Evidence for Social and Emotional Learning in Schools

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LEARNING POLICY INSTITUTE

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Executive Summary

There is a consensus among educators, parents, and policymakers that education should focus on supporting essential capacities to help children navigate the world successfully. This broad notion of educating the "whole child" generally includes at least the abilities to (1) develop healthy personal relationships, (2) treat others with respect and dignity, (3) develop the cognitive capacity to solve problems and think creatively, (4) succeed in postsecondary education and the labor market, and (5) be a contributing citizen in a democracy. To nurture these capacities, schools should be healthy, caring spaces that create a climate of support for equitable pathways for children to reach these goals while also creating a challenging and dynamic learning environment. Social and emotional learning (SEL) is critical for the development of these capacities.

In 2017, the National Commission on Social, Emotional, and Academic Development convened a 28-member Council of Distinguished Scientists to examine the relevant evidence regarding SEL across a range of disciplines. The council concluded that social and emotional competencies are essential to learning; positive development; and success in school, careers, and life. Its report cited research over the past two decades that has demonstrated the impact of SEL on a variety of child outcomes, including children's well-being, behavior, and academic outcomes. High-quality SEL programming also has been found to have a positive impact on teachers and other staff and leads to improvements in school culture and climate.

More than half of U.S. states have now articulated learning standards (sometimes called "competencies" or "benchmarks") for SEL. The most influential framework, which was developed by the Collaborative for Academic, Social, and Emotional Learning (CASEL), is organized around five competence clusters that include thoughts, attitudes, and behaviors related to self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Over the past 20 years, many evidence-based approaches and strategies have been created to promote SEL in educational settings.

What is the evidence on the effectiveness of these efforts? This report reviews the findings from 12 independent meta-analyses covering hundreds of studies of school-based SEL programs, presents the evidence on the effects of social and emotional learning programs in PreK–12 schools, and considers the next steps for research in SEL.

The Evidence Base for Social and Emotional Learning

It is essential that SEL practice and policy be committed to utilizing evidence-based research and practices. Much of the current body of SEL research is summarized in 12 meta-analyses of SEL-based research outcomes, conducted by a variety of independent researchers around the world, including studies from six continents. Each meta-analysis empirically synthesized a set of high-quality studies, most of which used

methodologically rigorous randomized control trials and other controlled comparison group designs that meet the Tier 1 and 2 criteria for evidence-based interventions under the Every Student Succeeds Act (ESSA). These meta-analyses provide evidence of SEL program effectiveness for students in every grade level (PreK–12) and have shown medium to large effect sizes on the following outcomes:

- SEL programs, usually taught by classroom teachers, promote the development of social and emotional competencies.

- Fostering these competencies facilitates positive, prosocial behaviors and positive relationships with others.

- SEL programs reduce disruptive behavior problems and emotional distress.

- Fostering these competencies increases students' engagement in learning and subsequently improves students' cognitive and academic performance.

Two of these meta-analyses have examined longer-term effects and found sustained positive impacts. These findings hold across all grade levels, from PreK–12, and across gender, ethnicity and race, income, and other demographic variables.

Implementing SEL Effectively

Substantial research indicates that effective teacher and staff training and administrative support are essential for effective SEL implementation and sustainable system change. Unfortunately, it is common for schools to adopt SEL curricula without providing the essential initial training, ongoing coaching and mentoring, or technical support. Thus, one key aspect of successful SEL implementation is to improve instructional practices through the use of effective ongoing professional development. It is also important to support teachers' own social and emotional competence through training. There are now four meta-analyses showing the effectiveness of focusing on teachers' own SEL for both their own well-being and teaching quality and for improving outcomes for students.

A principal's active support for implementation of SEL programming is essential. Principals themselves must be knowledgeable about evidence-based SEL models and how to effectively provide support to teachers. However, like teachers, principals generally receive little or no training or mentoring in how to create a caring, supportive school environment in which SEL is infused throughout the school.

For these and other reasons, studying the adoption of SEL programs alone may provide an underestimate of their potential impacts. First, most teachers rarely receive the required training and support to effectively deliver SEL programs, which leads to an underestimation of the potential effects of SEL programs due to low-quality implementation. Second, research demonstrates that comprehensive SEL programs produce broader behavioral and academic improvements than those that are more narrowly targeted. Third, it has long been noted by scholars and practitioners that SEL programs will be more effective and sustained in school ecologies that adopt a broad

vision and series of policies and practices that support whole child development and that complement and reinforce SEL programs. Full implementation of SEL calls for a systemic approach that uses continuous improvement practices.

Considerations for Future SEL Research

Although there have been many high-quality studies of SEL programs, the provision of SEL curriculum in schools is still a developing field. While the current body of evidence is strong and promising, not all of the SEL programs currently available have developed a strong evidence base.

For the next generation of SEL research, these eight areas of research conceptualization, design, and analysis are recommended:

1. Studies of SEL programs should be designed, wherever possible, to meet Tier 1 or Tier 2 ESSA criteria for comparison group designs or statistical controls.

2. Universal SEL studies should seek large enough samples to detect critically important but low-rate events.

3. Studies of SEL programs should examine impacts on development over time.

4. Universal intervention trials should look beyond main effects to understand the effects for different groups of students, for example, by cultural content, race and ethnicity, sexual identity, and disability status.

5. Research needs to identify the best ways for programs to promote equity and cultural competence.

6. Studies that involve program developers should be replicated by independent researchers.

7. Researchers should utilize reliable and valid assessments that measure multiple outcomes that fully test the logic model of the intervention.

8. Researchers should consider additional benchmarks of impact—beyond the conventional effect size benchmarks—to more appropriately quantify and present the range of impacts for distinctive audiences.

Implementing and Sustaining SEL as a Public Health Approach

Research shows that training and continuing support for school personnel are crucial elements to achieving high-quality implementation of evidence-based SEL programs. Successful and sustainable SEL requires supportive infrastructures and processes, and practice-based research demonstrates that systemic efforts to promote SEL include the following core features:

- developing a shared vision that prioritizes fully integrating SEL with academic learning for all students;

- identifying and building on existing strengths and supports for SEL at all levels;

- establishing infrastructure and resources for professional development—both in the central office and at the school level—that can build SEL awareness, enhance adults' own social and emotional competence, and cultivate effective SEL instructional practices;

- establishing student learning standards for SEL that guide the scope and sequence of SEL programming;

- adopting and aligning evidence-based programs to develop social and emotional skills in classrooms and throughout the school;

- integrating SEL and the development of a supportive climate into all school goals, priorities, initiatives, programs, and strategies;

- creating effective strategies to communicate frequently with parents to establish partnerships to enhance children's social and emotional competence and positive behavior;

- coordinating with specialized mental health services to create aligned approaches for building children's skills and managing their behavior in different contexts; and

- establishing a learning community among school staff to encourage reflection and the use of data to improve SEL practice and student outcomes.

Finally, to improve SEL programs and make informed decisions about their effectiveness in a particular school context, leaders should continuously assess stakeholder perspectives, program implementation, children's outcomes, school and district resources, new state and federal policies, and scientific advances.

Introduction

There is overwhelming agreement from the perspective of educators, parents, and policymakers that children should receive a broad education that prepares them to be active, engaged citizens who make positive contributions to support their families and communities. Although there are various models of educational goals, there is a consensus that education should focus on supporting essential capacities to help children navigate the world successfully. This broad notion of educating the "whole child"[1] generally includes at least the abilities to (1) develop healthy personal relationships, (2) treat others with respect and dignity, (3) develop the cognitive capacity to solve problems and think creatively, (4) succeed in postsecondary education and the labor market, and (5) be a contributing citizen in a democracy.[2]

Helping children develop all of these capacities is a formidable task for educators and families and requires our nation to create healthy, caring relationships from birth onward, including in our schools.[3] To nurture these capacities, schools should be healthy, caring spaces that create a climate of support for equitable pathways for children to reach these goals while also creating a challenging and dynamic learning environment.

Social and emotional learning (SEL) is even more critical for the development of these above capacities because of the complex, diverse, and rapidly changing world we now live in. Over the past 20 years, numerous evidence-based approaches and strategies have been created to promote SEL in educational settings. The current report reviews the empirical data on the findings on PreK–12 school-based SEL and considers the next steps for this area of research.

The COVID-19 pandemic radically altered daily life for every child, family, and school in the United States. A number of national health care organizations declared a national state of emergency in children's mental health.[4] A Surgeon General's Advisory that highlighted the need to urgently address the youth mental health crisis is notable. As stated by Surgeon General Vivek Murthy:

> Mental health challenges in children, adolescents, and young adults are real and widespread. Even before the pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and thoughts of suicide—and rates have increased over the past decade. The future well-being of our country depends on how we support and invest in the next generation.[5]

The advisory recommended, among other things, to implement SEL in all schools. It is important to note that while SEL programs can build protective factors that decrease risk for later mental health challenges, as well as build new competencies and strengths, it is an essential Tier 1 intervention model (i.e., used in all classrooms with all children), meeting the evidence criteria of the Every Student Succeeds Act (ESSA), and not a mental health treatment model.

The pandemic once again demonstrated inequities that cut across U.S. society and contributed to broad disparities. Students from low-income families and those who are marginalized, or living in rural settings, suffered greater losses, trauma, and isolation than other students.[6] In addition, many families are experiencing trauma because of the rapidly increasing number of climate-related disasters and because of the fears that families and children are experiencing as a result of school mass shootings and the practice lockdowns now happening in most schools. Americans are living through tumultuous times in which youth, their families, and their teachers have been challenged to cope effectively. The pandemic and other events of the past two years have highlighted the important roles schools play in the lives of students and their families.
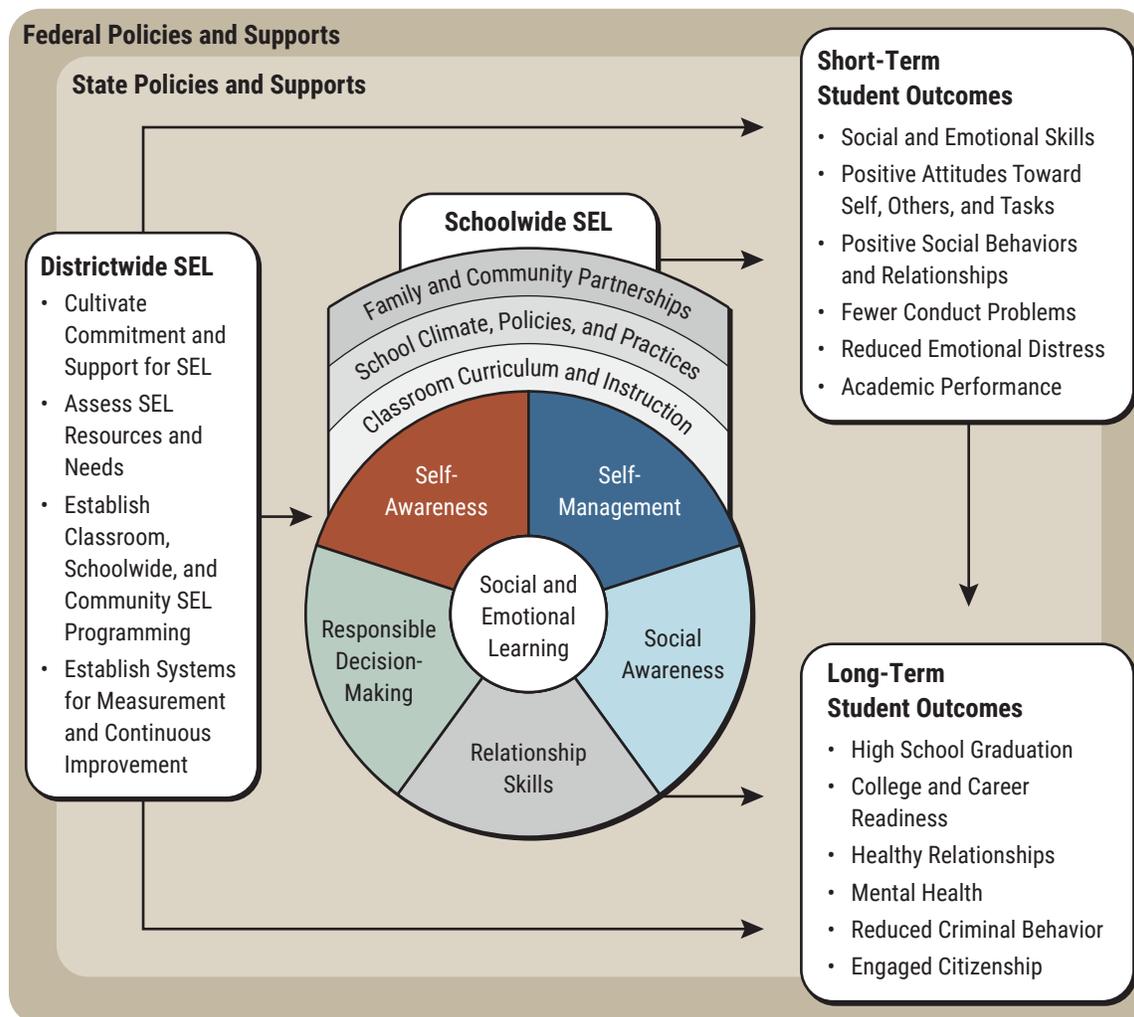
Definition of Social and Emotional Learning

We can foster social and emotional competencies through a variety of educational approaches that promote students' capacities to integrate thoughts, emotions, and behaviors to deal effectively with everyday personal and social challenges.[7] While many different frameworks of social and emotional competencies have been advanced, there is substantial overlap in competencies, including strengthening interpersonal and intrapersonal skills, as well as in cognitive and emotional competencies.[8] Social and emotional competencies are the intended outcomes of the social and emotional learning (SEL) opportunities that schools provide. Regardless of the specific framework, Jones and Doolittle note:

> At its core, SEL involves children's ability to learn about and manage their own emotions and interactions in ways that benefit themselves and others, and that help children and youth succeed in schooling, the workplace, relationships, and citizenship. To effectively manage emotions and social interactions requires a complex interplay of cognitive skills, such as attention and the ability to solve problems; beliefs about the self, such as perceptions of competence and autonomy; and social awareness, including empathy for others and the ability to resolve conflicts.[9]

The most influential SEL framework was developed by the Collaborative for Academic, Social, and Emotional Learning (CASEL).[10] More than half of U.S. states have now articulated learning standards (sometimes called "competencies" or "benchmarks") for SEL.[11] Of these, approximately two thirds of states with SEL standards base their SEL learning standards on the CASEL framework.[12] SEL learning standards in the remaining states tend to also be well aligned with the CASEL framework but have sometimes been adapted to make them state specific. The CASEL framework has also been adopted by other government agencies around the world. As the circle in the center of Figure 1 shows, the immediate outcomes of SEL proposed by CASEL are organized around five competence clusters that include a variety of thoughts, attitudes, and behaviors reflective of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

Figure 1
Conceptual Model for Advancing Social and Emotional Learning (SEL) in Education Settings

Federal Policies and Supports

State Policies and Supports

Districtwide SEL
- Cultivate Commitment and Support for SEL
- Assess SEL Resources and Needs
- Establish Classroom, Schoolwide, and Community SEL Programming
- Establish Systems for Measurement and Continuous Improvement

Schoolwide SEL

Family and Community Partnerships

School Climate, Policies, and Practices

Classroom Curriculum and Instruction

Self-Awareness

Self-Management

Responsible Decision-Making

Social and Emotional Learning

Social Awareness

Relationship Skills

Short-Term Student Outcomes
- Social and Emotional Skills
- Positive Attitudes Toward Self, Others, and Tasks
- Positive Social Behaviors and Relationships
- Fewer Conduct Problems
- Reduced Emotional Distress
- Academic Performance

Long-Term Student Outcomes
- High School Graduation
- College and Career Readiness
- Healthy Relationships
- Mental Health
- Reduced Criminal Behavior
- Engaged Citizenship

Source: Adapted from Greenberg, M. T., Domitrovich, C. E., Weissberg, R. P., & Durlak, J. A. (2017). Social and emotional learning as a public health approach to education. *Future of Children*, *27*(1), 13–32.

The five competence clusters include:

1. Competence in **self-awareness** is defined by understanding your own emotions, personal goals, and values and how they influence behavior across contexts. It includes accurately assessing your strengths and limitations, becoming aware of biases, possessing a well-grounded sense of self-agency and optimism, and using a growth mindset to develop personal and collective goals. High levels of self-awareness require the ability to recognize how your thoughts, feelings, values, and actions are connected to one another and one's personal and social identity.

2. Competence in **self-management** requires skills to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations. It includes the ability to delay gratification, manage stress, control impulses, and persevere through challenges to achieve personal and collective goals.

3. Competence in **social awareness** involves the abilities to understand the perspectives of others and to empathize with others, including those from diverse backgrounds, cultures, and contexts. This includes the capacities to feel compassion for others; understand broader historical and social norms for behavior in different settings; and recognize family, school, and community resources and supports.

4. **Relationship skills** involve the abilities to establish and maintain healthy and supportive relationships and to effectively navigate settings with diverse individuals and groups. This includes the capacities to communicate clearly, listen actively, cooperate, work collaboratively to solve problems, negotiate conflict constructively, navigate settings with differing social and cultural demands and opportunities, provide leadership, and seek or offer help when needed.

5. **Responsible decision-making** involves the ability to make caring and constructive choices about personal behavior and social interactions across diverse situations. This includes the capacities to consider ethical standards and safety concerns and to evaluate the benefits and consequences of various actions for personal, social, and collective well-being.

There are a number of key cognitive and attentional skills that underlie these social and emotional competencies, and these cognitive and social and emotional skills develop together as part of neural development.[13] The abilities to direct one's attention and to develop executive abilities (often referred to as executive functions) both support and are enhanced by the development of social and emotional competencies.[14] Executive abilities include the ability to focus, shift and maintain attention (especially under distracting conditions), set goals and plan effectively to complete tasks, monitor one's actions, and use problem-solving skills to manage academic and social frustrations and challenges.

In addition, classroom contexts that foster positive attitudes, including a growth mindset and sense of belonging, support students' sense of agency and promote curiosity and creativity. One SEL program has shown that part of the causal process through which students show decreases in disruptive behavior is through improving the executive functions of inhibitory control and working memory.[15]

Evidence for Programs That Support Social and Emotional Learning

In 2017, the National Commission on Social, Emotional, and Academic Development convened a 28-member Council of Distinguished Scientists to summarize the relevant evidence regarding social and emotional learning (SEL) across a range of disciplines. Altogether, the council found that the evidence conclusively showed that social and emotional competencies are essential to learning; positive development; and success in school, careers, and life.[16]

Research regarding the effects of SEL programs has grown dramatically over the past 2 decades, and this research has repeatedly demonstrated its impact on a variety of child outcomes.[17] There is now strong scientific evidence that certain carefully tested SEL programs improve children's well-being, behavior, and academic outcomes. These evidence-based SEL programs at all levels from preschool to high school have been shown to promote the development of social, emotional, and academic competencies.[18] The development of social and emotional skills, in turn, predicts improved academic engagement and performance, more positive social behaviors, and lower rates of behavior problems and psychological distress. Most educators now believe that developing social and emotional competencies is foundational for student success and should be a major goal of education.[19] This is not surprising, as theories of learning remind us that learning is a relational process.[20] Finally, effectively implementing high-quality SEL programming has a positive impact on teachers and other staff and leads to improvements in school culture and climate, thereby creating a more productive learning and work environment for all.[21]

> There is now strong scientific evidence that carefully tested SEL programs improve children's well-being, behavior, and academic outcomes.

Meta-Analyses of SEL Outcomes

Twelve independently conducted meta-analyses of SEL school-based research outcomes have been conducted in the United States, the United Kingdom, Europe, and Asia—thus demonstrating that interest in and development of SEL programming is occurring worldwide.[22] These meta-analyses have included studies involving children in many countries on six continents and have focused on all grades and developmental levels from PreK to 12th grade,[23] as well as focusing more specifically on early childhood programs,[24] secondary schools,[25] and whole-school models.[26] In addition, one meta-analysis focused exclusively on academic outcomes.[27]

Table 1 shows the overall results from these meta-analyses that use effect size[28] as a consistent measure of the effectiveness of programs. (See Appendix: References for Meta-Analyses.)

Table 1
Meta-Analyses of Social and Emotional Learning (SEL) Outcomes at Post-Test

Authors (by publication date)	Number of Studies	Education Level Studied	Effect Size of Outcomes Measured				
			SEL Skills	Positive Social Behaviors	Reduced Conduct Problems	Reduced Emotional Distress	Academic Performance
Durlak et al., 2011	213	K–12	0.57*	0.24*	0.22*	0.24*	0.27*
Sklad et al., 2012 [a]	75	K–12	0.23*	0.13*	0.20*	0.10*	0.26*
Wiglesworth et al., 2016 [b]	85	PreK–12	0.53*	0.33*	0.28*	0.19*	0.28*
Boncu et al., 2017	37	PreK–12	0.36*	0.20*		0.17*	
Yang et al., 2019	29	PreK (children from low-income families)		0.24*	0.15*		
Blewitt et al., 2018	63	PreK–K	0.30*	0.24*	0.19*		0.18*
Corcoran et al., 2018	40	PreK–12	0.30*	0.24*	0.19*		Reading 0.25* Math 0.26*
Goldberg et al., 2019	45	K–12 (whole-school approaches)		0.22*	0.13	0.10*	0.19
van de Sande et al., 2019	40	Secondary	0.24* to 0.58*	.	0.33*	0.31*	
Murano et al., 2020	48	PreK	0.34*		0.32*		
Mertens et al., 2020	104	Secondary		.	0.15*	0.19*	
Luo et al., 2022	33	PreK	0.42		0.31		

[a] 63% of studies assessed outcomes at post-test only (within 6 months of the end of intervention).

[b] 73% of studies assessed outcomes at post-test only (within 6 months of the end of the intervention).

Note: * is $p < 0.05$

Source: Learning Policy Institute. (2023).

Remarkably, these meta-analyses conducted by a variety of independent researchers have reached the same conclusions. These extensive reviews have shown the following:

- SEL programs, usually taught by classroom teachers, promote the development of social and emotional competencies (effect sizes range from 0.23 to 0.58).

- Fostering these competencies facilitates positive, prosocial behaviors and positive relationships with others (effect sizes range from 0.13 to 0.33).

- SEL programs reduce disruptive behavior problems and emotional distress (effect sizes range from 0.13 to 0.33 and 0.10 to 0.31, respectively).

- Fostering these competencies increases students' engagement in learning and subsequently improves students' cognitive and academic performance (effect sizes range from 0.18 to 0.28).

Based on the guidelines proposed by Kraft in his exhaustive review of 747 randomized clinical trials in education, these effect sizes would be classified as medium (0.05 to less than 0.20) to large (0.20 or larger) and thus of substantial benefit to children's affective, social, and academic development.[29]

Six meta-analyses have been conducted that examined programs at all grade levels (PreK–12). Four meta-analyses focused on preschool children. Two meta-analyses focused on secondary school students.

Meta-Analyses of Programs for All Grades

The first meta-analysis by Durlak and colleagues examined the findings from studies of 213 school-based, universal SEL programs published before 2008 and included outcomes data from over 270,000 K–12 students. This highly cited report found that compared to control students, those students participating in SEL programs showed significantly more positive outcomes, indicating improvements in social and emotional skills and attitudes, positive behavior, and academic performance, and significant decreases in conduct problems and emotional distress. Of particular note was the 11-percentage-point gain in achievement, which suggested that SEL programs improved students' academic success. The review also highlighted the role of careful program implementation in ensuring positive student outcomes.[30]

A second meta-analysis conducted in the Netherlands by Sklad and colleagues examined 75 studies conducted between 1995 and 2008 and excluded research conducted before 1995, which was contained in the initial meta-analysis led by Durlak. Although there is significant overlap in studies covered by the two analyses, almost half the studies in the Sklad report were not contained in the Durlak analysis. Twenty-one percent of the studies were conducted outside the United States. In contrast to the Durlak analysis, in which 57% of programs were conducted in elementary schools,

60% of the programs in the Sklad analysis involved secondary schools. As indicated in Table 1, findings were very similar to those of Durlak, and no differences in outcomes were found when comparing the United States with other countries.[31]

Wiglesworth and colleagues in the United Kingdom conducted a third meta-analysis across all grades that included 85 studies conducted between 1995 and 2013. It included new studies that were not in the previous reports and used a stricter definition of SEL. Its findings were remarkably similar to the two previous analyses (see Table 1). Moderation analysis indicated that higher implementation quality was related to more significant outcomes. Contrary to the hypothesis, there were no differences in outcomes when developers were involved in the study, indicating no evidence of developer bias affecting outcomes. Finally, studies that were conducted in the country in which the intervention was developed showed a somewhat higher impact, which may indicate the need for cultural modifications when programs are implemented in new contexts.[32]

Boncu and colleagues in Romania reported a meta-analysis involving only 37 studies conducted between 2008 and 2015, studies completed after the Durlak and Sklad analyses. While findings were similar to previous conclusions, stronger effects were found in early childhood and elementary school compared to secondary school.[33]

Corcoran and colleagues conducted a fifth, all-grade analysis primarily focused on studies conducted between 1978 and 2016 that examined the effects of SEL on academic outcomes. This analysis included 40 studies reporting on mathematics and reading performance. Overall, significant effects were found for both reading achievement (effect size of 0.25) and mathematics achievement (effect size of 0.26). There were no differences between studies based on the quality of the project design (randomized trial versus quasi-experimental design), the grade level of students, the date of publication, or between those with larger and smaller sample sizes.[34]

A sixth meta-analysis focused on whole-school approaches that involved a coordinated set of activities across curriculum teaching, school ethos and environment, and family and community partnerships. A total of 45 studies, and 30 interventions, from 1997 to 2017 were included. The effects were consistent with previous meta-analyses, with the exception that there were no significant academic effects (only eight studies assessed academic outcomes, leading the authors to attribute the lack of significance to low statistical power to detect effects). Stronger effects for whole-school models were found in studies in the United States. Almost half of the studies were rated as moderate or weak in quality, which signals the need for larger and more rigorous studies of whole-school approaches.[35]

All six of these comprehensive meta-analyses showed heterogeneity of effects (e.g., effects across various subgroups, including grade level and gender), indicating consistency of effects across studies as well as low rates of potential publication bias. However, there has been little exploration of effects by such characteristics as ethnicity or disability.[36]

Meta-Analyses in the Preschool Period

Four meta-analyses focused only on preschool and early childhood programs. Blewitt and colleagues in Australia examined the effects of 63 programs for children ages 2–6 that were published from 1995 to 2017. The findings showed significant effects on social and emotional skills, positive behaviors, conduct problems, and academic performance. However, 40% of the studies were rated as low in quality, and higher-quality studies showed lower effect sizes. Somewhat older children in this age range showed greater effects, which were attributed to the opportunities present as children develop their executive abilities (perspective taking, self-regulation, and attention).[37]

Murano and colleagues examined 48 studies of universal programs for preschoolers (mean age of 4) conducted through 2017. The findings indicated similar significant positive effects to other analyses, with significant impacts on social and emotional skills and conduct problems. There were no differences in outcomes by children's socioeconomic status or minority–majority status. Programs delivered by researchers and clinicians showed larger effects than those delivered by classroom teachers.[38]

A third meta-analysis by Luo and colleagues focused on preschool outcomes for children ages 3–5. The analysis utilized 33 studies conducted through 2018 and concluded that SEL programs showed consistent improvements in social and emotional competence and decreases in challenging behavior. Like Murano's findings, the effects were stronger when they involved family and school interventions, and the effects were weaker when provided by a classroom teacher. Stronger experimental research designs resulted in somewhat lower effect sizes.[39]

A final meta-analysis by Yang and colleagues focused on the impact of preschool SEL programs on children from low-income families. The analysis involved 29 studies conducted through 2018 (27 were conducted in the United States). The study compared SEL-focused curricula to broader early childhood curricula with no specific focus on SEL. Findings indicated significant effects on SEL outcomes for SEL-specific curricula but not for broader early childhood curricular models. Studies with higher implementation fidelity and those that lasted less than 1 year had stronger intervention effects.[40]

Meta-Analyses in Secondary Schools

Two meta-analyses (both conducted in the Netherlands) assessed program outcomes specific to students in middle and high schools. Van de Sande and colleagues conducted the first analysis to exclusively focus on secondary students and examined 40 recent studies conducted between 2014 and 2018, thus showing little overlap with earlier meta-analyses that included secondary schools. As secondary school programs often have a specific focus, programs were directed toward substance use prevention, depression prevention, and violence prevention as well as broader programs. Substantial effects were found for all five social and emotional competencies (effect sizes range from 0.24 to 0.58) and for depression, anxiety, substance use, and aggression (effect sizes range from 0.27 to 0.39).[41]

A second meta-analysis by Mertens and colleagues with secondary students focused on what components of SEL programs are most effective. The analysis involved 104 studies between 1979 and 2019, with over half conducted outside the United States. Interventions had significant effects on students' intrapersonal and interpersonal skill domains. Moderator analyses indicated that the most effective programs were those that were longer in duration and included insight building (self-awareness) and problem-solving, those that provided opportunities for students to practice skills during the sessions, and those that involved the entire school staff.

Meta-Analyses of Longer-Term Effects

Two meta-analyses have examined longer-term effects. An extension of the initial meta-analysis conducted by Durlak and colleagues examined long-term follow-up effects (6 months to 18 years) for 82 programs (38% were elementary programs). The analysis by Taylor and colleagues found sustained positive impacts (effect sizes ranging from 0.13 to 0.33 at follow-up) on a number of behavioral, academic, and mental health and life outcomes.[42] Similarly, in the Sklad and colleagues meta-analysis, programs with longer follow-up showed significant impacts, with no difference in outcomes from those who assessed only post-test outcomes.[43]

Summary

It is clear from the 12 meta-analyses that examined hundreds of studies that there is a consistent, reliable effect of tested, evidence-based SEL programs on students' social, emotional, behavioral, and academic outcomes across all grade levels from PreK to 12th grade and across gender, ethnicity and race, income, and other demographic variables. However, the field currently lacks a strong evidence base for many other SEL programs that are currently available.

Quality of Research Regarding the Effectiveness of Social and Emotional Learning Programs

Recently, social and emotional learning (SEL) has become somewhat controversial in the United States, as it has been targeted as part of the larger political divide.[44] While some conservative analysts championing education have positively reviewed the effectiveness of SEL,[45] there have also been claims that the evidence base for SEL is not strong,[46] and cautions across the political spectrum that SEL is at risk of becoming a fad as well as a target for educational marketing firms that do not rely on scientific evidence for their programs.

From the above review of the meta-analyses, as well as individual studies, it is clear that numerous SEL programs meet the Tier I or II criteria (strong evidence) under the Every Student Succeeds Act (ESSA), as they have been evaluated through studies using strong randomized or quasi-experimental designs that are sufficiently rigorous to suggest causal effects rather than merely correlational outcomes.[47] Tier III under ESSA also anticipates the use of methodological or statistical controls to allow for reasonable comparisons among groups. However, the criteria for Tier IV are vague and much weaker; thus, potential users of programs supported by Tier IV evidence should not consider those programs to be evidence-based programs, despite the language in the legislation.

A recent RAND Corporation synthesis of research on SEL programs in the United States provides a detailed accounting of the evidence base for specific programs using the ESSA Tier I–III criteria. The review focused on programs that were primarily examining social and emotional outcomes and excluded from review studies of "interventions with the primary purpose of promoting motivation or achievement in specific academic disciplines (e.g., reading, math)."[48] Even so, the authors did find evidence of positive effects on academic development as part of other studies. The authors summarized their findings as follows:

> We identified 60 SEL interventions that meet the first three tiers of evidence under ESSA (Tiers I–III) from evaluations that took place in U.S.-based, K–12 public schools. Across the entire body of evidence, educators have options of SEL interventions that have positive results on intrapersonal and interpersonal competencies, academic attainment and achievement, disciplinary outcomes, civic attitudes and behaviors, and school climate and safety.[49]

It is essential that SEL practice and policy be committed to utilizing evidence-based research and practices. Further, it is essential that schools and districts carefully choose SEL programs that have clear evidence that they will benefit the children in their particular school or district contexts. Finally, there is a clear need for districts and schools to adopt well-informed assessments of both implementation and child and school climate outcomes to make informed local decisions on how to refine or change programs.

Current Underestimation of the Effects of Social and Emotional Learning

Although the review of the meta-analyses indicates that social and emotional learning (SEL) programs can and often do build the foundational competencies young people need to help them thrive, there are a number of important caveats, as well as reasons why studying the adoption of SEL programs alone may provide an underestimate of their potential impact. First, research indicates that effective programs utilize four practices, represented by the acronym SAFE. Such programs are:

1. **Sequenced:** They involve a developmentally coordinated set of activities.

2. **Active:** Active learning helps students master new skills.

3. **Focused:** Programs intentionally develop personal and social skills.

4. **Explicit:** The specific skills taught are clearly identified, taught, and practiced.[50]

To effectively deliver programs that have these four components, teachers usually require substantial training and support, which are rarely part of preservice preparation and are unevenly provided in in-service contexts.[51] This leads to an underestimation of the potential effects of SEL programs in settings in which the intervention was not well implemented.

Second, research demonstrates that comprehensive SEL programs—those that broadly focus on all five social-behavioral, emotional, and cognitive self-regulatory competencies that influence knowledge, skills, and attitudes (components of the CASEL 5 model)—produce broader behavioral and academic improvements than those that are more narrowly targeted.[52] This is likely because these components are interdependent outcomes (e.g., accurately identifying emotions, regulating one's emotions and behaviors to see others' perspectives, being able to resolve conflict when there are different perspectives, etc.) and are all necessary to achieve student outcomes. Further, comprehensive models, such as the RULER Approach, Second Step, the PATHS Program, Lions Quest, and Positive Action, present a scope and sequence for learning and a logic model that incorporates developmental theory and balances interpersonal and intrapersonal competencies.[53]

Third, it has long been noted by scholars and practitioners that SEL programs will be more effective and sustained in school ecologies that adopt a broad vision and series of policies and practices that support whole child development and that complement and reinforce SEL programs.[54] For the past 25 years, researchers and practitioners have advocated for the integration of SEL programming with broader eco-behavioral changes in other aspects of school policies and practices, including integration into academics, creating a welcoming school culture for adults and children, aligning discipline policies to support SEL principles, etc.[55]

For example, school discipline policies, and the practices that support them, are important structures within educational systems that are designed to manage student behavior.[56] These structures can either undermine SEL when they are punitive in nature or create opportunities for SEL and positive teacher–student relationships when they provide opportunities for students to gain social and self-awareness, apply problem-solving skills to real-life conflicts, and negotiate interpersonal conflicts, which are common elements in a restorative approach to discipline.[57]

To create caring, safe, equitable, and challenging schools, full implementation of SEL calls for a systemic approach, with attention to social and emotional development integrated into every part of students' learning experience—during all parts of the school day, in out-of-school time, and in partnership with families and communities.

Often, schools and districts begin with relatively small initiatives, such as implementation of an evidence-based SEL program. Early success enables expansion into other areas as administrators and staff learn lessons, feel comfortable with a focus on SEL, and begin to see how it can be beneficial if broadened. Over time, the focus on SEL often grows to consider other aspects of systemic SEL, such as school climate, disciplinary strategies, adult SEL, authentic connections to parents, etc. As with all school transformation processes, this process of adopting a systemic approach occurs in phases over multiple years.

Mahoney and colleagues recently presented a broad framework that includes four actions that can be accomplished at national, state, district, and local school levels.[58] As noted on the left side of Figure 1, the process in each setting begins with four coordinated sets of practices to establish evidence-based systemic SEL for children and adults: (1) build foundational support and a plan by establishing SEL teams, engaging stakeholders broadly, fostering awareness, and developing a shared vision; (2) strengthen adult social and emotional competencies and capacity by cultivating a community of adults who engage in their own SEL, build trusting relationships, and collaborate to promote and consistently model SEL throughout the school; (3) promote SEL for students by developing a coordinated approach across the school, classrooms, homes, and communities; and (4) practice continuous improvement by establishing an ongoing process to collect and use implementation and outcome data to inform decisions and drive improvements. These sets of practices are broad enough to be carried out at different levels and are specific enough to encourage consistency among programs while still allowing local school, family, and community partners to adapt their SEL programs to fit their particular needs.

The circles surrounding the social and emotional competencies in Figure 1 graphically illustrate a systematic approach that incorporates classroom curriculum; schoolwide policies and practices; and student, family, and community involvement, and the approach is carried out most effectively in the context of a carefully planned, multilayered system.[59] A systematic approach uses continuous improvement practices. The practices include planning; ongoing goal setting and assessment of outcomes that actively involve students and faculty; and creating equitable learning opportunities across school, family, and community partnerships.

Further, SEL programs provide a universal level of support for all children but also need to be integrated into a multi-tiered system of support for those children who have additional learning and behavioral challenges. In this way, SEL can be an important component of a comprehensive public health model.[60] By integrating social, emotional, and academic development, SEL should nurture a school climate and culture that are inclusive of and responsive to the diversity of interests, aptitudes, perspectives, races, and cultures represented in the classroom.

There are also reasons why it is possible that current research may overestimate the impact of SEL on student outcomes. Most studies (and meta-analyses) are based on the effects of programs with relatively high rates of implementation. This may lead to an overestimate of the effects that schools might obtain in the event that teacher training and implementation quality are relatively low. This may be one reason why program effects obtained from randomized clinical trials show somewhat larger effects than studies of scale-up under typical circumstances. This issue is directly related to those elaborated in Figure 1 and throughout this section, which emphasizes the need for a supportive context in which to implement programs and policies. In addition, biases in measurement may also contribute to the overestimation of effects. (See the following section, Considerations for Future Social and Emotional Learning Research, regarding biases that may occur when using teacher ratings under certain conditions.)

Considerations for Future Social and Emotional Learning Research

Although there have been many studies of social and emotional learning (SEL) programs, this research area is still a developing field, and substantial improvements can be made. While systematic reviews and meta-analyses have strongly upheld support-specific strategies and the SEL movement in general, there is a need to conduct new research that includes a variety of improvements to continue to further our knowledge of what works, how it works, for whom it works, and when it works. Further, a key goal of research is to ascertain what programs, policies, and practices do not work. It is clear from current research that some SEL programs are not effective and that some programs may be effective in some contexts and not others. Further, even programs proven "effective" under more formal research studies may be less effective or ineffective under other conditions. For example, if a program was tested and effective under conditions that provided high-quality face-to-face training, but it is then implemented with untested online training, that same program may be ineffective. Indeed, the added stress, burdens, and inequities inherent in the past 2 years of the COVID-19 pandemic have led many SEL program developers to switch to brief online trainings for which little evidence of efficacy exists. As such, an important issue is to examine the efficacy of shorter and online trainings to assess their effectiveness.

There are eight areas of research conceptualization, design, and analysis needed for the next generation of SEL research:

1. **Studies of SEL programs should be designed, wherever possible, to meet Tier I or Tier II ESSA criteria for comparison group designs or statistical controls.** This includes a carefully developed design (randomized control or other approved design), clear specification of the program components, a developed logic model that drives the assessment model of the study, and assessments that are well validated and adequate to test the logic model of the program. In addition, studies should clearly report on factors that affect the implementation of the program, including the nature and quality of the training, and the quality of implementation, including fidelity to the program model, dosage, timing, and participant responsiveness—all factors that have been shown to influence outcomes. In addition, research should assess varying contextual factors, such as the attitudes and behavior of school leaders and teachers, which may influence the quality of implementation.

2. **Universal SEL studies should seek large enough samples to detect critically important effects.** Large sample sizes are needed to adequately assess the impacts on low-rate events in education, such as referral to special education, expulsion, and significant problems in learning and behavior. In addition, large sample sizes are needed to examine moderated effects in which impacts are stronger or statistically significant only within certain strata (portions) of the population. Many universal intervention evaluations are underpowered to detect

significant impacts on low-rate critical events or significant subgroups, which is problematic because those interventions may be having important effects even though they do not impact all children.[61] For example, a particular intervention may show no effects on children who have no behavior problems at baseline, children who are already performing above grade level, or children from a certain ethnic or cultural background. Thus, the overall effect size for an intervention may be misleading and will underestimate the effects of programs that show no main effects but that have a significant impact on an important stratum of population. When possible, though, hypotheses regarding low-rate event and subgroup impacts should be specified a priori, and universal intervention evaluations should be powered to detect these important effects.

A number of researchers have recently raised questions about potential differential effects on subgroups of children, including children classified by racial or ethnic status, sex, special education status, etc.[62] While this criticism regarding differential effects by subgroups is valid (see point 5), most existing studies are woefully underpowered to detect such subgroup effects, if they exist.

3. **Studies of SEL programs should examine impacts on development over time.** There are three critical reasons to examine longitudinal impacts over time. As previously indicated (and in most data from the reviewed meta-analyses), much of the data on the effectiveness of SEL has focused on short-term outcomes; usually, the impact on students is assessed at post-test or within a few months after the intervention. For most SEL programs, there is little long-term data to indicate whether the program's effects have a lasting influence on children's outcomes, but longer-term studies have shown encouraging positive effects.[63] While such data is not required by the What Works Clearinghouse or CASEL's Program Guide, it is required by Blueprints for Youth Development and other clearinghouses. This problem is compounded in numerous reports on the elementary grades because teachers who implement the curriculum are usually the only raters of children's outcomes, and they may have a clear bias to show impact given their status as implementers.

A second reason for longitudinal data is that although certain program effects may be evident immediately following a universal intervention (e.g., an SEL intervention may improve emotional understanding and social competence at post-test), clearly some prevention effects often emerge only after some delay. For example, the effects of SEL programs on school failure or later substance use may not be significant in a post-test at the end of elementary school because the base rates of these problems in both the intervention and control groups are too small to detect changes until these problems increase in middle and high school.[64] Even in SEL programs used in elementary schools, results showing changes in aggression and disruption are often not seen at immediate post-test but instead begin to emerge at 1- or 2-year follow-ups.[65] Ultimately, long-term follow-up is required to detect these important effects.

Thus, when designing evaluations of universal interventions, it is essential that participants' outcomes be assessed over a sufficient period of time during which a preventive effect might occur, particularly when a relatively small percentage of children in a classroom or school are at risk for a poor outcome.[66] That is, a complete evaluation of a universal intervention requires that data be collected over extended periods of time to track the longitudinal effects at different stages of development and to allow time for the control population to begin to show problematic outcomes that are the focus of prevention. For example, if studies of polio immunization had utilized only a 6-month follow-up, it is unlikely that they would have concluded that polio immunization was effective. Rather, to document the effectiveness of a vaccine, one would need to follow the control (nonimmunized) population long enough for a substantial number of cases to manifest. In addition, population-level changes may take time to consolidate, and small but key changes may snowball over time and thus provide protection from later diminished outcomes. For example, long-term follow-up of the universal Seattle Social Development Project indicated that population impacts on sexually transmitted infections by age 30 were mediated by shared school and family risk and by protective factors in grades 1–6.[67] For these reasons, when post-test-only studies conclude that there are no impacts, such results are at best inconclusive.

A third reason for careful longitudinal studies is the need for the study of benefit–cost and other economic analyses of SEL programs. Although a number of economic analyses have been conducted and have found quite positive economic benefits,[68] there has rarely been careful analysis of the short- and long-term effects of SEL programs on later development outcomes in adolescence or adulthood, with two possible exceptions.[69]

4. **Universal intervention trials should look beyond main effects to understand the effects for different groups of students, for example, by cultural content, race and ethnicity, sexual identity, and disability status.** It is worth noting that SEL interventions may have a substantial impact on the riskiest strata of a population.[70] The fields of education and prevention science are replete with such findings.[71] The long-term effect of the Good Behavior Game (an SEL intervention that was implemented in grades 1 and 2) was found on early adult substance abuse only for highly aggressive males.[72] Similarly, Low and colleagues found that an SEL curriculum in the elementary years primarily improved outcomes for students who began with skill deficits.[73] Person-oriented approaches, such as latent class analyses or growth mixture models, capitalize on variation within the population,[74] and numerous other statistical models have been developed recently that can be used when there are numerous possible moderators, which may lead to important subgroup effects. Of particular interest are subgroup analyses by cultural content, race and ethnicity, sexual identity, and disability status.

5. **Research needs to identify the best ways for programs to promote equity and cultural competence.** Although evidence-based programs have been shown to be effective across many populations of children, there is a need to do further research on factors that can increase equitable outcomes and inclusively instruct skills for all children. This includes research that examines whether SEL programs that promote equitable and culturally affirming practices are more effective on social and academic outcomes for minoritized populations. This may be especially important in programs for middle and high school students, for whom the issues of belonging, identity, and empowerment are factors that may affect their motivation and learning.[75] In this regard, there is substantial interest in the concept of Transformative SEL. Transformative SEL "is a process whereby young people and adults build strong, respectful, and lasting 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."[76] At present, there have been few SEL programs that would be considered "transformative," but one that would qualify and has shown effective outcomes is Facing History and Ourselves.[77] There is a need for greater examination of potentially differential outcomes among subgroups when programs are culturally adapted for specific contexts and cultures.[78]

> Although evidence-based programs have been shown to be effective across many populations of children, there is a need to do further research on factors that can increase equitable outcomes and inclusively instruct skills for all children.

6. **Studies that involve program developers should be replicated by independent researchers.** The fields of medicine, psychology, and education are replete with studies that may have both conscious and unconscious biases when they are conducted by program developers. Such studies should be considered only promising at best and only when peer reviewed and published in a scientific journal. This lack of independent research is largely due to a lack of funding support for research on promising practices and the fact that the program developers' efforts are often an initial step in the direction of establishing some validity within the means available to their organizations. Given the increased importance of evidence-based SEL programs for school districts (e.g., due to funding guidelines), many program developers are compelled to have some evidence but may not have the skills and background to conduct rigorous research. Nevertheless, numerous scientific groups have noted the inflated reports when studies are not independent from program developers and have called for independent replication due to the clear conflicts of interest, both financial and reputational, that may be at stake.[79] As a result, the Department of Education's Education Innovation and Research (EIR) program requires

independent research that separates program developers from the research process, and some clearinghouses (e.g., Blueprints for Youth Development[80]) require independent replication for program review.

7. **Researchers should utilize reliable and valid assessments that measure multiple outcomes that fully test the logic model of the intervention.** There have been some significant advances in SEL assessment.[81] However, research continues to suffer from a lack of high-quality outcome measures and, in particular, from the relative lack of direct assessments of social and emotional competencies. Most studies rely on learner self-reports or teacher reports, both of which can at times be subject to biases and other threats to validity. Advances in technology and psychometrics provide an opportunity for more innovative and accurate measures, but a concerted research and development effort is needed to advance these ideas. Improved assessment not only can improve confidence in the quality of research studies but can also support the continuous improvement efforts recommended earlier in this report. There is also a need to standardize measures across studies so that they can be adequately compared.

8. **Researchers should consider additional benchmarks of impact.** Researchers should expand their reports of outcomes beyond the "conventional" effect size benchmarks to more appropriately quantify and present the impacts produced by universal interventions to scientific, policy, and public audiences.[82] Standardized mean effect size may be the most appropriate metric for some programs used in certain populations and not for others.

Implementing and Sustaining Social and Emotional Learning as a Public Health Approach

If the goal is to have universal social and emotional learning (SEL) programs become part of a broad educational public health approach, it is essential to conduct research that demonstrates the likelihood of achieving high-quality implementation of evidence-based SEL programs. One crucial element, research shows, is training and continuing support for school personnel.[83]

While many educational leaders and teachers jump at the chance to offer SEL programming to their students, they would benefit from improved policies and support from administrators and policymakers to do so effectively.[84] Successful and sustainable SEL requires supportive infrastructures and processes. Administrators can enhance the work of individual teachers and staff by championing a vision, policies, professional learning communities, and supports for coordinated classroom, schoolwide, family, and community programming.[85]

> While many educational leaders and teachers jump at the chance to offer SEL programming to their students, they would benefit from improved policies and support from administrators and policymakers to do so effectively.

Practice-based research (which provides strong evidence from practitioners but often does not include experimental evidence) demonstrates that systematic efforts to promote SEL include the following core features:

- developing a shared vision that prioritizes fully integrating SEL with academic learning for all students;

- identifying and building on existing strengths and supports for SEL at all levels;

- establishing infrastructure and resources for professional development—both in the central office and at the school level—that can build SEL awareness, enhance adults' own social and emotional competence, and cultivate effective SEL instructional practices;

- establishing student learning standards for SEL that guide the scope and sequence of SEL programming;

- adopting and aligning evidence-based programs to develop social and emotional skills in classrooms and throughout the school;

- integrating SEL and the development of a supportive climate into all school goals, priorities, initiatives, programs, and strategies;

- creating effective strategies to communicate frequently with parents to establish partnerships to enhance children's social and emotional competence and positive behavior;

- coordinating with specialized mental health services to create aligned approaches for building children's skills and managing their behavior in different contexts; and

- establishing a learning community among school staff to encourage reflection and the use of data to improve SEL practice and student outcomes.

Finally, to improve SEL programs and make informed decisions about their effectiveness in a particular school context, leaders should continuously assess stakeholder perspectives, program implementation, children's outcomes, school and district resources, new state and federal policies, and scientific advances.

Role of Social and Emotional Learning in Creating Equitable Outcomes for All Children

Given the barriers, adversity, and challenges that many children and communities face due to impoverished conditions and historical and current discrimination and oppression, equity in research and practice is essential so that all students experience quality social and emotional learning (SEL). As the review of meta-analyses reveals, SEL benefits all young people. However, there are barriers that may prevent students of color, students with special needs, and other marginalized youth from accessing and benefiting from SEL programs and policies.[86] For all students to benefit, SEL must be grounded in a larger context of equity and justice efforts within public education. Factors such as poverty, exclusionary discipline practices, misinformation about the effects of trauma on students, implicit biases, and educator burnout may all impact access to quality SEL programming.[87]

A *universal* approach to SEL means that all students and adults in the school setting are engaged in a coordinated learning process. Such an approach allows SEL to be integrated with the life of the classroom, as well as other curricula, and is cost-effective.[88] However, a universal approach does not require a one-size-fits-all perspective to SEL. Adopting a *targeted universalism* approach recognizes that different supports may be needed for different students to reach the same desired outcomes.[89] The classroom context and regular contact with parents can provide teachers with specific knowledge about their students and allow SEL instruction to be personalized and culturally responsive. For students who need further support, it is essential that universal and targeted approaches are compatible and integrated to support the unique needs of individual students.[90]

Further, SEL can provide the opportunity to recognize and affirm the linguistic, cultural, and ethnic diversity in students' daily lives and support cultural understandings to promote their positive cultural identities. Promising initiatives in the pursuit of equity include those that focus on racial and socioeconomic integration, utilizing restorative justice practices for school discipline; introducing trauma-informed practices to create supportive school environments; improving the cultural competency and equity literacy of educators; and providing SEL and mindfulness programming to teachers to cope with stress, develop their own SEL skills, and create healthy, caring schools.

Furthermore, it is essential to recognize that SEL, like other areas of academic concern, is not value-free and reflects the goals of living in a diverse, democratic society.[91] As a result, equitable and inclusive values, attitudes, and beliefs are encouraged in SEL programs and daily interactions, including caring, compassion, respect, optimism, good manners, conscientiousness, citizenship, responsibility, fairness, and honesty. These values provide a reason for why we utilize social and emotional competencies to support the well-being of everyone in a diverse society.[92]

Role of Adult Social and Emotional Learning in Creating and Sustaining Change

Substantial research indicates that effective teacher and staff training and administrative support are essential for effective social and emotional learning (SEL) implementation and sustainable system change. Research has shown that teachers and other adults working with children in school contexts often receive little preservice training in ways to enhance and assess children's social and emotional development.[93] Yet teachers report that SEL is a key part of their responsibilities in improving children's academic outcomes, and this has only been reinforced by the pandemic's effects on children's mental health.[94] Unfortunately, it is common for schools to adopt SEL curricula without providing the essential initial training, ongoing coaching and mentoring, or technical support to ensure effective implementation. This is an immediate concern given the lack of evidence to show that brief online training can be effective in supporting teachers to implement quality SEL programs.[95] There is strong evidence that without reasonable quality of implementation, SEL programs will not improve children's well-being or academic success.[96] Therefore, one key aspect of adult SEL is to improve instructional practices through the use of effective ongoing professional development.

Thus, the critical role of teachers and administrators in this process has now come to the full attention of policymakers. And given the numerous reports of the pandemic's negative effects on stress, burnout, and mental health considerations for educators, the importance of adult SEL is prominent. A startling new Education Week poll finding shows that the percentage of American teachers who are very satisfied with their jobs dropped from 62% in 2010 to just 12% in April 2022.[97] Further, teachers report that the high level of stress is the primary reason why teachers left the profession during the COVID-19 pandemic and why they continue to leave now.[98] Not only does teacher stress have negative consequences for teachers, but it also results in lower achievement for students and higher costs for schools.[99] Thus, a second aspect of the broad term "adult SEL" is supporting teachers' own social and emotional competence through training that includes emotional awareness, stress management, and mindfulness, which has shown great promise in reducing teacher stress and improving classroom instruction.[100] There are now four meta-analyses showing the effectiveness of focusing on teachers' own SEL for both their own well-being and their quality of teaching and for improving outcomes for students.[101]

At the building level, a principal's active support for implementation of SEL programming is essential for success and sustained use.[102] Effective principals provide support in a variety of ways, including communicating a shared vision for SEL, allocating resources as needed, modeling the skills and attitudes with students and staff, observing classroom curricula, communicating common goals, supporting collaboration and participation by families and out-of-school providers, supporting teachers' own social and emotional competence, and creating a sense of community and a caring and positive school climate.[103] To do all of this, principals themselves

must be knowledgeable about evidence-based SEL models and how to effectively provide the skills needed. However, like teachers, principals generally receive little or no training or mentoring in how to create a caring, supportive school environment in which SEL is infused throughout the school.

Conclusion

Research indicates that high-quality, evidence-based social and emotional learning (SEL) programs, delivered through PreK–12 schools to all children, are a low-cost educational intervention that can create substantial returns on investment and that meet research criteria for demonstrating causal impacts. As with all areas of educational research, research on SEL programs will benefit from further developments that advance our knowledge of what works, how it works, for whom it works, and when it works. As SEL programming continues to "go to scale" across schools and districts, it will be essential to develop thoughtfully designed research–practice partnerships to understand what factors are key to effective implementation and positive outcomes for students. The current evidence supports school and district adoption of evidence-based SEL programs and activities to improve students' social, emotional, and academic success. Given the substantial interest at all levels of education, it is time to boldly scale SEL efforts to improve the educational and personal outcomes of current and future generations of students.

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