

# Untangling the Soft Skills Conversation

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The Inter-American Dialogue's education policy briefs provide insightful summaries of key issues in the education policy field. This brief examines soft or socioemotional skills from different perspectives: it offers important definitions, explores various frameworks used to study them, synthesizes the results and limitations of existing research, outlines the characteristics of some successful programs, and provides recommendations for future work in the area.

The brief is a product of a joint project between CAF – Development Bank of Latin America and the Inter-American Dialogue. The objective of the project is to develop better policies for technical education and professional training in Latin America. The project seeks to create an agenda based on best practices and to promote the development of professional training programs focused on optimizing the quality of human capital in the region. The preparation of this brief was made possible by support of the Vice Presidency of Social Development and the Department of Public Policy and Competitiveness at CAF. The brief, prepared by Juan Felipe Celia, summarizes the main takeaways of the report “Untangling the Soft Skills Conversation.” by Tamara Ortega Goodspeed (2016).

## Introduction

Ask any parent, student, teacher, administrator, policy maker, or member of the general public why we send children to school, and, with few exceptions, the answers will all boil down to teaching and learning. We want schools help our children acquire the skills, knowledge, abilities, and dispositions that will help them succeed in life. But what are those critical skills and abilities, and how do schools promote them?

A growing body of research from diverse disciplines – including psychology, economics, neuroscience, and education – suggests that it is not just content knowledge and critical thinking skills that matter for success, but that the strategies and personalities students bring to learning also affect their school and life prospects. Intuitively this makes sense, and the topic is not new. But attention to, and what we know about, these skills are increasing.<sup>1</sup>

Studies by researchers in the United States have found that non-cognitive skills like responsibility, perseverance (or grit), the ability to get along with others, self-control, and motivation are highly correlated with future educational levels (attainment) as well as success in broader life – including higher income and employment, better health outcomes, and avoidance of criminal behaviors.<sup>2</sup> Recent studies by the World Bank (Valerio, et al., 2014; and World Bank, 2014) and the OECD (Miyamoto, et al., 2015) find similar positive associations between soft skills and life outcomes outside the United States as well.

At the same time, there is a growing concern that young people are not adequately prepared with these critical soft skills. In surveys over the past decade, employers consistently note the high value they place on skills like working well with others, communicating effectively, and

having a strong work ethic, while at the same time lamenting the lack of these skills in the young people they hire. For example, more than a third of Latin American firms participating in a recent global business survey identified an inadequately educated workforce as a major constraint to their success.<sup>3</sup>

## What are soft skills?

The literature distinguishes between two types of learned skills – cognitive and non-cognitive (or soft skills).

**Cognitive skills** refer to a person's ability to "interpret, reflect, reason, think abstractly, and assimilate complex ideas, solve problems and generalize from what is learned. Cognitive competencies do not just reflect breadth of knowledge or the speed of its acquisition, but also include the ability to "make sense" of a situation or figure out what to do in the context of a new problem" (Ayrton Senna Institute, no date, p. 9).<sup>4</sup> In practice, they typically refer to the type of content knowledge and higher order thinking skills and abilities that can be measured by standardized achievement tests and grades.<sup>5</sup>

**Non-cognitive skills** refer to a person's capacity to "relate to others and themselves, understand and manage emotions, set and attain goals, make autonomous and responsible decisions, and creatively and constructively confront adverse situations" (Ayrton Senna Institute, no date, p. 9).<sup>6</sup> Although there is still on-going debate on what to call these skills (and which specific skills belong under the soft skills umbrella), the key is that these skills are: distinct from traditionally defined cognitive skills; seen as beneficial to individuals and society; relatively stable over time in the absence of external forces, but can potentially be developed or changed; and expressed differently in different contexts (Duckworth and Yeager, 2015).

One of the most common soft skills frameworks is known as the **Big Five**,<sup>7</sup> which includes: openness to new experiences, conscientiousness, extraversion, agreeableness, and emotional stability (alternatively neuroticism).

## What Does Existing Research Tell Us?

The research that exists on soft skills in the United States and internationally suggests that:

- **Both cognitive and non-cognitive skills are associated with future success** – Although different skills may matter more for different activities, research shows a strong correlation between both cognitive and non-cognitive skills, and success later in life. Recent studies by Hanushek and Woessman (2008) have shown that learning outcomes (as measured by achievement test scores), and not just years of schooling, are important predictors of individuals' and countries' economic success. Others studies show that soft skills are also associated with benefits that extend beyond schooling to health, happiness, and pro-social behavior (Heckman and Kautz, 2012).
- **Skills often lead to more skills** – If it is true that cognitive and non-cognitive skills are associated with life success, it is also true that these skills are often interconnected and that the marriage of both skills can lead to the strongest outcomes. Take learning outcomes, for example. Several studies have found that grades are better than test scores in predicting future academic success (Farrington, et al., 2012). Moreover, Miyamoto, et al. (2015) cite evidence from the United States and South Korea that skills accumulate over time, so that levels of cognitive and social-emotional skills today affect the further development of those skills in the future.
- **Starting early is better, but the window of opportunity for developing non-cognitive skills may be wider than for cognitive skills** – The value of early childhood development for cognitive and social development is well-documented. We know, for example, that extensive exposure to written and verbal language from birth is one of the most important academic foundations parents can give their children; that childhood stress factors (including poverty) strongly impact future development; and that strong attachments between parents and young children can counteract many of the negative effects of childhood stressors<sup>8</sup>. Moreover, while cognitive abilities tend to stabilize by age 10, peak at the end of adolescence and decline slowly afterward, soft skills continue to develop throughout a person's lifetime, with key opportunities in middle school and high school (Bassi, et al., 2012a, citing Borghans, et al., 2008 and Cunha, et al., 2005).
- **Non-cognitive skills may help disadvantaged students close the gap with more advantaged peers** – While all individuals need to develop appropriate soft skills in order to successfully engage with the people around them and face new challenges, some research suggests that soft skills may be particularly important in helping poor and minority students overcome disadvantages (Miyamoto, et al., 2015; Tough, 2012). For example, participants in programs such as the Knowledge is Power Program (KIPP) which serves primarily low-income minority students in middle school and high school in the United States and the MASS project

targeting soft skills in at-risk youth in Europe have improved both students' educational attainment – participants stay in school longer – and key character skills such as motivation and work ethic (Tough, 2012; Kechagias, et al., 2011).

- **Parenting matters, but so do schools** – Parents' support and attitudes toward learning seem to have a strong influence on their children (Ayrton Senna, no date; Miyamoto, et al., 2015; Santos and Primi, 2014; Tough, 2012). Yet, as Kechagias et al. (2011) summarize, soft skills are not just learned at home, but are tied to real world learning contexts, including schools, work, and the broader community where these skills are formed, used, and can be intentionally developed.

## Del Dicho al Hecho: Existing Interventions to Improve Soft Skills

A variety of existing interventions suggest that soft skills can be intentionally taught through curricular and extracurricular activities. Although these interventions are often small in scale and only some have been rigorously evaluated using randomized control trials, the breadth of experiences, along with promising initial results, can provide preliminary insights that can help guide future research.

Despite the variety of techniques and soft skills emphasized in different programs, researchers emphasize a few key characteristics that may lead to greater program success. First, strong

### **BOX 1. INTERVENTIONS TO PROMOTE SOFT SKILLS OUTSIDE LATIN AMERICA**

***PATHS (Promoting Alternative Thinking Strategies)*** – emphasizes skills such as self-control, interpersonal relationships, conflict resolution, and self-esteem through 20-30 minute lessons integrated with preschool and primary school social studies and language arts lessons two to three times a week. Rigorous, randomized studies among different student populations (including students with special needs and behavioral difficulty) have shown improvements in appropriate behavior and academic engagement as well as in grades and performance on cognitive skills tests. The program is primarily being used in the United States and Europe, but has also been implemented in schools in Israel, Pakistan, Thailand, Hong Kong, Singapore, and Australia.

***Entrepreneurs for Social Inclusion/Empresários pela Inclusão Social (EPIS)*** – Formed in 2006, this Portuguese association of more than 100 business leaders works with young people at risk to help them realize their academic potential and successfully enter the labor force. It places a strong focus on non-cognitive skills such as motivation, self-control, problem resolution, teamwork, and constructive feedback as a key component in training for school success and successful transitions to the world of work. They also provide support for project implementers. Evaluations of EPIS's work found 10% lower grade repetition, better academic performance, and lower dropouts among program participants.

***Angus College Skillzone Program*** – Pioneered in Scotland, the Skillzone program targets young people ages 14-18 who have either left school or are at risk of doing so, and provides them with individualized support in a safe environment. The curriculum emphasizes soft skills such as appropriate workplace conduct, ownership/responsibility, conscientiousness, help-seeking, motivation, efficiency/work output, time management, communication and teamwork. Students are asked to reflect on what they have learned and monitor weekly progress toward goals. Participants in the program report higher motivation and are less likely to drop out of school or the Skillzone program.

**Fuentes:** Tough, 2012; <http://www.prevention.psu.edu/projects/PATHS.html> and <http://www.pathseducation.com/>; Heckman and Kautz, 2012, Santos and Primi, 2014, and [www.epis.pt](http://www.epis.pt); Kechagias, et al., 2011; Friedlaender, et al., 2014; Miyamoto, et al., 2015; and Farrington, et al., 2012

soft skills programs should have clear objectives and methods, provide detailed instructions for student-centered teaching and offer lesson plans and assessment tools, including guidance and support for instructors in using those tools to monitor students' progress (Kechagias, et al., 2011). Second, activities should stress collaborative, cross-disciplinary learning and challenging exercises grounded in real world contexts – either simulated or real – as well as self-evaluation (Ayrton Senna Institute/UNESCO, no date). Finally, programs need to provide a safe environment, staffed by “caring and competent adults” and provide integrated services that address soft skills in conjunction with job or academic skills, psychological support, and/or financial needs (via transportation stipends, providing or subsidizing food, and providing child care services for young mothers participating in the programs) (World Bank, 2006). Some programs also provide follow-up with program facilitators to ensure programs are implemented

appropriately (Farrington, et al., 2012). Three interventions to promote soft skills outside Latin America are detailed in **Box 1**.

Despite limitations of existing research, both Miyamoto, et al. (2015) and Farrington, et al. (2012) find that existing research on soft skills training programs generally shows promising results. For example, a review of 35 school-based social and emotional learning (SEL) studies by Durlak, et al. (2011) found improvements in both grades and achievement test scores among participating students. Farrington and her co-authors also cite evidence showing the effectiveness of school-wide positive behavior supports (SWPBS) or Positive Behavioral Interventions and Supports (PBIS) in improving both behaviors. Miyamoto, et al. (2015) cite evidence from the U.S. that participation in arts and community service programs (often conducted outside school hours) improves participants self-esteem and positive self-image.

## **BOX 2: SOFT SKILLS PROGRAMS IN LATIN AMERICA**

**Juventud y Empleo (Dominican Republic)** – A collaborative effort between the Dominican Ministry of Labor, the National Institute of Technical-Professional Training (*Instituto Nacional de Formación Técnico Profesional* – INFOTEP), the Inter-American Development Bank, and the World Bank, this program initiative targets unemployed 16-29 year-olds who have not completed high school. A key component of the program is the Development of Basic Competencies (*Desarrollo de Competencias Básicas* – DCB) designed to teach values, teamwork, self-esteem, self-efficacy, conflict resolution, communication, organization and planning, and the ability to adapt to change, among other skills. Promising results from the program include a 20% reinsertion rate in formal education, lower involvement in gangs and drugs, lower teen pregnancy rates, and better self-esteem among participants.

**Entra 21 (Latin America)** – This initiative, led by the International Youth Foundation with support from international development organizations and a variety of private sector firms from 2001-2011, provided short-term job training, soft skills development, internships and job search assistance to youth ages 16-29 in 22 Latin American and Caribbean countries. Soft skills emphasized include teamwork, communication, conflict management, responsibility, ethics, time management, and self-awareness. Six months after program completion, more than half of students were employed (92% in the formal sector), many had returned to school and only 27% were neither studying nor working (compared to 66% at the beginning of the project).

**Sources:** Abdala (2009), ILO (2015), International Youth Foundation (no date), Portorreal and Romero (2010), Severo (2011), Vera (2009), and World Bank (2012, 2006).

There is less experience in directly promoting soft skills in Spanish-speaking countries or territories. The existing experiences come primarily from youth employment initiatives (see **Box 2** for examples). As with studies elsewhere, early evaluations of these programs show promising initial results. Severo (2011) notes that “In terms of types of skills taught, some programmes targeting marginalized groups include generic skills as a way to improve their integration into society and labor market. Most of these programmes have been positively evaluated by graduates” (p.16), and many have shown improved social behaviors and employment among graduates. However, it is nearly impossible to disentangle which specific contextual and program related factors contributed to these effects. It is also unclear whether short-term positive effects will persist over time.

## Five Preliminary Takeaways from Existing Soft Skills Interventions

At least five preliminary messages emerge from existing efforts to promote soft skills.

- 1) **Soft skills interventions have shown promising results in a variety of contexts**, both in and out of schools, with both general and at risk populations, in urban, suburban and rural areas and with ages ranging from pre-school to high school. Moreover, Yeager and Walton (2011) note that “Recent randomized experiments have found that seemingly “small” social-psychological interventions in education – that is, brief exercises that target students’ thoughts, feelings, and beliefs in and about school – can lead to large gains in student achievement and sharply reduce achievement gaps even months and years later” (p.2). Nonetheless, most interventions in this field have impacted relatively small
- 2) **Close monitoring and on-going support helps build soft skill success.** For example, Farrington, et al. (2012) cite evidence from Chicago that monitoring attendance and intervening quickly when students fall behind can improve passing rates/reduce course failure among 9<sup>th</sup> graders. They posit that because the transition to high school entails increased independence in managing one’s own performance, it is easy for students to get off track. More frequent check-ins with students and reinforcement of positive soft skills and study behaviors, particularly in a key transition year, can help students stay on track throughout their high school career. Likewise, providing on-going support and reinforcement of soft skills during training and internships is a key component of many labor force readiness programs. Many of these programs stress close, supportive relationships with trusted adults as a key variable in participants’ success. This is consistent with early childhood research that also shows the impact of caregiver attachment and parenting interventions in building both cognitive and non-cognitive skills (Walker, et al., 2011).
- 3) **The structure of activities will affect social skills learned.** This is most readily apparent when looking at group work vs. individual projects. On the one hand, it is difficult to learn soft skills such as teamwork, communication, and conflict negotiation if

students are exclusively engaged in individual projects. On the other, it is hard to learn skills like persistence and self-efficacy in groups where others are there to pick up the slack and where individual attribution is harder to establish. Consequently, appropriate interventions will depend on the target group, the specific goals, skills and discipline being targeted, and the context in which the skills are being taught (classroom, workplace, extracurricular activities or some combination) (Kechagias, et al., 2011).

- 4) **Although soft skills can be taught in a variety of contexts, *integral education programs that build on frameworks already in schools and adapt them to more fully integrate soft skills may have the potential to reach the most young people.*** The Ayrton Senna Institute (no date) says their experience shows that it is possible to “construct creative and collaborative solutions with education administrators...” that incorporate programs and evaluations that cover both types of skills and institutionalize what works (p. 7, author’s translation). Teachers, in particular, play a critical role in modeling and teaching soft skills and encouraging a positive growth mindset within schools. Programs need to leverage what teachers already know about how to develop study and life skills in their classrooms and provide accessible, practice-focused “guidance about how best to build classroom contexts and utilize pedagogical strategies that will leverage the body of research on non-cognitive factors as they teach content and skills” (Farrington, et al., 2012, p. 76). Rigorous, personalized instruction, safe environments, as well as shared leadership and support from administrators, staff and parents also can help build soft skills in the school environment (Friedlaender, et al., 2014;

Kechagias, et al., 2011; Portorreal and Romero, 2010; and World Bank, 2006).

- 5) ***Intermixed skill usage (as opposed to teaching skills in isolation) may be more authentic for practicing soft skills and learning how they apply in context*** (Kechagias, et al., 2011). This is particularly true in an education context increasingly focused on relevance and mastery of applied competencies. Moreover, interconnected tasks and skills are more reflective of the complexity of the real world. However, existing programs still serve only a limited number of youth and more long-term evaluation is needed to understand how different skills interact. It may also be that competing priorities and/or resource constraints make it impossible to “do everything at once” or that teaching skills first in isolation and then giving students the opportunity to practice them in more lifelike scenarios is a more reliable way to impart lasting skills.

## So What Next?

We know that soft skills, along with cognitive skills, are important predictors of school and life success and that building these skills can help lead to better academic performance, employment and wage opportunities, and healthy behaviors (Miyamoto, et al., 2015; Heckman and Kautz, 2012, 2013; Kechagias, et al., 2011). We also know that businesses both inside and outside Latin America complain that they cannot find workers with the skills they need, and that “American industry currently spends around US \$50 billion every year on training, and much of this training focuses on social and emotional skills” (Kechagias, et al., 2011, quoting Talavera and Perez-Gonzales). Likewise surveys of Latin American firms show

that while employers report that they highly value non-cognitive skills, these skills are the most difficult to find in young workers (Bassi, 2012a).

Fortunately, early research and experience suggest that we can teach soft skills at key moments from early childhood to young adulthood when the brain is most receptive to this type of thinking and learning. Soft skills interventions also have the potential to help young people from disadvantaged backgrounds overcome some of the obstacles they face, in addition to helping all students more successfully engage in the world around them (Tough, 2012; Santos and Primi, 2014). Schools and teachers are also increasingly receptive to fostering soft skills in schools. For example, CORE (2015) notes that a national teacher survey conducted in 2013 in the United States “shows that 93% of teachers think it is very or fairly important for schools to promote the development of social-emotional competencies. Furthermore, 95% of teachers believe that these skills are teachable, and 97% believe they will benefit students from all backgrounds” (p.1).

All of this suggests that further investment in helping young children and adolescents develop key soft skills is both warranted and timely. However, important questions remain as policy makers, funders, and practitioners decide just what shape that future investment should take. Areas for additional research include:

**1) *Hard or Soft or Both?*** Setting specific standards for soft skills and measuring them alongside standards and assessments for cognitive skills are promising first steps. Likewise, addressing soft skills across curricular areas and making them an integral part of school activities may reinforce skills and help students apply them in different contexts.

- 2) *How do we better leverage soft skills to improve equity?*** We know from experiences like KIPP in the US, MASS/Skillzone in Europe and *Juventud y Empleo* in the DR that programs that target soft skills have the potential to improve both academic performance and employment opportunities of disadvantaged youth. However, there is less research on how these programs affect equity or whether certain skills or approaches work better for certain groups of students.
- 3) *How can we best support soft skills development both in and out of school?*** Because individual students, contexts, and needs vary widely, and because research on “what works” is still limited, the best strategy may be to support a variety of interventions, making sure that these interventions are relevant, high quality, well-implemented, and systematically evaluated
- 4) *How do we make the most of windows of opportunity?*** While young children’s brains tend to be most malleable, both for learning new academic skills and content and for learning early soft skills like how to get along with others, adolescent brains tend to be more developmentally ready to incorporate the perspectives of others in their learning, as well as engage in more formal thought and choice around how they learn. Understanding how the brain works can help inform program design and help us tailor tasks and strategies to meeting students’ needs.<sup>9</sup>
- 5) *How do we strengthen connections between skills and the real world contexts in which they are applied?*** This question is about addressing the “disconnect” between the skills high school



and college graduates possess, and the skills employers say they need. It's also about better understanding the relationship between different types of skills and how well these skills transfer across different contexts (Farrington, et al., 2012).

- 6) ***How do we continue to improve measurements of soft skills to account for known biases and shortcomings and extract best practices?*** Duckworth and Yeager (2015) suggest developing a battery of brief, age-specific performance tasks, with instruments that make it easy to collect information, quickly process it, and ensure that it is contextually appropriate. The instruments should be also sensitive to short-term changes, while still allowing researchers to track results over time and across different schools/districts.

Although the discussion and research around soft skills is still evolving, the richness of the debate so far holds promising implications for equipping young people with the skills and abilities to help them succeed not just in school, but in life.

## Notes

<sup>1</sup> Kautz, et al., 2014 note that measures of soft skills trace back to research by S. Bowles and H. Gintis in their 1976 work *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life*. New York: Basic Books. Santos and Primi (2014) trace the roots of the Big Five theory of social skills back to early work by Gordon Allport and colleagues in the 1930s, Raymond Catell in the 1940s, and Lewis Goldberg, R. McCrae, P. Costa, J. Wiggins, and O. John in the 1960s (p.16, footnote).

<sup>2</sup> See for example, Heckman and Kautz (2012, 2013) and Deming (2015).

<sup>3</sup> World Bank, World Enterprise Survey online database, consulted October 28, 2015.

<sup>4</sup> Author's translation.

<sup>5</sup> Note that although historically cognitive skills have often been measured by IQ tests, current research on learning has moved away from the concept of intelligence as "a fixed and quantifiable amount of intellectual capacity" and toward a broader skills based concept in which cognitive skills are developed in context (Farrington, et al., p. 2).

<sup>6</sup> Author's translation.

<sup>7</sup> Heckman and Kautz also refer to these as OCEAN skills, for the first letter of each of the five characteristics.

<sup>8</sup> Tough, 2012 provides a brief, easy-to-understand overview of several neuroscience and cognitive science studies on early childhood development and its relation to future learning and success.

<sup>9</sup> See, for example, Farrington, et al.'s (2012) discussion of the mismatch between the structure of traditional middle schools and middle school students' readiness to learn more sophisticated soft skills.

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