

Social and emotional learning

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Research has clearly shown that social-emotional competencies can be taught, that schools are appropriate places to teach them, and that SEL can make a positive difference in young people's lives.

Weissberg (2019, p. 65).

Recent years have witnessed amplified attention to the field of social and emotional learning (SEL) fueled by burgeoning research evidence indicating that promoting students' social and emotional competence in school improves not only their well-being and positive development, but such efforts lead to successful academic outcomes. Bolstered by a plethora of compelling empirical evidence showing that SEL programs and practices are successful in promoting students' social-emotional competence and deterring mental health problems and antisocial behaviors (e.g., Domitrovich et al., 2017; Weissberg et al., 2015) as well as cost-effective (Belfield et al., 2015), many school districts and jurisdictions in the US and internationally have strengthened their efforts to integrate SEL into the very fabric of schooling in efforts to educate the "whole child" and prepare young people for the 21st century (Darling-Hammond and Cook-Harvey, 2018).

Clearly, SEL is now a worldwide phenomenon and not just a passing fad, with SEL approaches and programs being implemented in countries throughout the world (Frydenberg et al., 2017; Humphrey, 2013; Torrente et al., 2015). Large scale organizations such as the World Bank, the World Health Organization (WHO), UNICEF, UNESCO, and the Organization for Economic and Cooperative Development (OECD) are joining in the call for a more explicit and intentional consideration of social and emotional competencies and social and emotional well-being into both education and health (e.g., OECD Education, 2018; Varela et al., 2013).

The overall aim of this chapter is to provide a summary of current theory and research in the field of SEL. The chapter begins by providing a rationale for the promotion of students' social-emotional competence in education, followed by a brief history of SEL, a definition of SEL, and a description of the social and emotional competencies that comprise SEL. Following a brief review of recent research that offers strong empirical support for an SEL approach is put forth. Next, essential ingredients of a systemic approach to SEL are delineated. The chapter ends by offering some future directions conclusions on how an understanding of SEL has implications for the transformation of education.

SEL: rationale and definitions

Why now? The need for SEL

My own work on SEL originated during my time as a middle school teacher and a teacher at an alternative high school for youth deemed “at risk” for high school completion during the 1980s. My students inspired me, taught me, and coached me to learn from them about what it takes to create an educational context in which they could learn and flourish. The phrase that resounded for me was “Students don’t care how much you know until they know how much you care.” It was at that time that I learned that my success as a teacher relied on not only educating my students’ minds, but educating their hearts as well. And to do so required that I pay explicit attention to cultivating their social-emotional competencies, including their ability to be aware of their strengths and challenges, identify and regulate their emotions, show empathy and compassion for others, and seek help when they needed it. Nonetheless, what was missing at that time was the field of SEL and the science behind it, so I had limited information—I worked on instinct and had little from which to draw from my teacher training or support from the educators in my school context. It was during those years that I also realized that so many of the social and emotional problems that I saw in my students were preventable. This inspired me to enroll in graduate school so that I could explore the research on prevention and the promotion of students’ social and emotional competencies to better understand the social and emotional dimensions of teaching and learning. This work inspired a professional career that has spanned over 30 years in which I have sought to answer one central question: What are the ways that we can create educational contexts that foster students’ social and emotional competencies, such as empathy, compassion, altruism, and resiliency so that all young people can thrive and reach their optimal potential?

SEL and neuroscience: we feel therefore we learn

Many of the recent discussions on education and educational reform have emphasized that young people’s social, emotional, and academic development are inextricably linked (Cantor et al., 2018; Jones and Kahn, 2017). These conjectures draw strong support from research in the field of social neuroscience. As Immordino-Yang and Damasio (2007) assert, “The aspects of cognition that are recruited most heavily in education, including learning, attention, memory, decision making, motivation, and social functioning, are both profoundly affected by emotion and in fact subsumed within the processes of emotion” (p. 7). Stated simply, how we feel affects how and what we learn.

Recent innovations in neuroscience that emphasize the vital role of social experiences on brain development and learning support the explicit integration of SEL into education (Immordino-Yang et al., 2019). Groundbreaking new research that has emerged during the last half of the 20th century challenges pre-existing beliefs about the brain’s malleability by demonstrating that the brain is changeable (or “plastic”) to experience across childhood and adolescence, and even into adulthood (Baltes et al., 2006; Pascual-Leone et al., 2005). Similarly, research from the field of developmental cognitive neuroscience (Diamond, 2012), indicates that social and emotional skills can be taught across the life span and are viewed as more malleable than IQ.

Escalating mental health problems in children and youth

An increased emphasis on the role of schools in promoting students’ social and emotional competence and well-being reflects, in part, growing concerns about the problems facing youth today, such as declining academic motivation (Roeser and Eccles, 2014), increasing school bullying and aggression (Hymel and Swearer, 2015), an escalating mental health crisis (Jones et al., 2022), and decreases in well-being in youth exacerbated by the Covid-19 pandemic (Gadermann et al., 2022; Luthar et al., 2021).

The crisis of children’s mental health and rising disparities in educational outcomes has risen to the forefront of national consciousness with the release of the most recent US Surgeon General’s Advisory in December 2021. The Advisory calls attention to the rising mental health issues of young people and disparities across subpopulations in the US. It then outlines a whole-society approach for tackling the problem and includes a set of recommendations designed to prevent these challenges and bolster children’s well-being. One of the primary recommendations outlined is to “support the mental health of children and youth in educational, community, and childcare settings,” which involves, “creating positive, safe, and affirming educational environments” and “expanding programming that promotes healthy development (such as social and emotional learning)” (p. 13). To support the well-being and mental health of students, the Advisory also encourages policymakers and schools to undertake efforts designed to promote the “mental health of all school personnel” (p. 20). For instance, the recommendations suggest regular assessments of staff well-being and the integration of wellness initiatives into professional development for school staff. The Advisory proports that these efforts will directly benefit school personnel, while, at the same time, help to foster teachers’ social and emotional competencies (SECs, e.g., empathy and compassion)—competencies that are needed to create positive learning environments that can promote student well-being and healthy development (Lever et al., 2017; US Dept. of Education, 2021). Furthermore, other policy makers and advocacy groups in the US have called for the increased training of teachers in SEL so that teachers are better equipped to support the development of students’ SECs and well-being throughout the COVID-19 crisis and beyond (Walker, 2020).

Widespread support for SEL

There now exists consensus among parents, teacher, principals, and the general public that SEL should be integrated into schooling. Indeed, recent research indicates that the myopic focus on academics as the sole purpose of education appears to be shifting, with support for SEL from parents (Edge Research, 2018; PDK International, 2017) and the general public (Bushaw and Lopez, 2013;). Results from the 2013 PDK/Gallup Poll of the Public’s Attitudes Toward Public Schools indicates that most Americans agree that

public schools should teach students a full range of social, emotional, and cognitive competencies, including how to set meaningful goals (89%), communication skills (94%), how to collaborate on projects (84%), and character (76%).

Similarly, teachers confirm that SEL is an essential part of education. For example, a nationally representative survey published by Civic Enterprises and Peter D. Hart Research Associates of more than 600 teachers (Bridgeland et al., 2013) illustrates this point. Their report showed that the vast majority of preschool to high school teachers believe that social and emotional skills are teachable (95%) and that promoting SEL will benefit students from both rich and poor backgrounds (97%) and will have positive effects on their school attendance and graduation (80%), standardized test scores and overall academic performance (77%), college preparation (78%), workforce readiness (87%), and citizenship (87%). Additionally, these same teachers reported that, in order to implement and promote SEL effectively in their classrooms and schools, they need strong support from district and school leaders. These findings are important because they demonstrate that, although there is a readiness among teachers to promote SEL, there is a need for systemic supports for implementation at the district level. Similarly, a 2019 Rand Cooperation report by Hamilton, Doss, and Steiner echoes strong support for SEL, notably among both principals and teachers. Their survey revealed that a large majority of principals identified SEL as a top priority and that both principals and teachers identified a wide range of SEL skills as important (Hamilton et al., 2019).

Despite resounding support for SEL, it is not without its critics. Most recently, prominent scholars and education leaders have voiced their concerns about the rapid interest and implantation of SEL throughout the US (e.g., Finn and Hess, 2019; Hamilton and Schwartz, 2019; Hess, 2019; McShane, 2019; National Commission on Social, Emotional, and Academic Development, 2018; Starr, 2019). One frequent point of criticism for SEL is in regard to its definition. Some argue (e.g., Finn and Hess, 2019; Starr, 2019) that the definition for SEL is ambiguous and can mean many different things to different people. In a thoughtful and comprehensive response to concerns about SEL, Shriver and Weissberg (2020) posit that “Just like every other widely used term in K-12 education—deeper learning, mastery learning, collaborative learning, instructional leadership, and so on—SEL will no doubt be misunderstood by some people and misused by others trying to cash in on its popularity” (p. 53). They note that while the organization in which they both are members—the Collaborative for Academic, Social, and Emotional Learning or CASEL—has worked for over 25 years to define SEL, no one organization owns a definition of SEL, therefore some definitional ambiguity is inevitable. Despite this, Shriver and Weissberg contend that there is widespread agreement among leaders in the SEL movement on a set of foundational principles. Specifically, any SEL Framework should include a focus on both intrapersonal and interpersonal skills and attitudes; be developmentally appropriate and culturally sensitive; be grounded in empirical research; and support implementation and evaluation programming by offering practitioners resources that are evidence-based (Blyth et al., 2019). Undoubtedly, debates about SEL will continue—what is needed for the field to grow and flourish are productive and open conversations in which different points of view can provide an impetus for innovation and new knowledge.

A brief history of SEL

Although the term “SEL” is relatively recent—dating back almost 30 years—the attention to children’s social and emotional development in relation to education dates back much longer. For instance, centuries ago Aristotle posited that, “Educating the mind without educating the heart is no education at all” emphasizing that the aim of education should not solely focus on the mastery of subject content areas such as reading, writing, math, science, and social studies, but should include an explicit and intentional focus on teaching students social and emotional competencies, including empathy and compassion. More recent instantiations of SEL can be traced back to the early 1900s with John Dewey’s (1916) progressive education efforts that focused on the promotion of students’ social responsibility, Maria Montessori (1912) schools that emphasized child-centered education and a focus on whole child education—cognitive, social, emotional, and physical development, and Jane Addams (2002) focus on engaged citizenship and student agency and autonomy which aligned with Dewey’s focus.

The theoretical and empirical work in SEL related fields in particular can be traced back to the beginning of the 20th century. Osher et al. (2016), in their recent review of the genesis of SEL, noted that “The roots of SEL are intellectually diverse and politically nonpartisan” (p. 647). In their review, they trace back the roots of SEL to educational reform efforts in the early part of the 20th century (including John Dewey and Jane Addams) to the “Mental Hygiene Movement” with its presage attention to prevention of mental illness, and to Thorndike’s (1920) conception of “social intelligence.” Over the course of the 20th century, the shift to understanding the contextual influences that shape child development began to emerge and researchers such as Bronfenbrenner and his “bioecological model of human development” (1979; Bronfenbrenner and Morris, 2006) espoused the importance of taking into account the nature and levels of context as influencers on child development. Bronfenbrenner’s “bioecological model of human development” led to increased attention to the implementation of systemic interventions in the 1980s and 1990s (Elias et al., 1997).

The growth of SEL work was gradual and somewhat intermittent across the century but expanded markedly in the 1990s when researchers such as Salovey and Mayer (1990) began to work in the new field of “emotional intelligence.” Their work both built upon and expanded the work of Howard Gardner’s (1983) “multiple intelligences” and Robert Sternberg’s (1985) practical intelligence, challenged typical definitions of intelligence by showing the critical roles of emotion and motivation in predicting life success.

In 1995 the publication of Daniel Goleman’s book *Emotional Intelligence: Why It Can Matter More than IQ* catalyzed the field by making SEL a term known by researchers and the larger public. At the same time that interest in SEL was growing, there was an accumulating research base regarding the effectiveness of programs to prevent problem behavior and promote healthy development

coupled with a growing knowledge base on the importance of school climate to promote students' healthy relationships, achievement, and school connectedness, and prevent dropout (e.g., [Thapa et al., 2013](#)). Similarly, growing concerns around problems such as bullying and school shootings spurred an urgency for the creation and implementation of school programs focused on promoting safe and supportive school environments ([Dwyer and Osher, 2000](#); [Dwyer et al., 1998](#)).

Today, SEL has been characterized in a variety of ways, often being used as an organizing framework for an array of promotion and prevention efforts in education and developmental science, including conflict resolution, cooperative learning, bullying prevention, and positive youth development ([Schonert-Reichl and Weissberg, 2015](#); [Weissberg et al., 2015](#)).

What is SEL?

Social and emotional learning, or SEL, involves evidence-based programs, practices, and policies through which children, youth, and adults acquire the competencies to recognize and manage emotions, develop caring and concern for others, establish positive relationships, make responsible decisions, and handle challenging situations effectively ([Weissberg, 2019](#); [Weissberg et al., 2015](#)). That is, SEL programs and practices teach the personal and interpersonal competencies we all need to handle ourselves, our relationships, and our work effectively and ethically. Accordingly, SEL is aimed at helping children and even adults develop fundamental skills for success in school and life.

SEL builds from work in child development, classroom management, prevention, and emerging knowledge about the role of the brain in self-awareness, empathy, social-cognitive growth (e.g., [Best and Miller, 2010](#); [Goleman, 2006](#); [Immordino-Yang et al., 2019](#)), and focuses on the skills that allow children to calm themselves when angry, make friends, resolve conflicts respectfully, and make ethical and safe choices. In short, SEL competencies comprise the foundational skills for positive health practices, engaged citizenship, and school success ([Weissberg et al., 2015](#)). SEL is sometimes called “the missing piece” in education because it represents a part of education that is inextricably linked to school success but has not been explicitly stated or given much attention until relatively recently. SEL emphasizes active learning approaches in which skills can be generalized across curriculum areas and contexts when opportunities are provided to practice the skills that foster positive attitudes, behaviors, and thinking processes.

In SEL, social-emotional competencies are viewed as “mastery skills” underlying virtually all aspects of human functioning. Moreover, SEL emphasizes active learning approaches in which skills can be generalized across curriculum areas and contexts when opportunities are provided to practice the skills that foster positive attitudes, behaviors, and thinking processes.

SEL frameworks

The SEL landscape is replete with SEL frameworks. [Berg et al. \(2017\)](#) conducted an extensive review of frameworks related to the social and emotional (SE) competencies among youth between the ages of 6–25 years. Through their examination of reports, papers, and discussions with experts across a range of fields, including economics and health, they identified 136 frameworks across 14 areas of study, including areas such as Positive Youth Development, Resilience, Character Education, School-Based Competency Development, Public Health, Mental Health, Mindfulness to name a few (see [Berg et al., 2017](#), for a full description of their approach and findings). One central finding that emerged in their review was “that different terms are used for competencies that have similar definitions, and that the same terms are used for competencies that have different definitions” (p. 40). Their work underlines the importance of conceptual clarity when identifying and analyzing appropriate SEL frameworks.

CASEL's SEL framework

The Collaborative for Academic, Social, and Emotional Learning (CASEL; www.casel.org) a nonprofit organization in Chicago, IL, is one of the organizations at the forefront in North American and international efforts to promote SEL. Founded in 1994 by Daniel Goleman and Eileen Rockefeller Growald, its mission is to advance the science of SEL and expand evidence-based, integrated SEL practices as an essential part of preschool through high school education.

CASEL's SEL framework is one of the most recognized SEL frameworks across the world (see [Fig. 1](#)). The framework takes a systems approach that includes a set of social-emotional competencies that underlie effective and successful performance for social roles and life tasks, drawing from extensive research in a wide range of areas, including social neuroscience and methods of learning and instruction. The concentric circles that surround the five social-emotional competencies—notably, communities, families and caregivers, schools, and classrooms—are the key settings in which SEL promotion occurs. These serve as an organizing framework for coordinating policies and practices that students experience both inside and outside of the classroom. The five social-emotional competencies identified by CASEL are described in more detail below ([Weissberg et al., 2015](#); www.CASEL.org):

The CASEL Five.

1. *Self-awareness*: The abilities to identify and recognize one's own emotions, thoughts, and influences on behavior, including recognizing one's own strength and challenges, being aware of one's own goals and values, possessing a well-grounded sense of self-efficacy and optimism, and having a growth mindset that one can learn through hard work. High levels of self-awareness require recognizing how thoughts, feelings, and actions are interconnected. Dimensions of self-awareness include: integrating personal and social identities, identifying personal, cultural, and linguistic assets, demonstrating honesty and integrity, linking feelings, values, and thoughts, examining prejudices and biases, and developing interests and a sense of purpose.
2. *Self-management*: The abilities to regulate one's emotions, thoughts, and behaviors effectively, including stress management, delaying gratification, impulse control, motivating oneself, and persevering through challenges to achieve personal and

- educational goals. It also includes self-management within social interactions. Other skills include: using planning and organizational skills, showing the courage to take initiative, and demonstrating personal and collective agency
3. *Social awareness*: The abilities to take the perspectives of others—including those who come from a different background and culture, to empathize with others, understand social and ethical norms, and to recognize resources and supports in family, school, and community. Other social awareness competencies include: recognizing strengths in others, demonstrating empathy and compassion, showing concern for the feelings of others, understanding and expressing gratitude, identifying diverse social norms, including unjust ones, recognizing situational demands and opportunities, and understanding the influences of organizations/systems on behavior.
 4. *Relationship skills*: The abilities to establish and maintain healthy and supportive relationships and to effectively navigate settings with diverse individuals and groups, communicate clearly, listen actively, cooperate, negotiate constructively during conflict, solve problems with others, navigate settings with differing social and cultural demands and opportunities effectively, demonstrate cultural competency, practice teamwork and collaborative problem-solving, resist social pressure, show leadership in groups, and to offer and seek help when needed, and stand up for the rights of others.
 5. *Responsible decision making*: This includes the knowledge, skills, and attitudes to make constructive choices regarding one's own behavior and social interactions, taking into account safety concerns, ethical standards, social and behavioral norms, consequences, and the well-being of self and others, and to evaluate the benefits and consequences of various actions for personal, social, and collective well-being. Additional examples include: demonstrating curiosity and open-mindedness, identifying solutions for personal and social problems, learning to make a reasoned judgment after analyzing information, data, facts, recognizing how critical thinking skills are useful both inside and outside of school, reflecting on one's role to promote personal, family, and community well-being, and valuating personal, interpersonal, community, and institutional impacts.

What is transformative SEL?

Until recently, the definition of SEL did not include an explicit focus on considering the cultural and racial differences, privilege, and inequities that exist in schools (Jagers et al., 2019). To address this and to help advance the research agenda for the next generation by focusing on SEL in the service of equity and excellence, an expanded definition of SEL has been put forth by Jagers et al. (2019). The concept “transformative SEL” is the process whereby young people and adults build strong, and respectful relationships that facilitate co-learning to critically examine root causes of inequity and to develop collaborative solutions that lead to personal, community, and societal well-being. This new definition sets a vision for what high-quality systemic SEL is and how it might be achieved. Moreover, this form of SEL is necessary to meet the growing political, economic, and health challenges we face in the US and around the world.

Transformative SEL competencies focus on identity, intersectionality, agency, belonging and engagement as central to furthering social-emotional development and achieving equity in education (Jagers et al., 2019). Strategies identified as promoting these



Fig. 1 The collaborative for academic, social, and emotional learning (CASEL) framework.

transformative social-emotional competencies are culturally infused SEL skill development, project-based learning and youth participatory action research.

Also relevant to a discussion of an equity in transformative SEL are disciplinary approaches. Restorative practices for resolving conflict and behavioral issues offer an inclusive approach to counteract exclusionary, punitive measures that disproportionately marginalize students of color (Gregory and Fergus, 2017). Research evidence suggests that restorative approaches teach students skills for conflict resolution and help students become better integrated into the school community (Morrison, 2013; Wearmouth et al., 2007).

What is systemic SEL?

Because virtually all children go to school during key developmental years, schools are important contexts for fostering children's positive social and emotional competencies. Widely acknowledged is that efforts to make SEL an enduring aspect of education, need to include SEL at every level of the school, including school leadership, teaching and learning, and with families and community (see Mahoney et al., 2020). As recently espoused by Mahoney et al. (2020, p. 1),

Systemic SEL is an approach to create equitable learning conditions that actively involve all Pre-K to Grade 12 students in learning and practicing social, emotional, and academic competencies. These conditions require aligned policies, resources, and actions at state and district levels that encourage local schools and communities to build the personal and professional capacities of adults to: implement and continuously improve evidence-based programs and practices; create an inclusive culture that fosters caring relationships and youth voice, agency, and character; and support coordinated school-family-community partnerships to enhance student development.

Especially noteworthy in the above description of systemic SEL is that any approach to promote social and emotional competence in students must consider the interpersonal and intrapersonal capacities of the adults in the education system.

CASEL has developed a set of guidelines and school and school district resources for implementing SEL at the level of the system (www.CASEL.org). For example, for schools, CASEL has put forth "10 Indicators of Schoolwide SEL" that are evidence-based, and include: (1) Explicit SEL instruction, (2) SEL integrated with academic instruction, (3) Youth voice and engagement, (4) Supportive school and classroom climate, (5) Focus on adult SEL and relationships, (6) Supportive discipline, (7) A continuum of integrated supports, (8) Systems for continuous improvement, (9) Authentic family partnerships, and (10) Aligned community partnerships. Full descriptions of these, along with a rubric for assessing them, and many other resources from CASEL for integration of SEL schoolwide, can be found at: <https://schoolguide.casel.org/>

SEL: the research evidence

SEL skills in childhood predict academic achievement and adult success

A growing body of literature supports the premise that children's social-emotional competence not only predicts success in school (e.g., Oberle et al., 2014; Wentzel, 1993), but also predicts a range of important outcomes in late adolescence and adulthood, including physical health, substance dependence, and overall well-being (Moffitt et al., 2011). Recognizing the interrelationship between social-emotional competencies and academic success, researchers have argued that fostering positive social and emotional development may be key to enhancing academic growth (see Greenberg et al., 2003; Zins et al., 2004).

One early study that was pioneering in its design and approach to demonstrating the critical role of social-emotional competencies in predicting students' academic success, is from Wentzel (1993) titled "Does Being Good Make the Grade?" In her study of 423 sixth and seventh graders, Wentzel (1993) found that students' prosocial classroom behaviors, such as helping, sharing, and cooperating, were better predictors of academic achievement than were their standardized test scores, even after taking into account academic behavior, teachers' preferences for students, IQ, family structure, sex, ethnicity, and days absent from school. Similarly, in a longitudinal study of 294 Italian children, Caprara et al. (2000) found that prosocial behavior in third grade (average age 8.5 years) as rated by self, peers, and teachers, significantly predicted both academic achievement (explaining 35% of the variance) and social preference (explaining 37% of the variance) 5 years later when children were in eighth grade. Most interestingly, this "prosocialness" score, which included cooperating, helping, sharing, and consoling behaviors, significantly predicted academic achievement five years later, even after controlling for third grade academic achievement. In contrast, early academic achievement did not contribute significantly to later achievement after controlling for effects of early prosocialness. Collectively, these correlational studies, demonstrate the importance of social-emotional competencies in predicting short-term and long-term success.

In a short-term, longitudinal study of 441 sixth grade Canadian students, Oberle et al. (2014) examined the association between social and emotional competence and academic achievement in early adolescents. Social-emotional competence in grade 6, operationalized in terms of both self-reports of social responsibility goals and teacher assessments of frustration tolerance, assertive social skills, task orientation, and peer interaction, were evaluated as predictors of student academic achievement test scores in math and reading grade 7. As hypothesized, teacher-reports of students' social-emotional competencies significantly predicted higher scores in math and reading in seventh grade. Self-reported social-emotional competence in grade 6 was a significant predictor of grade 7 reading scores for boys but not girls. Although more research is needed regarding the link between SEL and academic

achievement, there is a confluence of empirical evidence suggesting that, if we want students to be successful in school, efforts should be made to teach SEL intentionally and explicitly.

In addition to playing a crucial role in predicting academic success, recent longitudinal research also documents links between children's social and emotional skills and later success in adulthood. Jones et al. (2015), for instance, examined the degree to which late adolescent and early adult outcomes were predicted by teacher ratings of children's social-emotional competence measured many years earlier, when children were in kindergarten, following 753 kindergarten children longitudinally, 13–19 years later. Kindergarten teacher ratings of children's prosocial skills (getting along with others, sharing, cooperating) were found to be significant predictors of whether participants graduated from high school on time, completed a college degree, obtained stable employment in adulthood, and were employed full time in adulthood. Moreover, kindergarten children who were rated by their teachers as high in prosocial skills in kindergarten, were less likely as adults to receive public assistance, live in or seek public housing, be involved with police, placed in a juvenile detention facility, or arrested. Early social competence inversely predicted days of binge drinking in the last month and number of years on medication for emotional or behavioral problems during high school. Given these findings, the authors emphasize the importance of assessing young children's social and emotional competence early on and contend that these "softer" skills can be more malleable than IQ or other cognitive measures and, hence are important contenders for intervention.

In another notable longitudinal study Moffitt et al. (2011) followed a cohort of 1000 children from birth to 32 years in New Zealand, assessing children's self-control across the ages of 3, 5, 7, 9, and 11 years via reports from researcher-observers, teachers, parents, and the children themselves. Self-control in childhood was found to predict physical health, substance dependence, personal finances, and criminal offending in adulthood, even after taking into account intelligence, social class, and problems the children had in adolescence (e.g., smoking, school drop-out). The authors concluded that focusing on the promotion of children's self-control "might reduce a panoply of societal costs, save taxpayers money, and promote prosperity" (p. 1). Thus, results from several recent longitudinal studies examining the association between early SEL skills and later adult adjustment suggest that, in the long run, higher levels of social and emotional competence can increase the likelihood of high school graduation, financial success, mental and physical health, and reduce criminal behavior.

Social and emotional skills are malleable—they can be taught

One approach to promoting the well-being and success of our young people and to ensure that they grow into productive adults is to identify the cognitive and social-emotional knowledge, skills, attitudes, and values that are considered to be "malleable"—that is, those that can change and be promoted through education and other experiences. Although the previous terminology in psychology referred to many of these constructs as "traits," hence conveying a sense of immutability or permanence, current descriptions identify these constructs as "skills" because they can be shaped and changed over the life cycle.

As described earlier, SEL is grounded in research from developmental cognitive neuroscience (e.g., Diamond, 2012) that indicates that social and emotional skills can be taught across the life span and are more malleable than IQ. Immordino-Yang et al. (2019) posit that although the malleability of the brain can be changed by experience through the lifespan, there remain periods across human development for which the brain experiences is more actively changing. These periods include the prenatal period through childhood, early adolescence, transition to parenthood, and old age. This information is particularly important when making decisions about SEL programming during the elementary, middle, and high school years.

Perhaps some of the most compelling evidence for the malleability of students' social-emotional competencies comes from a meta-analysis conducted by Durlak et al. (2011) of 213 school-based, universal SEL programs involving 270,034 students from kindergarten through high school. Students in SEL programs, relative to students who did not receive an SEL program, were found to demonstrate significantly improved social-emotional competencies, attitudes, and behavioral adjustment (increased prosocial behavior and decreased conduct problems and internalizing problems). SEL students also outperformed non-SEL students on indices of academic achievement by 11-percentile points. Durlak et al. also found that classroom teachers and other school personnel effectively implemented SEL programs. Thus, SEL programs can be easily incorporated into routine school practices and do not require staff from outside the school for successful delivery. Taken together, these results provide strong empirical evidence for the "value-added" of SEL programs in fostering students' social and emotional skills, attitudes, and behaviors, and also counter the claim that taking time to promote students' SEL would be detrimental to academic achievement.

Similar results were obtained in another meta-analysis of 75 recently published studies of SEL programs conducted by Sklad et al. (2012). That is, Sklad et al. found that universal, school-based SEL programs had significant positive effects on seven outcomes: social-emotional skills, prosocial behavior, positive self-image, academic achievement, antisocial behavior, mental health problems, and substance abuse. Not surprisingly, the most positive effects were found for social-emotional skills, with an effect size of 0.70. In other words, students participating in SEL programs had social-emotional skills 0.7 of a standard deviation higher than comparison students, indicating that the average SEL program student had better social-emotional skills than 76% of non-SEL students. Moderate effect sizes (program effects of nearly a half of a standard deviation) emerged for four of the outcomes: academic achievement, positive self-image, prosocial behavior, and antisocial behavior. As for follow-up effects, the largest effects were found for academic achievement, followed by substance abuse.

SEL skills are durable

Do students maintain their SEL competencies after the SEL program has ended? Findings from [Durlak et al. \(2011\)](#) meta-analysis described above provide additional support for the durability of effects of SEL programming on students' social and emotional competencies. Durlak and colleagues examined a smaller group of 33 interventions that included follow-up data (an average follow-up period of 92 weeks) and found that the positive effects remained statistically significant, although the effect sizes were smaller.

Research by [Hawkins et al. \(2008\)](#) documented the long-term positive effects of multi-year SEL programming on student outcomes. Specifically, Hawkins et al. found significantly reduced diagnosable mental health disorders (e.g., major depression, generalized anxiety disorder) at age 24 and age 27, which was 12 and 15 years after their SEL intervention had ended. Their results also showed intervention effects indicating better educational and economic achievement among those individuals who received the SEL intervention in contrast to those who did not. Although more research is clearly needed, Hawkins et al.'s research provides important evidence about the potential long-term benefits of well-designed and well-implemented SEL interventions.

More recently, [Taylor et al. \(2017\)](#) conducted a systematic review to address the relative paucity of evidence on the long-term effectiveness of SEL programming in enhancing positive student outcomes. This review is important because it addresses a critical question regarding the cost-benefit of investment in SEL programs, informing allocation of resources for SEL in school budgets. A total of 82 research studies evaluating school-based, universal SEL programs involving 97,406 ethnically and socio-demographically diverse students, from kindergarten to high school and in urban and rural settings were reviewed. Results demonstrated that students who had received an SEL intervention continued to show increases in social-emotional skills, positive behaviors and academic achievement, and decreases in conduct problems, emotional distress, and drug use up to almost four years after program completion, in contrast to those students who did not receive an SEL intervention.

SEL: the essential ingredients

As noted earlier, several organizing frameworks have been proposed for SEL, each one outlining various components that influence SEL—such as school culture and climate, and teachers' pedagogical skills—and each framework identifies similar student outcomes, such as improved academic achievement and social and emotional competence. Hence, in addition to focusing on specific instruction in social and emotional skills, SEL is a process of creating a school and classroom community that is caring, supportive, and responsive to students' needs. Moreover, effective SEL interventions and skill development occurs when teachers possess the requisite social and emotional skills to create an environment that is safe, caring, supportive, and well-managed, and have the social-emotional competencies and knowledge to implement SEL programs effectively.

To create a parsimonious depiction of a systemic approach to SEL, I contend that there are three distinct and interrelated dimensions: (1) The learning context, (2) SEL of students, and (3) SEL of teachers. As illustrated in [Fig. 2](#), these three dimensions are portrayed in a circle to illustrate the interconnectedness of each dimension to each other and to highlight that each dimension is influenced by, and influences, the other dimensions. Each one is discussed in turn below.

Ingredient 1: the learning context

Children can learn and thrive when they are in school and classroom contexts in which they feel safe, secure, connected, and cared for—contexts in which their social emotional competence and academic growth is nurtured and cultivated ([Jones and Kahn, 2017](#)). Conversely, stressful classroom contexts can thwart children's learning and jeopardize their mental health—leading them on a trajectory toward educational failure and problem behaviors ([Domitrovich et al., 2017](#); [Sauve and Schonert-Reichl, 2019](#)). Classrooms and schools operate as systems, and decades of research suggest that the unique culture and climate of classrooms and schools affects how and what students learn (e.g., [Thapa et al., 2013](#)). School culture refers to a general set of norms, beliefs, and practices or "the way things are done around here" ([Hemmelgarn et al., 2006](#)), whereas school climate "reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" ([National School Climate Council, 2007](#), p. 4). Culture and climate, in combination, influence the interactions and relationships among administrators, teachers, school staff, and students and their approaches to teaching and learning ([Gottfredson et al., 2005](#)). Therefore, any approach to promoting SEL needs to take into account both school culture and climate and systematically and intentionally embed SEL into every dimension of a school.

SEL interventions and skill development should occur within supportive classroom and school environments, as well as help to create such a climate. Additionally, successful SEL-related school and classroom activities foster active student voice in decision-making, problem solving, and engagement in lifelong learning. Research also has shown that effective programs provide repeated opportunities to practice new skills and behaviors within the program structure and to apply them in real-life situations. That is, providing opportunities to practice within classroom lessons is important, but actual opportunities to practice in real-life situations are likely to have even more impact ([Durlak et al., 2011](#); [Weare and Nind, 2011](#)). Communication styles, high performance expectations, classroom structures and rules, school organizational climate, commitment to the academic success of all students, district policies, and parental and community involvement are all important components of an SEL approach in the learning context.

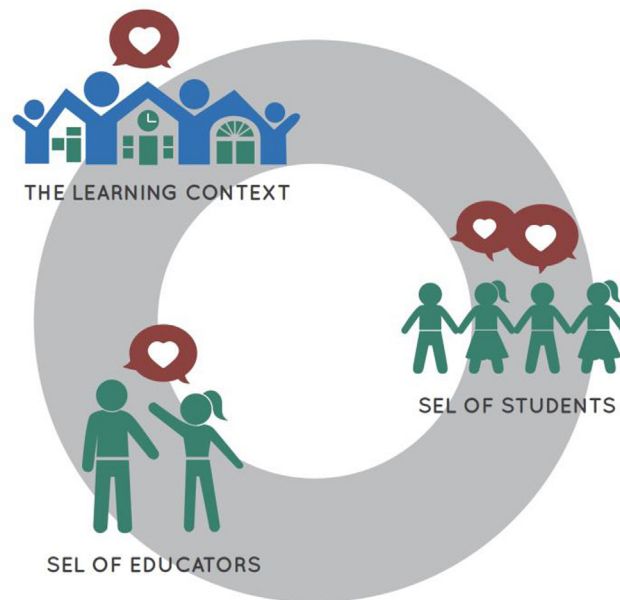


Fig. 2 The essential ingredients of SEL.

Ingredient 2: SEL of students

Promoting the SEL students includes several dimensions, including explicit SEL instruction through evidence-based SEL instruction, infusion of SEL into academic subjects, and providing students with opportunities for voice and agency. In 2003 CASEL published the results of a careful review of 80 SEL programs for kindergarten through to 12th grade entitled, *Safe and Sound: An Educational Leader's Guide to Evidence-Based Social and Emotional Learning (SEL) Programs*. This groundbreaking review provided educators with practical information on the features of different programs that could help them select programs most relevant and suited for their particular needs. In 2013, CASEL reviewed hundreds of SEL preschool and elementary school programs and identified dozens of programs that met high standards for program design, implementation supports, evidence of effectiveness, and applicability to specific grades. To be included in the 2013 CASEL Guide (CASEL, 2013) and designated as "SElect", the program had to meet three criteria: (a) be a well-designed classroom-based program that systematically promotes students' social and emotional competence, provides opportunities for practice, and offers multi-year programming, (b) deliver high-quality training and other implementation supports, including initial training and ongoing support to ensure sound implementation and, (c) be evidence-based with at least one carefully conducted evaluation that documents positive impacts on student behavior and/or academic performance. The 2013 CASEL Guide summarizes objective information about the characteristics of these nationally available, multi-year programs via a "consumer report" format that is clear and easy to read. Included in the Guide is information on SEL programs identified as CASEL SElect programs designed for preschool through elementary school students. A guide for middle school and high school programs was released by CASEL in 2015. Moreover, the CASEL Program Guide continues to be updated as new SEL programs are reviewed. Similar efforts to evaluate the effectiveness of various SEL programs are available on the University of Colorado Blueprints website (www.blueprintsprograms.com) and on the Public Health Agency of Canada's Violence Prevention Portal (<http://cbpp-pcpe.phac-aspc.gc.ca/public-health-topics/violence-prevention/>).

With regard to SEL program implementation, it is also critical to keep in mind the critical elements of effective SEL programs. In this vein, in their meta-analyses, Durlak et al. (2011) provided evidence that SEL programs promote better student outcomes when program implementers incorporate four elements represented by the acronym SAFE:

- (1) *Sequenced*: connected and coordinated set of activities to foster skills development;
- (2) *Active*: active forms of learning to help students master new skills;
- (3) *Focused*: a component that emphasizes developing personal and social skills; and
- (4) *Explicit*: targeting specific social and emotional skills.

The effective *implementation* of an SEL program plays a crucial role in influencing student outcomes. Unfortunately, some well-designed SEL programs do not promote positive student outcomes, often due to variability in way the program is implemented in the "real world" setting of a school and/or classroom. When implementing an established SEL program that has been shown to be effective, it is important for educators to recognize the importance of completing all lessons and activities in the program (dosage) and doing so as designed by the program developers (fidelity) in order to maximize the likelihood of success of the program in their own classroom environment.

Ingredient 3: SEL of teachers

Teachers are the engine that drives SEL programs and practices in classrooms and school (Schonert-Reichl, 2017) and teachers own SEL competence and well-being plays a critical role in influencing the learning context and the infusion of SEL into classrooms and schools (Jones et al., 2013). Researchers have shown that promoting the social and emotional competencies and of students is most effective when explicit attention is given to all levels of the system, including educator SEL (Mahoney et al., 2020).

Classrooms with warm teacher-child relationships facilitate deep learning among students (Merritt et al., 2012), and when children feel comfortable with their teachers and peers, they are more willing to grapple with challenging material and persist at difficult learning tasks. Conversely, when teachers poorly manage the social and emotional demands of teaching, students demonstrate lower levels of performance and on-task behavior (Marzano et al., 2003). Hence, it is essential that efforts are made to support the development of teachers' SEL competencies in order to optimize their classroom performance and their ability to promote SEL in their students (Jennings and Frank, 2015).

Caring teachers: strategies for the classroom

A caring teacher can transform the school experience, especially for students who face enormous difficulties, such as dropping out or dysfunctional home lives. The quality of teacher-student relationships is critical for children's academic achievement as illustrated by the work of Maldonado-Carreno and Votruba-Drzal (2011). Using data from the NICHD Study of Early Childcare of 1364 children from kindergarten through fifth grade, they found that increases in the quality of teacher-student relationships were associated with concomitant improvements in teacher-reported academic skills. Moreover, these relations remained unchanged as children progressed from kindergarten through fifth grade.

Some explicit strategies for fostering positive student-teacher relationships and caring classrooms include:

- Greeting students every day as they enter the classroom, with intentional efforts to have a brief *positive* conversation with them (e.g., noticing their new backpack or shoes) (Cook et al., 2018).
- Getting to know each student and the lives they live, learning about their strengths, challenges, interests and dreams. This could be done at the beginning of the school year, through individual interviews with each student. Teachers can also ask students about what they, as teachers, can do to help students learn and thrive in school.
- Actively listening to students to show you care. Authentic listening is demonstrated by hearing your students and then checking back with them to make sure you understand. Such interactions help to develop a trusting relationship between teachers and students.
- Asking students for advice and feedback as well as help when needed. For example, teachers can ask for help in setting up the classroom (e.g., what to put on the classroom bulletin boards, how to arrange the seating, how to organize activity centers), giving students a voice in the nature and organization of their physical environment. Through regular class meetings, teachers can engage students in developing the rules for the classroom and in creating a positive classroom environment. By considering student feedback, teachers demonstrate that student opinions and experiences are valued, and helps to create a classroom culture in which students feel safe to ask questions and take chances, enhancing the development of their SEL skills as well as their academic success.

Teacher stress and stress contagion

Clearly, teachers play a vital role in cultivating a positive and nurturing context that fosters students' social, emotional, and academic success (e.g., Braun et al., 2020). Nonetheless, teachers' stress and burnout can undermine their efforts to create an optimal context for healthy development and learning for their students. Decades of research have demonstrated that teaching is one of the most stressful professions in the human service industry (Montgomery and Rupp, 2005). Chronic work stress and exhaustion among teachers is associated with negative changes in biological indicators of stress as well with recent research showing that teachers who report chronic stress demonstrate atypical patterns of physiological stress reactivity as assessed via diurnal cortisol (Katz et al., 2016; Wolfram et al., 2013). Moreover, mounting evidence indicates that teachers' stress and burnout impedes the development of positive teacher-student relationships, effective classroom management, and student well-being (Jennings and Greenberg, 2009; Roeser et al., 2013; Schonert-Reichl, 2017).

In the context of education, teachers can experience stress when they appraise a situation as threatening and yet have limited ability to change or improve it. Take, for instance, the case of teacher autonomy. Among professional occupations, teachers rate lowest in feeling that they have a say in what happens in the workplace (Gallup, 2014). The percentage of teachers who report low job autonomy increased from 18% in 2004 to 26% in 2012 (Sparks and Malkus, 2015). The proportion of teachers who report significant levels of on-the-job stress is also rising. In a recent Gallup (2014) on occupational stress, 46% of teachers reported high daily stress—on par with nurses and just above doctors. Teachers and nurses had the highest levels of reported stress among all occupational groups.

Why does teacher stress matter for our understanding of SEL? High levels of chronic stress can lead to occupational burnout—characterized by emotional exhaustion, depersonalization and a low sense of accomplishment in one's work (Maslach et al., 2001). Teacher stress has also been linked to decreased job satisfaction, poor instructional practices and poor student outcomes (e.g., Schwarzer and Hallum, 2008). Taken together, there is evidence that the occupational stress of teachers can thwart efforts to promote students' social-emotional competence and well-being.

Chronic work stress and exhaustion among teachers is also associated with negative changes in biological indicators of stress. Recent research has found that teachers who report chronic stress demonstrate atypical patterns of physiological stress reactivity, as assessed via daytime levels of the stress hormone cortisol (Katz et al., 2016; Wolfram et al., 2013).

Moreover, research also shows that, like other emotions, stress is contagious and can spill over into the classroom. That is, when teachers are stressed, students are the collateral damage. Drawing from the stress-contagion framework, Oberle and Schonert-Reichl (2016) examined the link between teacher burnout and student stress in a sample of fourth and seventh grade children in Canada. To assess teacher burnout, teachers completed the Maslach Burnout Inventory modified for Teachers (Maslach et al., 1996). To assess student stress, students' salivary cortisol was collected as a biological indicator of students' stress reactivity. Biological stress reactivity is frequently assessed via the reactivity of the hypothalamic-pituitary-adrenal (HPA) axis, a homeostatic system that follows a circadian rhythm and is activated in response to cognitive (e.g., fear, excitement, anxiety) or non-cognitive (e.g., infections) stressors (Jessop and Turner-Cobb, 2008). Cortisol levels found in saliva or blood can be used as an indicator for HPA axis activity. The integrity of the HPA axis is essential to human health. In a typical diurnal HPA-axis regulation pattern, cortisol levels rise within 20–45 min after waking and then gradually decline across the day. Inappropriately low or elevated levels of cortisol can compromise HPA axis functioning (Jessop and Turner-Cobb, 2008). Students' salivary cortisol was collected from children at 9 a.m., 11.30 a.m., and 2 p.m. in the classroom setting. Analyses revealed that, after adjusting for differences in cortisol levels due to age, gender and time of waking, higher morning cortisol levels in students could be significantly predicted from higher levels of self-reported burnout of classroom teachers. Although these findings were correlational, the research conducted by Oberle and Schonert-Reichl (2016) was the first to show that teachers' occupational stress is linked to students' physiological stress regulation. What is not yet known is the direction of the stress contagion. That is, does teachers' burnout lead to higher levels of stress in students? Or do students who enter the classroom with higher levels of stress lead to increased teacher burnout? Only future research determining this causal relationship will lend further clarity to this relation.

Promoting teachers' social and emotional competence and well-being

As can be surmised, the majority of extant studies have focused on teacher well-being through a deficit lens by examining the teacher stress and burnout (Spilt et al., 2011; Collie et al., 2015). This research has been in concert in showing a general lack of teacher well-being among teachers across the globe (Kyriacou, 2011). Moreover, the research has shown that higher levels of teacher stress and burnout is associated with concomitant levels of student problem behavior (Hoglund et al., 2015) and lower student academic achievement (e.g., Herman et al., 2018). Although these findings are valuable, one criticism of examining teacher well-being through a deficit lens is that it fails to identify the influential factors within a school system that serve to strengthen teacher well-being (Collie et al., 2015).

Reviewing the evidence linking teachers own SEL competence and student outcomes, Jennings and Greenberg (2009) point to the importance of quality teacher–student relationships, and effective student and classroom management skills, (as well as implementation dosage and fidelity) in obtaining the best outcomes for students. Accordingly, they recommend the development and implementation of interventions designed to specifically address teachers' SEL competencies, reduce teacher stress and burnout, and improve teacher well-being. Although limited, the past few years have seen the emergence of interventions specifically targeted at improving teachers' SEL and stress management. For example, two programs designed to promote teachers' SEL competence by incorporating mindfulness-based approaches are CARE (Cultivating Awareness and Resilience in Education) and SMART-in-Education (Stress Management and Resiliency Training). Mindfulness is typically described as an attentive, nonjudgmental, and receptive awareness of present moment experience in terms of feelings, images, thoughts, and sensations/perceptions (e.g., Kabat-Zinn, 1990). Both programs aim to increase teachers' 'mindfulness, job satisfaction, compassion and empathy for students, efficacy for regulating emotions, and decrease stress and burnout. Initial research to date has supported the effectiveness of both the CARE (Cocchia and Greenberg, in press; Jennings et al., 2011) and SMART-in-Education (e.g., Benn et al., 2012; Roeser et al., 2013) programs in promoting teacher SEL competence and well-being. Nonetheless, further research is needed to examine whether such positive changes in teacher well-being spill over into the classroom and lead to improvements in students' SEL competence.

Future SEL efforts on the horizon

Now more than ever, SEL is needed to revolutionize and transform education across the globe in order to enable all children and youth to thrive. Today, SEL is no longer seen as an ancillary aspect of classrooms and schools—it is seen as an essential component. Simply stated, "SEL is not another thing on the plate, it is the plate."

Although much has been learned in the past decade about SEL and its effects on children's social-emotional competence and academic success, the field has further to go before firm conclusions can be made about the specific ways in which an SEL approach advances children's short-term and long-term school and life success. Indeed, many questions still remain regarding the ways in which programs and practices designed to promote children's SEL skills will best support children's future success. Many questions remain, such as: How does a systemic approach to SEL lead to successful improvements in children's social and emotional competence and short-term and long-term success? Which programs work best for which children and youth? What does a transformative approach to SEL look like at all levels of the system? What are the policies that need to support effective SEL implementation at federal and state levels? and how do we adequately prepare and support teachers and principals to implement SEL in classrooms and schools?

Another challenge that confronts the field of SEL is the translation of knowledge garnered from rigorous research on the effectiveness of programs into policy and widespread practice across countries (Greenberg, 2010; Shonkoff and Bales, 2011). Clearly, there is a need for greater efforts to translate science for practice and policy so that SEL approaches can be better integrated into schools and communities. Such efforts can help build the processes and structures needed to foster high-quality implementation and promote sustainability (see Elias et al., 2003).

Finally, greater collaboration between researchers and educators is needed to allow research to not only inform practice, but also that practice can inform research. To create a world characterized by the values and practices that illustrate caring and kindness among all people, it is essential that educators, parents, community members, and policy makers work in concert to achieve long-term change. It is therefore critical that we make intentional efforts to devise the most effective educational practices that promote SEL in all children. Such efforts must be based on strong conceptual models and sound research. Only then will we be in a position to advance the development of our world's children and youth.

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