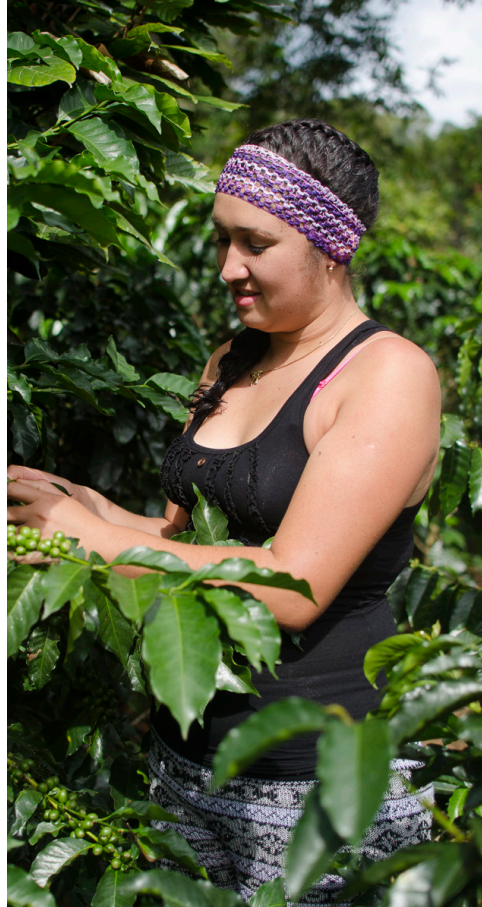


Bridging the Skills Gap: Insights from Employers, Educators, and Youth in Latin America and the Caribbean



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Bridging the Skills Gap: Insights from Employers, Educators, and Youth in Latin America and the Caribbean

by Ana Florez and Shubha Jayaram

OCTOBER 2016

FOREWORD

Nearly one-third of the Latin America and Caribbean (LAC) population is between the ages of 15 and 24. Although the region has made great strides in increasing access to secondary education, 20 percent of youth—20 million people—are neither working nor in school. Excluded, disaffected youth are cut off from productive jobs and instead turn to informal activities, such as street trading or service bartering, and even crime and violence (World Bank 2015a).

Bridging the Skills Gap: Insights from Employers, Educators, and Youth in Latin America and the Caribbean explores the fundamental question of why such a high percentage of youth in the LAC region, including those who successfully complete secondary schooling, lack employability skills and struggle to find employment in the formal sector. Worryingly, high youth unemployment is juxtaposed against unfilled vacancies, with companies unable to find qualified candidates to employ. Through extensive interviews with policymakers, educators, youth, and employers, we attempt to answer the following questions:

- **What skills are needed for employability in the LAC region?**

- **What skills do students primarily acquire in the current formal education system?**

- **What innovative delivery models are currently working in specific locations or may have potential to improve skill acquisition and youth employability?**

Although we focus in-depth on three countries—Colombia, El Salvador, and the Dominican Republic—our findings touch on broad themes around the importance of articulating a hierarchy of critical skills and correcting misunderstandings between employers, educators, and students. The insights are relevant not just for other countries in the LAC region, but also for other parts of the world including Sub-Saharan Africa and South Asia. For example, some of the innovative mechanisms identified—including public-private partnerships, multidimensional technical education, and post-secondary connection models—may hold valuable lessons for policymakers, educators, and employers beyond the LAC region.

Our work complements recent research, including the World Bank's 2016 study on *ninis* (youth that are neither studying nor working, “ni estudia ni trabaja”) and the Inter-American Development Bank's extensive analyses. We hope to offer fresh insights on employability and skill acquisition by sharing reflections and input from more than 300 educators, employers, and youth whose voices are documented throughout this synthesis report.

This research is the result of a deep, collaborative partnership between FHI 360 and the Results for Development Institute (R4D). The partnership allowed us to leverage the respective strengths of each organization, and we are excited to build jointly upon our work in this space.



John Gillies
Director, Global Learning at FHI 360



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Managing Director, Global Education at R4D

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Results for Development Institute (R4D), through the Innovative Secondary Education for Skills Enhancement project, identified the skills required for work in the 21st century economies of Africa and Asia, and explored innovative models of delivering those skills to youth of secondary school age. FHI 360 has a long track record of supporting education reform efforts and workforce development in countries in South and Central America, and the Caribbean. Over the course of four decades, the experts at FHI 360 have successfully and sustainably advanced education efforts in Latin America and the Caribbean, fostering policy dialogue on crucial issues with local stakeholders; advancing strong technical solutions in primary and secondary education and workforce development; and strengthening the capacity of local government and civil society actors in education, workforce, and youth. Building on one another's strengths, FHI 360 and R4D, with support from the FHI Foundation, conducted this investigation to provide new perspectives on the school-to-work transition and skills for employability.

We would like to thank all of the individuals—including educators, policymakers, employers, and youth themselves in Colombia, El Salvador and the Dominican Republic—who shared their valuable time and insights over the course of

this study. This study would not have been possible without their collaboration, support, and willingness to openly share their reflections on fostering the school-to-work transition.

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ACRONYMS

CEDLAS	Center for Study, Work, and Society (Spanish)
CIA	US Central Intelligence Agency
EAA	Education Alliance Association
EDUCAME	Secondary School for All (Spanish)
FEM	Flexible Education Models
FHI 360	Family Health International 360
GDP	Gross Domestic Product
IDB	Inter-American Development Bank
ILO	International Labor Organization
IMF	International Monetary Fund
INJUVE	Institute of Youth (Spanish)
IPL	Loyola de San Cristobal Polytechnic School
LAC	Latin America and the Caribbean
MCC	Millennium Challenge Corporation
MIF	Multilateral Investment Fund (Inter-American Development Bank)
MEGATEC	Gradual Education Model for Technical and Technological Learning (Spanish)
MINERD	Ministry of Education of the Dominican Republic (Spanish)
MOE	Ministry of Education
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-Operation and Development
OPV	Orientation to Life Program (Spanish)
PAES	Evaluation Test of Basic Education Achievement (Spanish)
PISA	Program for International Student Assessment
R4D	Results for Development Institute
SABER	Prueba Saber Standardized Learning Test (Spanish)
SENA	National Service for Learning (Spanish)
TERCE	Third Regional Comparative and Explanatory Study
UDB	Don Bosco University
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USAID	US Agency for International Development
YCI	Youth Career Initiative
WB	World Bank
WEF	World Economic Forum

GLOSSARY

A variety of terms related to skills development, particularly as it relates to employability, have evolved and been used in the literature to describe the types of skills that students acquire, those that are necessary for workplace success, and the types of youth employability models. Below, we define the key terms that are used in this report.

COMPETENCIES

Competencies are understood as the capability to apply or use a set of related knowledge, skills, and abilities required to successfully perform “critical work functions” or tasks.

Interviewees in this study defined skills and competencies differently. A competency goes beyond knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context. Competencies are measurable patterns of knowledge, skills, abilities, behaviors, and other factors that individuals need in order to perform work roles or occupational functions successfully. In the three countries studied, the national curricula and academic guidelines include the following competencies: In Colombia, communication, mathematical, scientific and citizenship; in the Dominican Republic, communication, logical, critical, and creative thinking and in El Salvador, functional, methodological, social, and human competencies. In all three curricula, basic cognitive and technical skills predominate in secondary education.

EMPLOYABILITY VERSUS EMPLOYMENT

Employability refers to possession of a mix of skills that will enable a student to function successfully in a workplace environment. Employment refers to obtaining a job in the formal economy. This report primarily investigates skill development and youth employability but highlights models that incorporate job pathway programs (e.g., New Employment Opportunities) to increase youth employment.

HIERARCHY OF CRITICAL SKILLS:

The literature generally groups skills into three broad categories: a) basic cognitive skills, b) technical skills, and c) socio-emotional skills. The “Hierarchy of Critical Skills” is our framework for describing how employers and educators rank these 3 skills categories. Our findings suggest that employers rank skills based on priority (those skills that a sector or business presently demands) while educators rank skills based on complexity (skills are building blocks that lead to acquisition of more complex skills). This framework helps to showcase how countries differ in the skills demanded by their major industries.

COGNITIVE SKILLS

Knowledge-specific, academic, basic, or foundational skills are those relating to the process of cognition—that is, evaluation, comprehension, reasoning, problem solving, decision making, and knowledge acquisition. Cognitive skills often pertain to mathematics, language, and other academic disciplines.

TECHNICAL SKILLS

Also commonly referred to as “vocational skills”, industry- or job-specific skills that students acquire either through technical training institutes, tertiary education, or specialized job training programs. These skills naturally vary depending on the sector and industry but may include accounting, mechanics, agroindustry, or information technology system management.

SOCIO-EMOTIONAL SKILLS

Recent literature also categorizes them as non-cognitive skills, intra-personal, life, or behavioral skills. The majority of employers categorized these as soft skills, while educators better understood them as socio-emotional skills. For our study, to maintain consistency with recent literature from the region, we use socio-emotional skills to refer to this category.

These skills are broadly applicable and complement other skills such as technical, vocational, and cognitive skills. For example, problem-solving, decision-making, and communication bridge the cognitive and socio-emotional skill categories. While problem-solving and decision-making require cognitive processes, they often require the ability to work successfully with groups, compromise, and listen to others—abilities which also fall within the range of socio-emotional skills. Likewise, oral and written communication skills tend to fall under the cognitive skills category; however, socio-emotional skills also include the ability to communicate with others and respond appropriately to verbal and nonverbal forms of communication.

PRIVATE SECTOR

Refers to the micro-, small-, medium-, and large-sized enterprises that operate in the formal economy and employ students with some degree of education. Private sector actors are also referred to in this report as productive sector actors, demand-side actors, enterprises, businesses, and employers.

SECONDARY EDUCATION

Countries define the length of secondary education differently, ranging from 2 to 7 years. In the majority of LAC countries, secondary education is 5 or 6 years in duration, usually with a lower and then an upper secondary cycle. The lower secondary cycle is usually considered part of basic education (8- to 9-year duration) and considered the minimum that all children should complete. In the Dominican Republic secondary education lasts 4 years (grades 9–12), and in El Salvador and Colombia there are 2 years of upper secondary, called bachillerato or media (grades 10–11). Details on secondary education are fully described in each country section in this report.

EXECUTIVE SUMMARY

Bridging the Skills Gap: Insights from Employers, Educators, and Youth in Latin America and the Caribbean presents the findings of a 10-month investigation of the secondary education school-to-work transition and trends in youth employability in Colombia, El Salvador, and the Dominican Republic. These three countries were selected to ensure representation of South America, Central America, and the Caribbean. With support from the FHI Foundation, FHI 360 and Results for Development Institute (R4D) led this study to advance an understanding of the skills gap that prevents companies from finding qualified candidates to employ. The research conducted identified and studied innovative programs and approaches to foster youth employability in the Latin America and the Caribbean (LAC) region. By triangulating results of a literature review and primary research in the three countries—including interviews with more than 100 participants in each country—this synthesis report reveals current trends in the school-to-work transition and offers recommendations to policymakers and other stakeholders.

This study is unique in that it connects both the demand and supply sides of this issue in the LAC region by bridging the perspectives of secondary education students, educators, public officials, and employers. Many studies conducted in LAC in recent years have focused on the skills gap solely from the demand side by analyzing results from employer surveys. Other studies have responded to the debate from the supply side (for example, by recommending reforms for technical and higher education) or have studied the phenomenon at the macro level by focusing on population and employment trends—given the recent increase of *ninis*, or youth who neither work nor study. Our research gives careful consideration to these previous studies but also analyzes and maps the current demand for and supply of different skills, while focusing on the role of upper secondary education in closing the gap. We investigated how employers' needs vary by sector and whether the skills demanded can be realistically expected from secondary education graduates or whether they are more easily attained by tertiary education graduates. Importantly, our

work shares the perspectives of educators, youth, and employers. By posing the same interview questions to each group, we were able to study to what extent their opinions corresponded and differed. By incorporating in this report the personal reflections of these key stakeholders, we hope to give a voice to those squarely impacted by the skills gap.

Supply- and demand-side perspectives are described in each of the three country studies. In each country analysis, we first present an overview of the country's economic and educational context. Next, we describe employers' perspectives ("Skills Needed for Employability") and then present educator and student perspectives ("Skills Acquired in the Formal Education System"). To conclude each country analysis, we highlight successful programs working to build relevant skills among secondary students ("Current trends in Innovative Delivery Models"). Below we summarize the key regional findings and trends for each of these three sections.

Skills Needed for Employability

Employers in the three countries identified socio-emotional skills as the main set of skills needed for employability. However, specific skills mentioned by the employers varied. Interviewees used more than 15 terms to describe non-academic and non-technical skills, including: communication, teamwork, work ethic, relationship-building, decision-making, leadership, autonomy, responsibility, flexibility, adaptability, initiative, self-control, social-awareness, conflict-resolution, and self-esteem, among others. This study identified several notable education models that engage employers in the definition of these skills. Although these models help to provide a bridge between secondary education and higher education through development of technical skills, special attention is also placed on academic and socio-emotional skills.

While employers in all three countries prioritized socio-emotional skills, the relative importance of cognitive and technical skills acquisition varied by country and economic sector development. Our analysis led to the

creation of a “hierarchy of critical skills”¹ to summarize the agreed-upon skills preferences of employers and educators, respectively, in each country. For example, in Colombia, the increasing complexity of economic activity has resulted in greater demand for technical skills. The Ministry of Education (MOE) and local governments have responded by including technical subjects within their comprehensive curriculum guidelines, and local governments are leading major public-private endeavors to deliver schooling models that meet the needs of local employers. In the Dominican Republic, which is dominated by fewer economic sectors such as tourism and a large informal economy, many employers and educators interviewed prioritized the acquisition of basic cognitive skills. The country is in the process of re-vamping its national education system, both to improve the quality of basic learning and to promote relevant technical training. El Salvador has a growing need for technically trained workers, and has made advances in expanding its technical formal school system including post-secondary connections models. The country faces a major challenge, however, in overcoming gang-related violence in school communities that directly affects secondary-aged youth and their options to complete education and find employment. Employers interviewed prioritized cognitive and technical skills, based on the immediate needs of their sector. This differed from the hierarchy of skills discussed by educators, which is described below under “Skills Acquired in the Formal Education System.”

The economic sector, size of businesses, and strength of trade associations and unions all influenced the skills demanded by employers. In general, large and complex businesses required more technical skills. For example, employers from livestock production, agroindustry, and mining in Colombia and textiles, services, and manufacturing in El Salvador emphasized that high school diplomas are sufficient for security guards and cleaners, but not for jobs where production processes have adopted technology that requires highly specialized skills. Most of these employers interviewed represented large and mid-size industries in stable or growing economic sectors. In these two countries, employers preferred

students with higher education degrees and valued English language as a preferred skill. Large and mid-size companies also valued high test scores, secondary and tertiary diplomas, strong resumes, and internal referrals.

Employers from the tourism sector, which dominates in the Dominican Republic, said they value and look for basic cognitive skills such as reading and numeracy, as well as intrapersonal skills more than technical skills, which they believed employees could acquire through on-the-job training. This sector requires a diverse workforce to respond to different segments (e.g., ecotourism, business tourism, and cultural tourism). The nature of this sector is more receptive to hiring secondary education graduates. Although our research primarily focused on employers in the formal sector, the informal sector accounts for nearly 50 percent of employment in LAC, and it is therefore important to consider this sector’s distinct needs in future or follow-on research.

Skills Acquired in the Formal Education System

Educators and employers did not have the same views on the acquisition of socio-emotional skills. Across interviewees, there was a lack of clarity on how to define, articulate, and measure socio-emotional skills acquisition within formal instruction. Educators argued that while these skills are embedded in formal curricula, teachers lack the tools to develop them consistently and thoroughly. This generates an unevenness in skill acquisition across schools and classrooms. Importantly, some educators understood the importance of combining academic and socio-emotional skills and use modern pedagogical methods (project-based learning, collaborative work, experiential learning, dual learning and leadership, among others) to teach. Indeed, some students interviewed made the connection between socio-emotional and academic skills taught in different subject areas. Young leaders from Caldas, Colombia, for example, highlighted the usefulness of collaborative work—taught to them since primary school—as a means of learning to work with others and to lead processes in coffee production. Students in both the Dominican Republic and El Salvador mentioned the acquisition of socio-emotional skills such as communication and life orientation skills in subject areas such as language, philosophy, social sciences, and English as a second language.

¹This term is our framework for describing how employers prioritized the skills categories (cognitive, technical, and socio-emotional) and how educators ranked the complexity of acquiring these skills. It explains how countries differ in the skills demanded by their major industries. The framework is defined further in the Glossary section.

However, many teachers expressed their frustration with their system's focus on academic standardized tests rather than holistic approaches, and felt they lacked the capacity and resources to deliver socio-emotional skills well. Meanwhile, employers said they use academic standardized test scores, as well as students' high school diplomas and grade point averages, as their main tools for measuring candidate performance—measurements that do not adequately reflect students' socio-emotional development. Employers believed that young graduates are inadequately equipped with socio-emotional skills. Promising methods of measuring socio-emotional skills at both the school and employer levels have been piloted recently in Colombia and El Salvador and are also being expanded to other regions.

Educators expected secondary education graduates to pursue technical and higher education before joining the labor market. This finding was consistent with the expectations of employers, who also valued candidates with cognitive and technical skills acquired at the post-secondary level (e.g., an associate degree providing supplemental training) above those with only secondary-level degrees. Thus, in the LAC region, secondary education is not considered a sufficient terminal degree to transition to work. Increasing the rate of secondary-level completion (currently 40 percent) and the rate of enrollment in higher education (30 percent) should be priorities, along with increasing the quality of education at these levels. It is important to note that the hierarchy of skills prioritized by educators was different from that of employers, since the former emphasized the complexity of skills students need and acquire throughout their schooling. For example, building a solid foundation of socio-emotional and cognitive skills allows for the development of more specialized technical skills. Educators saw skill development as not only preparing students for employment but also as a basis for success in higher education and in life. This distinction is important to appreciate the perspectives of educators, who understand the demand for competencies, not just skills.²

² We distinguish between skills and competencies, the former being specific learned activities, and the latter being the sets of knowledge, skills, and abilities that are articulated in school curricula.

Current Trends in Innovative Delivery Models

In addition to public-sector initiatives, countries are fostering public-private partnerships and developing multidimensional education and training interventions to respond to the skills gap by promoting post-secondary connections (PSC) and/or integrated student development (ISD) models.³ PSC models provide an instructional bridge between upper secondary and tertiary-level training, while equipping students with technical skills for job pathways. ISD models operate at the secondary education level, incorporating cognitive and socio-emotional skills in courses to develop well-prepared and well-rounded graduates. For example, in Colombia, there are deeply-rooted public-private education collaboration models such as the PSC Alliance in Caldas and Manizales, which connects upper secondary school students to higher education and employment. This firmly established model is now pilot testing approaches to socio-emotional skill acquisition. Additional examples include the MEGATEC (Modelo Educativo Gradual de Aprendizaje Técnico y Tecnológico) program in El Salvador, and the New Employment Opportunities (NEO) initiative in the Dominican Republic, which is a multi-stakeholder partnership to increase the scope and quality of technical training programs. Other models focusing on ISD include those implemented by the city of Bogotá and the flexible modalities approach in El Salvador and Colombia for serving disadvantaged youth. Our analysis showed that these interventions strengthen the links among youth, formal education systems, and the productive sector and have great potential to bolster youth employability. However, while multiple examples of innovative models can be found in each country, myriad issues related to their implementation, scaling-up, and sustainability need to be addressed.

Recommendations

Overall, our research led to important findings that support the need to more clearly integrate contextual factors (economic sector, industry and education levels, for example), when discussing and defining the skills gap in

³ The terms for PSC and ISD were adapted from Spanish phrases obtained during interviews: *programas de articulación* (PSC) and *programa de desarrollo integral estudiantil* (ISD). While ISD is a direct translation from Spanish to English, PSC is not. Instead, PSC is the name of a specific program implemented in the US.

Latin American and the Caribbean. Our research showed that employers and educators agreed on some underlying issues related to the skills gap and differed on others.

The two sides differed in identifying the hierarchy of skills that students need. Educators must understand that when employers from large, complex sectors prioritize skills they will focus on technical skills. Small- to mid-size employers will have greater needs for cognitive skills. On the other hand, employers must understand that educators focus on building more complex skills over time so that students are prepared for higher education, employment, and life. Different skills are developed in lower secondary, upper secondary, and higher education, and employers must recognize the varying skill complexity at each of these education levels when developing new-entry job qualifications. Innovative education and employability models from the region illustrate different ways of responding to both the demand for and the supply of these skills.

Moving forward, we offer four recommendations for closing the skills gap:

- I. **Policymakers should encourage efforts to define socio-emotional skills at employer and school levels, so that both sides can speak the same language, agree on priority skills, and find ways to assess them the same way.** This will provide employers with an accurate means to measure this skillset when they recruit candidates, and educators will have a means to assess whether students are acquiring these skills and to supplement and improve upon pedagogy accordingly. A pilot measurement system is under discussion in Bogotá and Manizales, with the support of the Organization for Economic Cooperation and Development (OECD).
- II. On the demand side, **employers should define typologies around the “hierarchy of critical skills” that they demand at the secondary and higher education levels.** These typologies will be useful in classifying the needs of employers according to economic sector, business size, among other characteristics to influence dialogue between educators and employers. In turn, this can help

develop a common language on youth preparedness and skills acquisition and increase connections among secondary and higher education education systems, governments, schools, the private sector, and other stakeholders.

- III. On the supply side, **education systems should continue to define and connect cognitive with socio-emotional skills in formal curricula, while responding to diverse contexts, and provide all teachers with adequate training on skills-based instruction and pedagogy.** Teacher and classroom guides, student governments, afterschool programs, and parent-teacher associations, for example, should support the development of these cognitive and socio-emotional skills in meaningful ways according to the unique characteristics of students. Updated pedagogy focused on learner-centered teaching—which helps to engage students in school, improve students’ cognitive and socio-emotional skill acquisition, and prepare youth for successful employment—should be expanded and lessons learned should be shared around the region.
- IV. Lastly, **governments in the LAC region should continue to implement, fund, and scale up innovative post secondary connection or integrated student development initiatives that have been evaluated both from the programmatic and operational sides and are proven to be successful.** Programs that are deeply connected with the private sector and include socio-emotional skills development are particularly relevant. Policies and initiatives that seek to increase secondary school completion rates and better connect upper secondary and tertiary-level training will be especially important.

INTRODUCTION

According to the Multilateral Investment Fund at the Inter-American Development Bank (MIF-IDB), nearly one-third of the Latin American population is aged 15–24. One out of every five youth—20 million people—is neither working nor in school, which is turning into a growing risk for the region (World Bank 2015a). Excluded, disaffected youth are cut off from productive jobs and instead turn to informal activities, such as street trading or service bartering, and even crime and violence. The MIF identified job skills as the core deficit: many youth lack both technical skills and, more importantly, “life skills” such as communication, reliability, and teamwork, which are long-term abilities essential for any career (MIF 2012).

The World Economic Forum (WEF) defines the “skills gap” as the quantity of positions that employers cannot fill because they cannot find employees with the types of skills they need (World Economic Forum 2015). As many as 40 percent of surveyed employers across the Latin America and Caribbean (LAC) region point to the skills gap as the principal obstacle to raising employment and boosting productivity. This divide results from a variety of factors, including differences in expectations between educators and employers and school-level weaknesses that affect the instruction of key skills. The skills gap in the LAC region has had particularly negative effects on youth employment, with the average unemployment rate for youth ages 15 to 24 reaching 15 percent and as many as 54 percent of youth working in the informal sector (World Bank 2015a).

Given that around the world, secondary education is the common level of education from which most people enter the labor force, it becomes crucial to consider the relevance, quality, and equity of learning at that stage and the barriers to transition from school to work. In recent years, secondary education has been identified as necessary for a citizen’s fundamental education, and many countries have passed laws making lower secondary—and occasionally upper secondary—part of mandatory requirements. Although access to secondary education has increased in most of regions, including in the LAC region, with secondary enrollment now at 73 percent,

concerns are growing around the lack of relevance of the curriculum and pedagogy for today’s labor market (IDB 2012a). Quality of instruction is an added concern, as recent Program for International Student Assessment (PISA)⁴ test scores have demonstrated that a majority of students fail to acquire basic knowledge and skills (IDB 2012a).

The rising demand for secondary education and the changing needs of the labor market present an enormous opportunity to identify and foster innovative ways of preparing youth for the workforce. Previous discussions on resolving the skills gap have focused too narrowly on employer interests and innovations (demand-side) and have de-emphasized the role and influence of educators (supply-side) in youth preparation. While recent publications from the World Bank (WB), IDB, and the Organization of Economic Co-Operation and Development (OECD) thoroughly detail the economic issues surrounding the skills gap, they tend to over-generalize the state of secondary education systems and actions to be taken. These unbalanced arguments do not portray the breadth of the school-work division, nor do they provide insight for system-wide policy reform. This synthesis report explores the skills gap ecosystem, by examining how private sector actors and school systems are understanding and responding to this issue. The objectives and findings of this study are structured according to the following research questions:

- **What skills are needed for employability in the LAC region?**
- **What skills do students primarily acquire in the current formal education system?**
- **What innovative delivery models are currently working in specific locations or may have potential to improve skill acquisition and youth employability?**

⁴ The Program for International Student Assessment (PISA) tests 15-year-olds across the world in reading, math, and science literacy.

By answering these questions, this report begins to integrate the skills gap discourse so that future policy and investment decisions related to youth employability may consider both educator and employer perspectives.

Our study used a thorough methodology that comprises literature review and in-depth primary data collection in three LAC countries: Colombia, El Salvador, and the Dominican Republic. The in-country data collection effort involved classroom observations and focus groups with students, teachers, principals, and employers across economic sectors, as well as key informant interviews with researchers, policymakers, educators, and innovators across the youth employment space. This diversity of perspectives allows for a thorough analysis of the obstacles and advances in youth employability that useful for establishing links between supply and demand in skills gap reform. This approach also illustrates the variability in the skills gap within LAC, in terms of the types of skills needed and acquired, as well as the forms of responses taken, and emphasizes the need for a deep understanding between employers and educators in this discourse.

In each of the countries, consultations indicated a lack of consensus between employers and educators on the term used to define the skills needed for employability that go beyond basic academic (i.e., literacy or numeracy) and

technical skills. Interviewees used more than fifteen terms to describe the non-academic and non-technical skills, including communication, teamwork, and work ethic. The majority of employers categorized these as soft skills, while educators better understood them as socio-emotional skills; to maintain consistency with recent literature from the region, this report uses the term socio-emotional skills.

Following a brief description of our methodology, this report provides an overview of the LAC region, exploring the skills required for employability, the skills delivered in formal education systems, and several innovative models working to address the skill gap. Each of these topics are then presented within the context of each country study, Colombia, El Salvador, and the Dominican Republic. We conclude with a synthesis of findings from the three countries of focus, highlighting key challenges that have contributed to the growing skills gap and recommendations on how governments and other stakeholders in the LAC region can work to improve skills acquisition in secondary education. This regional synthesis is accompanied by individual country reports that were originally written in Spanish and will be available to view on the FHI 360 (www.fhi360.org) and R4D (www.resultsfordevelopment.org) websites.

METHODOLOGY

This report features a combination of literature review and in-country primary research conducted by a team of four consultants and led by two principal investigators from FHI 360 and R4D. The in-country research focused on three countries in the LAC region—Colombia, El Salvador, and the Dominican Republic—to ensure representation of South America, Central America, and the Caribbean. These countries were selected based on the following criteria:

- **A middle-income country that is generally representative of the region**
- **Spanish-speaking population**
- **Vibrant private sector and civil society that are engaged in education issues**
- **Government stakeholders that have prioritized youth employment and skills development**
- **Availability of reliable data, including from the WB and IDB**
- **Presence of existing FHI 360 and R4D projects and networks**

The literature review captured current knowledge on employer skills needs and secondary education reforms in the region and in the three focus countries. In all, we studied more than 178 sources from these three countries, synthesizing the most relevant studies on formal secondary and tertiary education and skills needed for the 21st century. The literature review highlights recent writings and surveys focused on employers' needs and priorities, as well as studies illustrating perspectives from recent entrants to the labor force (both informal and formal). The review also incorporates national plans, programs, curricula, and laws related to basic and secondary education and youth unemployment in the

LAC region. Relevant literature on tertiary education and trends in youth population, youth unemployment, secondary school attendance and completion rates, and the percentage of youth entering the formal and informal employment sectors were also studied.

The primary research conducted in Colombia, El Salvador, and the Dominican Republic was both quantitative and qualitative in nature, involving interviews, focus groups, and surveys on the demand and supply sides of the workforce skills gap. This research follows FHI 360's policies and procedures from the Office of International Research Ethics. After receiving necessary approval from FHI 360's institutional review board, we developed a methodology for each country that included: 1) meetings with 30–60 participants in focus groups with employers; 2) key informant interviews with 30–45 policy makers, employers, business associations, researchers, educators, and innovators of skills training programs; 3) focus groups of 60–96 principals and teachers; 4) classroom observations in 36 classrooms; and 5) interviews and focus groups with 24–60 students.

The municipalities included in this study were selected based on their relative contributions to the national economies and the quantity of jobs within their zones. The schools were selected to participate in this study based on their connections with emerging economic sectors and were representative of public and private, rural and urban institutions. The selected schools also represent the diversity of configurations of formal secondary education country structures, including basic education, lower secondary, and *bachillerato* or upper secondary. Informal education programs were cited to complement the perspective of the formal education.⁵ Schools were also selected to participate in this study if they were secure and accessible.

The data collection in Colombia included 153 participants from two departments (Caldas and Cundinamarca) and three cities (Bogotá, Ibagué, and Manizales), including

⁵ An assessment of the informal education sector is out of the scope of this research.

four public schools with both technical-vocational and academic upper-secondary tracks, one private school, and one school within the Concessionary School Network (described later). In addition, experiences from the departments of Antioquia and the city of Cartagena were included in the literature review. The schools selected were connected with economic sectors such as agroindustry (coffee production, for example), mining, livestock, commerce, construction, tourism, and finance.

The data collection in El Salvador included 125 participants from four municipalities, including 11 schools. The study concentrated in two areas of San Salvador (San Salvador and San Martín), and two of La Libertad (Santa Tecla and Antiguo Cuscatlán). These four municipalities were connected with emerging economic sectors identified as textiles, electronics, agroindustry, technology and computers, and tourism. Five schools offered third cycle (lower secondary), and six schools offered technical *bachillerato*. Interviews with the private sector focused on businesses located close to the schools, or in the absence of any accessible business, on local chambers of commerce.

The Dominican Republic data collection involved 106 participants from three municipalities (Santo Domingo, Santiago, and La Altagracia), including seven schools. Three were academic; two were arts-based; and two were technical-professional. These municipalities were also selected to represent the Dominican Republic's various provinces (north, south, and east), each of which specialize in a different economic activity, such as agroindustry, tourism, and formal and informal trade.

Finally, we triangulated the findings from the in-country data collection with the findings of the literature review. Both qualitative and quantitative data from the three target countries were compared to broader regional trends. This triangulation was used to strengthen the analysis of trends in skills and youth employment, including the skills needed for employability, the skills students currently acquire in formal education, and some promising delivery mechanisms that address the skills gap across Latin America and the Caribbean.

The following sections of this report present an overview of the LAC region and summarize findings from our investigations in Colombia, El Salvador, and the Dominican Republic. The overview and each country synopsis contain four sections:

- 1. Economic and Educational Context**
- 2. Skills Needed for Employability**
- 3. Skills Students Currently Acquire in Formal Education**
- 4. Current Trends in Innovative Delivery Models**

Tables 1 and 2 following the country studies summarize our findings, comparing education systems and innovative delivery models across the three investigations.

LAC REGIONAL CONTEXT

Economic Overview

Over the last decade, economic growth in the LAC region has brought 70 million people out of poverty and expanded the middle class by 50 percent. The percent of people in total poverty (defined as less than \$4 a day in the LAC region) declined from 42 percent to 25 percent from 2000 to 2012, and extreme poverty (less than \$2.50 a day) declined from around 24 percent to 12 percent (BBC 2014). Much of the economic growth has been attributed to the region's commodity boom, which contributed to a modest rise in wages for unskilled and poor workers in exporting countries (World Bank 2015c).

With the end of the boom, the region is now experiencing a marked economic slowdown that may impact these positive trends. While the period of 2003–2012 saw average gross domestic product (GDP) growth rates of over 5 percent, in 2012 and 2013, average growth rates slowed to 2 to 2.5 percent. The WB's Office of the Chief Economist for LAC reported that the region had below 1 percent growth on average in 2015, and projected a growth rate of only 1 percent in 2016 (World Bank 2015b). Meanwhile, 130 million people in the LAC region are still chronically poor, and income inequality across the region, which has not improved since 2010, remains high.

With slowed economic growth, employment quality and generation in the region have suffered. A recent World Bank report found that employment quality is deteriorating as more workers become self-employed, moving from larger to smaller companies, or leaving the labor market entirely. For those that have become self-employed, entered small companies, or joined the informal sector, their work tends to be less stable and comes with fewer benefits.⁶ Workers in the informal sector are at a particular disadvantage, often earning less than minimum wage and working without pension plans or health benefits. Informal workers also have difficulty developing their skills and transitioning to formal sector employment. The International Labor Organization has estimated that nearly 47 percent of jobs in Latin America are informal (ILO 2015), and in countries such as

Paraguay and Nicaragua, informal-sector earnings have contributed to as much as 65 to 70 percent of national GDP (IMF 2008).

At the same time, data from the WB's recent Enterprise Survey shows that workers in the LAC region are hired about equally by large firms and small and medium enterprises (SMEs) (Enterprise Surveys 2014). Not only does this counter other data from the region, it also differs from other regions such as Sub-Saharan Africa, East Asia, and the Pacific, where SMEs account for the majority of employment. However, SMEs remain the highest source of new jobs, with more than 70 percent of new jobs created by SMEs in large LAC economies. The survey also showed that two-thirds of all employment in the LAC region is in the service sector, which has important implications for the need for cognitive and socio-emotional skills acquisition at the school level (in contrast to manufacturing, where on-the-job, formal training is common).

Skills Needed for Employability

The WEF reports that 37 percent of companies in the LAC region believe that one of their principal obstacles in boosting productivity is finding employees with necessary training. In Brazil, 68 percent of employers reported difficulty in filling positions because of a skills gap in the workforce, as did 40 percent in Costa Rica, 38 percent in Mexico, and 38 percent in Panama (World Economic Forum 2015).

The skills gap for youth in Latin America is evident across the three broad categories of cognitive, socio-emotional, and technical skills. According to an IDB survey of employers across Argentina, Brazil, and Chile, socio-emotional skills were considered twice as important as knowledge-specific skills and four times more important than industry-specific or technical skills (IDB 2012a). The lack of socio-emotional skills in workers across the LAC region has profound impacts on productivity, firm competitiveness, and innovation. Low levels of innovation and productivity often result in reduced demand for highly skilled labor, which perpetuates cycles of low economic growth (World Economic Forum 2015).

⁶See World Bank (2015b) and Rosnick, D. & Weisbrot, M. (2014) for additional data on employment trends.

Workers who are not sufficiently skilled face difficulties in securing employment. They make up a disproportionate share of the LAC region's low-income population. Households led by low-skilled workers represent only 28 percent of the population but make up 54 percent of those living in extreme poverty.⁷

Skills Students Acquire in Formal Education

Since employment opportunities for youth are tied to their skill levels, countries are investing in increased educational access, as well as a focus on skills development in school curricula. With more than 50 million youth in Latin America expected to complete their studies at the secondary level, the skills that students acquire in secondary education are of particular importance to their employment prospects (IDB 2012a).

The LAC region has already achieved significant gains in access to education. The IDB reports that LAC primary school enrollment has reached a record 95 percent, with secondary school enrollment currently at 73 percent (IDB 2012a). Access to higher education has surged in the last decade, with an average growth of about 40 percent (UNESCO 2014). While the majority of students have benefited, many children remain left out of the formal education system. Just 30 percent of students in the lowest income quintile complete secondary education, compared with 83 percent of youth from the highest income quintile; this educational inequity demands increased attention.

While access to education has increased throughout the LAC region, the quality of education remains low compared to international standards. Results of the PISA test⁶ indicate that over half of students in the LAC region are not reading at minimum grade levels and that more than 65 percent are unable to reach minimum levels of mathematical ability (IDB 2012a). Roughly 49 percent of 15-year-old students in the LAC region scored at the lowest possible level in reading, and over 80 percent scored the lowest possible level in mathematics and science. These results point to a low capacity to solve problems and apply mathematics, science, and language to basic life situations. Gender disparities are evident in test scores, as well, as girls score lower than boys in math and science throughout the region (World Bank 2015d). As millions of youth exit

education systems without the basic cognitive skills needed for successful employment, the impact of educational attainment on human capital accumulation is severely constrained (World Bank 2016b).

According to a 2012 McKinsey report, low-quality education can stem from incongruences in the expectations of students and educators in terms of pedagogy and instruction. In the LAC region, 58 percent of interviewed youth indicated that the most effective form of training, and that which they most prefer, is hands-on, practical learning. Only 24 percent of graduates from academic programs and 37 percent of graduates from technical training programs reported that their education provided them with this type of learning (McKinsey 2012).

Weak skills instruction and student disengagement lead to high dropout rates among youth ages 15–19. In 2009, the average dropout rate across the region was 29 percent. Only slightly more than 50 percent of youth ages 15–19 have completed the first phase of secondary education, and only 40 percent graduate from secondary school having completed 12 years of education. Only 12 percent of the entire workforce in LAC has completed any tertiary education, compared with 24 percent of the workforce in OECD countries. Youth who do not continue through the education system to develop strong cognitive and socio-emotional skills are ill-equipped for highly skilled or highly paid professions. Indeed, as our findings show, educators and employers do not consider secondary education sufficient education for transition to work. This is an important reason why increasing student graduation rates should be a priority in discussing the skills gap (World Bank 2012a).

Current Trends in Innovative Delivery Models

Many governments in the LAC region have placed youth employability at the top of their development agendas and launched a variety of initiatives to alleviate the widening skills gap. Most strategies have focused on improving technical skill acquisition, although some initiatives also target socio-emotional development in connection with technical training programs. Emerging models among these initiatives include public-led interventions, public-private partnerships, and multidimensional education and training. Both ISD and PSC models are also used as vehicles

⁷ Skill levels defined by the World Bank: "unskilled"—those with no formal schooling; "low-skilled"—those with only primary school education; and "skilled"—those with at least secondary school education.

to foster relevant skills. While most of these initiatives are recent and have not yet been rigorously evaluated, a number of promising approaches in the region are outlined below.

Public-Sector Reforms and Initiatives

In the last 10 years, many countries across LAC have passed new laws that offer more market support for youth employability. These initiatives are centered on overcoming demand-side barriers, promoting youth business initiatives, and strengthening the links between youth labor supply and the labor market. In 2013, CEDLAS (Centro de Estudios Distributivos, Laborales y Sociales) conducted a policy scan and meta-analysis of youth and employment policies across LAC, examining recent patterns, trends, and lessons learned between 2008 and 2013. Of the 65 initiatives launched or ongoing during that time, the majority involved measures that incentivized employment through minimum wages, tax exemptions, or subsidies for youth employment.

An example of one such measure is the “Lei do Aprendiz” (Apprenticeship Law) in Brazil, passed in 2000, which provides companies a 2-year subsidy to implement apprenticeship contracts for young workers. The law stipulates that every medium- and large-sized company must have 5–15 percent of its workers as apprentices, who must be between the ages of 14 and 18 and currently enrolled in a public institution of learning (Presidente de Republica 2000). The apprenticeship is legally required to include two modules: 1) experiential learning, in which the young worker is trained by supervisors in the workplace, and 2) theoretical learning, in which apprentices receive professional development at government-approved technical training institutes across the country (Casa de Moeda do Brasil 2010). The law benefited roughly 850,000 youth every year between 2000 and 2010 (Centro de Estudios 2013).

Not all legal measures adopted to increase youth employment have been met with a favorable response. Peru, for instance, facing 88 percent of its youth working in the informal sector and a youth unemployment rate of nearly 14 percent, passed a youth employment law in late 2014. In an attempt to lower costs for employers, the law cut vacation days from 30 to 15 and reduced benefits such as life insurance and social security for workers between 18 and 24 years old (The Guardian

2015). Many youth and trade unions vehemently opposed the law, claiming that it robbed youth of their right to fair and dignified employment. The law became known as the Pulpín Law. (*Pulpín* connotes a youth who is easily exploited). After widespread criticism and protests in Lima and 10 other cities across Peru, the Peruvian Congress repealed the law in early 2015 (Youth Employment Decade 2015).

Public-Private Partnerships

Only 10 percent of youth employability initiatives enacted in the LAC region from 2008 to 2013 included the private sector. However, public-private partnerships for inclusive development are increasingly seen as an attractive and innovative way to increase the skills of young people graduating from secondary school. A 2014 WEF report on innovative public-private partnerships in LAC found that “in the social and sustainable development spheres, partnerships between public and private actors are less common but are becoming more widespread suggesting that a new paradigm for collaboration, action and impact is rapidly emerging particularly in education and health—improving access to formal jobs and reducing informality” (World Economic Forum 2014, 11).

The benefit of private-sector engagement is that companies can provide targeted trainings that help youth develop the specific skills that employers are seeking. Employers across the LAC region, more than in most other regions, are reporting an urgent need to improve the capabilities of their workforce, and this urgency has likely contributed to increased involvement of the private sector in youth employment (World Economic Forum 2015). A notable private-public partnership and PSC model is the Youth Career Initiative (YCI), a global program with operations in Brazil, Mexico, and Costa Rica. YCI partners with companies in the service sector to place youth from poor communities in 6-month education programs that lead to full-time employment in the tourism and hospitality industries. YCI reports that 85 percent of graduates from their program go on to full-time employment or further education. However, YCI only targets youth who are high school graduates between the ages of 18 and 21. Due to high rates of dropout from secondary school across the LAC region, many youth cannot benefit from programs such as YCI that require participants to have completed secondary school (Youth Career Initiative 2016).

Another PSC example is the New Employment Opportunities (NEO) for youth initiative, launched in 2012 by the MIF. NEO brings together five of LAC's largest employers—Walmart, Caterpillar, Microsoft, CEMEX, and Arcos Dorados—to provide technical training for youth ages 16–19. Over the next 10 years, NEO's PSC model aims to enroll 1 million disadvantaged youth in job training programs and mobilize 1,000 companies to offer employment and internships for youth completing the training program. Since its inception, NEO's corporate partners have pledged US\$37 million to the initiative. NEO has partnered with governments in 11 LAC countries to agree to a common strategic agenda, measure progress, and promote government adoption of best practices for high-impact training models (MIF 2013) (IDB 2012a).

Multidimensional Education and Training

While on-the-job technical training has been popular in the LAC region for decades, new ISD programs focus on socio-emotional skills combined with technical and industry-specific skills. Of the 65 youth employability initiatives included in CEDLAS's statistical analysis, more than 30 initiatives included technical training, and two-thirds of those initiatives included both on-the-job training and socio-emotional skills development. The meta-analysis of the independent impact studies revealed a movement in LAC towards comprehensive learning packages that integrate basic life skills and technical training (Centro de Estudios 2013).

A promising example is the Entra-21 initiative, supported by MIF. Entra-21 ran in 22 countries in LAC from 2001 to 2011 and provided 135,000 youth with comprehensive life skills and technical skills training based on labor market and employer needs (ILO 2015). Other examples of ISD models include “Projoven” in Peru, “Juventud y Empleo” in the Dominican Republic, and “ProCaJoven” in Panama. These programs reach roughly 100,000 youth annually, and most initiatives are targeted towards specific groups of young people who are deemed to be at particularly high risk of unemployment (Centro de Estudios 2013).



COUNTRY STUDIES:

COLOMBIA

Interviews with employers revealed a significant skills gap in Colombia, most prominently in students' socio-emotional skills. While the Ministry of Colombia's (MOE) official curriculum guidelines cover all three types of skill acquisition, the school-level articulation of those skills is highly varied across the country. As a result, academic performance and youth employment are low, especially for at-risk populations. Over the last several years, Colombia's government—at national and local levels—has taken many steps to reform educational practices and better connect instruction with the productive sector. Colombia has had the most success with public-private sector collaborations, notably the Concessionary Schools Network and the Alliance Model in Caldas and Manizales.

Economic and Educational Context

Colombia's emerging economy is the fourth largest of Latin America. It has grown by an average of 5 percent annually since 2011, with industry expansion in banking, communication, manufacturing, extraction (coal and oil), and agriculture (sugar and coffee). Economic activity is relatively diversified, with roughly 53 percent of productivity within the service sector, 38 percent in industry, and 9 percent in primary resource extraction.

There are around 1.6 million individual businesses in the formal sector, 99 percent of which are small and medium enterprises, contributing 38 percent of the total GDP. Of those, 96 percent are micro-enterprises (0–10 employees), 3 percent are small (11–50 employees), and less than 1 percent are medium (51–200). Notably, 95 percent of small- and medium-sized companies are family-owned, 50 percent tend to survive the first year of start-up, and only 20 percent the third year of start-up (Dinero 2015). Colombia also has a prominent informal labor sector in which 60 percent of employed Colombians participate, 44 percent of whom work “cash-in-hand” in hotels and restaurants (Colombia Reports 2014).

As of 2015, unemployment stood at nearly 9 percent, with more than one-quarter of the population below the national poverty line (CIA World Factbook 2016). The unemployment rate is much higher for youth 14–28 years of age (15.8 percent), and even higher for young women (20.7 percent) compared to young men (12.2 percent). According to the Ministry of Labor, in 2014, 1 out of 5 youth were classified as *ninis*, neither working nor studying.

With regard to education, 84 percent of schools are public, and 16 percent are private. More than 84 percent of youth are currently enrolled in primary school and can expect to complete 13.5 years of schooling. Colombia's secondary schooling system is divided into two levels: lower secondary (grades 6–9), and upper secondary (grades 10–11). More than 3 million students are enrolled in lower secondary (72 percent) and nearly 1.1 million are enrolled in upper secondary (41 percent). The upper-secondary track is intended to be the culminating level of basic schooling for most students. As of 2010, approximately 9 percent of secondary-school-aged children (ages 11–16) were out of school.

Looking at the school-work divide, the 2014 Manpower Group Project on the Shortage of Human Talent reported that 57 percent of companies in Colombia have difficulty finding employees with adequate skills.

Skills Needed for Employability

Overall, employers interviewed across productive sectors sought to hire workers who have a combination of cognitive, technical, and socio-emotional skills. Still, the exact combination and degree of skills that employers requested varied according to the size of the company's industry, staff, and associations or unions. The most prominent companies, for example, requested highly specialized skills that may only be acquired in higher education.

Employers interviewed reported that they expect the labor force to have, at a minimum, basic technical and technological education, achievable through a post-secondary degree, especially for sectors with complex operations, such as mining, or where sophisticated operational skills are needed, such as call centers.

Above basic cognitive and technical competencies, many employers prioritized socio-emotional skills, including the ability to work successfully within an organization and comply with workplace norms. Employers also described their need for workers who are honest, confident, and self-motivated and who can take on leadership roles.

“Regarding socio-emotional skills, the students are good. But they don't have much initiative, they don't go beyond the instruction they are given. They are well-educated people, but they don't go that far; what they can do, they do according to what they are told...they don't go beyond certain limits that others quickly do.”

- Employer, Caldas

They agreed that the skills gap is most evident in youth's socio-emotional skills, such as self-control, social skills, communication, and positive self-concept. While these skills may be embedded within the MOE's citizenship competencies curriculum guidelines (described below),

employers believed these are not well-cultivated in formal instruction. Frustrated with the level of youth preparedness in schools, employers communicated a need for companies to organize themselves and directly teach and train aspiring students.

The employers interviewed also spoke about an increasing overemphasis of entrepreneurialism in the schools. In many technical programs, students are encouraged to create and implement initiatives that are self-sustaining and job-creating, but this reduces the incentives of students to enter conventional labor markets. These training programs are meant to increase human capital for local industries, and they paradoxically encourage students to risk new ventures, many of which fail to survive.⁸ Employers report that many students misconceive the values of entrepreneurship, and as a result, do not contribute productively to the economy.

A notable situation in Colombia is the conflict between the minimum age to start working (15 years) and the minimums that companies have established (18 years). Despite the legal rights of youth to work, both employers and educators agreed that 15- to 16-year-olds are too immature to be formally employed. Many are lobbying to change the laws by increasing the minimum age to work.

Skills Students Currently Acquire in Formal Education

The Curriculum and Its Articulation

In identifying the skills that Colombian students currently acquire, it is important to have a thorough understanding of the country's educational system and curriculum. Here, we look at the core competencies that students are expected to develop through the national curriculum guidelines, followed by an analysis of their articulation.

Under Colombia's General Education Law, secondary education is expected to develop in students the basic competencies and cultural capital that permit them to exercise their citizenship. The MOE has established formal curriculum guidelines⁹ that include cognitive,

technical, and citizenship skills development. In 2004, the MOE re-organized those guidelines according to four basic competencies:

- **Communication—reading, writing, and reviewing information critically**

- **Mathematics—logical and numerical thinking**

- **Science—investigation of phenomena in the natural and social world**

- **Citizenship—peaceful living, democratic participation, respect for diversity**

Socio-emotional skills are most clearly articulated within the citizenship competency. The four basic competencies branch into nine areas of mandatory instruction: 1) natural science and environmental education; 2) social science, history, geography, politics, and democracy; 3) artistic education; 4) ethics and human values; 5) physical education; 6) religious education; 7) humanities and foreign languages; 8) mathematics; and 9) technology and computing. At the upper-secondary level, these subject areas compose only 80 percent of a school's curriculum, leaving 20 percent for a variety of elective offerings, such as technical training, internships, sexual and reproductive education, etc. The majority of secondary education institutions in the country are academic in nature; approximately 22 percent are technical.

Academic-track students in grades 10–11 gain specialization in an area of the sciences, arts, or humanities and traditionally continue their studies at a university. They may also take courses in economics, philosophy, and political science. Interviewees described the curriculum structure for the upper secondary as extensive, superficial, and in some cases disconnected. In addition to the nine mandatory academic areas, schools need to respond to cross-cutting issues such as

⁸ In 2012, according to the Chamber of Commerce (CONFECAMARAS), 173,563 (77 percent) new individual companies were created and 49,502 (23%) companies were created by partnerships and associations. However, 80 percent of new small- and medium-size companies fail before their fifth anniversary, while 90 percent survive less than 10 years. Fifty-one percent of these companies close their businesses due to poor management and compliance.

⁹ The competencies-based curriculum guidelines include a) curriculum guidelines, b) basic competency standards, and c) pedagogical guidelines. These guidelines respect the school autonomy granted by the Colombian law. Schools create their own mission and vision statements and study plans for each grade and level.

diversity and inclusion for indigenous and Afro-Colombian populations. They also need to include subjects related to the environment, sexual education, and human rights, which can contribute an excessive amount of content for even a 40-hour school week.¹⁰ The MOE lacks clear strategies to monitor the implementation of these curriculum guidelines in the schools. In fact, no rigorous evaluations have been conducted on the degree of curriculum implementation in secondary education.

Technical-track students in grades 10–11 can specialize in specific industries, such as agriculture (most popular), industrial, mechanics, electronics, or production, and typically seek formal employment post-graduation. The technical track is supported mainly by SENA, which serves as an advisor and implementer of vocational programs across the country. Local non-governmental organizations (NGOs) and employers also influence the upper-secondary technical track at the regional and local levels. Particularly in rural zones, employers in the agriculture, agroindustry, livestock, and mining industries provide specialized training for entry to these careers. In other regions and urban settings, students receive more holistic instruction for a diversity of industry options.

In partnership with schools and local governments, SENA offers pre-set technical courses (usually two or three programs) to be taught at grades 10–11. These courses are integrated within the 20 percent of the curriculum dedicated to elective offerings. This strategy is part of a PSC model. The academic track allows students to take university-level classes (from the first two semesters) in conjunction with the curriculum for 10–11 grades, and course credits are valid for the students to continue their higher education degree. The technical track links students with technical careers and SENA offerings, so that students may obtain associate degrees or certificates in specialized areas.

While the high-level curriculum reform structure remains strong, the MOE has faced challenges in school-level implementation. New reforms combined with unequal school support have resulted in significant variability across secondary institutions in terms of academic and technical focus, the relevance of instruction for students,

the capacity for socio-emotional skills training, and the variety of actors (public and private) who may participate in school processes to improve the quality of education. While the Concessionary School Network, for example, has promoted ISD, other schools have invested in specific vocational tracks under the PSC, such as agroindustry to support local economies (described below).

Educators raise five additional concerns about the PSC model. First, the emphasis on technical offerings reduces the time and space to promote basic cognitive and socio-emotional skills. Second, students in the PSC model face barriers to accessing higher education due to high costs of tuition and additional fees.¹¹ Third, because the PSC model is implemented in the regions, whether or not contracts and alliances with SENA and other providers continue depends on the political will of local administrations.¹² Fourth, students in these PSC programs perceive limited offerings that may not relate to their areas of interest. Some students believe they have been directed to learn about only one technical area since an early age. Finally, impact evaluations have shown no significant improvement in learning outcomes or access to jobs. The implementation challenges around the PSC model seem to demonstrate the confusion that the upper-secondary education system faces in trying to offer both cognitive and technical skills (and socio-emotional skills) and respond to the demands of the local employers and society in general.

“Our rural fields are our most important enterprises, but we haven’t invested in the skills that will help us maximize its benefits. We need to learn teamwork, help one and other, and stop thinking that external help will solve our problems. Competency-based education will help us to develop entrepreneurship.”

- 9th-grade student,
Proyecto Jóvenes Caldas, Funza

¹⁰ The standard school week includes 30 hours of classes, 24 of which are for mandatory classes. Colombia is in the process of extending the school week from 30 to 40 hours a week.

¹¹ These include transportation costs and living expenses for students in rural areas who need to travel to urban settings where most of the universities are located.

¹² Including universities, technical training institutions, and local NGOs.

Perspective of Students and Teachers on Skills Acquired

Students

Interviewed secondary-level students identified the national examination exit test (SABER 11) as their main concern regarding the quality of education that they receive. This exam over-emphasizes basic cognitive testing and heavily influences classroom instruction. Even so, students indicated a significant gap between classroom content and exam content and described the disproportionate influence of scores on students' success post-graduation. If students under-perform on these tests, they have a very low probability of continuing on to tertiary education or finding an entry-level job.

This influence of students' scores mirrors the students' classroom experience, typically described as theoretical, non-motivating, and out-of-context. Students noted there is little project-based or hands-on learning, field visits, or engagement with the community in typical schools. These student-centered experiences seem to occur more frequently within the PSC model (specific examples are described below).

Teachers

Discussions with Colombia's educators revealed that content instruction at the secondary level is often divorced from teacher experience, student needs, and cultural or social context. Because the national curriculum guidelines are so extensive, educators often teach across a range of grade levels and content areas, especially in schools with limited specialized staff.¹³ As a result, teachers may homogenize and simplify their instruction, which leaves little room for student participation and curriculum adaptation. In this context, students may not receive explicit technical or socio-emotional skill building in the classroom. Interviewed principals and teachers

“There are not bad teachers; it's just that some teachers make their classes more dynamic. We like dynamic [lessons], in a laboratory, or outside the classroom, planting, watering, doing things. It would be easier than just being in the classroom in theory.”

- 9th-grade student, Funza

agreed that there are problems in current instruction regarding flow, quality, and relevance. As a result, they say, Colombian schools see high rates of student drop-out.

Current Trends in Innovative Delivery Models

The Colombian government, at national and local levels, is taking a multi-sectoral approach to addressing some of these challenges and improving youth employability. The most common strategies incorporate public-led initiatives, public-private partnerships, and multidimensional technical education and training. Most of these initiatives are still in the pilot or implementation phase, and only the Antioquia model has been formally evaluated.

Public-Sector Initiatives

Local government bodies are investing in a number of city-level education and youth employability programs that work to improve and integrate skills acquisition. Some notable examples are described below.

→ **In Bogotá**, the Secretariat of Education is implementing two main initiatives to re-vamp its curriculum guidelines and provide (and monitor) ISD models. First, the Competencias Ser pilot evaluated socio-emotional skills development from primary to 9th grade. This pilot originated a new upper-secondary program to provide youth with extra-curricular activities in sports, arts, citizenship, and peacebuilding intended to bolster students' socio-emotional skills.

A second initiative is a PSC model that prepares students for higher education through an optional 12th year of basic competency instruction. Although limited to certain schools, this pilot has demonstrated success in enrolling secondary-level graduates in tertiary education. The Secretariat of Education has worked with SENA and local universities to deliver this PSC model in 288 urban schools, or 85 percent of the city district. As a part of this program, secondary school teachers collaborated with university faculty, SENA representatives, and Secretariat of Education officials through joint committees to define and determine academic and technical priorities at the

¹³ Teachers are selected and assigned to their subject areas in all grades (6–11).

secondary level. City officials also worked with sector business associations and chambers of commerce to understand the most in-demand skills for the labor market. According to the Director of Secondary and Higher Education in Bogotá, these city efforts have sought to balance strict workforce development with promotion of a comprehensive model of education that is meaningful to secondary-level students.

→ **In Ibagué**, SENA and the Secretariat of Education have worked with secondary schools to develop a PSC model that responds to economic trends and needs in the region. The curriculum goes beyond technical skills development to include instruction on values, ethics, entrepreneurship, and innovation. Students are also expected to complete 880 hours of “practical learning” within a company environment, to help close the school-work divide on relevant skills development. One distinct characteristic in Ibagué’s PSC model is an emphasis on helping students to create “life plans” that have a positive impact on society. This activity was developed in response to the economic vulnerabilities and risk factors that young people face, such as early pregnancies, drug addiction, bullying, and violent behavior, among others. Parents are supporting the PSC model, in part by participating in parent-teacher associations. Schools also are using student government as a tool to motivate and engage students in the learning process.

→ **The PSC model in Cartagena**, otherwise known as “Relevant Education,” was developed to increase the productivity and competitiveness of the Cartagena District through improved academics that respond to the needs of emerging sectors in the region, such as tourism, petrochemicals, and agroindustry. The academic program includes English as a second language, entrepreneurship, and information technology training. The city has also invested in strengthening a network of local technical training institutions to provide a variety of career paths for students. These two tracks have been combined into networks that contain clusters of upper-secondary academic and technical schools. In this system, even students in the academic track receive 2 days of technical and vocational learning every week. The

objective of these networks is to ensure that students in all upper-secondary schools in Cartagena are prepared to meet the demands of local economic sectors, using the knowledge and resources of technical and vocational institutions.

→ **The Antioquia state model** is the only model at a state level that has invested in broad policy-level secondary education reform, with the support of the WB. The 2006 reform focused on raising levels of equitable access to and retention in secondary school, as well as improving competency levels and the proportion of students that pursue tertiary education. Antioquia invested in flexible education models (described below), incentives and scholarships to keep students in schools, vocational and career counseling, and school management, including pedagogical and classroom changes. The Antioquia model received a formal impact evaluation in 2012. It was shown to have achieved positive outcomes in student enrollment, but no significant returns in learning quality and performance or youth employability.

Public-Private Partnerships

In Colombia, there are many public-private partnership efforts to support education. This study focuses on three examples applied at the secondary education level, each of which aims to improve skills development.

→ **The Concessionary Schools Network** was launched as a collaboration between the government of Bogotá and private-sector partners. Currently operating in 23 schools, the Concessionary Schools Network seek to deliver diverse academic training, integrated personal development, and clear channels for the poorest students in the city to enter higher education.

One example studied under the Concessionary Schools Network is the Education Alliance Association (EAA), which manages five schools. The schools use the national curriculum guidelines (as outlined by the MOE) but provide additional support and integrated student development for socio-emotional and personal growth. The pedagogical methodology of these schools is one of exploration, where students can identify their own interests and develop their

“In my opinion, it’s not better to focus on only one thing, but to open the space and learn about any field, so that we can learn something new every day. It’s better to learn a bit of everything rather than a single thing.”

- 11th-grade student, Colegio Jaime Garzón,
EAA, Concessionary Schools Network

skills accordingly.¹⁴ Students have opportunities to participate in art, recreational, and sports activities during the school day, as well as in projects with national and international entities, such as the National Model United Nations. The EAA offers a Godfather Program as well, in which teachers are assigned to accompany students as they consider career pathways at the end of upper secondary. In coordination with SENA, the EAA also offer courses for technical learning, including in accounting, electrical engineering, and international business, although this program is different from that of the PSC previously described. In contrast to programs in more rural institutions, students of EAA receive exposure to a diverse range of academic and technical fields, which allows them to discover new occupations and professions, including in academia. Interviews with students at these schools revealed positive responses to the pedagogical model. Students said they enjoy the cultural exchanges, and they are passionate about the art, music, dance, and drama in the curriculum.

→ **The Alliance model** between the Government of Caldas—at both the state and national levels¹⁵ and with both the productive and academic sectors—is one of the longest-lasting examples of public-private education collaborations in Colombia. While the

¹⁴ In Bogotá, there are some nascent efforts to expand the International Baccalaureate Program, which has demonstrated high levels of academic achievement. The International College of Integral Education (CIEDI) private school was included in the country report, which is worth exploring in future research. The IB program recently created a track for intermediate technical education, termed “professional orientation,” that helps students to develop technical competencies, especially around Information Communication Technologies (ICTs).

¹⁵ The Caldas state is part of the Colombian Coffee-Growers Axis region along with the Risaralda and Quindío states that produce the majority of the Colombian Coffee. The capital of the state is the city of Manizales.

Alliance supports all levels of education, this study examines its efforts to connect secondary schools with higher education and employment. At the state level, Caldas has been working since 2009 with the Coffee Growers Committee, local universities, and rural schools to develop a tuition-free program in which upper-secondary students can work towards a technical degree or receive credits for a university degree while staying in their home districts. This PSC “University in the Coffee Fields” (Universidad en el Campo) model is designed to offer an education that is relevant to students in Caldas, thereby promoting a new generation of coffee growers and improving the competitiveness of the region. The program uses the methodology of Escuela Nueva (a rural, primary-school flexible model), which allows students to identify their unique interests and abilities and directly connect them to technical training. The program further emphasizes the development of socio-emotional skills, integrated within instruction on technical competencies. In comparison to the

“Among the universities in this country, this [Caldas] program offers a unique experience in terms of technical and technological instruction and the employment connections for the students.”

- Educator, Universidad de Manizales

Concessionary Schools, the Caldas model emphasizes thorough technical skill development that directly links students to post-secondary employment in the productive sector.

→ **The Alliance model at the municipal level in, Manizales** has been working since 2014 with the Luker Foundation and six local universities, secondary schools, job training institutions, and private-sector actors¹⁶ to implement a project based on the Escuela Activa Urbana model (which also follows Escuela Nueva principles). As a part of this initiative, students can attend the PSC “University in Your High School”

¹⁶ Including the National Association of Industrials (ANDI), Fundación Corona, and CONFA.

(Universidad en tu Colegio), a free afterschool program where students can work towards a technical degree or receive credits for a university degree. Students follow an intensive curriculum but have opportunities to pursue additional courses according to their interests.

An estimated 70 percent of secondary-level students in the city elect to participate in this program and go on to continue their academic studies in a university or in the formal productive sector. Since the private sector is deeply involved in the program, graduates from this model have improved chances of finding relevant jobs. This model includes the development of socio-emotional skills, and Manizales and Bogotá are partnering to pilot the measurement of socio-emotional skills with support from the OECD.

Multidimensional Education and Training

Colombia hosts a number of additional initiatives to improve access to technical training and deliver more holistic skills development. The nine Flexible Education Models supported by the MOE, for example, seek to increase school enrollment in diverse and at-risk communities. Of those nine, the post-primary, *telesecundaria*, and *media-academica* rural Flexible Education Models are progressively enrolling students, which make them important models to be evaluated. Further details about these models are included in the country report.

Also notable, the Agriculture Technical College of Funza, Cundinamarca, offers technical and entrepreneurship training from the primary to upper-secondary levels. In primary school, students develop skills in cognition, leadership, environmental protection, and other competencies relevant to the agroindustry. In upper secondary, under the PSC model, students are trained in specific processes of agricultural production and management, including finance for agribusiness, agro-economics, and dairy and livestock management. Within their course of study, students participate in the actual manufacturing and selling of agricultural goods, often in conjunction with industrial and dairy-production farms.

Flexible Education Models in technical skills development and entrepreneurship has a strong record for preparing youth for success in the agricultural sector. One of the main highlights of this model is the role of teachers in facilitating the connection between the school and the private-sector farms. According to parents, students, and the principal, teachers infuse relevance in their classes and support and expect high levels of success from their students, whether they continue into the agroindustry or into higher education.



COUNTRY STUDIES:

EL SALVADOR

El Salvador has made advances in its technical-vocational curriculum but faces challenges in school-level operationalization. School offerings do not adequately respond to economic growth sectors, such as textiles, plastics, pharmaceuticals, and the aviation industry, and many of the principals and teachers at the bachillerato vocational centers do not establish links with local businesses. Certain PSC initiatives, like MEGATEC (Modelo Educativo Gradual de Aprendizaje Técnico y Tecnológico), are addressing this gap and preparing youth for direct employment after secondary education. The rise of street gangs has contributed to violence in El Salvador and has reduced decent employment opportunities for youth. This distinct situation is heavily influencing employers' and educators' perceptions of the skills gap.

Economic and Educational Context

El Salvador has the third largest economy in Central America. The country's GDP per capita has grown an average of nearly 2 percent annually since 2011, reaching 2.5 percent in 2015. Top industries include food processing, beverages, chemicals, textiles, and light metals; and top agricultural products include coffee, sugar, and corn (CIA World Factbook 2016). El Salvador has around 500,000 micro-, small-, and medium-sized enterprises that employ two-thirds of the formally working population and contribute 44 percent of the national GDP (Entrepreneur 2007). Micro enterprises (up to 4 people) make up 91 percent of the business market, small enterprises (5–49) make up nearly 8 percent, and medium-sized enterprises (50–99) make up 1.5 percent. Large (multinational) corporations account for 0.4 percent of the market (Capitulo II).

El Salvador has one of the highest rates of non-agricultural informal jobs as a percentage of total employment, at nearly 66 percent in the LAC region (American Society 2015). In 2014, the unemployment rate stood at 7 percent and youth unemployment at slightly more than 10 percent (Trading Economic 2016). Nearly one-third of the population lives below the poverty line, the majority living in rural areas (World Bank 2016a). According to the National Household Survey (EHPM 2014), more than one-quarter of youth (ages 15–24) were classified as *ninis*, neither working nor studying.

Ninety-five percent of children are currently enrolled in formal primary school and can expect to complete 6.7 years of schooling (EHPM 2014). Within the formal system, there are two stages of secondary education: 3rd cycle basic (lower secondary), a transitional program for grades 7–9, and *bachillerato* (upper secondary), which includes a 2-year academic track and a 3-year vocational-technical track. There are approximately 401,000 students enrolled in 3rd cycle basic and 111,000 in *bachillerato*, including 99,000 in the academic track and 12,000 in the vocational-technical track. Enrollment rates for secondary school have increased significantly in the last several years. In the period 2009–2014, enrollment in secondary education (lower and upper) rose by 11 percentage points to nearly 63 percent of the

entire student-age population. Gender equity in education has improved substantially as well, with 64 percent of the female adolescent population enrolled in secondary education, compared with 61 percent for males.

Despite these gains, employers and human resources managers interviewed in El Salvador claim that the education system is ineffective in helping youth acquire necessary skills, particularly cognitive and socio-emotional skills. Managers report that youth arrive at their companies with significant deficiencies in communication skills, higher-order thinking, and positive self-concept, citing failures in the education system's curriculum development and lack of mechanisms to measure curriculum effectiveness. This is further explored in the next section.

Skills Needed for Employability

Employers and NGOs reported that they search for employees with “good character,” who are honest, empathetic, hard-working, willing to learn, interested in the field of work, and committed to serve their communities. Employers expressed an additional interest in candidates who have clean legal records, given the prevalence of crime and violence in the country. As a result, recruitment processes are often based on external and internal referrals from other employers and existing employees.

In a system that contains far more job-seekers than available positions, the need for candidates to establish trust-relationships further limits their access to formal employment. Most of the employers acknowledged they have decreased the number of internships at their companies for security reasons. However, employers from the tourism sector expressed an interest in creating alliances with public education institutions to get more graduates into this sector. Universities, business associations, job sites, and job fairs are becoming increasingly important routes for both employers and youth to establish trusting, collaborative relationships.

Major issues raised by both employers and educators were the effects of violence on students in certain areas of the country and the limitation of youth to move freely between provinces controlled by gangs. These challenges

result in high drop-out rates in the education system and high unemployment for youth in areas outside San Salvador and La Libertad, which, paradoxically, contribute 76 percent of the country's economic activity.

In terms of educational experience, employers prefer students with higher education degrees (3-year associate degrees), but many report receiving employees with just 9th-grade certificates for entry-level positions. The majority of the employers ask to interview candidates who are at least 18 years old, submit a strong resumé, and have high scores above 8 points on the Prueba de Aprendizaje y Aptitudes para Egresados de Educación Media (PAES) national exit exam. As such, high value is placed on cognitive skills above technical skills, the former being easier to evaluate using these accessible metrics. Employers also identified English as a second language as one of the most important academic skills to be acquired by students.

Employers valued cognitive skills first but connected them with the acquisition of socio-emotional skills and expressed their concerns that graduates are ill-prepared in this area. Interviewees noted that they have to invest in socio-emotional skill trainings at their companies or at the National Institute of Training. Workshops on self-esteem, punctuality, customer service, communication, ethics, gender awareness, and teamwork were mentioned most often.

Employers also believed that upper secondary schools and universities do not offer effective services to help students prepare for their post-secondary career paths. National institutes lack mechanisms to track graduates and learn whether they have the skills needed for effective employment. As one employer explained, some economic sectors, such as textiles, are growing and can generate thousands of jobs in a year. However, none of the technical institutes are preparing youth to get those jobs.

Finally, employers recognized the efforts of the government to reform the education sector, especially the upper secondary level. However, they indicated that the education reforms have not yet translated to effective youth preparation for employment. Employers also noted a lack of formal instruction on technical skills for

the fastest growing sectors of the economy, especially for the textile, clothing, plastics, pharmaceutical, and aviation industries.

“[In one year] between 80,000 and 90,000 direct jobs in this country were generated and yet there is no technical school that trains people for the textile industry...We found that paradoxically the most important sector in El Salvador's exports is the textile and clothing sector, making up 50 percent of exports, and the largest employer in the country, and yet in the whole education system, there is no single career track that teaches professional skills for textile engineering”

- State Official, El Salvador

Skills Students Currently Acquire in Formal Education

The Curriculum and Its Articulation

The *bachillerato* academic track emphasizes cognitive skills acquisition in four core subject areas: language, mathematics, natural sciences, and social studies. Instruction is geared toward the development of conceptual, procedural, and attitudinal competencies, which are regularly tracked through subject-specific performance indicators. Students receive an additional program of study entitled “orientación para la vida de educación media (OPV),” which promotes the development of social and interpersonal skills, critical thinking, problem solving, and responsible decision-making.

The technical track intends to prepare youth for direct employment in the productive sector and prioritizes technical skills development. In recent years, the MOE has worked to increase the number of technical offerings within this system. Technical high schools now offer up to 33 specialties, including trade, agriculture, tourism, and computer services, many of which align with growing economic sectors in the country.

The recently updated curriculum grounds instruction within four types of competencies: functional, methodological, social, and human. Despite its strengths, the new curriculum has not been universally implemented across institutions, nor has the MOE successfully monitored schools' levels of compliance. As such, recent standardized test scores suggest that students are not developing a thorough understanding of their curriculum subjects and cannot apply their knowledge across contexts. Interviewees agreed the MOE must improve systems for integrating the new curriculum and measuring the performance of students in relation to its content. The Ministry also piloted measuring socio-emotional skills in the PAES test and used the results to inform the new study plans for the *bachillerato*.

The Ministry has invested in multiple reforms since 2004, including the creation of national programs focusing on English as a second language and programs to offer primary and secondary education to those who need flexible schedules to complete their education. The MOE has created private and public partnerships with the support of the vibrant NGO community and international donors. The reforms have also focused on pedagogical interventions to boost learning and to ensure better school management at all education levels.

Recent efforts included the Full-Time School System (Escuela de Tiempo Pleno), which creates school networks at the basic and secondary education levels around the country that share services such as libraries and sports facilities, while training and promoting teachers to improve their teaching with new modern pedagogical models that promote student-centered learning. Teachers are exercising collaborative work through teacher circles, and teachers and students are using self-learning guides to empower students. Unfortunately, these promising reforms are not yet scaled up to reach all schools.

The MOE also supports promising models such as MEGATEC that require better coordination with other ministries such as the Ministry of Labor to ensure connection between upper-secondary, technical, and higher education and the labor market. This model is further explained in the innovations section.

Perspective of Students and Teachers

Students

Numerous students interviewed noted that instruction emphasizes self-control, teamwork, social skills, and communication, most often in conjunction with the subject areas of social studies, language, and OPV. The OPV class is included in the curriculum and aims to teach socio-emotional skills.

Students said that most of their instruction in socio-emotional skills occurs in the school environment, and infrequently at home with their families or through other associations. As such, they thought it important that teachers are trained in these areas. Although students acknowledged that their schools have made efforts to convey and guide socio-emotional skills development, several students believed these efforts can be improved and that their teachers are insufficiently trained in socio-emotional skills instruction.

Students noted that they did not receive proper guidance when it was time to choose a technical area in upper secondary school. They felt as though their educational options were not well explained and believed the decision to pursue a technical track was essentially made for them.

[Socio-emotional skills] are important because they help you to confront life in all aspects and to make life decisions.

- Student, Bachillerato Técnico

Most of the students interviewed expect to keep studying and to get a job. A small percentage of the students mentioned their interest in leaving the country with their families to look for better, safer opportunities. Students also expressed their interest in finding a job in the formal sector to access benefits such as pension and health insurance. However, they recognized that opportunities are limited for them and they might have to work in the informal economy.

Students were aware of the businesses located in the areas where they live. However, they were concerned with the lack of interaction between the schools and local

businesses to support the schools and teach students about professional life.

Teachers

Teachers and principals interviewed in this study highlighted the importance and relevance of socio-emotional skills development, although they used different terminology in discussing these skills. About 8 out of 10 teachers interviewed felt they were adequately trained to impart these skills to students but, importantly, they believed socio-emotional skills were diluted or not well articulated in the formal curriculum. During classroom observations, the majority of teachers observed included small-group work in their classes, but only half explicitly linked the content of the class to development of socio-emotional skills, such as communication, conflict resolution, and decision-making. A minority of observed teachers included critical thinking in classroom instruction, and none mentioned self-control or positive self-concept. Teachers lack tools to regularly assess skills development in each subject area (except in the case of the OPV), which makes it difficult to evaluate the success of their instruction.

Teachers were aware that they need more training in the curriculum subject areas, particularly math and science, but also in socio-emotional skills to ensure learning and improve the results of the PAES test. Teachers also cited limited resources in the schools, including deficits in infrastructure and equipment, lack of books, and lack of resources to support afterschool programming.

Teachers agreed with students about the lack of connection between the schools and local business and employers. They believed a lack of trust on both sides results in limited opportunities to bring employers to interact with the students or bring students to visit the companies or to conduct internships. Teachers also noted the difficulty in delivering their 200-day instruction and provide additional resources on post-secondary employment opportunities.

Teachers saw their role as ensuring students have a chance to master foundational skills. Some teachers, especially at the lower secondary level, saw national institutes and programs led by the National Institute of Training as meeting the needs of the employers more than those of students.

Finally, teachers expressed their concern about violence in the country and its effect on students. They believed that poverty, broken families, and lack of opportunities contribute to the growth of gangs. Teachers in secondary education expressed concerns about students who lack resources to pay for safe transportation to and from school, students who are pregnant or have children, and students who are both studying and working.

Current Trends in Innovative Delivery Models

El Salvador's MOE has been working over the last few years to develop new strategic priorities to transform the public education system and advance youth skills, while creating linkages with the private sector. Most of the interventions in El Salvador are implemented under public-private sector initiatives with the support of local NGOs and international donors.

Public-Sector and Multidimensional Education and Training Initiatives

Given the level of violence in El Salvador, the government—in coordination with local NGOs and international donors—is developing multiple interventions to prevent youth from joining gangs. These multidimensional interventions range from workforce development to welfare and education programs. A few notable examples are described below.

- **Centros Ciudad Mujer** (City of Women Centers) is a program that aims to improve the living conditions of Salvadoran women through the facilitation of essential services offered or coordinated by comprehensive health care centers located strategically throughout the country. Led by the National Institute for Youth (INJUVE) since 2012, this program has three cross-cutting components in education, health, and employment focusing on young urban women. The program has been evaluated by the IDB since 2013.
- **EDUCAME (Educación Media Para Todos)** is one program that offers flexibility in the delivery of academic courses. The MOE is implementing it to offer education services to vulnerable populations. Since 2005, this program has worked to enhance the ability of persons 15 years of age and older outside the education system to return to school and continue

their education, and thus fulfill their basic needs for entering the labor market. The EDUCAME program has been recognized as an important and successful model to be implemented by other countries, such as Guatemala.

Public-Private Partnerships

Our research looked at three important public-private partnerships in El Salvador, each described below:

→ **MEGATEC (Modelo Educativo Gradual de Aprendizaje Técnico y Tecnológico)** is a formal educational model based on the premise that technical education should be tailored to regional economies' labor market demands and structured to impart key competencies required of professionals in technical fields. MEGATEC aims to link all the institutions of secondary and tertiary technical education and to improve access for students who have studied or worked in technical fields. It does this by creating articulated (linked and coordinated) curriculum and competency testing.

The curriculum coordination encourages technical training by allowing students to eliminate repetitive coursework as they transfer between technical high school, associate-level, and university-level technical education, often reducing workload by a year of study. This model orients technical education to quality, excellence, continuity, and flexibility to increase productivity and adapt to the opportunities and needs of the labor market. The program also aims to implement progressive educational opportunities that strengthen regional development and has sites located around the country.

Since 2006, MOE has also developed a pilot plan to improve the MEGATEC technical education system through 22 national institutes, managed by local NGOs in the 14 departments of the country. It has also begun developing "Centers of Educational Innovation," a PSC program that connects upper secondary students with higher education. This model has been supported by donors including the Korean and Japanese governments and the United

States through the US Agency for International Development (USAID) and the Millennium Challenge Corporation (MCC). It starts at the first grade of upper secondary (10th grade) and offers students four different career paths:

1. **Receive a high school diploma after 2 years of study (10–11 grade)**
2. **Receive a technical high school degree after 3 years of study (10–12 grade)**
3. **Receive a superior technical degree in a selected area after 4 years of study (10–12 grade and 2-year associate degree)**
4. **After associate degree, pursue other levels of higher education**

The MOE manages the overall model, in close coordination with secondary education schools and the national institutes managed by local NGOs. This model is considered a fast-track high school to a technological degree. MCC strengthened one of the national institutes in Chalatenango. The external pre-post evaluation conducted in 2011 showed positive results in increased enrollment (from 309 students in 2008 to 663 in 2011), retention (96 percent), and graduation rates (88 percent). The evaluation could not determine long-term employment prospects for graduates, however. The evaluation also pointed to teacher turnover and political will as key issues affecting sustainability of the intervention (MCC 2014).

→ **The PILET (Modelo de Integración Lineal de Educación Técnica)** model is a public private partnership managed by two Salesian¹⁷ (faith-based) NGOs in El Salvador—Technical Institute Ricaldone and the Don Bosco University (UDB)—that primarily focus on workforce development projects. The MOE provides technical and managerial supervision. Since 2004, this model has developed a curriculum that responds to changing economic demands and that connects instruction in high schools, technical training

¹⁷The Salesians of Don Bosco is a Roman Catholic religious institution founded in the late nineteenth century by Saint John Bosco to help poor children during the industrial revolution. The organization has local presence in the five continents. In El Salvador, the Salesians have more than ten institutions including schools, universities, and NGOs.

institutes, and universities. Core topics in the curriculum for the technical track under upper secondary are computer sciences, electronics, and graphic design. Students can obtain three degrees: 1) high school degree; 2) superior technical degree from the Ricaldone, and 3) university degree in engineering from the UDB. Students in the PILET program take classes at both the Ricaldone and UDB. Evaluations showed positive results in increased retention and graduation rates. Both institutions recognized efficiencies, including improved communication, as a result of implementing this model.

- **The UDB-AEROMAN alliance** is another promising model. AEROMAN, a maintenance and engineering company that supports the leading airlines in the Americas, is implementing a skills development program through an existing agreement with UDB to enhance technical careers such as aeronautical maintenance and aeronautical engineering.

The aim is to prepare young students who may eventually become part of the company's qualified workforce. One distinct characteristic of this model is the social mission of the university. The UDB operates with a commitment to the Salesian philosophy of reaching out to people with low resources, reflected in the types of courses they offer. To assist with job placement, UDB's job center helps AEROMAN graduates find employment after graduation. The university reports that 90 percent of their graduates find employment in sectors related to their training.

UDB also maintains a database that links students with employers; approximately 500 companies and other employers use the database. In addition to assisting with job placement, the job center also tracks graduates to identify student outcomes at 1 year and 5 years following graduation. The UDB-AEROMAN alliance has more than 237 graduates, most of whom are already working with the company or with similar companies.



COUNTRY STUDIES:

DOMINICAN REPUBLIC

The Dominican Republic is revamping its education system to better match formal sector demands. It has invested heavily in expanding technical-vocational offerings and is currently building 29 new technical-professional centers. The MOE faces obstacles in the coordination and articulation of skills in the formal curriculum, especially around socio-emotional skills to respond to integrated education needs for at-risk youth. These challenges partially result from the significant differences in educators' perceptions of the skills that the labor market demands and the best methods for delivering those skills. While some believe the market requires specific technical skills, others see the informal market as looking for basic communication and social skills, along with other cognitive skills. This unevenness among educators is evidence of a lack of coherence in country-wide education strategies and goals and may be mitigated through improved collaboration among schools and with private sector actors.

Economic and Educational Context

According to the International Monetary Fund, the Dominican Republic's economy grew 7 percent in 2014 and keeps improving due to fiscal reforms and low inflation rates (IMF 2015). The country's economy is principally based on agriculture, tourism, commerce, services, and international trade, and the National Central Bank has cited growing economic activity in construction, transportation, and logistics.

As of 2013, the country counted 772,899 micro-, small-, and medium-sized enterprises, reflecting a 150 percent increase from two decades before. These companies employ more than 1.6 million men and women, which constitutes 41 percent of the working population. Micro enterprises make up nearly 98 percent of the business market, and small- and medium-sized enterprises (average 28.5 employees) make up slightly more than 2 percent (Fondo Micro 2014). The Dominican Republic has also seen immense growth in its informal sector, where 55 percent of the jobs in the country for those ages 15–29 are currently sourced.

Despite a growing economy, 4 out of 10 households continue to live in poverty and 1 out of 10 experiences extreme poverty (OMLAD 2012). Youth unemployment in the Dominican Republic currently stands at 31 percent—much higher than any other country in the region. Youth are also affected by a high rate of teen pregnancy (25 percent); high drop-out rates for young males from secondary school to enter work; a large quantity of *ninis* between the ages of 18 and 24; and high levels of crime and social violence.¹⁸

Looking to education, there are nearly 2.7 million students in the education system, with 93 percent net enrollment rate in primary education and 54 percent enrollment in secondary education. More girls (60 percent) than boys (49 percent) are enrolled in secondary education (MINERD 2012-2013).

Surveyed representatives from the business sector in the Dominican Republic spoke of obsolescence in the country's education model, specifically in its limited ability

to boost international competitiveness. Private-sector actors frequently reported that youth lack basic cognitive competencies in oral and written communication, logical and mathematical thinking, and personal qualities such as adaptability, leadership, and responsibility. This gap is further explored in the following section.

“...we understand that the most in-demand competencies for the labor market include the ability to sustain interpersonal relationships, work in teams, and be oriented to the needs of a client. Beyond these, companies require people that are analytical, pro-active, results-oriented, and able to adapt to changes.”

- Coordinator for the NEO Project

Skills Needed for Employability

Employers in the Dominican Republic, specifically in the tourism, commerce, and service industries, were in agreement regarding the demand for foundational skills (reading and writing, math competencies, logical thinking), and socio-emotional skills (creative and critical thought, problem solving, self-control, positive self-concept, and civics and citizenship). Many of the interviewees expressed their concern with the quality of education, not just at the secondary level, but even at the primary education level. Students are advancing in the education system unprepared with basic skills. Employers and youth employment specialists also cited the importance of “personal development” for workplace success, including oral communication skills, responsibility, punctuality, and leadership. Other frequently cited characteristics include self-direction, adaptability, flexibility, self-sufficiency, and proactivity. Employers from the technology and communication sectors highlighted the importance of flexibility and adaptability in new employees in order to adopt technological changes.

Employers from the tourism sector sought young people with solid basic cognitive skills. This sector contains a

¹⁸ See UNICEF's Country Statistics: Dominican Republic (2014); IDB (2016) for additional information on youth statistics in the Dominican Republic

wide variety of jobs, including in airlines, cruise ships, taxicabs, hospitality services (hotels and resorts), and entertainment (music venues, theaters, shopping malls). The industry also needs plumbers, construction workers, electricians, cleaners, customer service representatives, accountants, managers, and chefs. The industry has many career paths and room for professional growth, but while technical skills can be taught on the job, critical foundational skills cannot.

“Right now, the competencies that are most valued are socio-emotional skills. The employers tell us that instead of bringing them technically skilled youth, bring them young people that are responsible, that have the ability to work in teams...that have tools of oral and written communication, responsibility and punctuality. [Employers] don’t ask often for technical skills but rather that the youth have skills for employment.”

- Coordinator, Project Youth Alert

Employers also emphasized the need for more instruction in arts and sports. There is a need to promote entertainment services on the island. Employers need animators, artisans, dancers, singers, and other entertainers. Interviewees noted they have been thinking about creating a school for the arts and establishing a university technical degree on hospitality and tourism to respond to the demand for these skills.

One of the most common demands employers highlighted is foreign language skills, including English, French, Russian, Mandarin, and German, in order to help position the country to participate in international markets. Language skills were emphasized in the tourism sector, as well, and English skills were seen as particularly important in the technology sector.

Skills Students Currently Acquire in Formal Education

The Curriculum and Its Articulation

The Dominican Republic’s secondary-education system is divided into two distinct stages: basic education including lower secondary (ages 14–15) and upper secondary (ages 16–18). In the upper-secondary system, the MOE has established three specialized tracks: 1) academic or general (92.3 percent of enrolled students); 2) technical, which includes polytechnic centers and technical institutes (7.5 percent of enrolled students); and 3) arts and culture (0.1 percent student enrolled). The arts and culture track is the most recent of the three, and increasing its enrollment and offerings is a priority.

In a recent study of students completing upper secondary with a technical track, 38 percent pursued higher education degrees, 29 percent of the graduates found formal employment, 12 percent worked in the informal economy, 11 percent worked as freelance, 3 percent opted to create enterprises, and 7 percent did not work or study at all (Organization of Ibero-American States 2012).

In the last two decades, the Dominican Republic has significantly expanded basic educational enrollment. However, low educational performance and relevance are still major issues. Results of the international United Nations Educational, Scientific, and Cultural Organization OREAL-UNESCO and the Third Regional Comparative and Explanatory Study (TERCE) assessments indicate that the Dominican Republic exhibits one of the region’s lowest scores in reading, math, and science.

The country is now re-focusing efforts toward elevating access and quality instruction at the secondary level. Renewed governmental interest in public education is well-captured in the Decennial Education Plan 2008–2018, the National Strategy for Development (2012–2030), and the Pact for Educational Reform (2014–2030).

In the Dominican Republic, secondary education has three main functions:

1. **A social function that prepares students to positively and actively participate in society**
2. **An academic function that helps students commit to learning and acquiring knowledge**
3. **A guidance function that supports students in their career paths and their adult decisions to continue onto higher education or to join the workforce**

“There is a lack of learning on how to work in teams, in our schools and universities... a student always chooses groups of friends, or those that are the best students, but life is not like this. In life you have to work with people you don't know, from different cultures and environments... We need another type of dynamic in our education centers so that people can learn how to work with different types of people.”

- Employer, Industrial Sector, Dominican Republic

The upper secondary technical track offers training in labor-based skills and is meant to prepare students to enter the productive sector or to advance their studies in tertiary education. As such, this track is the most oriented toward the labor market and in the last several years has received increased national attention and investment. There are two 2-year cycles within the technical track, the first focusing on general cognitive skills acquisition. In the second cycle, students receive specialized training, which constitutes 70 percent of the entire technical curriculum. Of the 33 vocational technical specialties offered, 50 percent of enrolled students choose information and accounting, and the majority enter the industrial, agricultural, or service sectors post-graduation.

The geographical and economic distribution of the country are important criteria for the MOE's technical school expansion plan. These schools are located in

the areas with the largest populations and where the economy is the strongest, such as in Santo Domingo, the north corridor (Santiago), and Altagracia, the eastern touristic zone. Since 2014, three new technical track schools have been created in Altagracia, offering courses on gastronomy, baking, and hospitality, with the support of French cooperation and the national government. In 2015, the government began constructing 29 additional technical schools in and beyond these regions.

In addition to infrastructure build-out, from 2010 to 2014, the MOE led an initiative to develop new technical offerings, adding specialties in maritime shipping, mining operations, graphic design, television production, information systems and networking, technical applications, and tourism.

Although reforms are under way, interviewed employers expressed particular frustration with how cognitive and socio-emotional skills are delivered in primary and secondary education, noting that students graduate with limited skills to translate to the formal sector. Interviews with students and teachers, along with classroom observations, reveal the importance of fundamental competency development in school. Contradictions emerge, however, in how well skills are delivered in the teaching-learning process.

Perspective of Students and Teachers on Skills Acquired

“From my point of view, we already have the necessary capacities, because here we work in teams and we apply our skills. Also, we use our own knowledge, interpreting ideas with the teacher and with our fellow classmates.”

- 4th year accounting student, 18 years,

Santo Domingo

Students

The majority of participating students agreed on the importance of communication capacity, critical thinking, and positive self-concept. Students believed some of these skills were delivered regularly through text analysis,

teamwork, problem solving, public speaking, and role playing in the classroom. Some students were able to identify core academic subjects where they felt they learned socio-emotional skills. For example, they cited language, philosophy, English, and ethics. A student at a polytechnic institute in Santiago explained that the instructors worked to match classroom experience with the demands of the labor sector, within the parameters of the national curriculum. For example, students were sometimes placed in simulations, where they were asked to apply their skills within the context of a business. Other students commented that the internships they receive are hands-on experiences to learn and exercise relevant technical and socio-emotional skills.

“It would be better if we could put everything into practice, and that there wasn’t so much pressure to learn everything that they teach us, but that we could learn according to our own regimen.”

- Student, 18 years, Centro Domingo Savio,
Dominican Republic

Other students, however, felt their instructors could do more to articulate and apply relevant skills in their classrooms. Students recommended that their instructors do more to “put into practice” the competencies presented in class.

Teachers

Interviewed teachers described the importance of delivering competencies in communication, critical thinking, ethics, and citizenship and believed the best strategies to do so were through group projects and teamwork. While they believed the appropriate competencies were located in the national curriculum, the teachers were responsible for identifying the best ways to implement them. Teachers in a polytechnic school also emphasized the importance of taking learning beyond the classroom.

“The curriculum mandates that students exercise logical, creative, and critical thinking, and here we like to put students to work in groups so that they learn to relate to one another and make joint decisions.”

- Teacher, Politécnico IPISA, Santiago

Interviewees agreed with employers that students need training in foreign language skills because of tourism. They also agreed on the importance of the new modality in arts to develop skills for students to join the entertainment industries.

Teachers were the only actors that made specific references to the informal economy. For teachers, schools are not adequate to teach students entrepreneurship, and the government and businesses are not supporting students to create small enterprises. There is a disconnection between the expectations from businesspeople and the actual jobs they are offering. For example, interviewees argued that employers expect graduates from secondary school to excel in technical skills, as well as foundational and socio-emotional skills. However, the jobs are low-paying and the perception is that businesses want cheap labor and do not want to pay students with higher levels of education.

“In the polytechnic schools, the students do not just learn in the school space, but also have opportunities to visit factories, businesses, watch all the things they develop. So they are not just inside the school, but they have the opportunity to be in the labor market and see what it is like.”

- Professor of Art Education, Centro Onésimo
Jiménez, Santiago

Current Trends in Innovative Delivery Models

As noted previously, the Dominican Republic has focused on re-vamping upper secondary education through national-level education reforms. There are a few notable additional models operating in the country incorporating public-private partnerships and multidimensional education and training programs.

Public Sector Initiatives

The Dominican Republic's new national curriculum for secondary education includes a cross-cutting module on vocational orientation, mandatory internships for students, business plans, and projects for students to exercise entrepreneurship. The reform is linking education with economic sectors by using "professional clusters" that include socio-emotional skills under civics, gender, and human rights.

Public-Private Partnerships

There are two main public and private partnerships highlighted in this study. The first is an initiative sponsored by a local network of businesses. The second is the New Employment Opportunities (NEO) initiative, a regional program in LAC implemented by the MIF.

→ The Business Initiative for Technical Education

is a network of 10 local businesses, including the Center for Occupational Research and Development, that have been investing since 2007 in developing the capacity of the Loyola de San Cristobal polytechnic school (IPL) to improve the quality of upper-secondary education and to offer a career pathway-type program within engineering areas. Main areas of work include expanding educational opportunities, investing in teacher training, and financing equipment and school infrastructure. This model includes the development of programs such as Juventud y Empleo that offer workshops around career pathways and life skills. Based in Santo Domingo, this educational initiative helps youth acquire leadership and interpersonal skills through debate and simulation activities, such as Model United Nations. Unfortunately, many of these programs lack extensive written evidence or evaluation, but their beneficiaries value the involvement of the private sector in this school. More than 250 graduates from

the IPL completed the entire 4-year secondary program. They performed better on national tests (85 percent passing rate for IPL students compared to a 60 percent passing rate nationally). Teachers participated in intensive professional development (more than 10,000 total contact hours across the group). The learning curve or training period for graduates upon employment in industry was dramatically reduced, from 18 months to 3 months. More than half of the students left high school with a job offer. Math and science courses were updated and contextualized with real-world problems (CORD).

→ **The NEO-DR program** is one of the first initiatives to be launched in 2014 under the regional program NEO. NEO-DR is a partnership involving the ministries of education, labor, and youth; National Institute of Technical Vocational Training; Office of the Presidency's Bureau of Special Programs; the company Implementos y Maquinarias CxA; the Iniciativa Empresarial por la Educación Técnica [Entrepreneurial Initiative for Technical Education]; the Fundación Sur Futuro and Fundación Inicia; and the organizations Entrena and EDUCA-Accion Empresarial por la Educacion.

NEO-DR is designed to increase job opportunities for low-income individuals ages 15–29, living in urban areas in 13 of the country's provinces. The program seeks to expand the scope and improve the quality of technical training programs and of policies and programs aimed at promoting the employment of Dominican youth. The direct beneficiaries of this initiative will be 32,000 young people, of whom at least 50 percent will be women. The program focuses on young heads of household who are neither in school nor working (*ninis*) and on women who are pregnant or have children. The program also benefits instructors and staff of technical baccalaureate and technical training centers, as well as labor intermediation and regional employment offices, whose capacities will be strengthened for using new teaching methods and implementing curricula aligned with the needs of the labor market, including core competencies and vocational guidance and labor intermediation services (IDB 2012b). Principals and teachers interviewed identified promising practices

under the NEO-DR program that have potential to address gender gaps and discrimination at the upper-secondary level and during the transition to the workforce. For ministry officials, NEO-DR offers real connections from the upper secondary to the workforce by using labor intermediation units created within the technical schools or polytechnics.




Multidimensional Education and Training

Alerta Joven is a program implemented by ENTRENA since 2013 and supported by a network of 20 national partners and international partners with funding from USAID. This multidimensional initiative has components of health, education, and training for relevant work experience. The project focuses on reinsertion and retention in the formal school system, completing basic education or 8th grade, and having a realistic and accessible opportunity to graduate from high school or complete 12th grade. Education is directly linked to employment possibilities.

The program trains teachers with active student engagement methodology and adjusts their services to best respond to the unique needs of the at-risk youth population. The curriculum incorporates life skills and accelerated learning techniques from a socio-emotional skill model called Quantum Learning.¹⁹

¹⁹ Quantum Learning is an educational organization in the United States dedicated to transform educational processes using a wide range of educational programs.

Table 1: Comparison of Education Systems²⁰

	 COLOMBIA	 EL SALVADOR	 DOMINICAN REPUBLIC
ENROLLMENT RATE PRIMARY SCHOOL	84.1 percent	95.0 percent	92.6 percent
ENROLLMENT RATE, LOWER SECONDARY SCHOOL	71.9 percent	62.7 percent	71.4 percent
ENROLLMENT RATE, UPPER SECONDARY	40.5 percent	46.1 percent	54.1 percent
LOWER SECONDARY SCHOOL AGE	Up to age 14	Up to age 15	Up to age 15
GRADUATION RATES	Lower Secondary: 95.3%	Lower Secondary: 81.2%	Lower Secondary: 74.0% Upper Secondary: 19.4%
PRIVATE/PUBLIC DIVIDE	All levels: 16% private/84% public	Primary: 10.8% private/ 89.2% public Secondary: 16.9% private/ 83.1% public	Primary: 23.5% private/ 76.5% public Secondary: 20.0% private/ 80.0% public
CURRICULA CORE SUBJECT AREAS	<ul style="list-style-type: none"> • Natural Sciences and Environmental Education • Social Sciences (history, geography, political science) • Art Education • Ethics and Human Values • Physical Education • Religious Education • Humanities (including Spanish language and foreign languages) • Mathematics • Information Technology 	<ul style="list-style-type: none"> • Natural Sciences • Mathematics • Language, Literature • Social Studies 	<p>Academic Track</p> <ul style="list-style-type: none"> • Sciences, humanities, and modern languages <p>Technical/Professional Track</p> <ul style="list-style-type: none"> • Training for work in the industrial, agricultural, and service sectors <p>Arts Track</p> <ul style="list-style-type: none"> • Cultural, popular, musical, visual, and applied arts
VOCATIONAL EDUCATION INTEGRATION	Upper secondary, post grade 9, optional vocational track in a productive or service sector; options include agriculture, commerce, finance, administration, ecology, environment, industry, information services, mining, health, and tourism	Three-year vocational-technical track, post 9th grade. There are 33 vocational options, including commerce, agriculture, tourism, socio-emotional skills, software development, and information services. Curriculum emphasizes technical, entrepreneurial, human, social, and applied academic development.	Technical/professional track in upper secondary allows students to specialize in different technical areas depending on local and regional labor markets. It tends to include training for work in the industrial, agricultural, and service sectors, recently including aeronautic and boat maintenance, mining operations, graphic design, information and communication services, and radio/television production.

²⁰ External data from: UNICEF El Salvador (2013); UNICEF Dominican Republic (2013); IndexMundi Dominican Republic (2013); IndexMundi El Salvador (2013); UIS (2014)

Table 2: Comparison of Innovative Delivery Mechanisms

MODEL	OBJECTIVE	DELIVERY MECHANISM	TYPE	KEY PARTNERS
COLOMBIA				
CIEDI SCHOOL	Delivers International Baccalaureate (IB) curriculum, as well as intermediate technical instruction	ISD	Private	CIEDI
AGRICULTURE TECHNICAL COLLEGE OF FUNZA (ATCF)	Provides intensive vocational and entrepreneurship training relevant to the agroindustry	PSC	Private	Secretariat of Education, ATCF and SENA
FLEXIBLE EDUCATION MODELS (FEM)	Comprises 9 innovative models to increase school enrollment and improve instruction in diverse and at-risk communities (includes Escuela Nueva model)	ISD	Public	Various civil and private sector actors
CITY OF BOGOTÁ	Includes 4 city-level initiatives to re-vamp the district's curriculum guidelines and deliver integrated education and relevant skills instruction at the lower- and upper-secondary levels	ISD	Public	SENA, Secretariat of Education, secondary schools, business associations, chambers of commerce, local universities
CITY OF IBAGUÉ	Develops a PSC model that responds to local economic needs and includes instruction on citizenship, entrepreneurialism, and innovation, as well as 880 hours of internship experience	PSC	Public	SENA, Secretariat of Education
CITY OF CARTAGENA	Delivers a curriculum that responds to the needs of emerging sectors in the region, including through English instruction and entrepreneurial and Information and Communication Technology (ICT) training; offers technical training to all students in upper secondary	PSC	Public	Secretariat of Education, upper secondary academic and technical institutions
DEPARTMENT OF ANTIOQUIA	Policy-level secondary education reform focused on raising levels of equitable access to and retention in secondary school; and increasing tertiary education enrollment	PSC	Public	Secretariat of Education of Antioquia, World Bank
EDUCATION ALLIANCE ASSOCIATION (CONCESSIONARY SCHOOLS NETWORK)	Deliver diverse academic training and integrated personal development for higher education tracks	ISD	Public-Private	Secretariat of Education in Bogotá, private-sector actors
ALLIANCE MODEL IN CALDAS AND MANIZALES	Provide multidimensional skills instruction and direct pathways for employment in the productive sector.	PSC	Public-Private	Secretariat of Education of Caldas Department and City of Manizales, private-sector actors, universities

Table 2: Comparison of Innovative Delivery Mechanisms (Continuation)

MODEL	OBJECTIVE	DELIVERY MECHANISM	TYPE	KEY PARTNERS
EL SALVADOR				
MEGATEC	Trains youth in technical specializations that respond to regional economic characteristics and provides direct pathways for employment	PSC	Public-Private	Government of El Salvador, universities, private sector actors
PILET	Trains students in information systems, telecommunications, and graphic design	ISD	Public-Private	University of Don Bosco, private-sector actors
AEROMAN-UDC	Offers students specialized training in aeronautics and job pathway programs for the growing aeronautics sector	PSC	Public-Private	University of Don Bosco, AEROMAN
DOMINICAN REPUBLIC				
BITE	Leadership and personal development program for youth	ISD	Public-Private	Government of the Dominican Republic, universities, corporate partners
NEO	Connects at-risk youth with internships and job pathways, as well as technical instruction	PSC	Public-Private	Government of the Dominican Republic, EDUCA, IDB, corporate partners
ALERTA JOVEN	Provides multidimensional instruction and socio-emotional competency development for at-risk youth	ISD	Public	USAID, Government of the Dominican Republic, school centers, NGOs

DISCUSSION AND RECOMMENDATIONS

Through an in-depth literature review and in-country investigation, our study presents a supply- and demand-side analysis to the current skills gap in the LAC region. In the three countries of focus—Colombia, El Salvador, and the Dominican Republic—we identified a “hierarchy of critical skills” in which basic cognitive, higher-order cognitive, and socio-emotional skills are valued above specific technical skills. Our interviews with formal sector employers revealed that they prioritize socio-emotional skills, which include social, communication, and interpersonal skills, given their value in ensuring productivity and innovation in the marketplace.

Developing these skills in youth requires not only articulating these requirements in the formal curricula—which all countries do—but being able to effectively integrate skills development within classroom instruction and track and assess learner acquisition. Our findings showed that only in Colombia is there a comprehensive, advanced system for this level of integration.

Broadly speaking, in all three countries educators and employers lack mutual understanding about critical skill delivery, which in turn can hinder youth employability. There is a great diversity of demand from employers regarding competencies for work, which can overwhelm school providers and de-incentivize school responsiveness to labor market trends. In particular, interviewed employers frequently criticized schools for not doing enough to impart socio-emotional skills, sometimes with a lack of consciousness of how teachers deliver these skills in the classroom. Many teachers believed socio-emotional development is well-integrated in their curriculum and instruction, and students mentioned cases in which these skills were concretely practiced and acquired. We believe these layers of misunderstanding have contributed to the wide skills gap in the region, where employers cannot find graduates with the right set of skills and where large numbers of students do not complete secondary education. Together, these factors perpetuate the dominance of low-skilled labor and informal employment in the economy.

What are the key challenges to youth employability?

- **Neither employers nor educators view secondary education as a terminal degree in the LAC region.** Findings in LAC reveal that high school diplomas are viewed to be sufficient only for some sectors (for example, low-skilled work where technologies have not been adopted). Both employers and educators believe that crucial cognitive and technical skills relevant to the labor market are strengthened at the post-secondary level. If secondary education is not seen as a transition point to the workforce, it then becomes crucial to focus even more closely on both efforts that bridge general academic education and technical/vocational apprenticeships—so that students who do choose to leave the education system have the relevant skills and connections—and PSC and ISD models that bridge upper secondary with higher education.
- **More collaborative links between industry and education providers are needed, where employers are informing schools of the skills they are looking for in employees, or where the private sector is involved in designing technical training curricula.**

Although Colombia has had the most success with public-private sector collaboration, it must refine some of its approaches to youth preparation and employment. In contexts where there are strong relationships between the private and education sectors, it is common to see overemphasis on entrepreneurship in formal curricula. In other programs in Colombia, students are placed on “early track specializations” for particular industries, which ultimately limit students’ abilities to explore new fields. Post secondary connections like these are well-intentioned but must be refined and better coordinated between educational and private-sector actors.

In El Salvador, the PILET model is a public-private partnership that has developed a responsive curriculum to meet labor market needs. Key topics include computer sciences, electronics, and graphic design, with students able to take classes and obtain degrees at the high school, technical institute, or university level. Additional research about the effectiveness of this program is important as a potential model to scale up.

Meanwhile, in the Dominican Republic, there appeared to be a lack of agreement among educators on the necessary skills for successful employment, which could be mitigated through improved communication channels with private-sector employers.

What are the key challenges in formal education systems?

→ **Although curricula may articulate socio-emotional skills, national education reforms in each of the three countries have yet to be universally implemented. Institutional weaknesses within formal education structures limit the application of system-wide reforms.** Although education officials are working to address ineffective pedagogy and limited student participation, they find it difficult to administer changes universally across schools.

In Colombia, for instance, school principals and teachers do not receive clear guidance on how to articulate socio-emotional skills development, nor how to adapt curricula to different economic and educational contexts. Interviewed teachers described a daily dilemma in deciding whether to spend time on socio-emotional skills instruction or to deliver the foundational competencies clearly explicated in the curriculum. In many regions, private-sector actors have taken the lead on youth preparation due to institutional weaknesses within the formal education system.

→ **Classroom-level teaching often relies on outmoded pedagogy that is test focused and overly cognitive.**

Although teachers rightly cite the presence of socio-emotional skills in the curricula, pedagogy and teacher instruction have not been adapted to effectively impart these skills to all. Some teachers do use modern pedagogical methods, but many lack the tools to consistently and effectively encourage socio-emotional skills. This generates an unevenness in skill acquisition across schools and classrooms.

For example, interviewed students in Colombia reported that their classes felt too theoretical and out of context. Students said they did not receive sufficient “practical” learning, where they are given space to experiment, participate, and create. In contrast, other youth from Caldas, Colombia, emphasized that they had been taught collaborative work since primary school.

Meanwhile, in the Dominican Republic, too, students reported limited opportunities to personally shape their learning, such as through extracurricular activities or student-run organizations. Importantly, 47 percent of surveyed students between the ages of 12 and 17 reported having never participated in decision-making around the functioning of their school (ICCS 2009). Classroom disengagement increases the likelihood of student dropout, but because the legal age to work is 18 years, students aged 15–16 years who leave the education system early are often unable to find formal employment and contribute to the high numbers of youth that are not in education, employment, or training (*ninis*). Other students however believed that socio-emotional skills were being encouraged through public speaking and role playing in the classroom.

Overall, outdated pedagogy in these three countries, and in the region generally, presents a particular challenge to youth preparation. Learning primarily occurs through rote memorization, exposition, and repetition, rather than through problem solving, critical thinking, and hands-on exercises.

The Importance of Context and External Factors

A wide range of factors external to schools or workplaces can impact youth advancement and employability. High levels of economic insecurity, gang-related violence, drug usage, teenage pregnancy, and other community issues can all limit the progress of youth development initiatives. In El Salvador, for example, interviewees described how pervasive gang influence prevents students from traveling to certain neighborhoods for school or work. There can also be system-level factors that disrupt youth advancement. In Colombia, under-resourced educational institutions and the state's low capacity to monitor school-level reforms limit the quality of skills acquisition. Thus, in addition to contextualizing and specifying educator and employer interests, youth-oriented policymakers must consider external factors that may affect youth success and address those issues within reform programs.

Additionally, although this research primarily focused on formal sector employers, the prevalence of the informal sector cannot be ignored. The informal sector accounts for nearly 50 percent of employment in the LAC region and more than 60 percent in El Salvador. Given this, employment initiatives also need to be flexible enough to account for the needs of youth engaged in the informal sector, many of whom may be self-employed. Successful initiatives will thus seek to both enhance productivity and enable the acquisition of transferable skills.

Recommendations to Improve Youth Employability

In all three countries most youth employability strategies have focused on improving technical skills acquisition, although some initiatives target socio-emotional development in connection with technical training programs. The success of these programs is difficult to assess, however, as there are few statistical or systematic analyses that measure their impact on employment, skills, or economic development.

The observed low rates of labor force participation among youth in LAC are intricately linked with the skills gap. Our analysis concludes that the skills youth acquire in school are often inconsistent with those that employers

need, and this makes it difficult for employers to find qualified workers they can hire. Companies suffer from a lack of human capital, and the youth are often left without the jobs they need to further their professional development, lift themselves out of poverty, and help drive productivity and economic growth in their countries. While there are examples in each country of innovative education models, there appears to be a lack of country-wide curriculum coordination or teacher training to innovate pedagogy or to incorporate socio-emotional skill competencies into secondary-school instruction.

We offer four recommendations for closing the skills gap and improving skills acquisition in secondary school:

I. Efforts to define socio-emotional skills at employer and school levels should be encouraged, so that both sides can speak the same language, agree on priority skills, and find ways to assess them the same way. Importantly, standardized testing and assessment must also be reformed to more accurately correspond with the updated curricula. Across the countries in this study, students described the unfairness of national standardized tests that do not match the curricula or instruction they receive—or could potentially receive, with the appropriate pedagogy—in class. Unfortunately, the scores students receive on these tests often determine whether or not they can graduate from secondary education and acquire a job or continue their studies in higher education.

Prioritizing the development of more relevant assessment tools will give educators a means to assess whether students are acquiring these skills and to iterate and improve upon pedagogy accordingly, and provide employers a more accurate means to measure a broader range of capabilities when they recruit candidates (instead of continuing to use test scores).

II. On the demand side, employers should define typologies around the “hierarchy of critical skills” that they demand at the secondary and higher education levels. These typologies will be useful in classifying the needs of employers according to economic sector, business size, and strength of union. In turn, this will develop a common language on youth

preparedness and skills acquisition, and increase integration among secondary and higher education education systems, governments, schools, the private sector, and other stakeholders.

Importantly, this hierarchy will likely be dynamic and could evolve over time based on economic conditions and market needs. Regular, close collaboration between stakeholders—particularly educators and employers—will help ensure that both are aligned on this ranking and on the specific types of capabilities needed under each category of skills.

III. On the supply side, education systems should continue to define and articulate academic and socio-emotional skills in formal curricula, while responding to diverse contexts, and provide all teachers with adequate training on skills-based instruction and pedagogy. Students tend to acquire basic cognitive competencies in the lower secondary level and receive greater exposure to socio-emotional and technical skills in higher grades. First, it is critical that students in lower secondary education build a strong foundation of basic competencies, upon which high-order skills can be developed. Second, teachers must recognize how skill-instruction can be integrated, so that technical and socio-emotional skills are nurtured throughout secondary school.

To achieve these objectives, it is important for governments to consider widespread reforms to existing educational models and to provide teachers with adequate training and guidance on skills-based instruction. With regard to socio-emotional competencies, educational systems should continue to define and articulate socio-emotional skills in formal curricula and teaching practice.

Pedagogical strategies that focus on experiential learning and learner-centered teaching, for example, have the potential to support greater development of both cognitive and socio-emotional competencies and these can be delivered at the lower secondary level. Innovative pedagogy may also help students become more engaged in their learning, which will support greater learning outcomes and ultimately better

prepare students for successful employment. Teacher lesson plans and general classroom and school tools such as student governments, afterschool programs, and parent-teacher associations should all reflect the importance of developing in-demand skills.

To ensure system-wide adoption of new practices, principals and teachers should receive clear guidance and continual support in implementing educational reforms at the school and classroom levels.

IV. Lastly, governments in the LAC region should continue to implement, fund, and scale-up innovative PSC or ISD initiatives that have been evaluated from both the programmatic and operational sides and are proven to be successful.

Programs that are deeply connected with the private sector and include socio-emotional skills development are particularly relevant. Governments should invest in public-private partnerships, particularly in strengthening the involvement of the private sector in technical training. Technical training is more successful when there are clear pathways to employment, when the private sector provides input in designing the curriculum, and when the training is multidimensional, meaning that students learn not only industry-specific skills, but also socio-emotional and behavior skills that will help them be more productive workers. The impact of public-private partnerships and government-led initiatives on youth employment and skills development should be rigorously evaluated, and successful programs should be taken to scale when possible.

Ultimately, closing the skills gap in the LAC region requires concerted action from educators, employers, policymakers, and program implementers. Discourse in this area must be carefully contextualized. Moreover, given the value placed on post-secondary education by both employers and educators, PSC models that close the gap between upper-secondary and tertiary-level training must be encouraged. Finally, best practices, challenges, and innovations should be shared across the region, with joint learning encouraged to ensure that education quality continues to improve and that youth can effectively contribute to the region's growth and prosperity.

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