



# Social and Emotional Learning

## Can non-cognitive competencies predict future success?

### Overview

From early childhood through adulthood, the paths to achievement and self-fulfillment have long been tied to measures of intellectual ability and academic acumen. Yet a growing body of research now points toward social and emotional competencies as key indicators of future success as well. In this report, we explore what an emotional education can look like, some important characteristics of effective non-cognitive programs, the seven core competencies that have the greatest impact on student achievement, and additional research illustrating the benefits and limitations of social and emotional learning as a foundation for success in school, work, and life.

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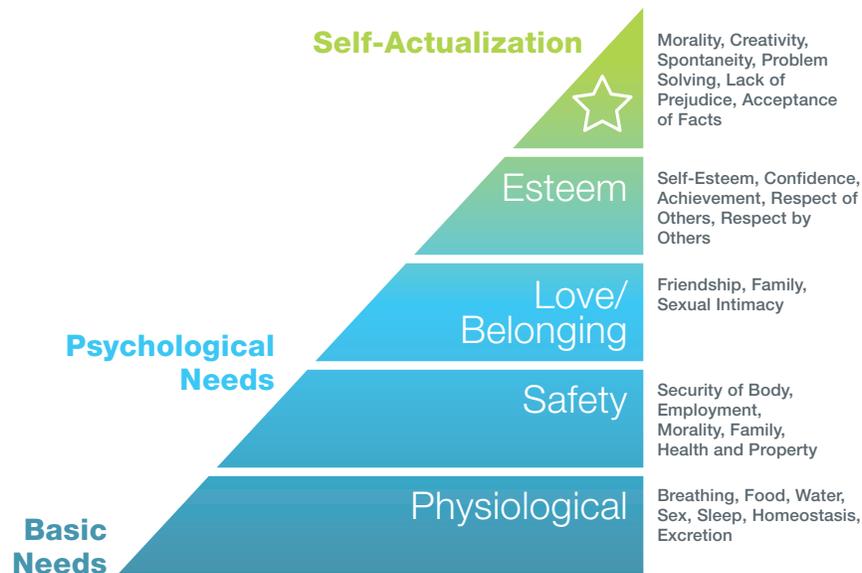
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# Introduction

Abraham Maslow (1943) famously developed the hierarchy of needs, which illustrates a route that humans must progress through to reach our full potential. Maslow envisioned that the optimal path of human development occurs in a very particular, sequential pattern of growth by walking up the pyramid level by level. At the pinnacle of needs is “self-actualization,” which Maslow viewed as the feeling of complete fulfillment with one’s life and reaching the pinnacle of our full human potential.

While we believe the strong emphasis of teaching of traditional academic skills remains an important focus in education, this should not come at the detriment of educating our children how to discover their passions, inspire themselves to be lifelong learners, and develop positive relationships with others. In order to fully appreciate how the power of social and emotional learning (SEL) can help our children reach Maslow’s level of “self-actualization,” the historical context of 21st century education should be understood.



### A Bit of History

When President George W. Bush signed the No Child Left Behind Act (NCLBA) in 2001, there was a shift in accountability for schools on the federal, state, and local levels. This shift placed content knowledge in areas like math and English under the microscope, so standards and tests were refocused to measure ability in these areas. While many still debate about whether NCLBA produced the intended academic gains, most agree that high-stakes testing has put undue pressure on schools, teachers, and children. In fact, cheating scandals emerged in Georgia, Pennsylvania, New Jersey, and other states due to the pressure to perform on standardized tests and the need to access performance-based funding.

Social scientist Donald Campbell's 1976 proverb may have been right: "The more any quantitative social indicator (or even some qualitative indicator) is used for social decision making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor."

Meanwhile, schools have experienced an increase in violence and bullying, the most terrifying and concerning being the number of school shootings since the 1999 attack on Columbine High School in Colorado (Jones & Bouffard, 2012). Although this connection is purely correlational, the rise in violence and the lack of clear pathways toward employment does not bode well for the nation's future.

The evolution of the Internet has also considerably changed the way people consume, disseminate, and use information. The skills needed to be successful in

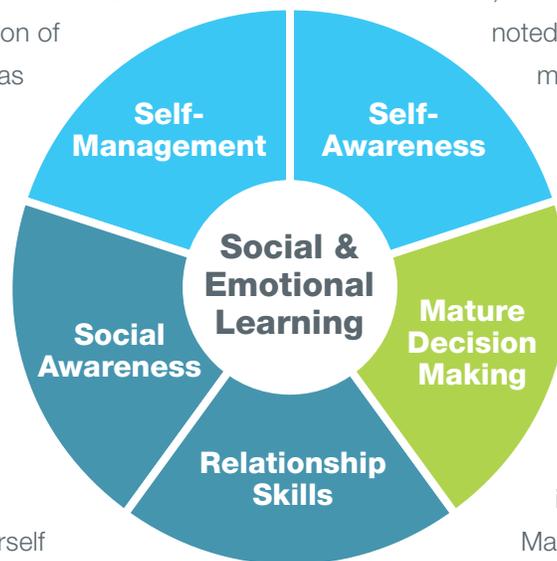
the modern economy have evolved into specialized capabilities that address new complexities like globalization, diversity, technology, and other corollaries of the information age. For example, Daniel Pink posits in his book *A Whole New Mind* that the 21st century has led to three distinct changes in our economy: abundance, automation, and Asia (outsourcing). Pink argues that humans have moved from the agricultural age, to the industrial age, and are presently in the information age, where "knowledge workers" have been successful. The information age is coming to an end, though, as information itself becomes easily accessible, and we are on the cusp of the conceptual age, where there will be an increased need for people to have a different skill set, which includes things like empathy and play. In other words, social and emotional skills.

This idea is by no means new. The Department of Labor in 1990 created the Secretary's Commission on Achieving Necessary Skills in order to determine the abilities necessary for young people to acquire and succeed in high-wage and high-skilled employment. The commission found that character qualities like responsibility, self-esteem, sociability, self-management, integrity, and honesty mattered the most, signaling a clear departure from the conventional focus on purely cognitive skills. By no means does this suggest that schools should discard curricula that focus on necessary subjects like math or science. Instead, it suggests how we are teaching these subjects is not creating a workforce that is prepared to thrive in the 21st century. SEL, a relatively new area of social science, offers valuable insights into how people learn best and what schools and communities can do to prepare children for a more successful future.

**Defining the Education of Emotions**

In 1995, Daniel Goleman released his seminal work called *Emotional Intelligence*, in which he made the argument that a person’s emotional and social acumen is actually more predictive of future success and well-being than IQ. Although much of the research cited by Goleman has been conflated or exaggerated in many regards since its publication, it spawned a focus on the concept and measurement of an emotional quotient (EQ), and the identification of non-cognitive skills, also known as soft skills. For example, Hopkins and Bilimoria (2008) found that emotional intelligence is twice as important as IQ and technical expertise combined and four times as important as IQ for overall success on the job.

At its core, emotional intelligence is the “ability to recognize and understand emotions in yourself and others, and your ability to use this awareness to manage your behavior and relationships” (Bradberry & Greaves, 2009). These translate into non-cognitive competencies, which refer to the skills that are less concrete than subjects like math or English. They represent character development, moral virtues, SEL, and consist of intrapersonal and interpersonal competencies that are related to future success and well-being. These soft skills include things like problem solving, critical thinking, teamwork, conflict resolution, perseverance, and decision making.



Several organizations and researchers have applied these non-cognitive factors to the realm of education in order to develop standards and programs that are predictive of success for students, especially those deemed “at risk,” such as children from lower socioeconomic backgrounds, those in the foster care system, and students with other family difficulties. Much of this movement is thanks to the Collaborative for Academic,

Social, and Emotional Learning (CASEL). As noted on the group’s website, CASEL members believe that the combination of a positive school environment and explicit SEL skills training leads to positive student outcomes — and they are not alone. Many of the nation’s top public school systems have adopted the group’s standards for effective SEL programming, including a recent collaboration in Massachusetts between the state’s

Department of Early Education and Care and the Department of Elementary and Secondary Education. These standards include: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Another strong proponent of incorporating SEL into education is Nobel laureate and oft-cited economist James Heckman, whose research cites both psychological and economic advantages.

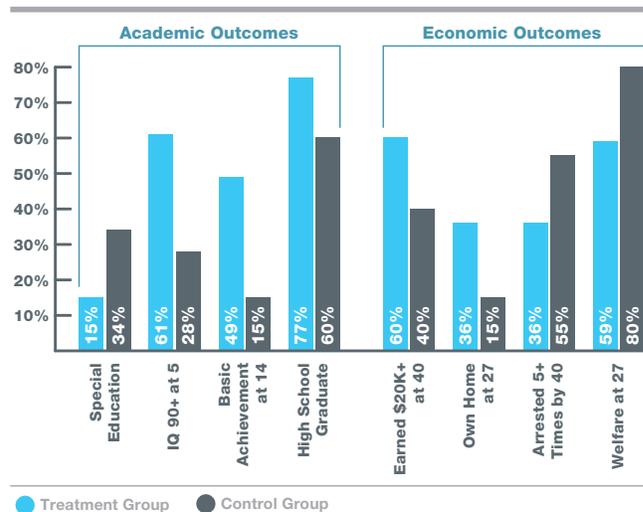
### Blinded by Science

There is no shortage of scientists, researchers, policy-makers, and parents who have seen the detrimental effects of today’s education system — particularly on underprivileged students. These are the stakeholders who sparked the conversation about changing teaching methods to achieve desired outcomes. There is no question that the sources cited in this report believe SEL in education could be the answer. Yet, in order to make an informed decision about SEL as a viable option, it’s important to understand what the research reveals.

**Perry Preschool Study:** In 1962, a team of progressive educators in Michigan developed a program to target at-risk youth from poor neighborhoods who had consistently not done well on standardized tests and received low IQ scores. These educators drew from the works of lauded developmental psychologists like Jean Piaget, John Dewey, Lev Vygotsky, and others to develop a curriculum called HighScope, which targeted 3- and 4-year olds from lower-income backgrounds, and embedded the teaching of soft skills into the program. The educators then created a randomized control trial for their program, splitting the students randomly between the HighScope group, and a control group representing a standard preschool experience. They later followed up with the students through the age of 40 to measure the effects of the HighScope program. When researchers later analyzed the outcomes at the age of 40 they found a variety of positive takeaways — including a \$16.14 return on every dollar invested (Schweinhart, Montie, Xiang et al., 2005). In other words, it appears that investing in early childhood programs, particularly those that embed and use SEL in their curricula, can serve as a protective factor for at-

risk youth throughout their entire life span, and actually improve not only psychological or social well-being, but also economic success.

### Significant Benefits: HighScope Perry Preschool Study



Data obtained from two sources: Significant benefits: The HighScope Perry Preschool study through age 27 (Schweinhart, Barnes, & Welkart, 1998); The HighScope Perry Preschool Study Through Age 40: Summary, conclusions, and frequently asked questions (Schweinhart, 2004).

### Social and Emotional Learning Meta-Analysis:

Another important piece of research was done by Durlak and his colleagues (2011), who performed the first meta-analysis on prior research of SEL. A meta-analysis is the process of compiling, standardizing, and aggregating data across several studies on a specific topic to find what trends and viable information emerge from the collective literature. Durlak and colleagues (2011) found that the implementation of SEL in schools was related to improved attitudes and behaviors. Students were more motivated to learn, they felt a deeper and more meaningful connection with the school, their classroom behavior was better, and attendance and graduation rates both rose. Reports of negative behaviors and emotional distress like anxiety or depression also declined. Perhaps of most interest to the masses, though, is that

academic performance increased when SEL programs were implemented in schools. A word of caution from the researchers — not all SEL programs are created equal. In the meta-analysis, they found that for an SEL curriculum to be successful it needed to be sequenced, active, focused, and explicit.

**What Makes an Effective SEL Program?:** Around the time of Durlak et al.'s (2011) meta-analysis, Yeager and Walton (2011) released research of their own that focused on the various elements that SEL interventions need in order to produce long-term positive effects. Their approach stemmed from a theory defining school as a “tension system,” where behaviors and attitudes interact in ways that either promote or restrain those behaviors and attitudes. In other words, individual students do not live in a vacuum, and how they act or feel is a process influenced by things like friends, fam-

ily, teachers, school environment, and socioeconomic status. Yeager and Walton discovered that effective SEL interventions focused on four different areas. The intervention had to:

- **Actively engage students’ direct participation.**
- **Make the experience relevant and meaningful to the students by personalizing the program content to the interests of the students.**
- **Avoid or limit corrective or punitive approaches in the classroom by developing and consistently affirming agreed-upon values, and using positive appeals.**
- **Target multiple psychological and social barriers to learning.**

### The Magnificent Seven

There has been an explosion of SEL and related non-cognitive research over the last two decades, which makes deciphering the science and outcomes of the subject somewhat difficult, especially for educators who may not have the time, money, or training to do so. So we think it might be useful to describe what sort of specific social and emotional competencies have the greatest impact on students, so that teachers can focus their efforts on areas of student deficiency. There is still much debate on what competencies truly matter, and where educators should focus, so readers should take this list with a grain of salt and use it merely as a launching pad for their own research into the subject of SEL.

**Growth Mindset:** This is a fairly new concept developed and studied by Stanford professor Carol Dweck and her colleagues. The general idea is that people adhere to one of two different mindsets regarding ability or intelligence. Those in a “fixed” mindset believe that one’s intelligence is static and innate, and that it will not change no matter how much effort one expends toward elevating their intellectual capacity. Alternatively, people can also believe that intelligence or ability is fluid and subject to change, which is called a “growth” mindset. Dweck and several other researchers looked at how this ideological difference affects outcomes for people, and many of her findings are surprising. Contrary to those who adhere to a fixed mindset, those with a growth mindset approach difficulties with more effort and intensity, allowing them to overcome those obstacles. They approach challenges and learning with a more positive attitude, and they conceptualize and react to failures less negatively. As a result, students do better academically when they have a growth mindset (Blackwell et al., 2007; Farrington et al., 2012; U.S.

Department of Education Office of Educational Technology, 2013; Tough, 2012; Yeager & Dweck, 2012). Moreover, the growth mindset is teachable, and has been shown to be a cost-effective approach to improving student outcomes.

**Self-Efficacy:** Julian Rotter (1954) developed the term “locus of control” in the 1950s to explain how people perceive the control they have over events that affect them. There is an internal locus, which refers to the things a person believes they have some power over, and an external locus, which describes those things that are outside of a person’s perceived control. At the core of Rotter’s theory is the idea that this locus of control is interdependent on our personal experience and interaction with our environment. An external locus of control is often cited as a primary reason for emotional distress or illness for anxiety and depression where an exaggerated sense that one has lost control over his or her life leads to persistently negative and deleterious feelings. Another concept that sprang from Rotter’s locus of control, and has been extensively studied since its creation, is Albert Bandura’s theory of self-efficacy, which is more relevant to education. Self-efficacy is the perceived ability of an individual to learn and use specific skills to achieve goals. This is not to be confused with general confidence, which relates more closely to self-esteem. Self-efficacy is more accurately the belief that a person has to exert control over one’s behaviors and the environment. This skill is important in an academic setting, as students who have less self-efficacy tend to suffer from lower levels of motivation to complete their work, a decreased ability to self-regulate in school, and an inclination to devalue academic tasks (Cleary & Zimmerman, 2004).

**Motivation:** The ability to plan and organize in ways that lead to achieving goals is a skill needed not only in the classroom, but in almost all aspects of life. There is extensive research on motivation and how to develop goals that will increase the likelihood of their success, but these skills are often not explicitly taught in schools. Researchers have discovered having a goal intention is not enough to achieve goals; one must also actively create plans that consider obstacles and frame the goals in a specific way to maximize the likelihood of follow-through. Gollwitzer and Sheeran (2006) did a meta-analysis on 94 independent studies that showed a strong positive relationship between creating an implementation plan for a goal and later obtaining that goal. The acronym SMART is often used as a way to develop a better goal — one that is Specific, Measurable, Achievable, Realistic, and Time bound (deadline driven). It is also important to consider the nature of the goal being set. Much of the research in this area regards the difference between extrinsic and intrinsic motivation, the former which uses external rewards to motivate, and the latter which uses the inherent enjoyment of the task itself to motivate. There is of course a time and a place to motivate externally, but what concerns psychologists is the tendency for behaviors or motivation to stop when the rewards stop, and the narrow-mindedness that external rewards engender when a student approaches a task (Pink, 2011). This is not to say never use extrinsic rewards, but it does emphasize the importance of understanding the pitfalls of motivating externally when setting goals. It is often more difficult to motivate intrinsically, particularly in a classroom setting that must adhere to a strict curriculum, or has students who have difficulty staying motivated at all. However, the benefits are well documented and lead to increased well-being, self-efficacy, and academic outcomes (Deci, 1996).

**Grit:** Resilience, or the ability to pursue challenging goals over a long period of time, is not a new concept, but not until recently has the subject been so thoroughly studied. A professor at Penn State, Angela Duckworth, has developed the Grit Scale in order to measure this trait in individuals, and has found that it is predictive of several positive outcomes such as college GPAs, success at the National Spelling Bee, and summer training at West Point — more so even than IQ (Duckworth et al., 2010 & 2011). Grit, much like the other competencies on this list, is not a fixed trait, and can be taught and increased through interventions. Much like Dweck's growth mindset, it is important to teach that a failure is not definitive, but instead an opportunity for further learning. It is important to consider that grit is a newer area of study, and that more research is needed, specifically on effective intervention types.

**Social and Emotional Intelligence:** The concept of an emotional quotient (EQ), largely described above, is fairly central to life inside and outside of school. Social and emotional competencies are important for people to have positive and productive lives in the workplace, in communities, in family, and really any relationship. Higher EQ is predictive of academic achievement, physical and psychological well-being, and a multitude of other positive outcomes (Durlak et al., 2011; Farrington et al., 2012; National Research Council, 2012; Sugai & Simonsen, 2012; Jones & Bouffard, 2012). Howard Gardner, creator of the theory of multiple intelligences, believes that everyone tends toward a specific talent in different areas such as interpersonal skills, athletic ability, spatial acuity, and several others, and that IQ as we understand it is a poor indicator of anything aside from those at the extremes of lower or higher intelligence. Some of the

most important social skills described in Durlak et al.'s (2011) meta-analysis were: emotion recognition, stress management, empathy, problem solving, and decision making, all of which can be cultivated through a variety of different evidence-based SEL programs.

**Creativity:** When school budgets are cut, and standardized tests are ubiquitous, the harsh reality is that art and music programs are frequently the first things to go. Fortunately, creativity, or the production of novel and new ideas, is not exclusive to those classes, and can be expressed and cultivated in any subject. There has arguably been a narrowing of how information is taught in relation to solving problems or synthesizing solutions, perhaps due in part to the nature of testing, which has only one right answer, and a “most efficient” method for discovering that solution. This is referred to as convergent thinking, whereby one uses information to find one solution. Creativity, though, is often related to divergent thinking, or the generation of several solutions to the same problem (Guilford, 1950). Creative problem-solving skills are becoming must-haves for the 21st century workforce (Sawyer, 2006). There is no question that the average IQ has steadily risen the last 30 years, yet creativity has stagnated during that time period (Bronson & Merryman, 2010). Furthermore, creativity is related to intelligence, but is different in that it requires traits like curiosity, perseverance, passion, flexibility, and attention. Research has shown that creativity is malleable, and can be cultivated through play, particularly at younger ages (Brunner, 1965; Bull, Montgomery, & Baloché, 1995; Cropley, 2001; DeHaan, 2009; Dugosh, Paulus, Roland, & Yang, 2000).

**Self-Regulation:** In 1983, Walter Mischel began the famous Marshmallow Study. Essentially, he gave children a choice: they could have one marshmallow immediately, or if they could wait until the researcher returned after a period of time, they could have two marshmallows (Mischel, 1983). Although this may seem simple, the idea was to see if the children were able to regulate themselves by delaying gratification for a better reward. They followed up with these children several times throughout the years, and found that those children who waited for the two marshmallows had improved SAT scores and coping skills in adolescence. They followed up even later in 2011, and found these positive outcomes were consistent, and the children who delayed gratification were generally more successful. There are several other studies that have correlated the ability to self-regulate with more positive physical and psychological health, and a lack of self-regulation with substance dependence, unstable personal finance, and criminal offenses (Moffitt et al., 2011; McGonigal, 2011; Baumeister & Tierney, 2012). Self-regulation is also highly related to executive functioning, or the ability to plan and organize for the future. It also plays a role in metacognition, or the ability to think about one's own thoughts, and contributes to a child's cognitive functioning and success in school (Diamond & Lee, 2011; McGonigal, 2011). Self-regulation, like the other competencies, can be taught, and extensive research has been done recently on the importance of self-regulation in the academic setting.

### **SEL in a New Era of Accountability**

In recent years, a handful of states have developed or begun to develop standards of SEL for K12 or earlier. Some of these states include Illinois, Kansas, Pennsylvania, and Massachusetts. Considering the lack of variety of quality interventions, the Department of Education approved the Elementary and Secondary Education Act (ESEA) waiver application, which arose from the California Office of Reform Education. The ESEA authorized eight school districts to design a new system for accountability called the School Quality Improvement Index, which will be scaled to schools around the country to assess school performance in three areas: academic outcomes, school climate and culture, and social-emotional measures.

No Child Left Behind, signed 15 years ago, was repealed at the end of 2015, and replaced by the Every Child Achieves Act, which largely gives power back to individual states for developing their own educational and accountability standards. It's difficult to project the effect that this new act will have on education in the immediate future, but the change could give states an opportunity to experiment and develop an educational experience based on the recent research done to elucidate the importance of embedding SEL in curricula, and general best practices for teaching. Teachers will likely benefit from access to more tools and increased flexibility for running a successful class. Ideally, the movement toward decentralizing the authority of states to define their own programs and measures of success will spark innovation in public schooling, whereby the more successful programs can be studied and eventually adapted and scaled to areas that are in desperate need of quality education. ●

## Summary

**Social and emotional skills are critical to achieving self-actualization.**

**A student's EQ, or emotional quotient, can predict future success just as well as IQ.**

**SEL investments at the preschool level have been shown to deliver economic returns as high as \$16 for every dollar spent.**

**Successful non-cognitive programs frequently address seven key competencies — growth mindset, self-efficacy, goal setting, grit, social and emotional intelligence, creativity, and self-regulation.**

**New legislative changes may offer greater access to effective teaching tools and increased flexibility to do what works.**

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