Docentes*" (The Benefit of Being Smart Scholarship for Teachers).

- 3.37 Another initiative for attracting “the best” is launching programs equivalent to *Teach For All*, which aim at recruiting top-university graduates and hiring them to teach in vulnerable areas during two years. The impact evaluation of “*Enseña Chile*” (Teach Chile) has evidenced that students who are taught by teachers from this program obtain higher scores in mathematics and language (Alfonso, Santiago and Bassi, 2010). Likewise, the study report of “*Enseña Argentina*” (Teach Argentina) shows that it is more probable for program teachers who have high grades and who come from scientific backgrounds to abandon the program when they find out about labor and salary conditions. This suggests that it is absolutely necessary to improve salary profiles in order to attract more qualified candidates to the teaching profession (Ganimian, Alfonso and Santiago, 2013).
- 3.38 **Preparing teachers with adequate training and useful experiences.** Thirty years ago, most of the education systems in the region only trained their teachers for secondary education (UNESCO, 2012). Currently, few countries continue doing so and all of them are trying to ensure that teachers pursue university studies (PREAL, 2015). Despite those efforts, more years of training have not necessarily led to improvements in student learning levels in the countries of the region. For instance, in Dominican Republic, 85% of the teachers have graduated from degree programs that last at least three 3 years, but the learning levels of students are still low compared to other countries in the region (CIMA, 2015; Bruns and Luque, 2015). Internationally and in the region, the effectiveness of teacher training depends on their quality and on whether the programs are capable of giving teachers tools, knowledge and skills that are useful in the classroom setting. Most specifically, it is absolutely necessary to include practical experiences so that novice teachers can interact with students before stepping into their classrooms and experimenting with innovations that improve the quality of education (Bruns and Luque, 2015). Examples of these initiatives include teaching brief programs that have been implemented in several countries in the region, among them those of Belize, Brazil, Colombia and Mexico. Even though these new programs might point in the correct direction, many of these efforts have not been studied yet.
- 3.39 **Adapting teachers’ skills to students’ needs.** In Latin America and the Caribbean, as well as elsewhere in the world, assigning the best teachers to the schools with the most needs is still a challenge. Qualified teachers avoid teaching in schools that serve children and youth who are in a situation of vulnerability and/or are located in rural areas or exposed to violent environments. For instance, in Uruguay, teachers with more years of training and experience usually prefer to work in educational institutions that serve students from richer socioeconomic households (Vegas, Urquiola and Cerdán-Infantes, 2006). However, several countries of the region offer financial incentives in order to attract teachers to vulnerable schools and to ensure that the students of those schools are exposed to the most effective teachers. For instance, Chile has implemented a Special Bonus for Teachers and an Allowance for Difficult Cases offered to effective teachers who work in schools that serve extremely poor students or schools in remote or difficult access areas. In the case of Honduras, the salary of teachers who work during three years in the rural areas is equivalent to the conventional five-year salary.

- 3.40 Another policy adopted by many countries in the region to adapt teachers' skills to the students' needs is the programs for intercultural bilingual education (IBE), which aims to reduce learning gaps for indigenous students. Among these countries, it is worth mentioning Bolivia, Ecuador, Guatemala, Mexico, Paraguay and Peru. For example, Guatemala trains bilingual teachers to offer the curriculum of primary education in both their native tongues and Spanish (Ministry of Education, Guatemala, 2009). Five studies on the application of this program reported positive effects evidenced in lower repetition rates and improvements in school performance (Patrinos and Velez, 2009; Carvajal and Morris, 1990; Morren, 1988; Scott and Simon, 1987; Townsend and Newman, 1985). In the case of Chile, a bilingual education program managed to reduce the performance gap registered in the national test between indigenous and non-indigenous students by 36% in language, 79.1% in mathematics and 86.4% in social comprehension (Echegaray, 2013). On the contrary, a study carried out in Mexico showed that bilingual education did not influence the possibility of reducing the gap between indigenous and non-indigenous students (Santibáñez, 2015). It is worth adding that there are barriers posed to the implementation of bilingual education programs. First, the availability of qualified teachers; in most countries the demand for qualified bilingual teachers exceeds the supply. Second, financial restrictions can also limit the possibility of hiring adequately trained bilingual teachers and of investing in training programs that are specifically targeted to those teachers. And, finally, many parents of bilingual children tend underestimate and reject this type of education because they consider it to be of lower quality (IDB, 2015).
- 3.41 **Teachers led by good and consistent principals.** In some countries of the region, mechanisms have been introduced in order to select and appoint principals based on managerial or educational criteria and the latter have been granted powers to be more autonomous in their activities. Peru established a rigorous, transparent and external merit contest for evaluating candidates who want to become principals. In Cuba, Nicaragua, Chile and Peru, principals have the power to hire or lay off teachers in their schools (OREALC / UNESCO, 2014). However, the support mechanisms for an effective school management are still limited and principals have low pedagogical leadership capacity to supervise teachers and influence learning outcomes in their schools.
- 3.42 **Initiatives for monitoring both teaching and learning.** Several countries in the region have introduced monitoring systems based on training evaluations in order to provide information to the education system about the performance of teachers and principals and ultimately identify opportunities for improvement. In Chile, this system is known as "*Docente Más*" (More of a Teacher) and it combines several factors: observing teaching practices in the classroom; a planning portfolio; an interview with a colleague; a self-assessment and an assessment made by the principal and the pedagogical supervisor. Evidence shows that those teachers who are adequately assessed -within the framework of aspects related to planning and observation of classroom practices- are those who can improve the learning levels of their students (Taut and Sun, 2014). In Ecuador, this program is known as "*Ser Docente*" (*Being a Teacher*) and it includes classroom observations, a self-assessment, a co-evaluation made by peers and an assessment based on

questionnaires for directors, students, parents, among others (Ministry of Education of Ecuador, 2016).

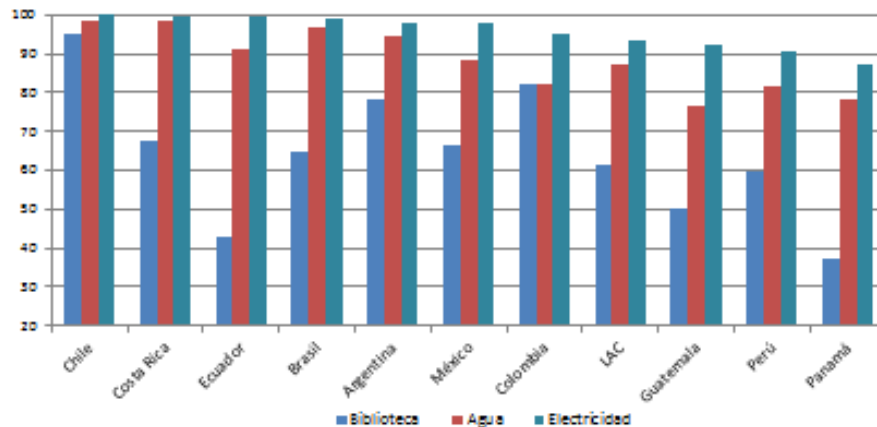
- 3.43 **Supporting teachers to improve education.** In many countries of Latin America and the Caribbean, considerable resources have been invested in training teachers on the job. However, the impact of these training programs on teachers' effectiveness has been quite limited. Indeed, many experiences are still merely theoretical and do not offer the teachers practices that they can take to their classrooms in order to motivate their students. Students in Latin America spent between 20 and 30% of the time of class working individually in their places, even though it has been shown that the use of the teaching time is more effective if teachers clarify doubts and reinforce contents and, subsequently, assign homework so that each student can do it on his / her own (Bruns and Luque, 2015). Students spent a considerable amount of class time copying from the blackboard without participating in activities that spark their interest and make them pay attention to the learning process (Bruns and Luque, 2015). In the region -especially in Central America- besides the inefficient use of time, high absenteeism rates are registered among teachers. Likewise, on many occasions, teachers participate in strikes that negatively affect the opportunities of children and young people to learn (PREAL, 2015).
- 3.44 The region has experimented successfully with interventions for supporting the teachers. An example of this is the Tutorial Learning System of Honduras, which led to improvements in student learning levels of 0.2 standard deviations for students who participated (McEwan, Murphy-Graham, Torres Iribarra, Aguilar and Rápalo, 2015). This program is administered under a decentralized scheme by an NGO and it offers high level instruction materials, training for teachers, as well as different models for hiring effective teachers that can be implemented by school principals. Besides, the costs involved in this intervention were 10% lower than those of traditional schools (McEwan, Murphy-Graham, Torres Iribarra, Aguilar and Rápalo, 2015).
- 3.45 **Motivating teachers.** Several countries in the region have launched initiatives for improving incentives in order to motivate, attract and retain qualified professionals in the field of education. A recent study has identified that the teachers of the region receive a comparatively lower compensation than that of other professionals, though it also highlighted that there is considerable variation among countries and even within the same country (Mizala and Ñopo, 2012). In fact, in some countries, salaries have increased rapidly (Mizala and Ñopo, 2012). For instance, in Brazil, they went up by 400% in real terms in three decades and, in Chile, this increase accounts for 200% during the same period of time (Elacqua and Alves, 2014). Additionally, recent studies have reached the conclusion that the gap between the salaries of the teaching profession and those from other professional and technical careers has narrowed in the last few decades (Mizala and Ñopo 2012).
- 3.46 Several countries in the region have also successfully launched pay-per-performance policies. For instance, the "*Bono Escuela*" (School Bonus) of Peru offers a bonus to those teachers and principals whose students have obtained the best student learning outcomes. The purpose of this program is to encourage them to improve their performance at school and acknowledge their efforts

throughout the school year. Incentives have also been implemented in several countries to ensure that teachers are willing to go to the most vulnerable regions or to the rural areas. A case that is worth highlighting is an agreement signed between the Ministry of Education of Ecuador and the Teachers Network, so that teachers with eight years of professional experience (especially those who work in intercultural bilingual educational institutions) are offered access to a master's degree in national or international universities paid by the government. Likewise, the agreement has set forth that no teacher should remain more than three years working in rural areas or zones of difficult access if he / she does not live in that district (Ministry of Education of Ecuador, 2016).

- 3.47 Pay-per-performance initiatives, incentives and support mechanisms have been essential aides for improving the performance of Latin American students in some countries (Ganimian and Murnane, 2015). In Chile, performance bonuses and group and individual contributions, based on the ranking of schools regarding student performance and school factors, have improved educational results (Rau and Contreras 2011). Similarly, in Brazil, in the cities of Sao Paulo (Oshiro and Scorzafave, 2011), Pernambuco (Ferraz and Bruns, 2012) and Rio de Janeiro (Alves, Elacqua, Martínez and Santos, 2016), teaching performance bonuses have had a positive effect. In Mexico, individual and group bonuses for students, teachers and principals resulted in an improvement in student performance (Behrman et al, 2015). On the contrary, individual performance and input bonuses (3rd through 6th grade) for diplomas, experience, training, peer evaluations, knowledge and student performance did not have any impact on the scores for mathematics and reading, despite the positive effects observed in an international context (McEwan and Santibáñez, 2005). Incentives do not have to be in cash. In most of the countries, acknowledgements and awards are granted to highlight the work of effective teachers. Notable examples include the "*Palmas Magisteriales*" (Teaching Award) in Peru, the "*Premio Compartir*" (Sharing Award) in Colombia and the "*Premio Maestros Ilustres*" (Illustrious Teachers Awards) in Argentina.
- 3.48 **The school infrastructure and teaching materials are absolutely necessary for student learning and the development of skills in Latin America and the Caribbean.** The region has made important efforts in order to improve the school infrastructure and offer text books, didactic materials and adequate spaces for schools so that they can improve student learning. Based on the data of TERCE 2013, on average, 88% of third grade students have access to water services in the school they attend. Likewise, 76% have access to bathrooms in good conditions, 65% to telephones and 63% to Internet services (UNESCO 2015b).
- 3.49 **However, there are still schools in the region that lack the basic conditions for learning and skills development. This is specifically the case in areas with low socioeconomic level students, indigenous students and rural students.** While 96% of the third grade students of quintile 5 have access to water services, only 76% of the quintile 1, do. There are also great variations between countries. For instance, in Nicaragua, only 22% of the students in quintile 1 have access to restrooms in good conditions, as compared to 71% in quintile 5. In Chile, almost 100% of the students in the five quintiles have access to restrooms in good conditions. Regarding access to books, on average 61% of the Latin American students have access to libraries in their school. However, there

are great inequalities. For instance, in Panama, 37% of the students have access to libraries while in Chile, 95% have library access (see Figure 16). This also applies to science laboratories. In Nicaragua, only 3% of the students have access to science labs, whereas science labs are accessible to 67% of Chilean students. In the overall region, 23% of students have access to science labs (CIMA, 2015). Additionally, the countries are increasing access to preschool education and the number of class hours (eliminating previous double-shift school schedules), which increases the continuous need to invest in the adequate school infrastructure.

Figure 8: Percentage of students who attend schools with basic resources, by country in the region



Source: TERCE data processed by the IDB. UNESCO 2015b

Note: Graph only available in Spanish

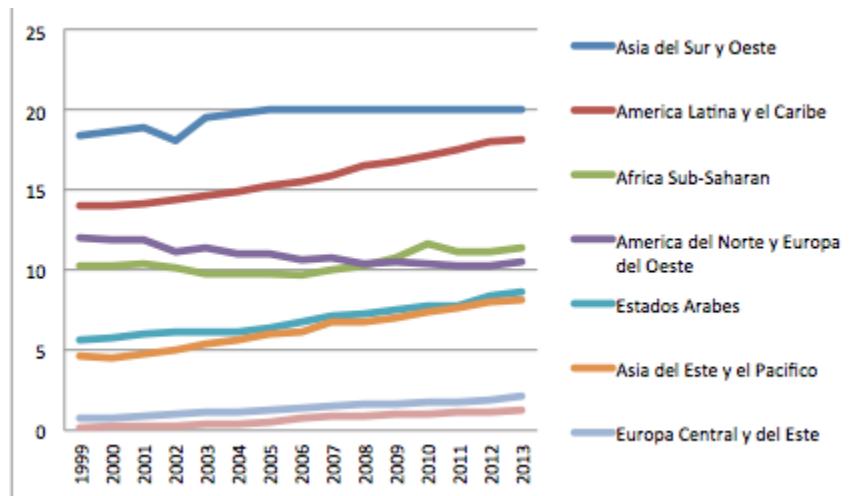
- 3.50 **There is also evidence in the region that interventions based on “unguided use” of the ICTs (as is the case of Peru), or ICTs implemented without the properly aligned software, curriculum, or personnel training, are not effective for promoting student learning** (Arias Ortiz and Cristia, 2014; Diether, Cristia, Cruz-Aguayo, Cueto and Malamud, 2013; Severin and Capota, 2012). Out of the 26 Latin American countries, 23 have implemented “*Uno a Uno*” (One for One)¹³ programs, either as pilots or national programs, and approximately 10 million devices have been distributed among LAC students (Arias Ortiz and Cristia, 2014). However, these interventions have not had a significant impact on student performance (Cristia, Ibarrán, Cueto, Santiago and Severin, 2012). The regional literature suggests that these interventions are most effective when they are implemented with software that is adequately aligned with the curriculum, as well as providing teacher and principal training that facilitates the integration of these technologies into the teaching activity (Arias Ortiz and Cristia, 2014). It is worth noting that access to technology has enabled innovations in education, This is the case, for instance, with the development of on-line student evaluations that

¹³ In the “*Uno a Uno*” (One for One) programs, the beneficiaries of the student population receive an electronic device -either a personal computer, a tablet, or any other technology- that will be used to enhance their learning process at school.

provide immediate estimates of student learning (Uruguay), increased access to teachers that are fluent in English (Uruguay) or access to teacher training in remote areas (Amazonas in Brazil).

- 3.51 **Class size is not the same throughout the region. On average, the student-teacher ratio is one of the highest in the world.** In Haiti, is the average ratio is 42 students per teacher in primary school, whereas Mexico has roughly 20 students per teacher, 23 in Brazil and 30 in Chile (School Census, 2010-2011; OECD, 2014). Most of these class size ratios are above the OECD average, which was 21.2 in 2010 (OECD, 2012). Few countries have implemented reforms for reducing the class size as these policies tend to be expensive and provide minimal effects on student learning.
- 3.52 **Several countries in the region have tried to implement extended school day programs in order to improve academic performance, thus ensuring that the students can spend more time at school and less time exposed to risk factors.** The recent evidence from Colombia and Uruguay shows that the extension of the school day offers positive academic and extracurricular results, specifically in the case of students who belong to the lowest socioeconomic levels (Hincapié, 2014; Cerdán-Infantes and Vermeersch, 2007). There is also a similar evidence in Argentina, Chile and Mexico (Llach et al, 2009; Valenzuela, 2005; García, 2006; Toledo Badilla, 2008; Bellei, 2009; Arzola, 2011; Bonilla-Mejía, 2011; Cabrera Hernandez, 2015; Pires and Urzua, 2014). Studies analyzing the experiences of Chile, Uruguay, Colombia and Mexico in this respect and have found that, on average, there is a 0.1 standard deviation impact on the passing rates of mathematics and language exams, which though it is an improvement in learning, is nonetheless less effective than other educational interventions. Some of the impacts on education are long term, occurring only years after the students have been exposed to extended school days (Pires and Urzúa, 2014).
- 3.53 **In regards to the education system, the percentage of students enrolled in private institutions has considerably increased and at higher rates than in the rest of the world** (see Figure 17). For instance, more than 1 out of 4 students attend private schools in Argentina, Colombia, Dominican Republic, Ecuador, Paraguay and Peru. In Chile and Haiti, more than two thirds of the students go to a private school. In cities like Bogotá, Buenos Aires, Guayaquil and Lima, almost half the students are enrolled in a private school.

Figure 9: Percentage of enrollments in private primary schools



Source: Elacqua, Ibarren and Santos (2016)

Note: Graph only available in Spanish

- 3.54 **As in the case of the international studies, the literature addressing the effect of private education and competition in LAC have shown mixed results.** In general terms, studies carried out in Brazil, Chile, Colombia and Venezuela which compare differences in learning between public and private (or charter) schools show ambiguous results (Christophe et al, 2015). On the other hand, controlling for socio-economic factors and selection bias, most of the studies show positive relationships between attending a religious or network-associated school and performance levels, regardless of whether the school is public or private (Elacqua, et. Al 2015; McEwan, 2003; Elacqua et al, 2013). However, there continues to be much debate on how to estimate the effect of the selection bias in religious or network-associated schools which tend to require admission tests and interview the families prior to admitting students. The evidence for effects of selection bias on school productivity suggests that competition has led to limited improvements in student learning and increased in the levels of segregation (Macleod and Urquiola, 2013, Elacqua, G., Iribarren M.L, Santos, H., 2016).
- 3.55 **While there is a constant debate and a growing number of articles in the literature that analyze the costs and benefits of private education, there is less research on public policies that can help improve the operation of mixed systems.** The research carried out to date has focused mostly on whether a system should foster competition among schools or subsidize private education rather than on examining the most effective design for a mixed education system.
- 3.56 **Some countries in the region have adopted specific rules for fostering and regulating school selection.** For instance, Argentina, Colombia and Ecuador offer public subsidies to pay for the teacher salary in private, predominately Catholic schools. In Colombia, the number of charter schools is constantly growing. In Brazil, tax deductions are offered to families that enroll their children in private schools. The Government of Haiti offers an exemption of school registration fees to students who attend private schools. In Rio de Janeiro, there is

a system for selecting public schools. In Chile, school selection reforms have been implemented to such a point that through the use of universal vouchers, parents may enroll their children in private schools at the expense of the State. In some systems, such as that of Río de Janeiro in Brazil, Buenos Aires in Argentina, Colombia and Chile, centralized enrollment mechanisms have been implemented in order to ensure that parents, not schools, are those making the decisions. Additionally, Chile has introduced weighted funding formulas for each student, which adjust voucher values to the cost of educating students from different socio-economic backgrounds. On the other hand, in countries with a higher income, mixed education systems are free. In some of the region's countries, schools are permitted to charge limited amounts. This is the situation, in Argentina, Chile and Haiti, where private schools that receive subsidies are allowed to charge a small enrollment amount. It is also the case in Chile and Colombia, where the State delivers information to the families so that they can make informed decisions regarding the selection and supervision of the school. Currently, there are very few rigorous studies assessing the effectiveness of different policies and regulations related to the education market.

- 3.57 **Reforms based on accountability mechanisms -in other words, those that evaluate the performance of the school based on the performance of the students- are becoming a more prevalent practice in the region.** Throughout the past decade, most of the countries developed monitoring and evaluation systems for education. In recent decades, there has also been an exponential increase in the number of countries that carry out national student learning evaluations and that participate in regional and international exams (Elacqua and Alves, 2016) (see **Error! Reference source not found.**). However, both the implementation and use of these evaluations varies considerably from country to country. In some, student learning evaluations are based on samples populations that consider the quality of the education system as a whole (Argentina, for instance, has an exam that is based on a representative sample). Representative samples offer limited information to policy makers, school boards and teachers for improving teaching practices. Other countries in the region have implemented survey-based evaluations and publish exam results for each school (Chile, Colombia and Brazil). Even though the use of the information derived from the tests to improve student learning is limited, the growing participation in international tests -including PISA- has enhanced the structure and content of national evaluations. It is also likely that results from these exams shaped the national curriculum in various countries (Ferrer and Fiszbein 2015). Most of the countries compile information on the related factors in order to guide their educational policies.

Table 1: Student Learning Evaluations in Latin America and the Caribbean

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Argentina	✓★	★	w★	★	★	c★	H★	★	✓★	★	★	cw	★		c	★		c	w★
Brasil	★		w★		★	c	★		c★		★	cw	★		c★		★	c	w
Chile	✓		w★	★	v✓★	c★	★	★	✓★	★	★	cw★	★	★	cw★	★	✓★	c★	w
Colombia			w★		v	★	H		★			cw★	✓		cw★		H	c★	w
Costa Rica			w	★								w		★	c★			c	w★
Ecuador		★	★			★						w	★	★	★	★			w
Guatemala		★	★	★	★	★					★	w★	★	★	v★	★	★	★	w★
Honduras			w★	★	★	★	★	★	★	★			★	★	★	★	H✓★	★	w★
Mexico	✓		w			c			c		★	cw★	★	★	cw★	★	★	c★	w★
Nicaragua								★				w★							w
Panama					★						★	w★		★	c				w★
Paraguay		★	w			★				★		w★			v	★			w
Peru		★	w		★	c	★			★		w★		★	c★	★	★	c★	w
República Dominicana			w									w			v		★	★	w★
Uruguay		★			★			★	c		★	cw			c★	★	★	c★	w★

Note: v= ICCS, w= LLECE, H= PIRLS, c= PISA, ✓= TIMSS, ★= NATIONAL

Source: Elacqua and Alves, 2016

- 3.58 **The implementation of accountability mechanisms varies considerably between countries.** For instance, while in Argentina, Uruguay and Peru, the results of each school are not published, other countries disseminate those results and the schools are expected to give account of their performance. In Colombia and Mexico, the average performance is published by school. This information is easy to access and the parents and the press can refer to it freely. Brazil uses the average score of the school and its repetition rate in order to build the Basic Education Development Index (referred to as IDEB in Portuguese). Subsequently, the Federal Government uses the IDEB scores for determining its national goals and identifying low-performing states, municipalities and schools. On the other hand, the states and schools utilize this information to develop their own objectives, improvement plans and bonus programs for teachers (*pay-for-performance*). The Government also openly shares IDEB scores with parents and the general public. On the other hand, in the case of Chile, there is a systematic and nation-wide mechanism of accountability that applies to each and every school. The government sets forth a minimum performance standard and ranks the schools according to their general performance and their progress in national tests, among other indicators. Sanctions are also imposed on low-performance schools, including closing down those schools that do not adequately improve and providing them with the technical and teaching support they need. The information on the ranking of the school, the average scores and other indicators are also openly communicated to the families and the general public.
- 3.59 **The few studies that have analyzed the effect of accountability pressures on the policies and practices of teachers, (Elacqua et al, 2013) show that schools with a high accountability pressure modify some of their internal policies and practices to the point that the changes impact student performance.** This observation is consistent with other studies that show that after implementing accountability mechanisms, low performance schools are able to improve (Mizala and Torshe, 2013). **Additionally, there is a systematic absence of accountability mechanisms in the ECD programs.** The availability

and use of data for monitoring the quality of ECD is very limited in the region (Berlinski and Schady, 2015, Vegas and Santibáñez, 2010).

- 3.60 **During the past few years, many countries in the LAC region have launched reforms for improving the management of their education systems in an effort to decentralized functions and/or create new institutions at a central level.** Some countries have decentralized the education system up to the lowest levels of government. Others have created new institutions at a central level for monitoring and guaranteeing the quality of education. Likewise, taking into account the weak economic situation that currently prevails and that will continue in the short term in Latin America, several countries in the region are considering implementing modifications to the funding structure with improve efficiency while increasing access and diversity in schools. Examples of such modifications are found in Argentina, Chile and Haiti, where the IDB is collaborating in order to develop and evaluate new funding strategies.
- 3.61 **Several countries have decentralized the administration of public schools and resources towards lower government levels.** Argentina and Peru transferred the responsibility for preschool and basic education from the central to the provincial governments (with elected governors). Chile decentralized educational services to regional and state offices, while the administration of public schools is entrusted to municipal governments (with elected majors and councilmen). Brazil decentralized the administration of public primary schools of the state level to the municipal level (with elected majors and municipal legislators).
- 3.62 **Some governments have developed an institutional architecture for supporting the accountability reforms** (Jaimovich, 2016). For instance, Brazil, Chile and Colombia have introduced independent evaluation systems, as well as agencies for supervising schools. School inspectors in Chile, Colombia and Panama offer technical assistant to low performance schools. Some countries also demand schools to develop improvement plans with specific learning objectives (this being the case of Brazil and Chile). A challenge faced by many countries of Latin America and the Caribbean is the lack of resources and the limited number of qualified supervisors that can evaluate and monitor a reasonable number of schools (Alves and Elacqua, 2016).
- 3.63 **Though there is a vast descriptive literature on the process for implementing decentralization reforms and management policies in the region (Winkler and Gershberg, 2000; Umansky and Vegas, 2007), the evidence of its impact on the attitudes of schools and the results obtained by students is quite limited.** There is evidence in Chile that shows that decentralization has not led to learning improvements because the lowest government levels have not had the capacity to support the schools and the teachers to compete with the growing sector of *vouchers* for private schools (Garcia-Huidobro, 2010).
- 3.64 **It is absolutely necessary to generate more knowledge on the impact of the policies that reform the institutional structure of education systems on student performance.** Studies to analyze the effectiveness of policies that defend the free selection of school by families and regulatory frameworks applied

to the educational services rendered by the private sector are still very limited. Likewise, the evidence of the effects of accountability mechanisms included in the monitoring and evaluation system, as well as of the systems for supporting the low performance schools, student learning and the behavior of the schools, teachers and families, is also quite limited. Finally, not much is known about the most efficient and equitable systems of school financing in the region. Besides, there are no studies that evaluate alternative educational funding mechanisms or research that explores the more and less efficient spending modalities throughout the different levels of the education system (central, sub-national, local and school level).

- 3.65 **Finally, during the past two decades, the LAC region has witnessed the emergence of social movements and groups of the civil society that demand improvements in the quality of their education systems.** Certain experts argue that the same middle class that emerged and prospered after the economic and social reforms implemented in the region around the second half of the 20th Century is the one that is now demanding improvements in the quality of public services -among them, education (Elacqua and Alves, 2014). The quality of life of Latin American citizens seems to have increased at a somewhat faster pace than the capacity of the governments to adapt and supply high quality public services (Cardoso 2011; Elacqua and Alves, 2014). Consequently, in countries as Brazil, Chile and the Dominican Republic, new social movements are demanding a better quality in the education sector, as well as higher investments. Besides, the civil society is also organized in groups aimed at fostering reforms for improving the quality and equity of education systems. This is the case of “*Mexicanos Primero*” (Mexicans First) in Mexico; “*Todos por la Educación*” (All for Education) in Brazil; “*Empresarios por la Educación*” (Businessman for Education) in Colombia and Peru; “*Unidos por la Educación*” (United for Education) in Panama; “*Educación 2020*” (Education 2020) in Chile; “*Educar 2050*” (Teaching 2050) in Argentina, “*EDUCA*” (TEACH) in Dominican Republic, among others. These organizations have even set up international networks to share good practices and expand their scope. Two examples are the Latin American Network of Civil Society Organizations (REDUCA, for its acronym in Spanish), which was created in 2011 with the support of the IDB and the Program for the Revitalization of the Educational Reform in Latin America and the Caribbean (PREAL, for its acronym in Spanish).

IV. LESSONS LEARNT FROM THE EXPERIENCE OF THE IDB IN EDUCATION

- 4.1 **During the past three years, more than 75 loan and technical cooperation projects have been approved for the education sector in Latin America and the Caribbean. Coupled to what had been accumulated since 1959, this projects turn the bank into a valuable reservoir of knowledge and experiences.** Multiple lessons have been learnt and good practices have been set forth as a result of these actions and their pertinent evaluations, with respect to effective teaching and the improvement of student learning, as well as the organization and management of educational systems. The following paragraphs contain a summary of the recommendations issued by the Office of Evaluation and Oversight (OVE) related to the work of the Bank in the sector, the progress

made in the evaluability of the portfolio (DEM), and the main lessons learnt from the Progress Monitoring Reports (PMRs), the Project Completion Reports (PCRs), Loan Documents and other documents and contributions of sector experts to the areas where the Bank has been working.

A. Reports of the Office of Evaluation and Oversight (OVE)

- 4.2 The OVE has offered valuable recommendations applicable to the Bank's work in education with the purpose of maximizing the impact of its activities and ensuring the reaching of the objectives that have been posed. More specifically, the analysis of the Bank's Support to Secondary Education (OVE 2013) offers the following recommendations:
- 4.3 Focusing the Bank's support on improving the quality of secondary education. This implies investing more resources in order to understand the deep rooted causes of the quality deficit in secondary education, the determining factors for the performance of students and teachers, and what "yields results" in secondary education.
- 4.4 In relation to access, focusing the Bank's support on the higher cycle of secondary education, especially among vulnerable and disadvantaged populations.¹⁴
- 4.5 Emphasizing innovation and strengthening the repository of knowledge to learn from experiences in secondary education and disseminate the lessons learnt including those related to: flexible service provision models for disadvantaged populations; alternative service provision models for populations that are more difficult to reach; use of technology with cost efficacy criteria; and the pertinence and effectiveness of education and vocational training methods.
- 4.6 Preparing project completion reports exclusively based on empirical tests that show what results were generated and why. Reinforcing the measurement of results at the project level, setting forth a manageable number of realistic goals, and considerably improving follow-up procedures for the results and attributable impacts for each project.

B. Results of the Development Effectiveness Matrix (DEM)¹⁵

- 4.7 Since 2009, the Development Effectiveness Matrix (DEM) for education projects has been showing important improvements in key aspects of the design, ranging from the sector diagnosis to the evaluation proposal for the intervention, as illustrated in Table 2.
- 4.8 Between 2013 and 2015, the Education Division improved its results, as compared to 2012. Its total value increased from 9.2 to 9.4 and similar improvement could be observed for each individual item. In 2015, the 9.0 average was lower than that of previous years due to two operations using the PBL modality, which usually have a lower score than specific investment

¹⁴ As related to this recommendation submitted by OVE of focusing on higher secondary education, it is worth highlighting that "the highest dropout rates are registered during the transition from lower to higher secondary education". Hence, it is necessary to continue working in order to guarantee equal access to both levels of secondary education.

¹⁵ The data submitted in this section only correspond to projects of the Division of Education.

projects. If we exclude the PBLs, the average was 9.4. Nevertheless, substantial improvements were observed in that category, including impact evaluations based on the most rigorous methodologies and the generation of monitoring systems designed specifically for the interventions.

Table 2: Summary of the Results of the DEM for the Sector

Year	Number of Approved Projects	Section				Annual DEM Average
		Rationale of the Program	Monitoring and Evaluation	Economic Analysis	Risk Management	
2009	4	7.8	5.0	0	7.5	5.5
2010	10	8.2	7.4	4.9	7.8	7.2
2011	4	7.8	9.0	8.5	8.1	8.4
2012	8	9.3	8.4	9.4	9.7	9.2
2013-2015		9.6	8.9	9.7	n. a.	9.4
2013	4	9.9	9.2	9.6	.	9.6
2014	5	9.4	9.4	10.0	.	9.6
2015	7	9.6	8.1	9.4	.	9.0

4.9 While almost all operations count, at the moment of their approval, be it with impact evaluations financed with the budget of the Project or, or in other cases with external resources, the interest of the Bank in those evaluations is focused on innovation or areas where no rigorous evidence exists that grounds and supports educational policy decisions. On the other hand, not all impact evaluations can be implemented upon completion of an operation due to different factors that not always depend on the Bank (the specific interests of the country, costs and financing, etc.). Notwithstanding, the projects also include a Cost Benefit Analysis and qualitative or process evaluations, which complement or replace the impact evaluation.

4.10 In summary, all education projects for the 2013 - 2015 term were classified as highly evaluable. In this sense, the Bank is interested in ensuring that the lessons derived from the impact and process evaluations continue to be used both for informing public policies of the countries and guiding the activities that the Bank executes in this sector so that the results continue to be positive.

C. Lessons learnt from the experience of IDB activities

4.11 The Bank contributes to the development of education in LAC through knowledge products, funding and technical assistance. Recent activities and operations have provided multiple lessons and good practices, which are a valuable contribution to empirical knowledge. Nevertheless, they need to be contextualized, taking into account the conditions in which the activities took place. The lessons learnt are grouped together into three categories: strategic, technical and operational.

1. Strategic Lessons

4.12 **Importance of the sector dialogue and technical assistance.** The aspects that have contributed to the strategic positioning of the Bank in the education

sector throughout the region are the generation and dissemination of knowledge, a continued sectorial and multi-sectorial technical dialogue, and the field presence of experts who offer technical and operational support for projects. Simultaneously, this ensured a significant presence in the most vulnerable countries with the biggest institutional weaknesses (63% of the projects), despite having a smaller share in the funding (35%). In terms of sovereign guaranteed loans, the Bank has balanced the volume with larger projects and countries (Mexico, Argentina and Brazil), in addition to certain operations in Central America that go beyond the average loan amount. Special mention should be made of the expansion to the education sector of new countries, such as Costa Rica, Peru, Barbados, Bolivia and, more recently, Brazil, Belize and Chile. Uruguay is an example of a country where the sector dialogue and the technical accompaniment of the process of incorporation of new technologies in the classroom (One laptop per Child) gave rise to a program for supporting the consolidation of the Ceibal Plan in primary education, supplementing it with technical assistance and resources of the Multilateral Investment Fund (MIF). This alliance then led to new projects for offering math teachers access to educational contents, including remote teaching of English and evaluating the implementation of the Cyber Home Learning Model (CHL)¹⁶ In Uruguay.

- 4.13 **Complementarity in the use of Bank instruments.** Technical cooperation and non-financial products are very effective instruments for articulating the sectorial dialogue and generating knowledge with the operations program, thus guaranteeing its focus on the priorities of the SFD and the strategies and policies of each of the countries. This has allowed the Bank to offer a more effective and immediate response to demands of the countries. Special mention must be made of the case of Chile after having made direct contribution, through different technical cooperation initiatives, to the identification of the base conditions required for the implementation of the reform of the institutional structure of public education and the reform of the technical professional education sector, the Bank then proceeded to funding these reform initiative by means of three new loans approved in 2014 and 2015.¹⁷ In Argentina, the pilot experience of learning in science and mathematics in the Provinces of Buenos Aires and Tucuman and their subsequent experimental evaluation -funded by the Social Fund- helped scale up the pedagogical proposal nationwide as part of several programs of a Conditional Credit Line for Investment Projects.¹⁸
- 4.14 **Complementarity between the public and private dimensions.** Between 2010 and 2015, eight education operations were approved with the private sector of

¹⁶ Program for the Consolidation and Expansion of the Ceibal Plan (UR-L1058, UR-L1093, UR-M1029, UR-T1084).

¹⁷ Strengthening the Management of the Education Sector (CH-L1081, CH-T1138, CH-T1163, CH-T1170).

¹⁸ Supporting the Policy for Improving Educational Equity – PROMEDU (AR-X1011, AR-L1108, AR-L1180, AR-T1047).

the Bank (SCF/OMJ).¹⁹ The main lessons learnt emphasize that: (i) the private sector and the civil society can play a significant role in determining education priorities and its strategies as part of a public agenda;²⁰ (ii) private institutions can contribute to the design of educational contents and materials -as was the case in Brazil with projects with and without a sovereign guarantee,²¹ (iii) support offered to technical and tertiary education is an additional strategic option to meet the challenge of expanding opportunities in education, provided it contributes to offering better quality services and access to populations with less resources; (iv) within this context, projects with financial institutions that support educational credits are indeed an alternative. For instance, Mexico is financing operations aimed at students of certain degree programs based on business models that include partial funding of the cost of education and alliances of financial institutions with universities that offer quality education and participate in the guarantee schemes; (v) the private sector can contribute in early schooling phases in Brazil, though it is important to coordinate activities with the public policy for early childhood development and basic education; (vi) the private sector can also contribute to developing innovating initiatives in areas as the development of socioemotional skills and teacher training (for instance, *Innova Schools* in Peru and *Fundación Cimientos* in Argentina; and (vii) Public Private Alliances (APP, for the its acronym in Spanish) can be an important instrument for developing the sector, specifically in infrastructure (Colombia). The creation of the new Inter American Investment Corporation (IIC) offers an opportunity for strengthening mechanisms for internal work of the IDB Group so as to meet the needs of our clients, mobilizing new partners and generating catalytic effects throughout the region, taking into account: (i) a greater knowledge of the private offer, the legal and regulatory framework and the quality assurance systems of the different countries in order to map opportunities and set priorities of quality aspects and educational equity; (ii) systematizing the required basic information (quality of the services, admission and funding policies, academic support); (iii) mechanisms for coordination between the private sector and the Vice Presidency of Sectors, with respect to technical issues and the Vice Presidency of Countries as related to the strategic dialogue with the country; and (iv) evaluating the impact and results of the operations of the private sector in education.

4.15 Comprehensive approach. Frequently, the Bank's education projects involve different actors from the public, private and civil society sphere, with whom it is essential to collaborate and create synergies. This also occurs with

¹⁹ Projects in Brazil, Mexico and Peru (ME-L1094, ME-L1132, ME-L1137, ME-L1173, BR-L1313, BR-L1432, PE-L1141, PE-L1120) for: (i) offering access to educational credits for university studies or young people with a medium and low socioeconomic level (Mexico); (ii) improving the quality of education in the early years of childhood, encouraging the cognitive socioemotional development of children with ages ranging between 0 a 6 years (Brazil); (iii) offering access to a quality primary and secondary education to low income children and young people in Peru; and (iv) developing the cognitive and socioemotional skills of young people (Brazil).

²⁰ The project "*Todos por la Educación*" (All Together for Education)" (BR-T1246) and Latin American Network for Education -Reduca- that develops activities as a community designed for learning and contributing to the educational public policies in Latin America. The network is made up of 14 organizations of the civil society of 14 Latin American countries.

²¹ Programs based on a sovereign guarantee for improving the quality of education in Pará and Porto Alegre (BR-L1327, BR-L1392) and a program without a sovereign guarantee (BR-L1313, BR-L1432).

sectors such as energy and telecommunications, water and sanitation, hygiene and public toilets in school infrastructure and with social development and nourishment in early childhood development. Modifying and improving the reality is a complex effort and poses a challenge that requires multi-sectoral and interdisciplinary coordination within countries served by the Bank and within Bank's internal work.

- 4.16 **Meeting the demands of the countries.** During the past few years, the education agenda of the countries of the region has not only included topics related to access, equity, and improvement of permanence and graduation in the educational system, but also other critical areas related to the quality of education – such as the improvement of pedagogical practices in the classroom, preschool education and early childhood development, as well as education evaluation and information and teacher training. Between 2013 and 2015, the Bank set as a priority the objective of education equality and knowledge of factors contributing to it. In response to this, projects with activities aimed at meeting high student learning goals as a guide for offering and monitoring educational services accounted for 44% of the funding and 51% of the technical cooperation. Likewise, in the last three years, there was a promising increase in the participation of operations aimed at early childhood development and preschool development, as well as policies and programs focused on teacher effectiveness.
- 4.17 **A more efficient Bank.** The better positioning of the Bank in this sector has been associated with a more efficient performance in the region. In fact, 86%²² of the operations that were evaluated evidenced a satisfactory progress (88% in 2015), between 2013 and 2015, which is considerably higher than the average for the Bank. During same of time, the ther interval for projects to reach eligibility after their approval was reduced and the time for preparing the projects was also improved. This was achieved together with a better design and portfolio evaluability (DEM), as previously pointed out. Similarly, one of the highest levels of projects approval of the last ten years was recorded in 2015, while disbursements reached their highest levels since 2008, with more than US\$ 600 million in the year 2014 (Martínez et al, 2016).

2. Technical Lessons

- 4.18 The technical lessons that have been learnt fall into five thematic areas (quality assurance, early childhood development, effective teachers, adequate resources and labor market skills). For each, activities related to operations and knowledge and dissemination, which the Bank has developed, are summarized, as well as the resulting takeaways and good practices. The operational and knowledge and dissemination activities are primarily focused on the past three years, after the approval of the SFD which guided the sector between 2012 and 2015.
- 4.19 **High expectations and quality assurance.** The Bank supported operation activities aimed at curricular improvements and the setting of higher learning

²² This figure is calculated based on the Progress Monitoring Reports (PMRs) of the IDB for the education sector, as a simple average of the annual value resulting from dividing the number of projects with a satisfactory performance into the total number of projects that have been evaluated by the Office of Strategic Planning and Development Effectiveness in the period 2013 to 2015.

standards. The following items are worth highlighting: (i) operations that support curriculum reform in preschool and primary levels, together with teacher training and learning evaluations (Trinidad and Tobago, Suriname and Jamaica); (ii) operations that support the development of national learning tests and that finance the participation of the countries in international tests (Suriname, Haiti, Jamaica, Guatemala, Honduras), supplementing these projects with institutional agreements with international organizations (OECD, UNESCO, IEA), in order to support the improvement of the capacity of countries in the region to participate in international learning tests; (iii) technical assistance and operations that support the reform of education systems by restructuring the function of national ministries and the respective local and units, as well as support to the schools (Chile, Jamaica, Haiti, Paraguay); (iv) technical and operational assistance for designing the institutional architecture and quality assurance systems for education (Chile); and (v) technical assistance for developing curricula and materials that will foster gender equity (Argentina, Chile).

- 4.20 The Bank has also supported activities for knowledge and dissemination for those topics and the following are worth highlighting: (i) descriptive analysis of monitoring and evaluation systems in the region; (ii) evaluation of the effects of the accountability systems based on student learning tests and assessment of the teaching career (Chile); (iii) regional initiatives for encouraging the use of data and evidence in decision making (developing a portal of educational statistics (CIMA), creating a laboratory for educational innovation and research (SUMMA) and an online course for educational leaders of the region (SPOC) in collaboration with the Knowledge and Learning Sector (KNL)²³ of the Bank; (iv) technical assistance for improving availability and use of data on learning tests in the Caribbean; (v) development of a network of civil society organization involved in education (Reduca); (vi) meeting of the Regional Policy Dialogue where the Vice Ministers of the region discuss the quality assurance systems; (vii) virtual course on Management of Childhood Development Programs and Policies; (viii) Massive On Line Open Course (MOOC) to prepare “Effective Policies for Childhood Development; and (ix) publications in specialized journals on the impact of educational markets and accountability systems for different results.
- 4.21 The lessons learnt from the activities carried out by the Bank clearly show that the approach of placing children learning at the core of educational proposals contributes to a decrease in repetition and dropout rates. This approach also promotes procedures for evaluation and promotion, adapting the work in the classroom to the characteristics and needs of the children, pedagogical interventions focused on literacy campaigns in reading and writing and basic mathematical knowledge from early ages on, coupled with the participation of families and the community in the education system for accountability in schools and creating an environment that fosters student learning. This has been evidenced in operations carried out in Paraguay, Guatemala, and the Dominican Republic. Likewise, the case of Belize suggests that setting national standards that define study programs is not enough and that there is a need for duly trained

²³ These initiatives are financed by the Social Fund (SOF) and the Regional Public Goods Fund (RPG).

teachers and an information system for following up on the results of the schools (paragraph 2.20).²⁴

- 4.22 Improving the information systems for diagnosing, planning, and supervising educational actions makes them more effective when key information is offered to the users. For those who are at central levels, information allows them to plan policies based on empirical data. Meanwhile, at a district level, it allows formulating plans can be designed for improving the districts, or, in the schools, it serves as as input for teaching. In Uruguay, online primary school evaluations have generated highly useful information for teachers regarding pedagogical processes. In Suriname, the effectiveness of social dissemination campaigns aimed at parents, teachers, and directors in order to inform about the new study plan, have been supplemented with teacher training in the use of teaching materials.²⁵
- 4.23 As to the curriculum frameworks, Chile has posed the significance of favoring navigability and modularity in education in order to facilitate transitions between educational levels and expand opportunities for students to further pursue and complete their studies. It is absolutely necessary to coordinate the curriculum of secondary education and the programs of technical vocational education with the skills that are demanded by the labor market in the different countries.²⁶
- 4.24 **Early childhood development.** The Bank has worked in operational activities aimed at early childhood development. Among them, mention can be made of the following: (i) operations for expanding access to ECD, development of the curriculum, training teachers and supplying materials specially emphasizing on the vulnerable populations (Peru, Chile, Bahamas and Trinidad and Tobago); and (ii) technical assistance for the development and evaluation of programs that foster the active role played by parents in the early development of the child (Jamaica).
- 4.25 The Bank has also contributed with activities aimed at knowledge and dissemination in this area. Among them: (i) publication of the results of ECD indicators for four countries in the region (PRIDI) and a meeting of the Regional Policy Dialogue during which Vice Ministers of the region discussed their ECD systems; (ii) evaluation of the impact on the characteristics and practices of preschool teachers in the school trajectory and student learning ("*Cerrando Brechas en Ecuador*") (Closing Gaps in Ecuador); (iii) evaluation of the impact of the quality of preschool teachers on student learning (Jamaica); (iv) publication of a technical note regrading access to children care institutions in the region; (v) publication of a guide of tools for measuring children care services; and (vi) publications on the importance of ECD and the organization of ECD systems in the region, published in DIA 2015 and the International Handbook of Education and Development.

²⁴ Programs of "*Escuela Viva II*" (Living School II)(PR-L1017, LP and LRR), "*Mi Escuela Progres*a" (My School Improves) (GU-L1023, LP), Improvement of the Quality of Education (BL-L1018, LP), National Education Plan I (DR-L1032, PCR).

²⁵ Consolidation and expansion of the Ceibal Plan (UR-L1058, PCR); Improvement of Basic Education II (SU-L1038, LP).

²⁶ Strengthening Technical Professional Education (CH-L1095, LP; CH-T1138).

- 4.26 The lessons learnt from the activities of the Bank include the results of the Regional Program on Childhood Development Indicators (PRIDI, for its acronym in Spanish).²⁷ These results evidenced that childhood development in the region is unequal in terms of countries, populations and development dimensions. This inequality is seen at early stages and it increases with age, specifically when dealing with cognitive language and communication dimensions. Based on the factors that were analyzed, it is clear that the socioeconomic level of the household, the level of education of the mother and the environment of their home contributes to better results related to childhood development. On the other hand, a favorable household environment can help mitigate the negative association of low income levels with others dimensions of development that were measured (paragraphs 2.3-2.8; 3.27-3.31).
- 4.27 The effectiveness of investments in the field of early childhood development requires these interventions to be global and have a good quality, as was posed in Peru²⁸ and other countries of the region. The needs of the children and their families should be at the center of the assistance offered and ensure availability of the following elements: adequate spaces and equipment, duly trained staff, a curriculum that is consistent with the ages of the children, frequent and quality interactions between children and adults, availability of the necessary materials in the classrooms, good coordination between the centers and the families, good food, hygiene, safety conditions and, finally, quality assurance systems for monitoring the services rendered. Most specifically, **developing standards and regulations for children care services, as well as the quality of training of the teachers and their specialization in the early levels of schooling are very relevant** (Paraguay).²⁹
- 4.28 The experience derived from early educational programs in mathematics and science in four countries in the region³⁰ offers important lessons about the effectiveness of the models used: (i) all the children can benefit from a practical student-centered education on mathematics and sciences, whatever their initial performance or their socioeconomic status, provided they receive quality education; and (ii) a wide professional development program and counting on the adequate materials are absolutely necessary for generating a change in the way mathematics and sciences are taught so as to enhance skills as critical thought and problem solving.
- 4.29 In order to ensure that access to preschool education and ECD programs is universal, it is necessary to reach the population that lives in marginal or remote (rural) areas. To this end, interventions must be specifically designed for those populations (itinerant teachers, multi-grade schools), effective compensation

²⁷ The PRIDI developed an instrument -the Engle scale- for measuring cognitive, socioemotional, motor and language development in children with ages ranging between 24 and 59 months and applied it in four countries (Costa Rica, Nicaragua, Paraguay and Peru).

²⁸ Improving initial education in Ayacucho, Huancavelica and Huanuco (PE-L1062. LP).

²⁹ Improvement of Initial and Preschool Education (PR0124, PCR).

³⁰ The programs analyzed in the report were: "*Mimate*" (Pamper Yourself) in the regions of Huancavelica and Ayacucho in Peru, Tikichuela in the department of Cordillera in Paraguay, "*Matemáticas para Todos*" (Mathematics for All) in the provinces of Buenos Aires and Tucuman, in Argentina; and "*Matemáticas Visibles y Tangibles*" (Visible and Tangible Mathematics) in the district of Belize, Belize (see: "[Todos los niños cuentan](#)" (IDB, 2016).

programs and communication and work strategies that involve the families in order to overcome the cultural barriers, as evidenced in the case of Honduras, Paraguay and Peru.³¹ Likewise, the coordination between the preschool and primary level must avoid abrupt changes when the child goes from a dynamic preschool environment to first grade, where the main character is the teacher and the child rather takes a more passive posture. According to the impact evaluation project of Honduras, there is also evidence that low cost preschool models strongly impact childhood development and the way children are prepared to start primary school ready to learn. Children in rural zones exposed to a preschool model based on facilitators and structured materials acquiring skills at a faster pace and are adequately prepared for their first grade.

- 4.30 **Effective teachers.** The Bank has given special attention to operational activities that support teaching quality. Among them: (i) operations that offer training and mentoring for teachers (Belize, Brazil, Suriname, Trinidad and Tobago); (ii) technical assistance for informing about the reform in the teaching career in the region (Peru, Chile, Jamaica and Belize); (iii) operations that promote initial training of teachers at the university level (Guatemala and Honduras); (iv) technical assistance for implementing and evaluating the test period when the teaching experience starts (Dominican Republic, Brazil); and (v) an operation that offers support for the retirement of teachers and strengthens the process of entry to the teaching career (Ecuador).
- 4.31 The Bank have also contributed with research and dissemination activities in this area, among them: (i) research on alternative methodologies for recruiting teachers *“Enseña por Argentina”* (Teach for Argentina); (ii) evaluation of policies aimed at raising the status of the teaching profession (Peru); (iii) study about salaries of teachers in the region; (iv) study on the aggregate value of schools for initial teacher training (Colombia); and (v) publication of a book on teaching mathematics and sciences in the first schooling years, which was shared during the Regional Dialogue with education authorities from all over the region.
- 4.32 The **lessons learnt** and the literature coincide **regarding the importance of empowering teachers in programs, thus guaranteeing that they count on their initial training and the necessary skills to be effective. This requires a good system of access to teaching.** The region has examples where the initial training of the teachers has weaknesses with respect to pedagogical skills, professional practice, the use of teaching methodologies and the inclusion of technological tools, as pointed out during the observations in the classroom that that were carried out in Dominican Republic and Paraguay (Naslund et al, 2013), among others. The region is developing strategies in order to act with respect to this situation. In order to count on a higher number of better prepared teachers to work in remote or vulnerable areas, Ecuador developed an early retirement strategy of the teaching staff along with the admittance of young teachers who had to go through a rigorous system of merit competition³². On the other hand, Belize is developing innovating methods for teacher training in language and mathematics (*Visible and Tangible Math*), that emphasize the investigation and

³¹ Paraguay, Technical Education Note (2014); Primary Education and Technological Integration (HO-L1062, PCR), PE-L1062 (LP).

³² Universalization of Basic Education (EC-L1018, PCR).

practical activities for the students, counting on the coaching of tutors and mentors in the classroom. This helps motivate and retain teachers and enhances students' learning (paragraphs 2.9 - 2.22; 3.32 - 3.37).³³

- 4.33 **The support offered to teachers in the classroom is an effective practice**, as evidenced in Peru or Uruguay. However, implementing this practice can be expensive and complex. A continuous and constructive feedback -coming either from mentors or peers- helps improve teaching and supports teachers who are adopting new teaching methodologies. In Uruguay, "tutor teachers" played a key role when new technologies were brought to the classroom and their presence has been consolidated. Likewise, technology can be a supplementary tool for empowering teachers -as has evidenced from the teaching methodology developed in Paraguay in the project "*Tikichuela, matemáticas en mi escuela*" (Tikichuela, mathematics in my school) (3.43 - 3.44)³⁴.
- 4.34 **On the job training is a relevant topic in education projects of the region as it helps improve the quality of the available human resources.** Teacher training programs must be adapted to the needs of the local context preferably with decentralized schemes and quality evaluation systems -as was the case in the programs implemented in Colombia. An effective strategy is group participation in training sessions for teachers of the same school or different schools that are part of network, along with an adequate monitoring of the progress made in the courses and changes in the classroom practices at a group level. This is what was done in the experience of Colombia.³⁵ In order to improve the effectiveness of training programs, it is absolutely necessary to ensure a timely and adequate distribution of resources. The training must involve the principals in topics like school management and pedagogical leadership and the school must be the center of the coordinated action of the teaching staff (paragraph 3.41).
- 4.35 **Adequate resources.** The Bank has aimed efforts at supporting operational activities for improving the quality of the physical offer. Among these activities, mention can be made of the following: (i) operations that support improvement and expansion of the school infrastructure (Argentina, Panama, Trinidad and Tobago, Suriname, Guatemala, Mexico and Haiti). The Bank plays the leading role in support offered to this sector and, in some cases, the parents play an active role (Guatemala, Paraguay); (ii) operations aimed at extending the school day (Paraguay, Argentina) and technical assistance offered to countries that are trying to extend the school day (Colombia); (iii) operations for expanding access to quality education resorting to the use of technologies (State of Amazonas, Brazil) and operations that support teaching training, preparing them for the effective use of the technology in the classroom (Uruguay); (iv) technical assistance offered to countries for improving their planning capacity and for managing school infrastructure investments ("*Aprendizaje en las Escuelas del Siglo XXI*") (Learning in 21st Century Schools);³⁶ and (v) operations and technical

³³ Improving the Quality of Education (BL-L1018, LP).

³⁴ Consolidation and Expansion of the Ceibal Plan (UR-L1058, PCR), PR-T1128, Final Evaluation Report.

³⁵ Equity in Education in Bogota (CO-L1010, PCR).

³⁶ This regional technical cooperation is financed by the Fund of Regional Public Goods (RPG).

assistance focused on interventions specially aimed at indigenous and rural communities (Paraguay, Panama and Colombia).

- 4.36 The Bank has also contributed with activities related to both knowledge and dissemination. Among them: (i) a series of case studies by country on the breakdown of education spending; (ii) publication of a technical note giving evidence of the best practices in the use of technology in the classroom and a seminar of experts and government officials of the region organized for sharing experiences on this topic; and (iii) a series of *briefs* on planning, design and management of the school infrastructure and a Web page with a repository of documents and best practices on the topic.
- 4.37 Even though the Bank has set forth priorities, it is also clear that countries still have deficiencies in school infrastructure. Hence, they request financial and technical support for investing in infrastructure projects. As a result of this, the education portfolio is still strong in this area (67% of the funding). The purpose is that projects for expansion of access to or rehabilitation of existing school have components for improving the quality of education and increasing the number of activities centered on other areas of intervention that improve learning opportunities, specially focusing on children and young people who are in a situation of vulnerability. Likewise, even in school infrastructure projects, it is necessary to ensure that basic services will be offered for access to (mobility) and operation of the educational center. In turn, this requires the participation of other players and sectors, as well as an effective coordination between them.
- 4.38 The **lessons learnt** identify multiple relevant dimensions when developing infrastructure and furnishing education resources. On the one hand, **defining criteria for focusing on the beneficiaries, framed within adequate contexts and adapted to the objectives of each program, is *indeed a relevant*** aspect in order to be effective and respond to issues of equity -as can be evidenced in the projects carried out in Argentina, Panama, Mexico or Guatemala. In the second place, **the global information systems related to infrastructure and censuses contribute to a better administration of resources**, as evidenced in Mexico.³⁷ An index for diagnosing assistance needs in order to systematize the classification of the physical conditions of the school has also been developed in that country. Likewise, it is important to continue with the current effort of the Bank aimed at systematizing learning and furnishing information to the Ministries of Education (a library of school infrastructure). A third relevant factor is **setting priorities regarding investments**, in view of the high costs of infrastructure -libraries, laboratories, multiple use spaces, restrooms and access to drinking water to ensure the health of the students. The schools must also count on other educational resources that enhance the quality of the offer -as is the case of texts, teaching material and access to technologies. Likewise, **the maintenance of these schools is a relevant topic for ensuring the sustainability of interventions**. Paraguay and Guatemala offer us an efficient experience where parents administer resources (through school cooperation associations) for managing the school and maintaining educational centers. Mexico has included a preventive and routine maintenance of its interventions in school infrastructure.

³⁷ Educational physical infrastructure (ME-L1171, LP).

Finally, there is a need to strengthen the technical and operational areas involved in the management of the infrastructure, **so as to ensure integrity when signing and executing contracts, as well as the quality of the actions**, specifically as related to technical designs, bids and contracting works or goods, budgetary allocation and planning, legal availability of the land and supervision of the works in order to anticipate difficulties without incurring in extra charges or lack of quality in the school infrastructure. The region has developed several strategies in order to approach these topics within the framework of its infrastructure programs. The results have been quite heterogeneous (centralized or decentralized management, outsourcing, trusts), as evidenced from the operations carried in Argentina, Uruguay, Ecuador, Bolivia, Panama, Costa Rica, Guatemala, Mexico and Haiti, among other countries (paragraphs 2.23 - 2.24; 3.48).³⁸

- 4.39 An aspect that has been the focus of special attention in the past few years has been the incorporation of new technologies to the field of education. **The ICT do not guarantee that learning will improve per se, though they can help improve school achievement if there are clear learning goals and the teachers receive support so that they can modify their pedagogical practices in the classroom.** It is worth pointing out that the use ICTs in the region has a clear potential as they have generated changes in class planning, materials diversification, the use of virtual environments and/or the inclusion of evaluation activities. This has been clearly the case in Uruguay.³⁹ The teaching aids offered in the center and in the classroom, on the job training, together with the logistic support and technical services for teams are a very important triad. Pedagogical changes are complex. This is not only the case because it is necessary to accept the tool, but because it takes time to overcome the predominance of pre-existing working routines when using technology (Honduras).⁴⁰ Despite this, the ICTs can be a very useful tool in aspects like the on line evaluation of the students that generates information for the teacher regarding the learning levels of his / her students, or the development of platforms that offer tools to teachers and students for working on a subject or remotely teaching a language using high quality technology (Uruguay). One of the challenges involved in the use of ICTs is the sustainability of interventions in terms of costs, connectivity, technical updates and teachers' participation (Honduras, Uruguay) (paragraphs 2.25; 3.50).
- 4.40 **Skills for the labor market.** The Bank has supported operational activities for improving the quality of secondary and technical education. Among them, special mention can be made of the following: (i) operations for trying to improve the framework of policies built around technical vocational education (Chile) and expanding the offer of technical vocational education (Colombia); (ii) technical and operational assistance for aligning the school with the production center by setting up a fund of training offers subject to merit contests coordinated by

³⁸ Projects: AR-L1108, AR-L1152 and AR-L1180, UR-L1050, BO-L1071, PN-L1064, CR-L1053, ME-L1171, among others that have different execution modalities.

³⁹ Consolidation and Expansion of the Ceibal Plan (UR-I058, PCR), Education in Mathematics and English in Primary and Secondary School (UR-I093, LP).

⁴⁰ Primary Education and Technological Integration (HO-L1062, PCR).

- training institutes and leader industries (Barbados); (iii) technical assistance for implementing programs aimed at developing socioemotional skills in the case of vulnerable young people (Paraguay); and (iv) money transfers for scholarship holders in advanced higher education programs (Program for Human Development and Opportunities), in order to progress in the school ladder and complete studies, ensuring an effective effort for promoting human capital.
- 4.41 The Bank has also contributed with knowledge and dissemination activities in this area. They include the following: (i) *fee for service* for offering technical assistance for the design of a new impact evaluation for a scholarship program that enables young people from rural areas to pursue university studies (Peru); (ii) technical assistance for designing and implementing an impact evaluation of a program for supporting vulnerable young people at risk of school dropout (Argentina); and (iii) studies about young people at risk of school dropout and retention strategies (Brazil, Central America).
- 4.42 The **lessons learnt** in the region show us that **involving the private sector when teaching socioemotional and cognitive skills by means of apprenticeship programs and alliances with educational institutions favors the insertion of young people in the labor market and also strengthens the link between those who graduate from the education system and the employers**. This has been the case in several countries of the region, specifically those of the Southern Cone. On the other hand, Haiti has shown that the success of a training program based on demand depends on the existence of an organized and dynamic labor market that offers reliable data, an efficient interaction between employers and those who offer the training and an adequate supervision and tutoring for the young people. Besides, Jamaica has emphasized that **technical vocational education should not only be aimed at training and connecting young people with specific employment opportunities, but also at offering them the necessary skills to adapt to the new circumstance and to be competitive in the modern labor market** (paragraphs 3.26-3.26).⁴¹

3. Operational Lessons

- 4.43 It is absolutely necessary to successfully implement the projects in order to meet the development goals. As a result of this, operational topics have received special attention so that they can be more efficient and effective. The PCRs and other reports issued by the Bank (Alvarez C. et al, 2012; IDB / SPD, 2016) offer cross-sectional operational lessons that apply to the projects -as is the case of the importance of taking into account the “country effect” more than the “sector effect” and consider the capacity of the countries when designing the projects for adequately gauging expectations regarding results. When the client has a limited capacity, it is advisable to introduce institutional strengthening components that will help design and implement long term projects. Among the areas where the need for support is usually identified, mention can be made of the following: training in program management and leadership and in the use of planning, monitoring and management tools, creating alliances with specialized institutions for ensuring a better execution, building efficient communication channels -in

⁴¹ Vocational Training (HA0017, PCR), Technical vocational education (JA-L1005, LP).

particular for decentralized projects- along with procedures for delegating functions and efficient mechanisms for interinstitutional and intra-institutional coordination between technical and operational units, as well as developing a timely and relevant information systems for decision making.

- 4.44 In the second place, the PCRs detect the need to ensure the adequate focus of the interventions of a project and its beneficiaries, the sustainability of the interventions and strengthening the capacity to evaluate educational programs. The institutionalization of a culture of evaluation in the public sector is indeed relevant and, to this end, it is absolutely necessary that the Bank offers technical support to the offices of statistics and the offices of evaluation directors of the Ministries of Education for organizing the information systems so as to follow up the different programs, thus guaranteeing the quality of the information for the subsequent analysis.
- 4.45 Another recommendation of the PCRs is taking into account the political, economic and social conditions that might hinder or delay the development and implementation of projects financed by the Bank in the countries. Hence, it is important to count on leadership capabilities and skills and on the active participation of the *stakeholders* in order to ensure a higher degree of *ownership*. The *stakeholders* or groups of interest may turn into either obstacles or promoters of educational reforms. For instance, teachers' trade unions, parents, communities, schools, students at every single level, among others, may be determining factors when designing and implementing the projects of the Bank in the different countries.
- 4.46 On the other hand, the PCRs identify the importance of adjusting the model of intervention of a program to the local reality and to be a part of the national mid and long term policies. An example in this respect has been applying the model of "*Escuela Viva*" (Living School) in Paraguay, which focus successfully on the school as a unit of intervention and formation of networks of schools in the educational areas, as a pedagogical and strategic resource.
- 4.47 Finally, the problems evidenced in the bidding and contracting processes are among the main causes for the delays and overcharges of projects. This is specially the case when building educational infrastructure, which involve contributions of more resources or targets which are below those that had been planned and reaching a smaller number of beneficiaries. Among the measures for mitigating the associated risk, mention can be made of the following: (i) joint programing and planning of the Bank and the client in order to address aspects related to institutional capacity; (ii) carrying out cost and market studies in order to formulate the adequate budget; (iii) legal availability of the land lots timely; (iv) hiring specialized agencies or strengthening the units and technical equipment that are responsible for the infrastructure in the ministries; and (v) preparing an action plan from the very beginning in order to respond to contingencies, including the risk of integrity and environmental risks among others.

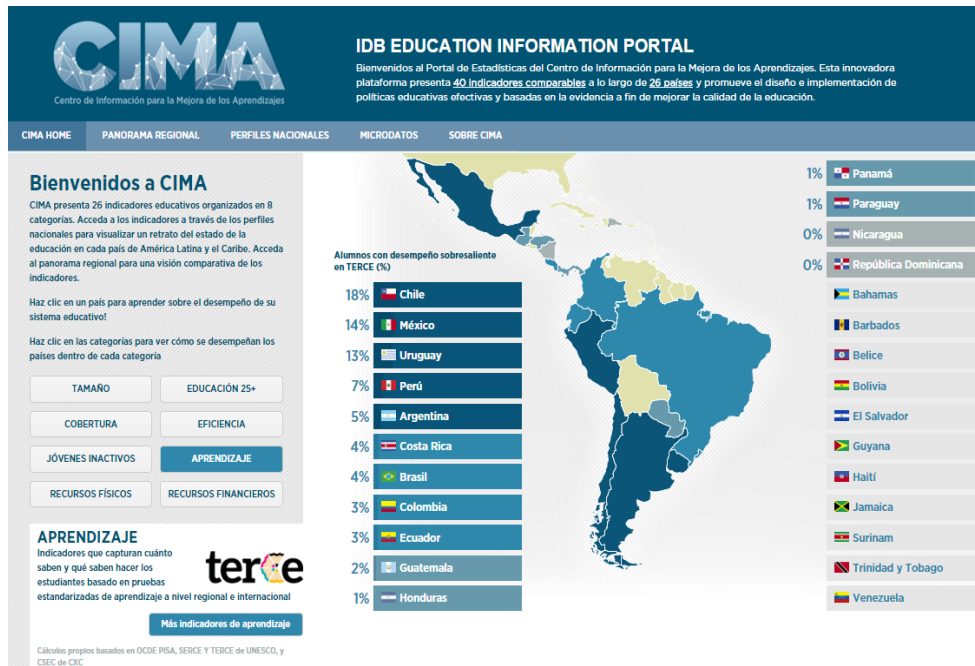
D. Comparative advantages of the Bank in the education sector

- 4.48 Since it was created in 1959, the Bank has been strongly committed to the development of education in Latin America and the Caribbean. At first, its operations were centered on loans for university education because the

prevailing trend in the region favored professionalization. Later, the Bank started to support access to basic education and its priority was granting loans that included the component of reforming education and strengthening institutional capacity. In this stage, infrastructure projects played a key role because everyone was trying to expand the coverage of primary and secondary education. Starting in 2007, the Bank increased its investments with a sovereign guarantee in education and focused its attention on improving the learning level of children and young people of the LAC region and acquiring knowledge about factors that leading to quality education, in view of the fact that international evidence has confirmed that there is a positive relation between learning and economic growth and that it is far more determining than simply schooling years. Likewise, in 2010, the Bank started using loan instruments without a sovereign guarantee for supporting private schools and helping them to improve their quality and ensure equity of access to education, so that they can have access to a higher number of young people.

- 4.49 **The financing of specific projects and the presence of technical and operating staff in the field for more than five decades is indeed what has led to the Bank's undeniable baggage of knowledge. On account of that, it is one of the most important assets of the Bank for its activities in the LAC region.** During the past 25 years, the Bank has contributed to the region with financing for the education sector for more than US\$ 8.7 billion assigned to more than 120 projects (SG) combined to operations of the private sector (NSG), technical cooperation and non-financial products. On the other hand, the Bank keeps an important professional presence in the countries so as to contribute to the sectorial dialogue and adequately and timely meet the clients' demands. Currently, 75% of the funding offered to countries is accounted for by an education expert working in the field.
- 4.50 **A second comparative advantage is that the Bank has developed expertise and skills for: carrying out activities, offering technical assistance and matching coordinating the needs of the countries with the experience acquired in the region and the knowledge that is available elsewhere.** The Bank has been developing proposals aimed at strengthening the analytical and managerial capacity of the educational sector in the countries (CIMA Portal, the *"Nuevos Líderes para Sistemas Educativos de América Latina y el Caribe"* (New Leaders for the Education systems of Latin America and the Caribbean) Project, the *"Infraestructura para las Escuelas del Siglo XXI"* (Infrastructure for the 21st Century Schools) Regional Public Good, the *"SUMMA: Innovaciones en Educación"* (SUMMA, Innovations in Education) Regional Public Good), which has strategically positioned the Bank in the regional dialogue. Likewise, on account of its structure and the instruments it counts on, the Bank is an efficient coordinator and has access to specialists, experiences and resources of countries outside the region, as was evidenced when the reform projects were underway in Chile, when teaching evaluation event was organized in Peru, when Finland granted financing to Haiti or when it coordinated with the Government of South Korea activities related to the Ceibal Plan of Uruguay.

Figure 10: Learning Improvement Information Center (CIMA)



Source: www.iadb.org/cima.

- 4.51 **In the third place, during the past few years, the Bank has turned into a prime moving force for strict and accurate evaluations of innovative educational actions**, so as to generate new empirical evidence on the impact that educational programs and policies have on the quality of learning, as well as on the narrowing of learning gaps. This is not only relevant for the countries involved and others in the region, but also for education systems outside the scope of Latin America and the Caribbean.

5.1 **The main goal of the Bank in this sector is promoting the necessary learning and skills for the region to achieve its potential.** Five Dimensions of Success have been identified in order to reach this goal. They are based on the policies and programs implemented by successful education systems and the lessons learnt from the experience of the Bank in this sector. The purpose of these dimensions is intervening in factors related to the households, the school and the education system -as mentioned in the previous sections. The five Dimensions of Success that all education systems must be aimed at achieving include the following: (i) high students' learning goals guide the rendering and

monitoring of educational services at every level; (ii) the new students enter the system ready to learn; (iii) all the students have access to effective teachers; (iv) all the schools have the adequate resources and can use them for learning and developing skills; and (v) all the children and young people acquire the necessary skills for being productive and contributing to society. This goal and the Dimensions of Success align with the framework proposed by the Sustainable Development Goals that aims at ensuring that all children have access to an inclusive, equitable and quality education, and promoting life-learning opportunities for all. These proposed dimensions give the tools for identifying specific action lines that the education systems of the region should take up in order to considerably improve the learning levels and skills of every child and youngster. In order to support them in this endeavor, the operational activities, along with those related to knowledge and dissemination that will contribute to the technical and operational work, are identified.

A. Dimension of Success 1. High student learning goals guide the rendering and monitoring of educational services at every level

- 5.2 **International evidence shows that education systems that are able to reach high levels of learning and development of activities in the case of all their students have higher explicitly defined students' learning goals that guide all the activities of the education system.** However, the Bank has also realized that not all the countries in the region have enough institutional capacity for monitoring and evaluating student learning and the development of student skills. Hence, the education systems find it difficult to set forth clear learning goals coordinated with school curriculums, to design programs for teaching training and to carry out student evaluations. In this respect, this Success Dimension is aimed at supporting countries so that they can develop and implement policies that will enable their education systems to organize activities in order to improve learning levels and student skills, so as to ensure the quality of education. The purpose is setting forth high and precise goals about what the student should know and be able to do after completing each cycle of the education system, as well as fostering in the LAC region the creation and strengthening of national quality assurance systems. Likewise, the proposal includes supporting national, regional and international learning evaluations in order to effectively measure the progress made towards reaching these goals and compile information for determining whether the students acquire the contents of the curriculum and the necessary skills to achieve a full and productive social progress.
- 5.3 **Lines of action:** (i) establishing clear standards that will rule student learning and skills so that they can be shared with all the teaching institutions and teachers; and (iii) aligning the curriculum with the learning levels and student skills in order to guide the work of teachers and (iii) aligning the evaluations with standards, teaching materials and teacher trainings, using them to monitor learning and the acquisition of skills, while at the same time guiding public policies and focusing technical support.
- 5.4 **Operational activities:** (i) developing learning standards and skills, as well as curriculum frameworks aligned to them; (ii) developing and strengthening national systems for evaluating teaching and school performance, as well as supporting the participation of countries in international and regional tests that

measure students' learning levels and the improvement of national education statistics systems. In this respect, activities will be aimed at institutional strengthening and capacity generation in the ministries of education and other institutions of the education system, especially for developing and using the information derived from learning evaluations in order to help design public policies and improve teaching practices; (iii) designing and implementing education quality assurance systems at every level, including policies and programs for helping out students coming from vulnerable situations and with disabilities; and (iv) designing and implementing policies and programs aimed at changing, from the school setting, the values, behaviors and attitudes related to gender roles and practices.

- 5.5 **Knowledge and dissemination activities:** (i) generating knowledge on the reforms of the education monitoring and quality assurance systems for improving accountability; (ii) investigating how to design effective education systems counting on the strong participation of the private sector for rendering this service; (iii) generating knowledge about the impact of institutional changes on the organization of education systems, the behavior of school teachers and students' achievement; (iv) generating knowledge about the impact of information on the behavior of teachers and families; (v) promoting the use of data derived from learning tests and publishing results of the international and national evaluations; (vi) strengthening the capacity of countries to use educational data and to make evidenced-based decisions ; and (vii) encouraging the development of innovative educational practices, as well as their subsequent evaluations.

B. Dimension of Success 2. The new students enter the system ready to learn

- 5.6 **Access to high quality Early Childhood Development (ECD) and preschool education programs does not only help ensure that all the students enter the school system ready to learn, but also helps narrow the gaps generated by the socioeconomic levels during the cognitive, physical and emotional development of these children.** Nevertheless, access to these type of programs in the region is still limited and it is not easy to reach the most vulnerable groups. On account of this, the Bank believes that it is absolutely necessary to promote the development and implementation of preschool education and ECD programs. In this respect, this Success Dimension is aimed at reaching the worse off populations with preschool and ECD quality programs in order to narrow the gaps related to opportunities and educational outcomes that separate children who belong to different socioeconomic levels, genders, ethnic groups, regions or zones of the country, so that they all enter the education system duly prepared to learn.
- 5.7 **Lines of action:** (i) expanding access to quality preschool education and ECD programs, specially for reaching groups coming from low socioeconomic levels, rural areas, different ethnic groups and both genders and with disabilities; (ii) promoting quality monitoring activities for ECD services and preschool education, as well as those for measuring the cognitive development of children during the first years of childhood; and (iii) promoting global quality assurance systems for monitoring the services offered in preschool education and ECD initiatives.

- 5.8 **Operational activities:** (i) promoting access to quality ECD programs; (ii) expanding and strengthening teacher training programs related to ECD; (iii) promoting global multisectorial policies for ECD initiatives; (iv) developing quality standards for guiding ECD services; (v) promoting the creation and use of monitoring and quality assurance systems for ECD services; (vi) encouraging the participation of parents and guardians in the ECD activities of their children. Teaching quality, the development of skills from early childhood and institutional strengthening in order to scale up successful ECD programs will be especially emphasized.
- 5.9 **Knowledge and dissemination activities:** (i) evaluating programs for encouraging demand and quality assurance in preschool education; (ii) developing national and regional ECD indicators; (iii) generating knowledge on programs and interventions for improving the quality of ECD services; and (iv) generating knowledge on the impact of information campaigns regarding the expansion of ECD coverage, and (v) informing the different target audiences involved in ECD about the significance of this activity.

C. Dimension of Success 3. All the students have access to effective teachers

- 5.10 **As related to the school, it is clear that the effectiveness of the teacher is the most important factor and it has an influence on student learning and development of skills, while at the same time, it helps reduce inequality.** However, the improvement of teaching quality in the region is still a challenge. The lessons learnt by the Bank highlight the importance of training, supporting teachers, school principals and supervisors and working with them for improving learning and teaching levels, as well as including the pertinent players at a national, regional and local level. This will ensure the success of projects aimed at improving the quality of education. This Success Dimension focuses on actions that the education systems of Latin America and the Caribbean can implement for ensuring that the students have access to effective teachers, especially when dealing the worse off populations and setting priorities regarding projects and programs that promote teaching quality and school leadership.
- 5.11 **Lines of Action:** (i) transforming the teaching career so as to attract, develop, motivate and retain the best professionals. This includes helping the countries so that they can set up teaching evaluation systems for supporting the transformation of the teaching career; (ii) strengthening the role played by school principals and their leadership for improving teaching effectiveness; (iii) developing training support structures for school networks, principals and teachers; (iv) promoting innovations for improving and scaling teaching practices; and (v) generating knowledge about how to improve the effectiveness of training and preparation programs for of teachers and the use of teaching incentives -for individuals and groups.
- 5.12 **Operational activities:** (i) investing and developing programs for attracting and retaining the best professionals in the teaching career; (ii) strengthening the quality of initial training systems and teaching professional development; (iii) promoting effective systems for teachers' evaluation and feedback; (iv) promoting innovative support programs for improving teaching and learning, including alternative teaching methodologies; (v) encouraging the assignment of

the best teachers to schools that are in charge of the most vulnerable populations; and (vi) developing innovative programs for training principals in effective school management.

- 5.13 **Knowledge and dissemination activities:** (i) generating knowledge about the best practices for recruiting, training and motivating teachers, specifically during their initial years; (ii) examining how accountability and payment by performance policies may affect teachers' mobility and school performance; (iii) developing research about school management and leadership; and (iv) completing publications about policy options for narrowing the talent gap that divides teachers in Latin America and the Caribbean.

D. Dimension of Success 4. All the schools have adequate resources and are capable of using them for learning and skills development

- 5.14 **Evidence suggests that investments in school infrastructure, furniture, resources for supporting learning and the development of skills (books, teaching materials, technology, among others), as well as teaching time are key aspects for generating the adequate conditions for children to learn.** Hence, it is of the utmost importance to generate basic learning conditions for all the students -specifically in schools that service students coming from the most vulnerable communities where these investments are key aspects. The purpose of this Success Dimension is aligning investments in school infrastructure, learning resources and teaching time with the other dimensions in order to promote improvements in learning levels and the acquisition of student skills.

- 5.15 **Lines of Action:** (i) aiming education financing and mechanisms at promoting effective teaching and better learning outcomes; (ii) ensuring every student access to schools that have an adequate and sustainable and accessible infrastructure that is resilient to natural disasters and counts on environments that promote learning and the development of skills; (iii) fostering the guided use of ICTs in the classroom setting for facilitating student learning and the development of skills, in line with the pertinent curriculums and teachers' training programs; (iv) aligning the text books and teaching material with the learning goals and the curriculum; and (v) promoting initiatives for closing the gender and ethnic gaps in the education sector, as is the case of school dropout among youngsters of the Caribbean and the low learning levels in mathematics and sciences evidenced by the girls and young females, as compared to boys and young males, in most of the countries.

- 5.16 **Operational Activities:** (i) promoting reforms in educational financing so as to help achieve greater efficiency in the use of resources in the education sector and at a project level; (ii) investing in projects for improving infrastructure and educational inputs, as well as connectivity in schools following high standards that meet the global needs of protecting the environment, especially in schools that service vulnerable populations; (iii) offering technical assistance for an adequate use of information and communication technologies, so as to improve teaching and learning processes; (iv) supporting the production of teaching materials and text books for students and teachers that are in line with the learning and curriculum goals; and (v) promoting initiatives for closing the gender and ethnic gaps.

- 5.17 **Knowledge and dissemination activities:** (i) generating knowledge about the impact of different educational funding mechanisms; (ii) generating knowledge about the use of infrastructure and technology as inputs for improving learning levels and the development of skills; (iii) generating knowledge about best practices for planning, executing and maintaining a sustainable school infrastructure; and (iv) generating knowledge about the effect of the extended school day on different results.
- E. **Dimension of Success 5. All the children and young people acquire the necessary skills to be productive and contribute to society**
- 5.18 **The ultimate purpose of education systems and, hence, of the work of the Bank in the sector, is ensuring that everyone acquires the necessary skills to develop his / her maximum potential in the labor world, thus contributing to society.** The assessment of the region and the studies carried out by the Bank show that there is a disconnect between the curriculum of secondary education and technical vocational programs and the skills that are demanded by the labor market. They have also evidenced that the labor world and the education system are not coordinated as they should in order to ensure a better transition from school to work and from work to higher studies.
- 5.19 In view this, this Success Dimension No. 5 is aimed at addressing the challenge that, in the LAC region, a high proportion of young people graduate without having the cognitive, socioemotional and interpersonal skills that are required to successfully join the labor market and society and that many of them do not work or study. This Success Dimension analyzes the factors that have an effect on school dropout, namely: lack of interest and the limited benefits offered by education to young people who belong to the lowest socioeconomic strata. It is inspired by the successful education systems of the world that have been able to generate a stronger link between education and the demands of the labor market. Working in this direction, improving learning levels and skills of graduates of the education system will contribute to economic development, will help reduce poverty and inequality and will finally help the region develop and reach its full potential.
- 5.20 **Lines of action:** (i) developing the cognitive, socioemotional and interpersonal skills that are required so that school system graduates are successful in society, post-secondary education and the labor sector; (ii) contributing from the school sector to facilitate the transition of young people to post-secondary education and the labor world, encouraging the necessary skills for enabling them to continue their lifelong learning process; and (iii) encouraging a close relation between the education system and the labor world, especially as related to secondary and non university higher education, in order to ensure the relevance of the technical - professional education programs.
- 5.21 **Operational activities:** (i) supporting the alignment of education systems (curriculum, organization of schools, educational management and institutional skills) with the cognitive and non-cognitive skills that are required for successfully participating in society and the labor world; (ii) promoting a better coordination between secondary education, post-secondary education and the production sector, which includes supporting the development of information systems for

following up academic and work-related activities of those who graduate from secondary and post-secondary institutions; and (iii) encouraging public - private alliances for improving the relation between students and graduates and the labor sector, which includes supporting information systems for defining the profile of students who access public and private institutions at different education levels.

- 5.22 **Knowledge and dissemination activities:** (i) generating knowledge about the effectiveness and equity of different educational interventions that facilitate the transition from secondary to post-secondary studies and, from there, to the labor world, specifically, in the case of those groups who face more difficult challenges in the labor market -as is the case of women, indigenous populations and people of African descent; (ii) generating knowledge about the way in which skills are developed throughout life, the skills that are more highly valued in the labor market, the skill gap in the region and evidence regarding the costs and benefits of programs that promote the development of skills (DIA 2017); (iii) generating evidence about effective policies for decreasing school dropout; (iv) generating evidence about the impact of stress on school violence and other educational outcomes; (v) generating knowledge about the impact of school violence on student performance; and (vi) generating evidence about trends and policies for promoting quality and access to higher education in Latin America (DIA 2017).

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