Social and Emotional Learning as a Public Health Approach to Education

Mark T. Greenberg, Celene E. Comitrovich, Roger P. Weissberg, and Joseph A. Durlak

Summary

Evidence-based social and emotional learning (SEL) programs, when implemented effectively, lead to measurable and potentially long-lasting improvements in many areas of children's lives. In the short term, SEL programs can enhance children's confidence in themselves; increase their engagement in school, along with their test scores and grades; and reduce conduct problems while promoting desirable behaviors. In the long term, children with greater social-emotional competence are more likely to be ready for college, succeed in their careers, have positive relationships and better mental health, and become engaged citizens.

Those benefits make SEL programs an ideal foundation for a public health approach to education—that is, an approach that seeks to improve the general population's wellbeing. In this article, Mark Greenberg, Celene Domitrovich, Roger Weissberg, and Joseph Durlak argue that SEL can support a public health approach to education for three reasons. First, schools are ideal sites for interventions with children. Second, school-based SEL programs can improve students' competence, enhance their academic achievement, and make them less likely to experience future behavioral and emotional problems. Third, evidence-based SEL interventions in all schools—that is, *universal interventions*—could substantially affect public health.

The authors begin by defining social and emotional learning and summarizing research that shows why SEL is important for positive outcomes, both while students are in school and as they grow into adults. Then they describe what a public health approach to education would involve. In doing so, they present the *prevention paradox*— "a large number of people exposed to a small risk may generate many more cases [of an undesirable outcome] than a small number exposed to a high risk"—to explain why universal approaches that target an entire population are essential. Finally, they outline an effective, school-based public health approach to SEL that would maximize positive outcomes for our nation's children.

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The ultimate goal of public health is to improve the general population's wellbeing. That means not only preventing diseases, disorders, injuries, and problem behaviors, but also nurturing positive outcomes that improve quality of life. To achieve this goal, public health researchers and practitioners begin by documenting the epidemiology of the problems they target, tracking the rates at which a problem occurs and who is most affected. They also study the risk and protective factors associated with a problem—that is, factors that increase or decrease the likelihood that the problem will develop among certain groups. Once they identify the most important factors, they work to develop effective interventions targeting risk factors that can be changed and to disseminate those interventions widely. Interventions often work directly with individuals to alter their behaviors and the contexts they live in, and, at the same time, strive to change norms and policies more broadly.

Social and emotional learning (SEL) can support a public health approach to education, for three reasons. First, schools are ideal sites for interventions with children: most children attend school for many years and spend a substantial amount of time there each day. Second, school-based SEL programs can improve students' competence, enhance their academic achievement, and make them less likely to experience future behavioral and emotional problems. Third, evidence-based SEL interventions in all schools—that is, *universal* interventions—could substantially affect public health.

This article defines social and emotional learning and summarizes research to explain why promoting personal and social competencies is important for positive outcomes, both while students are in school and afterward, when they become adults. We describe what a public health approach to education involves, and we define the levels at which interventions are conducted within such an approach. In doing so, we present what's known as the "prevention paradox" and explain why universal approaches that target an entire population are essential for long-term public health impact. Finally, we discuss how to implement an effective, school-based public health approach to SEL in order to maximize positive outcomes for our nation's children.

A Definition of Social and Emotional Learning

We can foster SEL through a variety of educational approaches that promote students' capacity to integrate thinking, emotion, and behavior to deal effectively with everyday personal and social challenges.[1] SEL programs in schools aim to teach students specific SEL skills and also to create a classroom and school culture that enhances SEL skills. Both approaches typically involve training school staff to interact with students in new ways to promote students' competence.

As the circle in the center of figure 1 shows, the immediate outcomes of SEL proposed by the Collaborative for Academic, Social, and Emotional Learning (CASEL) are organized around five competence clusters that include a variety of thoughts, attitudes, and behaviors: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.[2]

- Competence in *self-awareness* means understanding your own

emotions, values, and personal goals. It includes accurately assessing your strengths and limitations, possessing a well-grounded sense of self-efficacy and optimism, and having a growth mindset that you can learn through hard work. A high level of self-awareness requires the ability to recognize how your thoughts, feelings, and actions are connected to one another.

- Competence in *self-management* requires skills and attitudes that help regulate emotions and behaviors. They include the ability to delay gratification, manage stress, control impulses, and persevere through challenges to achieve personal and educational goals.

- Competence in *social awareness* involves the ability to take the perspective of people with different backgrounds or from different cultures and to empathize and act with compassion toward others. It also involves understanding social norms for behavior and recognizing family, school, and community resources.

- *Relationship skills* give children the tools they need to establish and maintain healthy and rewarding relationships and to act in accordance with social norms. Competence in these skills involves communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking help when needed.

- *Responsible decision-making* requires the knowledge, skills, and attitudes to make constructive choices about personal behavior and social interactions, whatever the setting. Competence in this area requires the ability to consider ethical standards, safety, and the norms for risky behavior; to realistically evaluate the consequences of various actions; and to take the health and wellbeing of yourself and others into consideration.

The far right side of figure 1 shows positive short- and long-term developmental outcomes that are fostered by competence across the five clusters. The thoughts, skills, and attitudes in each domain help students understand and manage emotions, set and achieve positive goals, feel and show caring and concern for others, develop a positive and realistic perception about their own competencies, establish and maintain positive relationships, and make responsible decisions.[3] In the short term, social-emotional competence can lead to enhanced self-efficacy and confidence; greater attachment, commitment, and engagement in school; more empathy and prosocial behaviors; fewer conduct problems; less risk-taking and emotional distress; and improved test scores and grades.[4] Follow-up studies of SEL interventions in elementary school have found that in the long term, greater social-emotional competence makes it more likely that people will be ready for college, succeed in their careers, have positive family and work relationships and better mental health, and become engaged citizens.[5]

The Need for Social and Emotional Learning in Education

What is the purpose of education? Put another way, what do children need from

their education that will prepare them to deal with the inevitable challenges of everyday life and attain later success? Academic achievement receives much attention, but the public school system in this country wasn't initially developed just to teach academic skills. The nation's founders believed that schools should create a competent citizenry made up of independent and critical thinkers who could work effectively with others and contribute to democratic society.

To become the kind of citizens the founders wanted public education to create, children need skills that will help them develop personal plans and goals, learn to cooperate with others, and deal with everyday challenges, setbacks, and disappointments.

To become the kind of citizens the founders wanted public education to create, children need more than the ability to read, write, and do arithmetic. They also need skills that will help them develop personal plans and goals, learn to cooperate with others, and deal with everyday challenges, setbacks, and disappointments. As we'll argue later in this article, SEL interventions give children opportunities to learn the life skills they need for successful development. But our point here is that education should be seen as an opportunity for students to develop a range of cognitive, personal, and social competencies. Schools should help young people improve their general wellbeing, not just their academic skills.

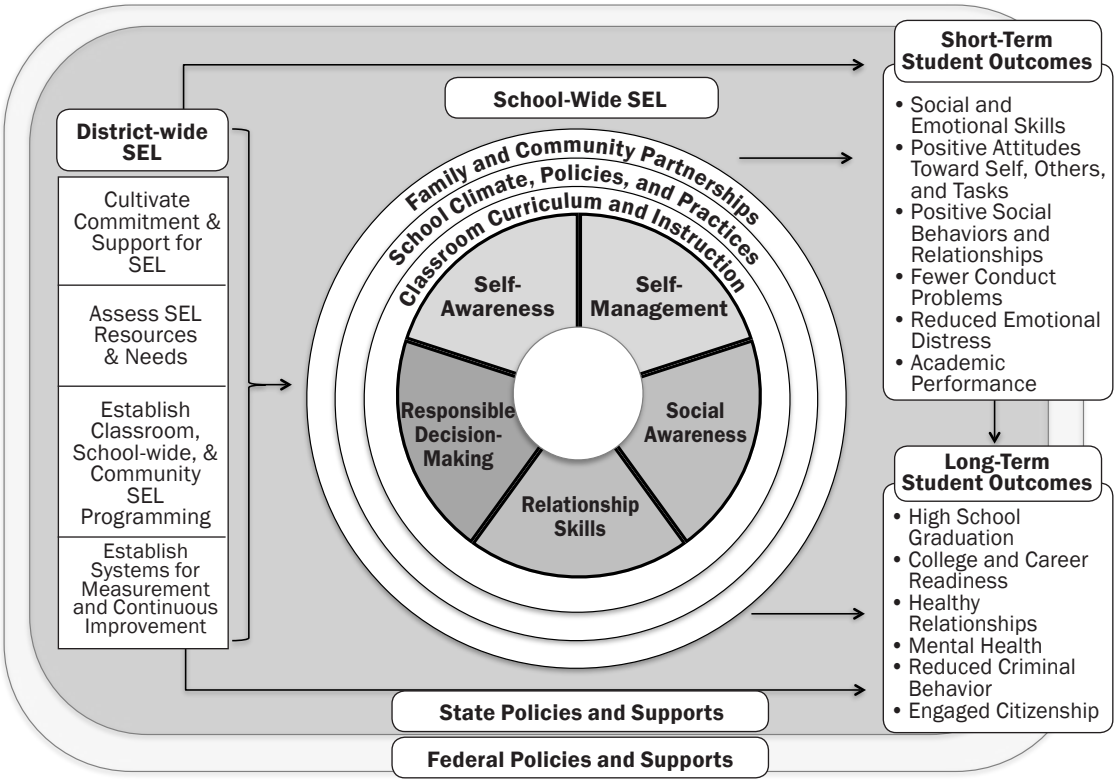
Americans broadly agree that today's schools must offer more than academic instruction to prepare students for college, career, and community success.[6] Children's life conditions have changed dramatically in the last century.[7] Many families face greater social and economic pressures. Schools and communities are increasingly multicultural and multilingual. Children are exposed to a more complex world through the media and have unmediated access to information and social contacts through various technologies. These societal changes—as well as the shift from a manufacturing to an information economy—call for a new emphasis on learning how to manage stress, get along with others, and work in groups. These abilities, often called 21st-century skills, are essential for adult success.[8]

Students come to school with different abilities and motivations for learning, behaving positively, and performing academically. Estimates suggest that 40 to 60 percent of US high school students are chronically disengaged.[9] According to the 2015 Youth Risk Behavior Survey, a large proportion of high school students behave in ways that jeopardize their future (for example, substance use, violence, and bullying).[10] Because of these individual and social complexities, we need a broader perspective for education in which success means more than just academic achievement.

Benefits of Social and Emotional Learning

The past 20 years have seen an explosion of interest in SEL. We now recognize that social-emotional competencies are important

Table 1. A Conceptual model for advancing SEL in education settings.



and should be nurtured. The thoughts, attitudes, and skills fostered by SEL are associated with key indicators of adjustment, both immediately and over the lifespan.[11] In addition to promoting positive outcomes, social-emotional competencies also buffer the effects of exposure to risk factors.[12]

SEL has become more widely accepted as a component of education. In a recent national survey of teachers, 95 percent of respondents said that SEL is teachable; 97 percent said that SEL can benefit students from all socioeconomic backgrounds.[13] Programs that promote SEL now operate in thousands of US schools and in many other countries.[14] States and school districts have established policies to foster young people's social-emotional growth alongside academic growth, and federal legislation increasingly supports educating the whole child.[15]

Research reviews consistently show that SEL programs have positive effects.[16] For example, one meta-analysis of the outcomes from 213 interventions in kindergarten through 12th grade reported significant effects on positive social behavior, conduct problems, and academic performance.[17] The magnitude of these effects is comparable to those achieved by other types of evidence-based programs, indicating that SEL programs are valuable preventive interventions.[18] An extension of the same meta-analysis also found that effects on targeted outcomes remained significant during follow-up periods that averaged 3.75 years, indicating the long-term benefits of SEL interventions. Recent reviews show that well-implemented SEL programs promote positive outcomes and reduce negative outcomes among preschool, elementary, middle, and high school students.[19]

Because promoting social-emotional competencies affects a range of academic and behavioral outcomes, interventions to enhance SEL can be found in numerous fields, including education, psychology, and public health. Both interventions that promote health and those that seek to reduce specific risk behaviors (such as using drugs, bullying, or anxiety) include strategies to develop personal and social competence. For example, several drug-prevention programs promote resistance skills, which represent one type of social competence. We might even say that SEL is a common denominator among interventions for children's wellbeing and success.

According to CASEL, an SEL intervention is comprehensive when schools, families, and communities collaborate to promote students' development across the five competence clusters (see figure 1). When such programming is evidence-based—that is, implemented with quality and fidelity, and evaluated in well-designed research studies—it produces stronger effects than do interventions that lack these characteristics.[20] Well-designed programming can be characterized by the acronym SAFE, which stands for *sequenced*—having a connected and coordinated set of activities to foster skills development; *active*—using active forms of learning to help students master new skills; *focused*—emphasizing the development of personal and social skills; and *explicit*—targeting specific social-emotional skills.[21]

A Public Health Approach to Education

Until recently, educational research and interventions related to students' emotional and behavioral status focused primarily on treatments for children already classified as having a mental health disorder or showing substantial problems. Schools devoted fewer resources, if any, to preventive approaches. In contrast, a comprehensive public health approach to education would not only treat those already affected by the targeted problems but also involve a range of prevention or competence-promotion strategies that could benefit many more students.[22]

Prevention programs are commonly divided into three levels, based on the degree of risk among the participants. The first level encompasses *universal* interventions, which are designed to be used among the general population without regard for individual risk level. At the second level, *selective* interventions target a subgroup with one or more risk factors that increase their likelihood of poor outcomes. At the third level, *indicated* interventions identify individuals who are already experiencing early signs of problem behaviors but don't yet meet diagnostic criteria for having a disorder.[23]

Unlike these prevention programs, *treatment* interventions generally target children with high levels of symptom or diagnosable disorders. Unfortunately, most schools emphasize treatment over prevention. And many schools lack the resources to effectively treat all those who need such help, let alone the resources to offer prevention programs.

Universal Interventions

These interventions are essential to a public health approach. They target all children, they're usually relatively inexpensive compared to other levels of intervention, and they have many advantages. First,

they can contribute to adaptive coping and resilience in an array of contexts across school, family, and community. Second, because they're framed positively and provided to all children, they aren't stigmatizing. Third, they can reduce or prevent multiple behavior problems that are predicted by shared or common risk factors, including emotional and behavioral problems, early substance use, delinquency, and school failure.[24]

School-based universal interventions commonly focus on three things: improving school structure (for example, policies or organizational rules), supporting teachers' pedagogy and instructional quality, and offering SEL curricula that promote knowledge and teach specific skills to all children in a classroom. As figure 1 shows, in a comprehensive public health model of education, SEL programming takes place at both the classroom and school level, and through partnerships with families and community members.[25] As we'll discuss in more detail later in this article, such a school-wide approach to SEL is increasingly popular. One way to achieve it is through evidence-based programs that provide instructional materials and practices across multiple grade levels to improve children's SEL competencies and reduce problem outcomes.[26] Intervention training can be adapted to different types of school staff so they can apply the program's language and philosophy to their work with students. Universal interventions also commonly involve families, seeking to nurture parenting skills such as communication, responsiveness, management and monitoring of child behavior, and support for children's learning.[27]

Because they serve many children, universal interventions can cost relatively little per child. For this reason, even relatively small effects on expensive outcomes (such as dropping out of school) across an entire population can easily offset an intervention's cost.[28] For example, a recent review of universal SEL programs showed a projected saving of more than $11 for each dollar invested.[29]

A final benefit of universal interventions is that their effects can spread beyond the individual level to encompass the school culture, home, and peer group. For example, a universal SEL intervention may have strong and lasting effects not only by promoting healthy skills in particular children but also by changing the norms, skills, and attitudes of the entire population, thus creating a "sustaining environment."[30] For example, the PROSPER study (Promoting School-community-university Partnerships to Enhance Resilience), which included more than 11,000 young people, showed that universal drug-prevention programs can change the structure of adolescents' social networks so that prosocial teens—that is, those less inclined to hold pro-drug attitudes or engage in problem behavior—become more popular and influential.[31] PROSPER's effects illustrate the "protective shield" concept: certain universal interventions may operate by creating a context that reduces exposure to risks at a point in the lifespan when such a reduction can have long-term effects.[32]

Selective Interventions

At the next level of prevention, specialized programs or services are delivered to a class of children, families, or communities with demographic characteristics or life

experiences that place them at risk for later poor outcomes. For example, students may be living in poverty or a disadvantaged neighborhood, be experiencing trauma, or have parents who suffer from depression or a substance use disorder. In educational terminology (that is, in the Response to Intervention, or RTI, model), these are called tier 2 interventions. The major advantage of selective programs is that effort and resources are spent on children who are at greater risk. For these children, selective interventions may offer greater conceptual precision, intensity, and focus than universal interventions do.

Indicated Interventions

The third level of prevention targets children or families who show early signs of difficulty. Often, the distinction between indicated interventions and treatment interventions—meaning services for those who have already received mental-health diagnoses or special-educational classifications—isn't clear-cut; it depends on the nature of the problems, when they're detected, and how quickly intervention follows. In the RTI model, indicated prevention and treatment are both considered tier 3 interventions. Such services and programs are more intensive and expensive than those at tiers 1 and 2. But given the high cost and long-term effects of the problems they target, they may nonetheless be cost-effective.

Each level of intervention has its strengths and limitations. A comprehensive public health model that offers a carefully orchestrated sequence of strategies—universal, selective, and indicated preventive approaches, followed by treatment—is ultimately most likely to be effective and cost-efficient.[33]

Prevention Strategies and the Prevention Paradox

We can illustrate the fundamental importance of a universal approach to prevention through what's called the *prevention paradox.* Public health approaches that seek to prevent common and serious medical conditions, such as cardiac arrest and stroke, have primarily used a "high-risk" strategy—that is, screening patients to find those who are already showing early signs or substantial risk factors related to later illness. Thus it's been standard procedure for the past 30 years or so to screen adults for high blood pressure or high levels of serum cholesterol, which are correlated with stroke and heart attack. The screening identifies people who are more likely to experience a stroke or heart attack, and this high-risk group is then treated, usually with drugs intended to lower their risk, such as statins and beta-blockers. This approach is similar to the indicated level of prevention. Often, the people identified as being at risk are also asked to adopt lifestyle changes related to diet, exercise, and tobacco use.

The high-risk strategy benefits some recipients. But because the approach requires screening, it's limited to a relatively small segment of the population. For this reason, and somewhat unexpectedly, its impact on the total public health burden of heart attack and stroke is relatively small. That's the great insight of Geoffrey Rose, the British epidemiologist who coined the term *prevention paradox* more than 30 years ago.[34] Using the example of heart disease, Rose demonstrated that "a large number of people exposed to a small risk may generate many more cases than a small number exposed to a high risk."[35]

Findings from the North Karelia Project in Finland illustrate this phenomenon. That study showed that while approximately 10 percent of people aged 30–59 with very high serum cholesterol account for about 30 percent of deaths from coronary heart disease, almost 70 percent of cases of coronary heart disease come from the other 90 percent of the population, who are considered to be at low risk.[36] To substantially lower the rate of heart disease, Rose asserted, it would be necessary to adopt a *population strategy* or universal intervention model.

The benefit to each individual may be extremely small even though the cumulative benefit is significant.

Rose articulated the prevention paradox as follows. A preventive measure, action or policy that brings large benefits to the whole community may offer little benefit to each participating individual. In contrast, an intervention that brings much benefit to an individual (such as statin therapy for heart disease) may have a relatively small impact on the population as a whole. For example, a population strategy for heart disease might involve a discount on insurance premiums to people who attend exercise classes or don't smoke. And the use of car seat belts is a universal intervention to reduce auto fatalities.

The paradox is that the benefit to each individual is extremely small (the chance is low that you'll be in an accident in which a seat belt saves your life) even though the cumulative benefit will be significant (the use of seat belts has dramatically reduced auto accident deaths in the United States). Thus under a population-strategy approach, many individuals must change their behavior or receive some degree of intervention so that a much smaller number of people will benefit. This led Rose to argue that we should strive to minimize the effort and potential harm that could arise from a universal approach.

Preventing heart disease or auto fatalities may seem far afield from preventing mental health or educational problems in young people. But when it comes to children and teenagers, Rose's insights into the limitations of using a high-risk strategy alone have been borne out in many areas. These include the effects of lead exposure on IQ, substance use, college drinking and injuries, risk for delinquency arrest, and risk of dropping out of school.[37] In all these areas, research shows that for the population as a whole, the majority of problems occur among people considered at low risk.

Dropping out of school is an excellent example. You might expect that if you knew the achievement test scores of ninth-graders as well as their disciplinary and behavior records, you could accurately predict which students would fail to complete high school. Yet models that include both achievement and behavior accurately predict only about 50 percent of dropouts.[38] Thus a large percentage of students who are identified by dropout screening don't drop out; conversely, a large percentage of students who eventually drop out of high school can't be identified by screening.

As an example, imagine that we screened 100 ninth-graders and identified the 20 percent at the highest risk for dropping out. Let's say that our screening was highly accurate, and 75 percent of those students dropped

out (that is, 15 out of 20 high-risk students). Let's also imagine that only 25 percent of students in the low-risk group will drop out (or 20 out of 80). In this scenario, 20 of the 35 dropouts—or 57 percent of all dropouts—will come from the low-risk group. Given the high lifetime cost of not finishing high school (estimated at more than $350,000 per person) and the relatively low cost of universal interventions, a universal intervention that reduced the dropout rate among this low-risk group by 25 percent, or 5 students, could produce dramatic cost savings. In other words, although we can screen, identify, and treat some children who are at risk for later problems with mental health or school failure, we can substantially reduce the problem's prevalence in the long run by first using an effective universal intervention.

The prevention paradox implies that policies to prevent poor outcomes in childhood and adolescence need to apply the right mix of strategies. That means multiple levels of intervention: universal interventions that focus on all the children and families in a school, selective interventions that focus on at-risk groups, indicated interventions that focus on children already showing early signs of trouble, and treatment for children with formal diagnoses. This is in fact the layered strategy recommended by the Institute of Medicine, by the RTI model, and by models for promoting mental health in schools.[39]

A Framework for Systemic Social and Emotional Learning

We've shown that the most effective school-based interventions begin with a strong universal base for all students and then add more targeted services for students with greater needs—a concept known as *vertical integration*. Next we describe *horizontal integration*—a comprehensive framework for organizing universal SEL interventions so they are fully integrated into the educational system and create a structure that supports high quality and sustainability.[40] Such a framework can take advantage of natural opportunities for promoting student social-emotional competence to integrate various school-based interventions.

The concentric circles around the competency clusters in figure 1 represent classrooms, schools, home and family, and communities. We have evidence-based approaches to promote student SEL in each of these settings; we also have models of family- and community-based partnerships with schools that create environments to foster SEL among children and teenagers. In contrast to vertical integration across service tiers targeting students at different risk levels, horizontal integration ties together universal approaches to SEL. That means including programs that deliberately target SEL as well as practices and policies—such as *restorative discipline*—that can also create opportunities for SEL.[41] Discipline policies, and the practices that support them, are important structures for managing student behavior. These structures can undermine SEL if they are punitive in nature, but they can create opportunities for SEL and positive student-teacher relationships if they allow students to gain self and social awareness, apply problem-solving skills to real-life conflicts, and negotiate interpersonal conflicts—all of which are common elements of a restorative approach to discipline.[42] (To learn more about restorative discipline, see the article in this issue by Anne Gregory and Edward Fergus)

Classroom-Level Strategies

One frequently used approach to SEL involves training teachers to explicitly teach social-emotional skills in order to promote students' competencies. SEL instruction can also be embedded in academic content areas such as English language arts, social studies, and math.[43] To promote social-emotional development for all students in their classrooms, educators can teach and model social-emotional skills, give students opportunities to practice and hone those skills, and let them apply those skills in various situations.

Teachers can also foster skills through their own interpersonal and instructional interactions with students throughout the school day. Student-centered learning approaches emphasize changing adult practices and the ways students interact with one another and their environment, in an effort to promote students' analytical, collaborative, and communication skills.[44] For example, teacher practices that support students emotionally and let them experience their own voice, autonomy, and mastery can give students a stake in the educational process, lead to positive student-teacher relationships, and promote students' engagement in learning.[45] Instructional methods that involve collaboration and cooperative learning can promote interpersonal and communication skills.

School-Level Strategies

A school climate that's safe, academically challenging, participatory, and emotionally supportive tends to promote social and emotional competence. It also positively affects students' academic achievement, behavior, and mental health.[46] Typical school-level SEL strategies involve policies, practices, or structures that foster these characteristics of the school climate.[47] For example, a restorative approach to discipline can not only promote students' skills but also positively influence relationships both between teachers and students and among students.[48] Activities such as peer mentoring and service learning build positive relationships and a sense of community among students.

One way to promote a positive school environment is to establish a climate or SEL team to develop clear behavioral norms and expectations for students and staff, and to enforce discipline fairly when rules are broken. School leaders can also use organizational structures to build SEL competencies. For example, regular morning meetings or *advisories*—smaller social groups that help staff members develop personal relationships with students and with one another—can build a sense of community.

Educators' own social-emotional competence and pedagogical skills influence classroom and school climate as well as student behavior. High-quality teacher preparation and in-service professional learning related to SEL should include such elements as the theoretical knowledge and pedagogical strategies essential to teaching SEL, the development of teachers' and administrators' own personal and social competencies, and supportive feedback from colleagues and administrators.[49] Some research suggests that SEL interventions targeting students may also have secondary benefits for teachers' own sense of efficacy and competence.[50] This additional benefit only reinforces the rationale for establishing a comprehensive foundation of universal programming in schools.

Family and Community Strategies

Programs that extend learning to the home and neighborhood can strengthen the impact of school approaches. Community partners and organizations can support classroom and school efforts, especially by giving students more opportunities to refine and apply SEL skills.[51] School-family-community partnerships characterized by equality, shared goals, and meaningful roles for families and community partners have been shown to enhance students' SEL and academic performance.[52]

Young people can also connect with supportive adults and peers in after-school programs—an important venue for helping students develop and apply new skills and talents. Research has shown that if after-school programs devote time to social-emotional development, they can significantly improve students' self-perceptions, bonding to school, positive social behaviors, school grades, and achievement-test scores, and reduce problem behaviors.[53]

Implementing and Sustaining a Public Health Approach

If we want universal SEL programs to become part of a broad educational public health approach, we must understand how to increase the likelihood that evidence-based SEL programs will be implemented well. Research shows that training and continuing support for school personnel are crucial.[54] And before adopting any new program, schools need long-term plans for sustaining it and integrating it with other SEL interventions.

While many teachers jump at the chance to offer their students SEL programming, they need help from administrators and policy makers to do so effectively.[55] Successful 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, school-wide, family, and community programming.

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Systematic efforts to promote SEL should 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-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-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-emotional competence and positive behavior;
- coordinating with specialized mental-health services to align approaches for building children's skills and managing their behavior in different contexts; and
- establishing a learning community among school staff members to encourage reflection and use of data to improve SEL practice and student outcomes.

Finally, to improve SEL programs and make decisions about their future, leaders should continuously assess stakeholders' perspectives, program implementation, students' outcomes, school and district resources, new state and federal policies, and scientific advances.

At the school level, CASEL has created a model and set of tools to support school-wide SEL.[57] Schools that adopt this model form an SEL leadership team that tackles six key activities: creating a vision and developing goals; assessing needs and resources; providing professional development to promote student SEL; implementing evidence-based SEL interventions; integrating SEL programming at all levels and across support tiers; and using data to monitor and improve the process.[58]

CASEL has also developed a complementary model for implementing and sustaining SEL initiatives at the school-district level.[59] Research suggests that classroom and school-wide SEL programs are most likely to be implemented with quality and sustained when they're aligned with district priorities and supported by principals, district administrators, school boards, and teacher unions.[60] The left side of figure 1 shows the critical elements that districts must provide: cultivating commitment and support for SEL; assessing resources and needs; establishing programs at multiple levels; and establishing systems for measurement and continuous improvement.

To demonstrate that its school- and district-wide models are feasible and produce measurable impacts on student outcomes, CASEL is working with eight large urban districts: Anchorage, AL; Austin, TX; Chicago, IL; Cleveland, OH; Nashville, TN; Oakland, CA; Sacramento, CA; and Washoe County, NV.[61] So far, a third-party evaluation has found that in the first three to four years, districts and schools successfully implemented evidence-based SEL programming, aligned SEL with other programs and with diverse district priorities, enhanced students' academic performance, and reduced discipline referrals.[62]

As much as we need infrastructure at the school and district levels to support implementation by classroom teachers, we also need infrastructure to support vertical integration of SEL programming across tiers based on level of need. Observers have noted a lack of coordination and

fragmentation among school-based mental health services.[63] It's rare to see school providers (classroom teachers, counselors, special-needs teachers, and psychologists) coordinate their services, and it's even rarer to see coordination with mental-health service providers contracted from local agencies.

Moreover, the work of professionals such as school counselors, social workers, and psychologists should be coordinated with universal efforts in the classroom and the school so that children may interact with adults who use the same language and promote the same skills. For students who need more support, such professionals supplement classroom-based instruction, often through small group work. But few classroom teachers are taught the skills required to reinforce and support the competencies children learn during these groups. We also need training for local providers of evidenced-based mental health services (such as community mental health programs) to connect them to what's being done in schools.[64] Once these professionals are made aware of the social-emotional content and instructional practices that teachers are using in classrooms, they can integrate these approaches into their own work with students.[65]

A key challenge will be to synthesize research from different disciplines so that we recognize the essential elements of diverse programs and policies that support coordination between universal modes and tiered services. The next step is to put these essential elements in place to sustain comprehensive school- and district-wide SEL programming. Typically, SEL programs are introduced in schools as a fragmented succession of fads or quick fixes, isolated from everyday educational practices. As a result, schools often take on a hodgepodge of prevention, treatment, and youth-development initiatives with little direction, coordination, sustainability, or impact.[66] Children will benefit the most when we find commonalities and coordinate across contexts and levels of service.[67]

We know that universal SEL interventions can reduce problems such as aggression, noncompliance, and emotional distress.[68] But not every universal SEL program can be expected to produce the same degree of change, and we need more research to find the best ways to integrate concepts and programs across tiers of service need. Surely, if children encounter common language and skills across universal and targeted services, that consistent environment will help them develop their own SEL skills and improve their competence.[69]

To achieve the coordinated framework we propose will require stronger program development and evaluation. This in turn will require teachers, administrators, counselors, and therapists to see the value of collaboration on behalf of children's outcomes. Moreover, schools will need to spearhead such collaboration and use common assessments to evaluate progress among children and among the programs themselves. To encourage wider use of evidence-based comprehensive and systematic SEL programming, schools must also collaborate with other interested parties, including policy makers, funders, administrators, parents, researchers, and program developers. Each group has an important role to play in melding theory, research, practice, and policy so that they work together to achieve the public health impact we all desire.

Conclusions

The past two decades have seen an explosion of research and practice in the development, implementation, and evaluation of SEL programs and policies. Research has shown that when evidence-based SEL programs are effectively implemented, they lead to measurable and potentially long-lasting improvements in various domains of a child's life. We advocate for placing SEL within a larger public health framework for education, with two essential components. The first is to go beyond the classroom to develop comprehensive universal models of SEL that involve entire schools and school districts, partner with families, and are coordinated with community programs. The second component is to fully integrate universal SEL models with services at other tiers, giving schools a common framework to promote wellbeing and school success and to prevent mental-health disorders. To advance the science and practice of school-based prevention, researchers, educators, and policy makers must work together to design evidence-based, comprehensive SEL programs that can substantially improve our communities' public health.

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