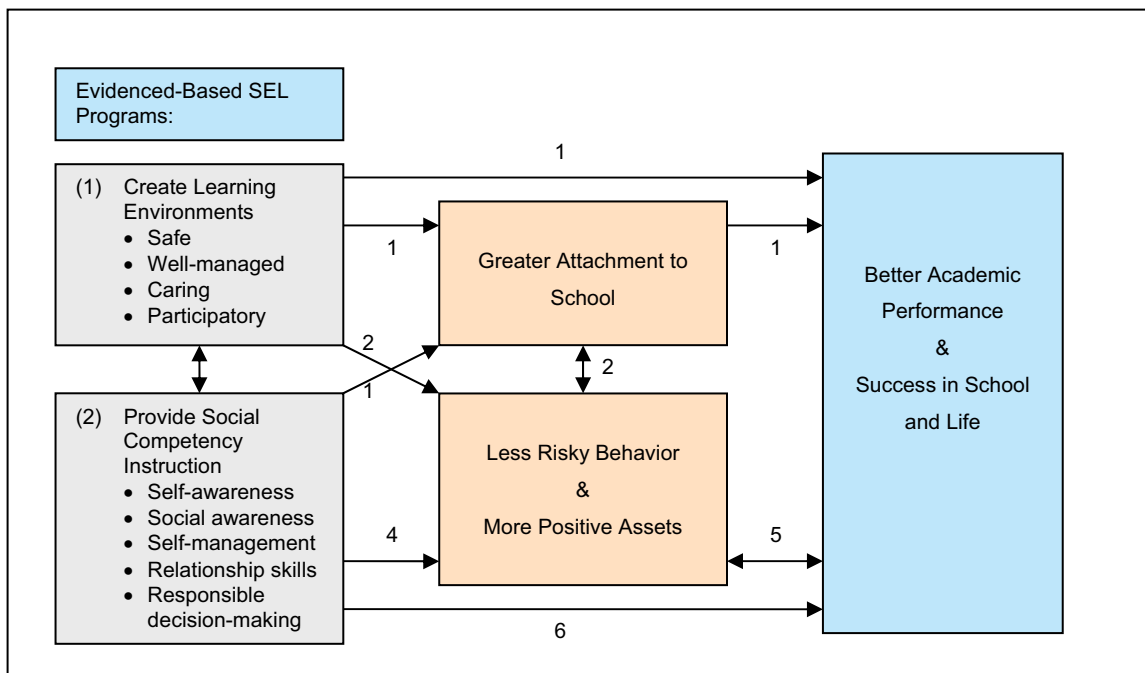


## How Evidence-Based SEL Programs Work to Produce Greater Student Success in School and Life



Social and emotional learning (SEL) programs have direct as well as indirect impacts on student learning and school success. The figure above describes the mechanisms of action that connect SEL programs to student achievement. The far left column of boxes in the figure is definitional. It posits that evidence-based SEL programs do two things: (1) create safe, caring, well-managed learning environments, i.e., they address the classroom and school climate in systematic ways (top left box); and (2) provide sequenced, developmentally appropriate, classroom-based instruction in five major areas of social and emotional competence (bottom left box). Few SEL programs accomplish all of these objectives. Instead, schools typically combine programs with strengths in one or the other area to achieve the full benefits of SEL programming. The remainder of the figure describes a series of relationships that hold true in studies of classrooms and the interventions designed to improve them. Several of the studies highlighted below are

experimental or quasi-experimental in design, rather than merely correlational. That is, SEL programming has been shown to result in better student outcomes, including improved academic performance. These relationships, and some of the research supporting them, are described in the remainder of this brief.

***1. There is solid evidence demonstrating that student attachment to school is strongly influenced by the learning environment. Classroom and school interventions that make the learning environment safer, more caring, better managed, more participatory, and that enhance students' social competence, have been shown to increase student attachment to school. In turn, students who are more engaged and attached to school have better attendance and higher graduation rates, as well as higher grades and standardized tests scores. Interventions that increase student bonding often positively affect student educational outcomes and academic achievement.***

### **Supporting Evidence**

- A detailed review of the literature finds that creation of supportive learning environments increases student engagement and attachment to school, and that these variables significantly influence student academic performance (Osterman, 2000).
- According to the National Longitudinal Study of Adolescent Health, students feel greater attachment to school when they attend small schools and are part of well-managed classrooms where students get along with each other and with teachers, pay attention, and complete assignments (Blum, R.W., McNeely, C.A., & Rinehart, P.M., 2002).
- The evaluation of a program designed to develop student prosocial skills and foster a more supportive, cooperative, and participatory learning environment documented increases in students' sense of school community and commitment to school (Battistich, Solomon, Watson, & Schaps, 1997). Perceived sense of community mediated the positive program effects, including improved academic achievement (Solomon, Battistich, Watson, Schaps & Lewis, 2000).
- When teachers implemented an intervention that included proactive classroom management, interactive teaching methods, cooperative learning techniques, and interpersonal skills instruction, students' positive attitudes and commitment to school significantly increased, as did the grades and standardized achievement scores of males (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001; O'Donnell, Hawkins, Catalano, Abbott, & Day, 1995).
- A school and classroom intervention that increased student bonding to school by creating smaller learning environments, increasing classmate stability during school transitions, and restructuring teacher roles to be more supportive also resulted in higher attendance rates, lower drop out rates, and better grades among middle and high school students (Felner, et al., 1993).
- A similar intervention improved student bonding by implementing the same three components, in addition to increasing parent involvement. This intervention significantly decreased drop out rates, and increased

students' attendance and standardized test scores (Reyes & Jason, 1991).

- A meta-analysis of 273 SEL programs found that SEL interventions significantly improve students' attachment and attitudes toward school (Weissberg, et al., manuscript in progress).
- Well-designed evaluations of several SEL programs have demonstrated that SEL instruction can produce significant improvements in school attitudes, school behavior, and school performance (Zins, et al., 2003).
- In learning environments with high-levels of teacher-child conflict, students have greater levels of school avoidance, decreased liking for school, less self-directed behavior, and lower levels of cooperation. Conversely, student-teacher closeness promotes school bonding and attachment, and academic achievement (Birch & Ladd, 1997).
- Schools characterized by high relational trust are more likely to have educators who experiment with innovative teaching practices and reach out to parents. These practices result in marked improvements in student learning. School-wide relational trust also influences whether students regularly attend school and put forth high effort when faced with difficult tasks. (Bryk & Schneider, 2002).

***2. Research indicates that attachment to school decreases the prevalence of high risk behaviors, and interventions that improve classroom climate and functioning, and enhance student attachment to school, decrease rates of high-risk behaviors. When students are attached to school and to prosocial teachers and peers, they are more likely to behave in prosocial ways themselves, and to avoid engaging in high risk behaviors (Hawkins, Catalano, & Miller, 1992). Providing students with opportunities for participation may also increase students' intrinsic motivation to behave in prosocial ways, thereby decreasing school crime and other forms of deviant behavior in the school setting (Csikszentmihalyi, & Larson, 1980).***

### **Supporting Evidence**

- A meta-analysis of 165 studies of school-based prevention activities showed

environmentally focused interventions (e.g., establishing norms for behavior, classroom and instructional management, school or discipline management interventions, reorganization of grades/classes) significantly decreased the prevalence of the four outcomes examined: delinquency, alcohol and drug use, drop out/non-attendance, and conduct problems (Wilson, Gottfredson, & Najaka, (2001).

- Students in schools using a program designed to create more supportive and cooperative-learning environments had significantly lower rates of drug use and delinquency than comparison students (Battistich, Schaps, Watson, Solomon, & Lewis, 2000).
- Adolescents' sense of connectedness to school is associated with significantly lower rates of emotional distress, suicidal thoughts and behaviors, violence, substance abuse, and sexual activity (Resnick et al., 1997).

***3. Creating more caring and psychologically safe classroom environments also improves a variety of students' social and emotional skills, thereby reinforcing the second component of effective evidence based SEL programming—SEL instruction. In supportive atmospheres, for example, students feel more comfortable approaching and interacting with teachers and peers, thereby strengthening their relationship skills. In essence, teachers and schools can improve students' social-emotional competence by creating a social learning context where such skills are frequently called for and positively reinforced.***

#### ***Supporting Evidence***

- A review of the research on cooperative learning indicates that teachers can improve the interpersonal relationships among students by creating cooperative learning groups characterized by positive interdependence (Johnson, Johnson, & Maruyama, 1983).
- Other reviews have found that cooperative learning methods are consistently more effective than individualistic methods in promoting intrinsic motivation, achievement effort, retention, reasoning skills, psychological health, and overall academic achievement (Johnson & Johnson, 1989).

- Students in classrooms using a program designed to create more supportive and cooperative learning environments showed significant improvement in two types of interpersonal skills: spontaneous prosocial behavior and supportive and friendly behavior (Solomon, Watson, Delucchi, Schaps, & Battistich, 1988).
- Students in such classrooms also scored significantly higher on measures of cognitive problem-solving skills (e.g., interpersonal sensitivity, consideration of others' needs, means-end thinking), and used more prosocial conflict resolution strategies than comparison children (Battistich, Solomon, Watson, Solomon, & Schaps, 1989).
- Adolescents' judgments of their teachers as respectful, fair, or supportive are associated with less cheating (Calabrese & Cochran, 1990; Murdock, Hale, & Weber, 2001).
- Among adolescents, teacher support was a significant predictor of student reports of pursuit of adherence to classroom norms, while peer support was a positive predictor of their reports of prosocial behavior (Wentzel, 1998).
- Adolescents who characterize their learning environments as including a caring, respectful teacher and peers who help each other were more likely to participate in class and complete their homework (Murdock, 1999).
- A study implementing a school-wide discipline approach combined with teacher training and frequent classroom meetings improved teachers' questioning techniques, and their use of praise and constructive feedback. Students disciplinary referrals also declined significantly (Masters & Laverty, 1977).
- A school and classroom intervention that improved classroom management by establishing clear rules and expectations, and created a better psychosocial climate by incorporating daily morning meetings and reorganizing classrooms to foster social interaction and independence, improved students' social skills and academic performance. (Children attending such schools also showed greater increases in reading and math scores, felt closer to their teachers and peers, and showed more prosocial behaviors. Their teachers felt more effective and positive about teaching, were

more collaborative with colleagues, and used more effective instructional strategies.) (Rimm-Kaufman, 2006).

**4. SEL instruction provides students with basic skills, such as good decision making and refusal skills, which enable them to successfully avoid engaging in high-risk behaviors, and to participate in behaviors that support their positive development.**

#### **Supporting Evidence**

- A meta-analysis of 165 studies of schoolbased prevention activities found interventions with social competency instruction significantly decreased delinquency, alcohol and drug use, and conduct problems (Wilson, Gottfredson, & Najaka, 2001).
- A review of prevention studies from 1980-1990 found that among 12 categories of programs, comprehensive programs (i.e., those using several different prevention strategies, but all providing decision making and resistance skills training) and social influence programs (i.e., programs teaching about and providing skills to resist social pressures) were the more effective in preventing or delaying the onset of substance use (Hansen, 1992).
- A recent meta-analysis of 273 SEL programs found that SEL interventions significantly decrease rates of violence/aggression, disciplinary referrals, and substance use (Weissberg et al, manuscript in progress).
- Reviews of the research on school-based substance abuse and violence prevention programs indicate that instruction and practice in social and emotional competencies is a critical element of effective programs (Dusenbury, & Falco, 1995; Dusenbury, Falco, Lake, Brannigan, & Bosworth, 1997).
- Students receiving cognitive social-emotional skills training report higher self-efficacy and score higher on teacher ratings of attention and concentration, problem-solving, prosocial skills and lower on teacher ratings of aggressive behavior than comparison students. These students also receive higher grades than comparison students (Linacres et al, 2005).
- A multi-component intervention that included daily classroom lessons teaching

SEL skills, a schoolwide-climate component, and community/parent involvement significantly decreased the number of violence incidents and suspensions while increasing students' attendance and academic achievement on standardized tests (Flay & Allred, 2003).

**5. High-risk behaviors in students are associated with poor academic performance. Likewise, poor academic performance is a risk factor for a variety of high-risk behaviors, while academic achievement is a protective factor.**

#### **Supporting Evidence**

- An intervention designed to prevent problem behaviors and increase academic achievement by teaching students prosocial skills and creating a positive school-wide climate significantly reduced violent incidents, and increased students' attendance and performance on a standardized achievement test (Flay, Allred, & Ordway, 2001).
- A review of health risk behavior studies and reports found student health risks such as intentional injuries, substance use, sexual behavior, and poor physical health were directly and negatively linked to educational outcomes, education behaviors, and student attitudes about education (Symons, Cinelli, James, & Groff, 1997).
- A meta-analysis of naturalistic studies on academic performance and delinquency found that high academic achievers are much less likely to engage in delinquent acts than their low-achieving peers. Academic performance negatively predicted delinquency independent of socioeconomic status (Maguin & Loeber, 1996).
- Data from the National Longitudinal Study of Adolescent Health found that being at risk for academic failure was associated with every health risk behavior studied. The authors state that school failure should be recognized as a health and education crisis (Blum, Beuhring, & Rinehard, 2000).

**6. SEL instruction provides students with the social skills needed to successfully navigate the social learning environment of the classroom. Social and emotional skills can also significantly enhance learning when they are integrated into different academic content areas. Other**

***specific strategies and mechanisms for enhancing academic performance through SEL can be found in Zins, Weissberg, Wang, & Walberg (2003).***

***Supporting Evidence***

- A meta-analysis of 165 studies of schoolbased prevention activities found interventions with social competency instruction significantly decreased rates of student drop out/non-attendance (Wilson, et al., 2001).
- A meta-analysis of SEL interventions that included measures of academic performance found that such interventions significantly improve students' grades and performance on academic achievement tests (Dymnicki, manuscript in progress).
- An innovative intervention that integrated SEL skills into the school curriculum by introducing self-regulation skills in physical education class significantly reduced student disciplinary referrals and improved students' standardized test-scores (Twemlow et al., 2001).
- A meta-analysis of 158 cooperative learning studies found that 8 different cooperative learning methods all significantly improved students' academic performance, with conceptually-grounded cooperative learning making the largest impact (Johnson, Johnson, & Stanne, 2000).
- Longitudinal studies of a preschool program designed to foster social-emotional competence documented numerous positive outcomes for program participants, including less time in special education programs, higher literacy and high school graduation rates, higher incomes and rates of home

ownership, fewer arrests, and (for females) fewer children outside of marriage (Schweinhart, Barnes, & Weikart, 1993; Schweinhart & Weikart, 1997).

- In a longitudinal evaluation of a social problem-solving program, students who participated in the program had higher overall academic achievement six years later than a non-participant comparison group. Students whose teachers most fully implemented the program performed better in language arts and mathematics, and had fewer absences than students in the comparison group (Elias, Gara, Schuyer, Branden-Muller, & Sayette, 1991).
- Students' social competence in second grade significantly influenced their third grade academic competence (as assessed by language and math grades and work skills), suggesting that improving social competence results in improved student academic performance (Welsh, Parke, Widaman, & O'Neil, 2001).
- Students who completed conflict resolution training retained their knowledge of the conflict resolution skills throughout the school year, applied the skills to conflicts that arose in the classroom, and transferred the skills to nonclassroom and nonschool settings. Furthermore, students performed significantly higher on academic performance than comparison students and were better able to interpret the information learned in insightful ways (Johnson & Johnson, 2000).

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