

The Evidence Base for How Learning Happens

A Consensus on Social, Emotional, and Academic Development



BY STEPHANIE M. JONES AND JENNIFER KAHN

Compelling research demonstrates that the success of young people in school and beyond is inextricably linked to healthy social and emotional development. Students who have a sense of belonging and purpose, who can work well with classmates and peers to solve problems, who can plan and set goals, and who can persevere through challenges—in addition to being literate, numerate, and versed in scientific concepts and ideas—are more likely to maximize their opportunities and reach their full potential.

Stephanie M. Jones is a professor of education at the Harvard Graduate School of Education. Jennifer Kahn is a research manager in the EASEL (Ecological Approaches to Social and Emotional Learning) Lab at the Harvard Graduate School of Education. This article is excerpted with permission from The Evidence Base for How We Learn: Supporting Students' Social, Emotional, and Academic Development (Aspen Institute, 2017). The full report and the list of distinguished scientists who developed the consensus statements are available at www.aspeninstitute.org/publications/evidence-base-learn.

Educators understand the benefits of educating the whole child, and have been calling for more support and fewer barriers in making this vision a reality. Similarly, employers recognize that social and emotional development, along with content knowledge, is crucial to preparing the future workforce with the life skills employers increasingly need and value.¹

Given the substantial amount of time children spend in them, schools are an important and powerful influence on children's development in all areas. They are a critical context in which to intentionally and productively cultivate social and emotional development.

While many schools and districts are pursuing this work, their success so far has been impeded by education policies—and practices in some schools—that are predicated on a narrow vision of student success. Fortunately, the federal Every Student Succeeds Act and growing efforts at the state and local levels to make social and emotional development a priority are beginning to change the landscape. This convergence of support from the education and business communities and shifts in the policy landscape creates a rare window of opportunity

to highlight and build upon the powerful body of evidence that establishes social, emotional, and cognitive competencies as essential to learning.

Seizing on this momentum, the Aspen Institute's National Commission on Social, Emotional, and Academic Development united a broad alliance of leaders to speak with a unified voice about the urgency of integrating social and emotional development into the fabric of K-12 education. The commission convened a group of scientists, researchers, and academics across disparate fields to develop consensus statements on what research says about integrating social, emotional, and academic development. These consensus statements were recently published in *The Evidence Base for How We Learn: Supporting Students' Social, Emotional, and Academic Development*, from which this article is drawn.

The Intertwined Nature of Learning and Development

Decades of research in human development, cognitive and behavioral neuroscience, educational practice and policy, and other fields have illuminated that major domains of human development—social, emotional, cognitive, linguistic, academic—are deeply intertwined in the brain and in behavior. All are central to learning. Strengths or weaknesses in one area foster or impede development in others; each domain intersects with the others. For example, social development has critical cognitive elements that govern the processing of information from the social world and drive subsequent attributions that result. Similarly, cognition and emotion work in tandem. Lacking a core skill like self-control can inhibit cognitive information processing that depends on the emotions of the individual and the actual situation.

We recognize the deep connections among these areas and the importance of each one, but often conversations about academic learning leave out the body of evidence that highlights a set of skills and competencies that are primarily social and emotional. What we refer to in this article as social and emotional learning and development encompasses cognitive, social, and emotional processes, skills, and competencies. Not only do these important skills facilitate academic learning, but we know that the quality and depth of student learning is enhanced when students have opportunities to interact with others and make meaningful connections to subject material. Promoting social and emotional development includes enhancing the skills that students and adults in schools and in other settings possess and demonstrate, and depends on features of the educational setting itself, including its culture and climate.

A challenge here is that public debates about social and emotional development suffer from the same issue that plagues many education concepts: not everyone can quite agree on what it is. To some, social and emotional development involves a set of tools for learning, whereas others see it as a way of promoting resilience in the face of both normative and traumatic stresses. Still others emphasize the importance of neurocognitive skills or frame it as a morality and character-building exercise. This lack of consistency doesn't mean that social and emotional competence is "soft," immeasurable, irrelevant, or faddish. It means that social and emotional development is multifaceted and is integral to academics—to how school happens, and to how learning takes place.



Educators understand the benefits of educating the whole child, and have been calling for more support and fewer barriers in making this vision a reality.

Taken together, social and emotional development comprises specific skills and competencies that students need in order to set goals, manage behavior, build relationships, and process and remember information. Moreover, these skills and competencies are fundamentally tied to the characteristics of settings that can be intentionally structured to nurture their development. Looking across a variety of disciplines, organizing systems, and correlational and evaluation research, and reflecting the intertwined nature of human development described above, at least a dozen specific social and emotional skills are clearly linked to school and life success² and are relevant for both students and the adults who teach and care for them.³

In the broadest terms, these skills can be grouped into three interconnected domains: (1) cognitive skills, including executive functions such as working memory, attention control and flexibility, inhibition, and planning, as well as beliefs and attitudes that guide one's sense of self and approaches to learning and growth; (2) emotional competencies that enable one to cope with frustration, recognize and manage emotions, and understand others' emotions and perspectives; and (3) social and interpersonal skills that enable one to read social cues, navigate social situations, resolve interpersonal conflicts, cooperate with others and work effectively in a team, and demonstrate compassion and empathy toward others.



Social, emotional, and cognitive development are deeply intertwined and together are integral to academic learning and success.

Drawing on evidence from a range of disciplines and perspectives, it is clear that social and emotional skills and competencies develop in a complex system of contexts, interactions, and relationships.⁴ Therefore, schools and other organizations that work with children must promote development across multiple areas and address the skills and beliefs of educators and other adults in schools; organizational culture, climate, and norms; and routines and structures that guide basic interactions and instruction. As described in greater detail below, such approaches are most effective when designed to match the needs and opportunities of specific contexts, organizations, and communities.

Social, Emotional, and Academic Development Matters

1. Social, emotional, and cognitive competencies develop throughout our lives; are essential to success in our schools, workplaces, homes, and communities; and allow individuals to contribute meaningfully to society.

There is a substantial and rigorous body of evidence showing that students learn more and classrooms are more effective when children and adolescents have the skills and competencies to manage emotions, focus their attention, successfully navigate relationships with peers and adults, persist in the face of difficulty,

learn from and apply academic content, and problem solve.⁵ Interest in this area is high, and with good reason: there is now a strong body of evidence from large-scale experimental studies showing that high-quality preschool and school-based programming focused on social and emotional development make a positive difference for children's academic achievement and behavior. Moreover, during the past 30 years, demand in the labor market for individuals who possess this body of skills has increased.⁶

To date, we've learned that, in addition to broad improvements in social, behavioral, and mental health outcomes,⁷ programming in social and emotional learning across the school years drives increases in executive functioning, self-efficacy, persistence, prosocial behavior, grades, and scores on standardized tests.⁸ Children with stronger social and emotional competencies are also more likely to enter and graduate from college; succeed in their careers; have positive work and family relationships, better mental and physical health, and reduced criminal behavior; and become engaged citizens.⁹

2. Social, emotional, and cognitive capabilities are fundamentally intertwined—they are interdependent in their development, experience, and use.

Research in human development establishes that social, emotional, and cognitive development are deeply intertwined and together are integral to academic learning and success.¹⁰ Indeed, many social, emotional, and cognitive capacities are processed in the same parts of the brain,¹¹ and this plays out in behavior when, for example, fear impedes our ability to process information.

Studies of effective early childhood and school environments¹² confirm that academic skills in the first years of schooling are entwined with the ability to regulate emotions and behavior and to engage in positive social interactions with peers and adults. Similarly, academic behaviors in the later years (e.g., attendance) are closely tied to students' social, emotional, and behavioral functioning.¹³ We also know that classroom instruction and academic activities that connect rigorous cognitive challenges with social interaction or that spark students' emotions result in deeper, longer-term learning.¹⁴ In practice, efforts that approach these domains from a lens of integration—addressing social, emotional, and academic development together—are likely to be the most effective and sustainable.¹⁵

3. Engaging in effective social and emotional learning-informed programs and practices can improve teacher effectiveness and well-being.

In addition to individual student outcomes, attention to social and emotional development leads to safe, well-functioning schools and classrooms characterized by supportive culture and climate, positive relationships, effective classroom management, deeper learning, and reduced behavioral problems.¹⁶ Not only is there compelling evidence that a focus on social and emotional skills is central to effective classroom management,¹⁷ but promising evidence shows¹⁸ that discipline policies in schools founded on core principles of social and emotional learning can shift race and gender disparities in the application of punitive discipline practices.*

*For more on positive school discipline, see the Winter 2015–2016 issue of *American Educator*, available at www.aft.org/ae/winter2015-2016.

Moreover, there is now a small, but growing, body of evidence suggesting that interventions addressing teacher-specific social and emotional competencies result in improvements in a variety of indicators of teacher well-being, including reductions in stress and burnout,¹⁹ which in turn can reduce rates of teacher and administrator turnover.²⁰ Teachers also report greater job satisfaction when their students are more engaged and successful, and we know that student motivation and engagement is closely linked to experiences with instructional content and approaches that reflect students' social and emotional worlds.²¹

Social and Emotional Skills Are Malleable

1. Social, emotional, and cognitive competencies can be taught and developed throughout childhood, adolescence, and beyond.

Social, emotional, and cognitive skills are not predetermined by one's genetic blueprint. Rather, our genes interact with experience so that these skills emerge, grow, and change over time, beginning in the earliest years and continuing throughout childhood and adolescence. Indeed, there is some evidence to suggest that social and emotional learning skills are malleable over long periods of development, whereas some core cognitive skills become less so as children get older.²²

Although more research is needed in this area, two important developmental principles are at play. First, some skills act as building blocks, serving as a foundation for more complex skills that emerge later in life. For example, regulating and managing one's emotions is fundamental to resolving complex social conflicts, and identifying basic emotions in oneself is essential to being able to regulate them effectively. This suggests that children must develop certain basic social, emotional, and cognitive competencies before they can master others.

Second, as the environments in which children learn, grow, and play change, so do the social, emotional, and cognitive demands placed on them. This suggests that certain social, emotional, and cognitive skills should be cultivated or taught before others, and within specific grades or age ranges, and that instruction in these domains should be developmentally sequenced and age-appropriate.²³ Documenting the typical developmental progression of these skills and, critically, their variability between individuals, cultures, and contexts, represents a major research opportunity.

2. Contexts and experiences can be shaped in ways that positively affect children's social and emotional learning and their academic and life outcomes, and there are programs and practices that have been proven to be effective at improving social and emotional development.

Social and emotional skills can be intentionally cultivated with high-quality practices, programs, and interventions²⁴ in both school and out-of-school settings.²⁵ For example, in a seminal review of more than 200 school-based, universal social and emotional learning (SEL) programs spanning grades K–12, researchers demonstrated that students who participated in evidence-based SEL programs showed significant improvements in social and emotional learning skills, behavior, attitudes, and academic performance, as well as reduced emotional distress and conduct problems.²⁶ Results from this study also indicated that programs were most effective when they employed evidence-based skills-

training practices. Specifically, these programs conformed to the acronym SAFE, meaning they included sequenced activities to teach skills, actively engaged students in learning skills, focused time on SEL skill development, and explicitly targeted SEL skills.²⁷

A follow-up study revealed that participants continued to demonstrate positive benefits for an average of 3.75 years following participation, indicating the long-term benefits of SEL interventions.²⁸ Furthermore, interventions were beneficial across populations, regardless of race/ethnic or socioeconomic background.²⁹ Other approaches to intervention that emphasize one aspect or domain of social, emotional, and cognitive skills—those focused on executive functions, mindfulness, or growth mindsets, for example—have also been shown through rigorous evaluations to be effective.³⁰

Teachers report greater job satisfaction when their students are more engaged and successful.

Schools Play a Central Role in Social, Emotional, and Academic Development

1. Schools can have a significant influence on social, emotional, and academic development. The wider community (families, community institutions, etc.) must be engaged to enhance the strength, depth, and pace of acquisition of these competencies.

Given the substantial amount of time children spend in school, interacting with other students and adults, early childhood educational settings and schools are a primary and critical context for intentionally and rigorously building and cultivating social, emotional, and academic skills. At the same time, families and other community institutions play an essential role in building and supporting these skills.³¹ The inclusion of families and out-of-school-time organizations in such efforts allows for learning and reinforcement to continue across contexts.³²

2. Social, emotional, and academic development is an essential part of preK–12 education that can transform schools into places that foster academic excellence, collaboration and communication, creativity and innovation, empathy and respect, civic engagement, and other skills and dispositions needed for success in the 21st century.

Integrating a focus on social and emotional development into the structures and practices of schools and schooling is a path to creating safe, supportive school environments that are conducive



Classrooms characterized by warm and engaging teacher-student relationships promote deeper learning among students.

to learning. One of the most enduring, repeated, and substantial effects of SEL and related interventions (those focused on executive function or self-regulation, for example) is changes in the culture and climate of classrooms, including organizational, instructional, and behavior management practices.³³ It is clear that such interventions shape not only individual outcomes but also broader, classroom- and school-level outcomes tied to a range of important school experiences.³⁴

Students with strong social and emotional skills are also more likely to initiate and sustain positive relationships with peers and adults, participate in classroom activities, and engage in learning.³⁵ In addition, classrooms characterized by warm and engaging teacher-student relationships* promote deeper learning among students: children who feel comfortable with their teachers and peers are more willing to grapple with challenging material and persist at difficult learning tasks.³⁶ Curriculum and instructional practices that deliberately integrate or interweave

*For more on the importance of educator-student connections, see "It's About Relationships" in the Winter 2015–2016 issue of *American Educator*, available at www.aft.org/ae/winter2015-2016/ashley.

academic content with social and emotional themes and/or skills are likely to be the most sustainable and effective. There are a growing number of examples of such practices in the field.³⁷

3. Effective implementation is necessary to improve outcomes and for all children to benefit.

A growing body of research highlights the importance of effective implementation of social and emotional learning and related interventions and strategies.³⁸ Unsurprisingly, evidence indicates that high-quality implementation is positively associated with better student outcomes.³⁹ Schools and other settings that merely give "lip service" to social and emotional learning, but do not have clear and consistent programs or strategies, will not show commensurate outcomes for students. Monitoring implementation is essential for program impact and for providing valuable guidance in terms of continuous program improvement.⁴⁰ A focus on implementation advances research, practice, and educational policy because it can lead to better decision making and better services for students.⁴¹

Conditions for effective implementation are known. For example, social and emotional learning should be developmentally and culturally aligned to the needs of students and integrated across settings, including the school, home, and community.⁴² For skill building in these areas to permeate across settings, students need continuous, consistent opportunities to build and practice these skills, which means that adults must agree on consistent practices across classrooms and other school contexts.⁴³

4. For social, emotional, and academic development to thrive in schools, teachers and administrators need training and support to understand and model these skills, behaviors, knowledge, and beliefs.

Students are more likely to benefit from social and emotional learning when staff members receive training, and when the program or strategy is implemented well and embedded in everyday teaching and learning.⁴⁴ However, today's teachers typically receive little training (both pre-service and in-service) on how to promote these skills or deal with peer conflict or social and emotional development overall.⁴⁵ As a result, teachers report limited confidence in their ability to respond to student behavioral needs and, in turn, to support students' social and emotional development.⁴⁶

When teachers receive training in specific evidence-based programs or strategies that affect teaching and learning in the classroom, they feel better equipped to propose and implement positive, active classroom management strategies that discourage students' aggressive behaviors and promote a positive classroom learning climate.⁴⁷ In addition, teachers who have knowledge about child and adolescent development are better able to design and carry out learning experiences in ways that support students' social, emotional, and academic competencies, and enhance student outcomes.⁴⁸ Ultimately, training should be embedded in educators' pre-service and in-service experiences, and administrative and supervisory support should be integrated in ongoing ways.

It is difficult for adults to help students build these skills if they themselves do not possess them. Research indicates that teachers

with stronger social and emotional skills have more positive relationships with students, engage in more effective classroom management, and implement their students' social and emotional programming more effectively.⁴⁹ Critically, not only teachers but district administrators, principals, and other school staff need professional training and support in social and emotional development and related practices.⁵⁰

Focusing on Social and Emotional Development Is Worth It

1. Supporting social, emotional, and academic development is a wise use of public resources, because there can be long-term social and economic benefits to society when schools implement and embed evidence-based programs that promote social and emotional as well as cognitive development.

Relatively low-cost SEL and related interventions can deliver substantial returns on investment. For example, a benefit-cost analysis of prominent SEL interventions revealed a positive return on investment averaging a yield of \$11 in long-term benefits over a range of outcomes for every \$1 invested.⁵¹ Evidence from national and international settings indicates that individuals with higher social and emotional competencies tend to have higher labor market earnings.⁵² Research and theory also suggest that these skills are likely to lead to gains in labor productivity, which include increased long-term employment and taxable earnings.⁵³ Similarly, reductions in violence, drug use, delinquent behavior, and mental health problems—as a result of stronger social and emotional skills and competencies—are likely to lead to a decreased need for government services and, ultimately, less expenditure of public money.⁵⁴

Building social and emotional skills and competencies also has important value from a public health perspective. Universal school-based programs focused on these skills have the capacity to influence short- and long-term physical and mental health outcomes for all children. By facilitating the development of skills such as how to manage emotions, such interventions can serve as important protective factors and change the way individuals adapt to their environment and respond to stress.⁵⁵ Likewise, the inability to cope effectively with stress or regulate one's emotions is associated with numerous diseases that influence the physiological response system.⁵⁶ This is particularly relevant for children exposed to chronic stress often associated with poverty, violence, and substance abuse, conditions that have long-lasting consequences for learning, behavior, and general physical and mental well-being.⁵⁷

2. All students, regardless of their background, benefit from positive social and emotional development. At the same time, building, nurturing, and integrating social, emotional, and academic development in preK–12 can be a part of achieving a more equitable society.

It is clear that supporting positive social, emotional, and academic development is highly valuable for the success and well-being of individuals, schools, and society at large. Interventions designed to build social and emotional skills have been shown to be effective for all children and youth, regardless of geographical setting or socio-demographic background.⁵⁸

We do know that children exposed to adversity, trauma, and stress are particularly susceptible to challenges in these areas,⁵⁹

and that those with different geographic, socioeconomic, gender, and racial/ethnic backgrounds can experience the same environment differently. Importantly, this work is especially relevant for supporting low-income or at-risk students, providing them with a set of skills that can buffer exposure to adverse experiences or difficulty in school.⁶⁰

These issues are very complex, and supporting children and adults to cope with or manage systemic and enduring inequities is not a sustainable pathway to a more equitable society. However, focusing on social, emotional, and academic development can contribute to an important shift toward a society where all children and youth can learn and succeed.

Interventions designed to build social and emotional skills have been shown to be effective for all children and youth.

Integrating social and emotional development with academic instruction is foundational to the success of our young people and, therefore, to the success of our education system and society at large. All children deserve the opportunity to learn the skills they need to succeed as individuals and as contributing, engaged citizens.

With these guiding principles and the collective expertise and influence of the National Commission on Social, Emotional, and Academic Development's Council of Distinguished Scientists, we are well positioned to bring about meaningful and sustainable change, placing the integration of social, emotional, and academic development at the forefront of education practice and policy. □

Endnotes

1. National Network of Business and Industry Associations, *Common Employability Skills: A Foundation for Success in the Workplace; The Skills All Employees Need, No Matter Where They Work* (Washington, DC: National Network of Business and Industry Associations, 2014); and National Association of Colleges and Employers, *Job Outlook 2016* (Bethlehem, PA: National Association of Colleges and Employers, 2015).
2. Stephanie M. Jones and Suzanne M. Bouffard, "Social and Emotional Learning in Schools: From Programs to Strategies," *Social Policy Report* 26, no. 4 (2012); and Hillary Johnson and Ross Weiner, *This Time, With Feeling: Integrating Social and Emotional Development and College- and Career-Readiness Standards* (Washington, DC: Aspen Institute, 2017).
3. Patricia A. Jennings and Mark T. Greenberg, "The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes," *Review of Educational Research* 79 (2009): 491–525.
4. Elise Cappella, Clancy Blair, and J. Lawrence Aber, "Outcomes beyond Test Scores—What Is Social-Emotional Learning?" (New York: NYU Steinhardt, 2016); Jones and Bouffard, "Social and Emotional Learning in Schools"; and Jenny Nagaoka et al., *Foundations for Young Adult Success: A Developmental Framework* (Chicago: University of Chicago Consortium on Chicago School Research, 2015).

(Continued on page 42)

How Learning Happens

(Continued from page 21)

5. David Osher et al., "Advancing the Science and Practice of Social and Emotional Learning," *Review of Research in Education* 40 (2016): 644–681; and Stephanie M. Jones and Emily J. Doolittle, "Social and Emotional Learning: Introducing the Issue," *The Future of Children* 27, no. 1 (2017): 3–11.
6. David J. Deming, "The Growing Importance of Social Skills in the Labor Market," NBER Working Paper Series, no. 21473 (Cambridge, MA: National Bureau of Economic Research, 2015); Catherine J. Weinberger, "The Increasing Complementarity between Cognitive and Social Skills," *Review of Economics and Statistics* 96 (2014): 849–861; and Diane Whitmore Schanzenbach et al., *Seven Facts on Noncognitive Skills from Education to the Labor Market* (Washington, DC: The Hamilton Project, 2016).
7. Stephanie M. Jones, Joshua L. Brown, and J. Lawrence Aber, "Two-Year Impacts of a Universal School-Based Social-Emotional and Literacy Intervention: An Experiment in Translational Developmental Research," *Child Development* 82 (2011): 533–554; and Jones and Doolittle, "Social and Emotional Learning."
8. Mark T. Greenberg et al., *The Study of Implementation in School-Based Preventive Interventions: Theory, Research, and Practice* (Rockville, MD: Substance Abuse and Mental Health Services Administration, 2005); Joseph A. Durlak et al., "The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions," *Child Development* 82 (2011): 405–432; Camille A. Farrington et al., *Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance; A Critical Literature Review* (Chicago: University of Chicago Consortium on Chicago School Research, 2012); Marcin Sklad et al., "Effectiveness of School-Based Universal Social, Emotional, and Behavioral Programs: Do They Enhance Students' Development in the Area of Skill, Behavior, and Adjustment?," *Psychology in the Schools* 49 (2012): 892–909; Roger P. Weissberg et al., "Social and Emotional Learning: Past, Present, and Future," in *Handbook of Social and Emotional Learning: Research and Practice*, ed. Joseph A. Durlak et al. (New York: Guilford Press, 2015), 3–19; Clancy Blair and Rachel Peters Razza, "Relating Effortful Control, Executive Function, and False Belief Understanding to Emerging Math and Literacy Ability in Kindergarten," *Child Development* 78 (2007): 647–663; Rebecca Bull, Kimberly Andrews Espy, and Sandra A. Wiebe, "Short-Term Memory, Working Memory, and Executive Functioning in Preschoolers: Longitudinal Predictors of Mathematical Achievement at Age 7 Years," *Developmental Neuropsychology* 33 (2008): 205–228; Kimberly Andrews Espy et al., "The Contribution of Executive Functions to Emergent Mathematics Skills in Preschool Children," *Developmental Neuropsychology* 26 (2004): 465–486; Robin B. Howse et al., "Motivation and Self-Regulation as Predictors of Achievement in Economically Disadvantaged Young Children," *Journal of Experimental Education* 71 (2003): 151–174; Megan M. McClelland et al., "Links between Behavioral Regulation and Preschoolers' Literacy, Vocabulary, and Math Skills," *Developmental Psychology* 43 (2007): 947–959; Claire E. Cameron Ponitz, "Touch Your Toes! Developing a Direct Measure of Behavioral Regulation in Early Childhood," *Early Childhood Research Quarterly* 23 (2008): 141–158; and Stephanie M. Jones et al., *Navigating SEL from the Inside Out: Looking Inside and Across 25 Leading SEL Programs; A Practical Resource for Schools and OST Providers* (New York: Wallace Foundation, 2017).
9. Terrie E. Moffitt et al., "A Gradient of Childhood Self-Control Predicts Health, Wealth, and Public Safety," *Proceedings of the National Academy of Sciences* 108 (2011): 2693–2698; Mark T. Greenberg et al., "Social and Emotional Learning as a Public Health Approach to Education," *The Future of Children* 27, no. 1 (2017): 13–32; and Weissberg et al., "Social and Emotional Learning."
10. Stephanie M. Jones and Edward Zigler, "The Mozart Effects: Not Learning from History," *Journal of Applied Developmental Psychology* 23 (2002): 355–372; Mary Helen Immordino-Yang and Antonio Damasio, "We Feel, Therefore We Learn: The Relevance of Affective and Social Neuroscience to Education," *Mind, Brain, and Education* 1 (2007): 3–10; and Mary Helen Immordino-Yang, "Implications of Affective and Social Neuroscience for Educational Theory," *Educational Philosophy and Theory* 43 (2011): 98–103.
11. Ralph Adolphs, "Cognitive Neuroscience of Human Social Behavior," *Nature Reviews Neuroscience* 4 (2003): 165–178.

12. C. Cybele Raver et al., "Targeting Children's Behavior Problems in Preschool Classrooms: A Cluster-Randomized Controlled Trial," *Journal of Consulting and Clinical Psychology* 77 (2009): 302–316; C. Cybele Raver et al., "CSRP's Impact on Low-Income Preschoolers' Preacademic Skills: Self-Regulation as a Mediating Mechanism," *Child Development* 82 (2011): 362–378; Karen L. Bierman et al., "Promoting Academic and Social-Emotional School Readiness: The Head Start REDI Program," *Child Development* 79 (2008): 1802–1817; and Amie Bettencourt, Deborah Gross, and Grace Ho, *The Costly Consequences of Not Being Socially and Behaviorally Ready by Kindergarten: Associations with Grade Retention, Receipt of Academic Support Services, and Suspensions/Expulsions* (Baltimore: Baltimore Education Research Consortium, 2016).
13. Jones, Brown, and Aber, "Two-Year Impacts"; and James J. Heckman and Tim Kautz, "Fostering and Measuring Skills: Interventions That Improve Character and Cognition," NBER Working Paper Series, no. 19656 (Cambridge, MA: National Bureau of Economic Research, 2013).
14. Farrington et al., *Teaching Adolescents to Become Learners*.
15. Jones and Bouffard, "Social and Emotional Learning in Schools."
16. Eileen G. Merritt et al., "The Contribution of Teachers' Emotional Support to Children's Social Behaviors and Self-Regulatory Skills in First Grade," *School Psychology Review* 41 (2012): 141–159; Kimberly A. Schonert-Reichl, "Social and Emotional Learning and Teachers," *The Future of Children* 27 (2017): 137–155; Jones and Bouffard, "Social and Emotional Learning in Schools"; Jason A. Okonofua, David Paunesku, and Gregory M. Walton, "Brief Intervention to Encourage Empathic Discipline Cuts Suspension Rates in Half among Adolescents," *Proceedings of the National Academy of Sciences* 113 (2016): 5221–5226; and Jason A. Okonofua, Gregory M. Walton, and Jennifer L. Eberhardt, "A Social-Psychological Account of Extreme Racial Disparities in School Discipline," *Perspectives on Psychological Science* 11 (2016): 381–398.
17. C. Cybele Raver et al., "Improving Preschool Classroom Processes: Preliminary Findings from a Randomized Trial Implemented in Head Start Settings," *Early Childhood Research Quarterly* 23 (2008): 10–26; and Stephanie M. Jones, Rebecca Bailey, and Robin Jacob, "Social-Emotional Learning Is Essential to Classroom Management," *Phi Delta Kappan* 96, no. 2 (October 2014): 19–24.
18. Anne Gregory and Edward Ferguson, "Social and Emotional Learning and Equity in School Discipline," *The Future of Children* 27 (2017): 117–136.
19. Patricia A. Jennings et al., "Improving Classroom Environments by Cultivating Awareness and Resilience in Education (CARE): Results of Two Pilot Studies," *Journal of Classroom Interaction* 46, no. 1 (2011): 37–48; Patricia A. Jennings et al., "Improving Classroom Learning Environments by Cultivating Awareness and Resilience in Education (CARE): Results of a Randomized Controlled Trial," *School Psychology Quarterly* 28 (2013): 374–390; and Robert W. Roeser et al., "Mindfulness Training and Reductions in Teacher Stress and Burnout: Results from Two Randomized, Waitlist-Control Field Trials," *Journal of Educational Psychology* 105 (2013): 787–804.
20. Suzanne Bouffard, "Riding the Turnover Wave," *Usable Knowledge*, August 21, 2017, www.gse.harvard.edu/news/uk/17/08/riding-turnover-wave.
21. Robert M. Klassen and Ming Ming Chiu, "Effects on Teachers' Self-Efficacy and Job Satisfaction: Teacher Gender, Years of Experience, and Job Stress," *Journal of Educational Psychology* 102 (2010): 741–756.
22. James J. Heckman, Jora Stixrud, and Sergio Urzua, "The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior," *Journal of Labor Economics* 24 (2006): 411–482; and Flavio Cunha, James J. Heckman, and Susanne M. Schennach, "Estimating the Technology of Cognitive and Noncognitive Skills Formation," *Econometrica* 78 (2010): 883–931.
23. J. Lawrence Aber and Stephanie M. Jones, "Indicators of Positive Development in Early Childhood: Improving Concepts and Measures," in *Indicators of Children's Well-Being*, ed. Robert M. Hauser, Brett V. Brown, and William R. Prosser (New York: Russell Sage Foundation, 1997), 395–408; Gretchen Brion-Meisels and Stephanie M. Jones, "Learning about Relationships," in *Positive Relationships: Evidence Based Practice across the World*, ed. Sue Roffey (Dordrecht, Netherlands: Springer, 2012), 55–72; Cappella, Blair, and Aber, "Outcomes beyond Test Scores"; and Nagaoka et al., *Foundations for Young Adult Success*.

INTENTIONALLY
LEFT BLANK

24. Jones and Doolittle, "Social and Emotional Learning."
25. Joseph A. Durlak, "What Everyone Should Know about Implementation," in Durlak et al., *Handbook of Social and Emotional Learning*, 395–405; Schonert-Reichl, "Social and Emotional Learning and Teachers"; Durlak et al., "Impact of Enhancing"; and Rebecca D. Taylor et al., "Promoting Positive Youth Development through School-Based Social and Emotional Learning Interventions: A Meta-Analysis of Follow-Up Effects," *Child Development* 88 (2017): 1156–1171.
26. Durlak et al., "Impact of Enhancing."
27. Durlak et al., "Impact of Enhancing."
28. Taylor et al., "Promoting Positive Youth Development."
29. Durlak et al., "Impact of Enhancing"; and Taylor et al., "Promoting Positive Youth Development."
30. Clancy Blair and C. Cybele Raver, "Closing the Achievement Gap through Modification of Neurocognitive and Neuroendocrine Function: Results from a Cluster Randomized Controlled Trial of an Innovative Approach to the Education of Children in Kindergarten," *PLoS ONE* 9, no. 1 (2014): e112393; Kimberly A. Schonert-Reichl and Molly Stewart Lawlor, "The Effects of a Mindfulness-Based Education Program on Pre- and Early Adolescents' Well-Being and Social and Emotional Competence," *Mindfulness* 1 (2010): 137–151; W. Steven Barnett et al., "Educational Effects of the Tools of the Mind Curriculum: A Randomized Trial," *Early Childhood Research Quarterly* 23 (2008): 299–313; David Paunesku et al., "A Brief Growth Mindset Intervention Improves Academic Outcomes of Community College Students Enrolled in Developmental Mathematics Courses" (unpublished manuscript, Stanford University, Stanford, CA, 2012); and David S. Yeager, "Social and Emotional Learning Programs for Adolescents," *The Future of Children* 27, no. 1 (2017): 73–94.
31. S. Andrew Garbacz, Michelle S. Swanger-Gagné, and Susan M. Sheridan, "The Role of School-Family Partnership Programs for Promoting Student SEL," in Durlak et al., *Handbook of Social and Emotional Learning*, 244–259; Annie Bernier, Stephanie M. Carlson, and Natasha Whipple, "From External Regulation to Self-Regulation: Early Parenting Precursors of Young Children's Executive Functioning," *Child Development* 81 (2010): 326–339; Urie Bronfenbrenner, "Toward an Experimental Ecology of Human Development," *American Psychologist* 32 (1977): 513–531; Michelle I. Albright and Roger P. Weissberg, "School-Family Partnerships to Promote Social and Emotional Learning," in *Handbook of School-Family Partnerships*, ed. Sandra L. Christenson and Amy L. Reschly (New York: Routledge, 2010), 246–265; and Noelle Hurd and Nancy Deutsch, "SEL-Focused After-School Programs," *The Future of Children* 27, no. 1 (2017): 95–115.
32. Bronfenbrenner, "Toward an Experimental Ecology"; Albright and Weissberg, "School-Family Partnerships"; Garbacz, Swanger-Gagné, and Sheridan, "The Role of School-Family Partnership"; Joseph A. Durlak, Roger P. Weissberg, and Molly Pachan, "A Meta-Analysis of After-School Programs That Seek to Promote Personal and Social Skills in Children and Adolescents," *American Journal of Community Psychology* 45 (2010): 294–309; and Joseph A. Durlak and Roger P. Weissberg, *The Impact of After-School Programs That Promote Personal and Social Skills* (Chicago: Collaborative for Academic, Social, and Emotional Learning, 2007).
33. Karen L. Bierman et al., "The Effects of a Multiyear Universal Social-Emotional Learning Program: The Role of Student and School Characteristics," *Journal of Consulting and Clinical Psychology* 78 (2010): 156–168; Hugh F. Crean and Deborah B. Johnson, "Promoting Alternative Thinking Strategies (PATHS) and Elementary School Aged Children's Aggression: Results from a Cluster Randomized Trial," *American Journal of Community Psychology* 52 (2013): 56–72; Susan E. Rivers et al., "Improving the Social and Emotional Climate of Classrooms: A Clustered Randomized Controlled Trial Testing the RULER Approach," *Prevention Science* 14 (2013): 77–87; Carolin Hagelskamp et al., "Improving Classroom Quality with the RULER Approach to Social and Emotional Learning: Proximal and Distal Outcomes," *American Journal of Community Psychology* 51 (2013): 530–543; Stephanie M. Jones et al., "A School-Randomized Clinical Trial of an Integrated Social-Emotional Learning and Literacy Intervention: Impacts after 1 School Year," *Journal of Consulting and Clinical Psychology* 78 (2010): 829–842; Jones, Brown, and Aber, "Two-Year Impacts"; Conduct Problems Prevention Research Group, "Initial Impact of the Fast Track Prevention Trial for Conduct Problems: II. Classroom Effects," *Journal of Consulting and Clinical Psychology* 67 (1999): 648–657; Raver et al., "CSRP's Impact"; Pamela Morris et al., *Using Classroom Management to Improve Preschoolers' Social and Emotional Skills: Final Impact and Implementation Findings from the Foundations of Learning Demonstration in Newark and Chicago* (New York: MDRC, 2013); Carolyn Webster-Stratton, M. Jamila Reid, and Mike Stoolmiller, "Preventing Conduct Problems and Improving School Readiness: Evaluation of the Incredible Years Teacher and Child Training Programs in High-Risk Schools," *Journal of Child Psychology and Psychiatry* 49 (2008): 471–488; and Joshua L. Brown et al., "Improving Classroom Quality: Teacher Influences and Experimental Impacts of the 4Rs Program," *Journal of Educational Psychology* 102 (2010): 153–167.
34. Taylor et al., "Promoting Positive Youth Development."
35. Stephanie M. Jones et al., "Promoting Social and Emotional Competencies in Elementary School," *The Future of Children* 27, no. 1 (2017): 49–72; Greenberg et al., "Social and Emotional Learning as a Public Health Approach"; Durlak et al., "Impact of Enhancing"; Farrington et al., *Teaching Adolescents to Become Learners*; Sklad et al., "Effectiveness"; Weissberg et al., "Social and Emotional Learning"; and Susanne A. Denham, "Social-Emotional Competence as Support for School Readiness: What Is It and How Do We Assess It?," *Early Education and Development* 17 (2006): 57–89.
36. Merritt et al., "Contribution of Teachers' Emotional Support"; Schonert-Reichl, "Social and Emotional Learning and Teachers"; and Farrington et al., *Teaching Adolescents to Become Learners*.
37. Jones and Bouffard, "Social and Emotional Learning in Schools"; and National Commission on Social, Emotional, and Academic Development, *Putting It All Together: Curriculum That Addresses the Social and Emotional Dimensions of Learning Helps All Students Thrive Academically and Prepare for Challenges beyond School* (Washington, DC: Aspen Institute, 2017).
38. Jones and Bouffard, "Social and Emotional Learning in Schools."
39. Durlak et al., "Impact of Enhancing"; Celene E. Domitrovich and Mark T. Greenberg, "The Study of Implementation: Current Findings from Effective Programs That Prevent Mental Disorders in School-Aged Children," *Journal of Educational and Psychological Consultation* 11 (2000): 193–221; and Joseph A. Durlak and Emily P. DuPre, "Implementation Matters: A Review of Research on the Influence of Implementation on Program Outcomes and the Factors Affecting Implementation," *American Journal of Community Psychology* 41 (2008): 327–350.
40. Durlak, "What Everyone Should Know."
41. Durlak, "What Everyone Should Know."
42. Jones and Bouffard, "Social and Emotional Learning in Schools."
43. Jones and Bouffard, "Social and Emotional Learning in Schools."
44. Domitrovich and Greenberg, "Study of Implementation"; and Jones and Bouffard, "Social and Emotional Learning in Schools."
45. Jones and Bouffard, "Social and Emotional Learning in Schools"; Paulo N. Lopes et al., "The Role of Knowledge and Skills for Managing Emotions in Adaptation to School: Social Behavior and Misconduct in the Classroom," *American Educational Research Journal* 49 (2012): 710–742; and Janet Pickard Kremenitzer, "The Emotionally Intelligent Early Childhood Educator: Self-Reflective Journaling," *Early Childhood Education Journal* 33 (2005): 3–9.
46. Wendy M. Reinke et al., "Supporting Children's Mental Health in Schools: Teacher Perceptions of Needs, Roles, and Barriers," *School Psychology Quarterly* 26 (2011): 1–13; and Kimberly A. Schonert-Reichl, Jennifer L. Hanson-Peterson, and Shelly Hymel, "SEL and Preservice Teacher Education," in Durlak et al., *Handbook of Social and Emotional Learning*, 406–421.
47. Heather K. Alvarez, "The Impact of Teacher Preparation on Responses to Student Aggression in the Classroom," *Teaching and Teacher Education* 23 (2007): 1113–1126.
48. Bridget K. Hamre and Robert C. Pianta, "Student-Teacher Relationships," in *Children's Needs III: Development, Prevention, and Intervention*, ed. George G. Bear and Kathleen M. Minke (Bethesda, MD: National Association of School Psychologists, 2006), 59–71; Sara E. Rimm-Kaufman and Bridget K. Hamre, "The Role of Psychological and Developmental Science in Efforts to Improve Teacher Quality," *Teachers College Record* 112 (2010): 2988–3023; and Schonert-Reichl, Hanson-Peterson, and Hymel, "SEL and Preservice Teacher Education."
49. Jones and Bouffard, "Social and Emotional Learning in Schools."
50. Maurice J. Elias et al., *Promoting Social and Emotional Learning: Guidelines for Educators* (Alexandria, VA: ASCD, 1997); Maurice J. Elias et al., "Implementation, Sustainability, and Scaling Up of Social-Emotional and Academic Innovations in Public Schools," *School Psychology Review* 32 (2003): 303–319; Janet Patti et al., "Twenty-First-Century Professional Development for Educators: A Coaching Approach Grounded in Emotional Intelligence," *Coaching: An International Journal of Theory, Research and Practice* 8 (2015): 96–119; Janet Patti et al., "Developing Socially, Emotionally, and Cognitively Competent School Leaders and Learning Communities," in Durlak et al., *Handbook of Social and Emotional Learning*, 438–452; Greenberg et al., *Study of Implementation in School-Based Preventive Interventions*; and Linda Dusenbury, Roger P. Weissberg, and Duncan C. Meyers, "Skills for Life: How Principals Can Promote Social and Emotional Learning in Their Schools," *Principal* 96, no. 1 (September/October 2016): 8–11.
51. Clive Belfield et al., "The Economic Value of Social and Emotional Learning," *Journal of Benefit-Cost Analysis* 6 (2015): 508–544.
52. Giorgio Brunello and Martin Schlotter, "Non Cognitive Skills and Personality Traits: Labour Market Relevance and Their Development in Education & Training Systems," IZA Discussion Paper Series, no. 5742 (Bonn, Germany: Forschungsinstitut zur Zukunft der Arbeit, 2011).
53. Damon Jones, Mark T. Greenberg, and Max Crowley, "The Economic Case for SEL," in Durlak et al., *Handbook of Social and Emotional Learning*, 97–113.
54. Jones, Greenberg, and Crowley, "Economic Case for SEL."
55. Mark T. Greenberg, Deirdre A. Katz, and Laura Cousino Klein, "The Potential Effects of SEL on Biomarkers and Health Outcomes: A Promissory Note," in Durlak et al., *Handbook of Social and Emotional Learning*, 81–96; John C. Buckner, Enrico Mezzacappa, and William R. Beardslee, "Characteristics of Resilient Youths Living in Poverty: The Role of Self-Regulatory Processes," *Development and Psychopathology* 15 (2003): 139–162; and John C. Buckner, Enrico Mezzacappa, and William R. Beardslee, "Self-Regulation and Its Relations to Adaptive Functioning in Low Income Youths," *American Journal of Orthopsychiatry* 79 (2009): 19–30.
56. Moffitt et al., "Gradient"; and Angela L. Duckworth and Martin E. P. Seligman, "Self-Discipline Outdoes IQ in Predicting Academic Performance of Adolescents," *Psychological Science* 16 (2005): 939–944.
57. Center on the Developing Child, "Building the Brain's 'Air Traffic Control' System: How Early Experiences Shape the Development of Executive Function" (working paper, Center on the Developing Child, Harvard University, Cambridge, MA, February 2011); and Ross A. Thompson, "Stress and Child Development," *The Future of Children* 24, no. 1 (2014): 41–59.
58. Durlak et al., "Impact of Enhancing"; Taylor et al., "Promoting Positive Youth Development"; John Bridgeland, Mary Bruce, and Arya Hariharan, *The Missing Piece: A National Teacher Survey on How Social and Emotional Learning Can Empower Children and Transform Schools* (Chicago: Collaborative for Academic, Social, and Emotional Learning, 2013); and Jennifer L. DePaoli et al., *Building a Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic; Annual Update 2015* (Washington, DC: Civic Enterprises, 2015).
59. C. Cybele Raver, Clancy Blair, and Michael Willoughby, "Poverty as a Predictor of 4-Year-Olds' Executive Function: New Perspectives on Models of Differential Susceptibility," *Developmental Psychology* 49 (2013): 292–304; Gary W. Evans and Pilyoung Kim, "Childhood Poverty, Chronic Stress, Self-Regulation, and Coping," *Child Development Perspectives* 7 (2013): 43–48; and Kimberly G. Noble, M. Frank Norman, and Martha J. Farah, "Neurocognitive Correlates of Socioeconomic Status in Kindergarten Children," *Developmental Science* 8 (2005): 74–87.
60. J. Lawrence Aber, Joshua L. Brown, and Stephanie M. Jones, "Developmental Trajectories toward Violence in Middle Childhood: Course, Demographic Differences, and Responses to School-Based Intervention," *Developmental Psychology* 39 (2003): 324–348; and Cappella, Blair, and Aber, "Outcomes beyond Test Scores."