A review of the literature on social and emotional learning for students ages 3–8: Characteristics of effective social and emotional learning programs (part 1 of 4)

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Social and emotional learning (SEL) is the process by which children and adults learn to understand and manage emotions, maintain positive relationships, and make responsible decisions. This is the first in a series of four related reports about what is known about SEL programs for students ages 3–8. The report series addresses four issues raised by the Regional Educational Laboratory (REL) Mid-Atlantic's Early Childhood Education Research Alliance: characteristics of effective SEL programs (part 1), implementation strategies and state and district policies that support SEL programming (part 2), teacher and classroom strategies that contribute to social and emotional learning (part 3), and outcomes of social and emotional learning among different student populations and settings (part 4). This report identifies key components of effective SEL programs and offers guidance on selecting programs.

Why this review?

To thrive in a social world, students must learn social and emotional skills, such as controlling their impulses, interpreting and understanding emotions, motivating themselves, and developing positive attitudes toward school and community (Pianta & La Paro, 2003; Raver, 2002). Therefore, early childhood

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programs aim to help students develop socially and emotionally in addition to fostering academic school readiness.

This process, referred to as social and emotional learning, centers on "the development of five interrelated sets of cognitive, affective, and behavioral competencies" (CASEL, 2012). These five competencies include self-awareness, self-management, social awareness, relationship skills, and responsible decisionmaking (see box 1 for definitions).

Moreover, students are exposed to social and academic information that they must interpret, analyze, and respond to in acceptable ways (Crick & Dodge, 1996). Therefore, they need to develop self-regulation and executive functioning in addition to social and emotional skills. Executive functioning and self-regulation are the mental processes that enable students to plan, focus attention, remember instructions, and juggle multiple tasks successfully (Center on the Developing Child, 2011). Both self-regulation and executive functioning influence social and emotional learning (figure 1). Accordingly, effective SEL programs, particularly in preschool, include approaches to enhance self-regulation and executive functioning.

What the review examined

Because of recent policy interest in social and emotional learning, a large amount of information is available about SEL programs and approaches, including literature reviews, research syntheses, practice guides, and meta-analyses. Members of REL Mid-Atlantic's Early Childhood Education Research Alliance identified the need for an organized summary that addresses school-based social and emotional learning for the general population of students ages 3–8, synthesizes the body of literature, and enables educators to easily identify the programs and strategies that are most appropriate for their setting and student population.

Box 1. Five competencies define social and emotional learning

The Collaborative for Academic, Social, and Emotional Learning (CASEL) identifies these five interrelated competencies as central to social and emotional learning:

Self-awareness. Knowing what one feels, accurately assessing one's interests and strengths, and maintaining a well-grounded sense of self-confidence.

Self-management. Regulating one's emotions to handle stress, control impulses, and motivate oneself to persevere in overcoming obstacles, setting and monitoring progress toward the achievement of personal and academic goals, and expressing emotions appropriately.

Social awareness. Being able to take the perspective of and empathize with others, recognizing and appreciating individual and group similarities and differences.
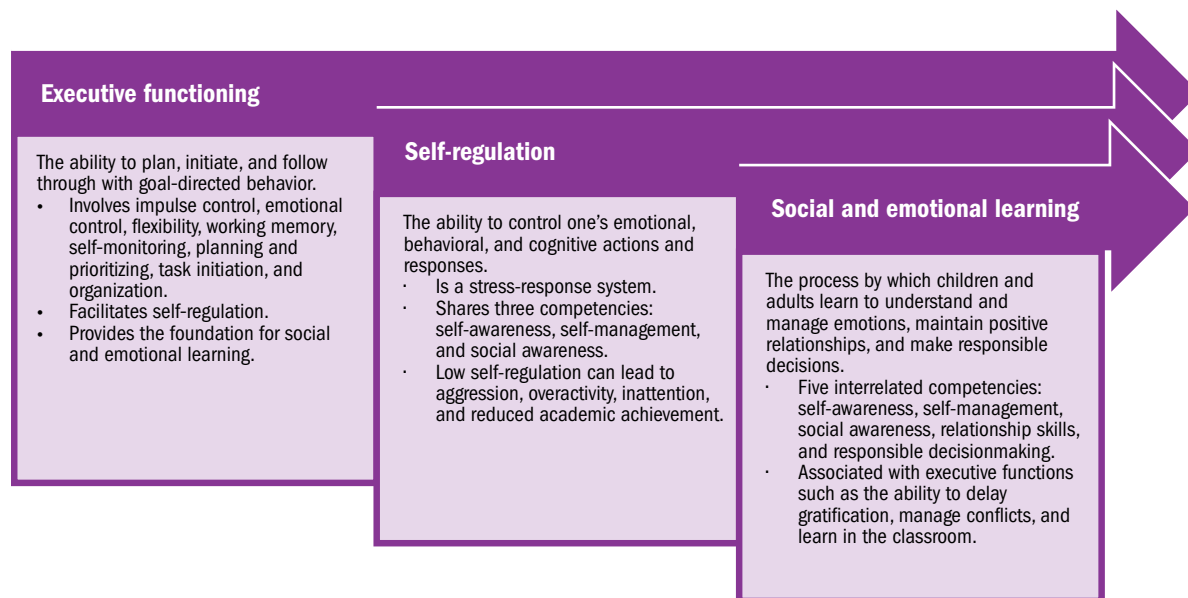
Relationship skills. Establishing and maintaining healthy and rewarding relationships on the basis of cooperation and resistance to inappropriate social pressure; preventing, managing, and constructively resolving interpersonal conflict; and seeking help when needed.

Responsible decisionmaking. Making decisions based on a consideration of all relevant factors, including applicable ethical standards, safety concerns, and social norms; the likely consequences of taking alternative courses of action; and respect for others.

Source: CASEL, 2012.

Figure 1. Relationship among executive functioning, self-regulation, and social and emotional learning

Executive functioning

The ability to plan, initiate, and follow through with goal-directed behavior.
- Involves impulse control, emotional control, flexibility, working memory, self-monitoring, planning and prioritizing, task initiation, and organization.
- Facilitates self-regulation.
- Provides the foundation for social and emotional learning.

Self-regulation

The ability to control one's emotional, behavioral, and cognitive actions and responses.
- Is a stress-response system.
- Shares three competencies: self-awareness, self-management, and social awareness.
- Low self-regulation can lead to aggression, overactivity, inattention, and reduced academic achievement.

Social and emotional learning

The process by which children and adults learn to understand and manage emotions, maintain positive relationships, and make responsible decisions.
- Five interrelated competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decisionmaking.
- Associated with executive functions such as the ability to delay gratification, manage conflicts, and learn in the classroom.

Source: Bierman & Torres, 2015; Campbell, 2002; CASEL, 2012; Center on the Developing Child, 2011; Garon, Bryson, & Smith, 2008

Research questions

With these goals in mind, the alliance developed four research questions to guide the project:

1. What are the characteristics of effective SEL programs?

2. What implementation strategies and state and district policies support SEL programming?

3. What teacher and classroom strategies contribute to social and emotional learning?

4. What outcomes have SEL programs demonstrated among different student populations and settings?

These four research questions guided REL Mid-Atlantic's systematic search, review, and synthesis of recent (2008–15) research reviews and meta-analyses (rather than original studies and sources) on the topic of social and emotional learning.[1] The review found 83 research syntheses that met the study inclusion criteria, including peer-reviewed journal articles, book chapters, reports, and online publications. Each synthesis was coded for criteria such as research question, methodology, relevant populations/ages, and settings. (The methodology and coding results are described in appendix A. The literature is mapped to the relevant research questions in appendix B.)

The social and emotional learning report series

Four related reports summarize the literature addressing each of the four research questions. This report (part 1) focuses on the first research question on the characteristics of effective SEL programs. The other three reports offer guidance on program implementation and identify trends toward integrating this

learning at the school, district, and state levels (part 2), describe teacher and classroom strategies (part 3), and provide evidence of student outcomes (part 4; O'Conner, De Feyter, Carr, Luo, & Romm, 2017a, b, c).

Each report can stand alone as a summary of the research literature on a specific topic. The reports can be read in any order. The first section (Why this review?) and this section (What the review examined) of each report provide similar introductory information, with more detail on social and emotional learning and how it is related to executive functioning and self-regulation presented here in part 1.

What the review found

A surge in SEL research over the past few decades has begun to illuminate what works in SEL program design and implementation for yielding positive student and school outcomes (Barbarasch & Elias, 2009). Most of the research that documents the impact of social and emotional learning on student outcomes used rigorous, randomized controlled experiments and tested a specific program.

To assist educators and policymakers, this report presents information and recommendations from experts on selecting an evidenced-based SEL program.[2] It reviews the literature on stand-alone, evidence-based SEL programs that are associated with positive student behaviors or academic performance. The literature also includes programs that target executive functioning. Many SEL approaches represent a hybrid of the two.

Effective social and emotional learning programs share three characteristics

Systematic reviews that summarized the evidence on the characteristics of effective SEL programs found three common characteristics:
- Use of a combination of techniques that are skills focused and environment focused.
- Use of a program that is sequenced, active, focused, and explicit (SAFE).
- Provision of training and technical assistance for teachers.

Most social and emotional learning programs use a combination of skills-focused and environment-focused techniques (Heller, 2013; Lantieri & Nambiar, 2012; Meyers & Hickey, 2014; Whitted, 2011). Skills-focused techniques involve explicit instruction in social and emotional skills. These techniques emphasize classroom-based lessons, direct instruction, and opportunities to practice social and emotional learning through role plays and modeling. Environment-focused techniques involve creating conditions that foster social and emotional skills. These conditions involve classroom climate, teaching practices, classroom management, and school initiatives.

Integrating skills-focused and environment-focused techniques reflects an understanding that a student's social and emotional skills and the larger school environment influence each other. Research shows that a caring and safe school climate fosters students' social and emotional learning and that a school full of socially and emotionally competent students contributes to a positive school climate (Barbarasch & Elias, 2009; CASEL, 2008; Weissberg & Cascarino, 2013; Zinsser, Denham, & Curby, in press).

Four core practices tend to make social and emotional learning programs more effective. A recent meta-analysis of 213 school SEL programs found that programs using four core practices, referred to by the acronym SAFE, were more successful in their targeted outcomes than programs that did not use these practices (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). A SAFE program is:
- *Sequenced.* Uses a connected and coordinated set of activities to achieve its skill development objectives.

- *Active.* Uses dynamic, varied forms of learning that are engaging and allow students opportunities to practice and learn new skills in real-world situations.
- *Focused.* Has at least one component devoted to developing personal or social skills.
- *Explicit.* Is based on a theoretical model of social and emotional learning and targets specific SEL skills rather than positive development in general.

Teacher training and technical assistance are necessary. Implementation of high-quality SEL programs requires teacher training and professional development (CASEL, 2012). Teachers who receive training are more likely to teach all the lessons (full dosage) and deliver content and strategies as intended by the developers (high fidelity). Research suggests that high-quality training and technical assistance for teachers implementing social and emotional learning include the following elements (CASEL, 2012; Han, 2014):

- Materials such as standardized manuals, lesson plans, and supplies.
- A standard, replicable training format and a team of qualified trainers.
- Initial training on the program's theory, design, activities, and expected outcomes.
- Ongoing training and support, including follow-up training, coaching, feedback, and implementation support.
- A coherent and systematic approach (based on a framework or theoretical model).
- Grounding in research-based practices (considering contextual needs, receiving feedback).
- Support for capacity building in early childhood teachers (for example, reflection, broadening of social and cultural perspectives).

An effective social and emotional learning program meets the specific needs of a classroom, school, or district

SEL programs vary considerably in their theoretical foundation, design, supports, and activities. Adopting classroom SEL programs and practices is the first step in making student social and emotional competence a priority. Using an evidence-based SEL program offers many advantages, including a cohesive theoretical framework, supportive materials and prepared activities, and guidance for implementation, assessment, and evaluation (CASEL, 2012).

An awareness of the effective components of social and emotional learning is important when selecting an SEL program for a school or district. However, it may not always be obvious what these components are. The Collaborative for Academic, Social, and Emotional Learning (CASEL) has published a rating system of 23 programs that meet a number of quality and effectiveness criteria (CASEL, 2012). The guide provides a starting point when searching for effective and appropriate programs.

The following steps may also help a planning team select an evidence-based SEL program (Merrell & Gueldner, 2010):

- Identify the needs of your school.
- Identify the short- and long-term goals for your students.
- Assess the programs that are being used in your school.
- Review evidence-based SEL programs that seem to best match your needs and goals.
- Identify the resources needed to sustain program implementation.

Other considerations may also affect program choice (Macklem, 2008):

- Attitudes of school staff.
- Time available.
- Competing interests.
- Funding for training.
- Availability of staff for monitoring the program and determining outcomes.

- Administrative support.
- Community and parental support.
- School values.

Finally, answering the following questions can help evaluate a program for appropriateness and feasibility—how well the program will meet a school's needs (Powell & Dunlap, 2009):
- Are the stated purpose of the program and the outcomes obtained in evaluation studies congruent with the needs of your school?
- Are the theoretical basis, content, and methods of the program a good fit with the needs of your school?
- Has the program been shown to be effective with a population of students/parents similar to those with whom you will use it?

Additional resources for educators and policymakers on selecting an SEL program are listed in appendix C.

An effective social and emotional learning program is aligned across grade levels and contexts

Research shows that school programs are more effective within a framework of support and implementation that extends beyond the classroom (Durlak et al., 2011). One way to conceptualize this framework is to consider a system of vertical and horizontal alignment (Jones & Bouffard, 2012):
- Vertical alignment refers to developing SEL skills across grade levels. This kind of alignment requires common terminology and goals, as well as the establishment of developmentally continuous benchmarks for social and emotional learning from preschool through high school. Skills learned in the early grades should provide the foundation for skills taught in later grades. An example of vertically aligned social and emotional standards is presented in table 1.

Table 1. Example of vertical alignment using the Illinois social and emotional learning standards to show learning standards and benchmarks for different grade levels

Learning standard	Preschool	Early elementary	Late elementary	Middle/junior high	Early high school	Late high school
Identify and manage one's emotions and behaviors.	Recognize and label basic emotions.	Recognize and accurately label emotions and how they are linked to behavior.	Describe a range of emotions and the situations that cause them.	Analyze factors that create stress or motivate successful performance.	Analyze how thoughts and emotions affect decision making and responsible behavior.	Evaluate how expressing one's emotions in different situations affects others.
Use communication and social skills to interact effectively with others.	Interact verbally and nonverbally with other children.	Identify ways to work and play well with others.	Describe approaches for making and keeping friends.	Analyze ways to establish positive relationships with others.	Evaluate effects of requesting support from and providing support to others.	Evaluate the application of communication and social skills in daily interactions with peers, teachers, and families.
Begin to consider ethical, safety, and societal factors in making decisions.	Participate in discussions about why rules exist.	Explain why unprovoked acts that hurt others are wrong.	Demonstrate the ability to respect the rights of self and others.	Evaluate how honesty, respect, fairness, and compassion enable one to take the needs of others into account when making decisions.	Demonstrate personal responsibility in making ethical decisions.	Apply ethical reasoning to evaluate societal practices.

Source: Adapted from Zinsser, Weissberg, & Dusenbury (2013).

- Horizontal alignment refers to developing SEL skills across contexts, connecting SEL messages, supports, and opportunities for practice across students' multiple environments: classrooms, playgrounds, lunchrooms, school buses, and even students' homes. With horizontal alignment, the SEL skills learned in the classroom are practiced in various settings and become part of a daily routine.

An effective social and emotional learning program has sustainable school and community supports

Experts recommend fully integrating SEL programs into school practices and creating a sustainable system involving teachers, administrators, families, and the community (box 2). With such supports in place, social and emotional learning becomes business as usual, embedded into the culture of the school and community.

Implications of the review findings

Evidence-based SEL programs vary considerably in their theoretical foundations, designs, supports, and activities. However, a recent surge in SEL research has begun to illuminate the core components that work across programs. Research shows that effective SEL programs reinforce and support learning through classroom activities. SEL program activities build on one another, are implemented regularly and consistently, keep students engaged, and give students dedicated time to practice social and emotional skills. Moreover, teacher training and technical assistance are essential components of effective SEL programs. While selecting an SEL program is a challenging task for many state and local education agencies, an abundance of highly useful, practice-oriented resources are available to make the process achievable and sustainable.

Box 2. Going to scale with social and emotional learning programming

To create sustainable school and community supports for social and emotional learning (SEL), experts recommend that SEL programming:
- Include strategies for the entire student body in order to reinforce social and emotional learning not only in the classroom but also on the playground, in the cafeteria, and in hallways.
- Begin early in a student's development and ideally span preschool through grade 12. Programs shorter than one year should at least include booster sessions at several intervals after regular program completion.
- Be part of organized SEL efforts coordinated across multiple grade levels and receiving ongoing district support.
- Involve broad parent and community involvement in program planning, implementation, and evaluation. Parents can reinforce social and emotional learning at home.
- Be embedded in curriculum and instruction and linked to academics. This not only provides more opportunities to practice but makes uptake and feasibility more likely.
- Address social and emotional learning in multiple settings throughout the day and in and out of the classroom (for example, school, home, and community).
- Be tailored culturally to all student groups, including racial/ethnic minority students.
- Undergo continuous monitoring and evaluation.
- Provide school staff opportunities to learn and practice the same emotional and interpersonal skills they are helping students develop.
- Be well designed and properly implemented, with high-quality training and other supports to implement the SEL curriculum with fidelity.

Source: CASEL, 2008; CASEL, 2012; Barbarasch & Elias, 2009; Denham & Zinsser, 2014; Durlak et al., 2011; Garner, Mahatmya, Brown, & Vesely, 2014; Heller, 2013; January, Casey, & Paulson, 2011; Merrell & Gueldner, 2010; Weare & Nind, 2011.

Implications of the social and emotional learning report series

Decades of SEL research have begun to answer some of the questions educators, researchers, and policy-makers have asked about what really works in supporting students' overall development, keeping them engaged in school, and giving them the knowledge and skills to thrive from childhood through adulthood. However, although great strides have been made, some SEL research areas remain largely uncharted. This SEL report series identified five areas where additional focus would strengthen knowledge about evidence-based practices:

- Some research syntheses have identified general quality issues with the literature base, such as reliance only on self-reports or lack of data on the reliability and validity of measures (Durlak et al., 2011; Humphrey, 2013).
- Only a small number of studies report data on implementation, and even fewer connect implementation data with outcomes.
- Few studies report on how outcomes differ by social and cultural factors or by gender.
- SEL assessments have been designed and used mostly for a homogeneous White population, and rarely have efforts been made to assess the applicability of the instruments to students in different racial/ethnic or language groups.
- Finally, because schools and teachers implement social and emotional learning within real-world circumstances and constraints, components must sometimes be adapted to fit specific requirements. More research is needed on exactly which components of individual programs can be adapted without jeopardizing program outcomes and which need to be implemented exactly as prescribed.

The promise of social and emotional learning as an educational approach is only as strong as the methods used to understand and develop it. Attention to these key research gaps will provide better evidence and therefore better services to support students and families.

Appendix A. Literature search methodology and coding results

This appendix describes the methodology for the systematic review of the literature on social and emotional learning (SEL) that formed the base of the four reports in the series.

Literature search and retrieval

A systematic literature search and review strategy was used to identify and synthesize the findings of research reviews on social and emotional learning for students ages 3–8. The first phase involved a systematic keyword search in the major academic search engines and a prescreening of the titles and abstracts of recent SEL literature using a set of screening criteria. A web keyword search was conducted using the Google search engine to collect any sources not previously identified through the database search. The resource pages of well-known organizations working in the SEL field were also scanned. Scans of the reference lists of critical sources supplemented the keyword searches and captured literature missed by the other search methods. The review team closed the search by asking members of the Early Childhood Education Research Alliance (ECERA) and subject matter experts to nominate SEL organizations and publications they found useful. Details for each of these search methods appear below. A second phase was a screening to confirm that the research syntheses initially identified as relevant met the inclusion criteria.

The third phase was coding the resulting set of 83 relevant research syntheses for review-specific parameters, such as research question, publication type, peer review status, and relevance to subpopulations and contexts. The research syntheses were then categorized by research question, target population, and context. Finally, the review team summarized the syntheses and highlighted salient themes across studies.

The literature search and retrieval included complementary search strategies to capture the full breadth of the SEL literature. To qualify for full coding, a source had to meet each of the following inclusion criteria:
- *Topic.* The source must address school-based SEL programs, strategies, or policies and at least one of the four research questions:[3]
  - What are the characteristics of effective SEL programs?
  - What implementation strategies and state and district policies support SEL programming?
  - What teacher and classroom strategies contribute to social and emotional learning?
  - What outcomes have SEL programs demonstrated among different student populations and settings?
- *Population.* The population discussed must include U.S. students ages 3–8 from the general school population as the ultimate beneficiaries of the SEL programs, strategies, or policies.
- *Source type.* The source must qualify as a secondary review source (not a primary, empirical study) such as a meta-analysis, systematic literature review, research synthesis, or evidence-based practice guide.
- *Publication date.* The source must have a publication date no earlier than 2003 (later revised to 2008; see below).

The literature search laid the foundation for a series of four reports based on syntheses of current knowledge of social and emotional learning. The aim was not to conduct an exhaustive search and analysis of primary empirical studies, which has already been done (see Durlak et al., 2011 or CASEL, 2012), but rather to summarize research reviews and practice-oriented sources (for example, meta-analyses, literature reviews, and practice guides) to provide a comprehensive yet targeted overview of the literature for each research question.

Electronic publication database search. The review team used EBSCO Scholar to search the following research databases: PsycINFO, PsycEXTRA, PsycARTICLES, PsycBOOKS, Academic Search Complete, Education Research Complete, SocINDEX, Child Development and Adolescent Studies, MEDLINE, eBook collection, Education Resources Information Center (ERIC), Social Sciences Full Text, Psychology and Behavioral Sciences Collection, and Social Work Abstracts. The search was then divided by terms for preschool and elementary school populations, using "AND" operands targeted for SEL domains and methods.

For the literature retrieved from EBSCO, the review team referenced the inclusion criteria relevant to the content, population, and publication dates of the sources and prescreened the titles and abstracts of articles returned as "hits" to the keyword searches. Sample keyword combinations, qualifiers, and numbers of articles retrieved as relevant based on the inclusion criteria are shown in table A1.

The review team identified 254 articles as initially relevant from the electronic database search.

Web keyword search. The review team used the keyword combinations from the electronic database search that resulted in the greatest number of relevant hits for a web keyword search using the Google search engine. The search revealed 26 additional relevant pieces of SEL literature published in books, conference proceedings, research reports, and online publications.

The two keyword searches resulted in 280 sources that met the inclusion criteria based on titles and abstracts. When the texts were screened, 152 (54 percent) were dropped because they failed to meet at least one of the inclusion criteria. The most common reasons for exclusion were failing to adequately address the topic of social and emotional learning (25 percent) or addressing an incorrect target population (17 percent), usually students with disabilities or pre-existing behavior problems. Excluding these sources left 128 sources that met the full criteria for inclusion and proceeded to full coding and review.

Supplemental searches. Supplemental searches were conducted of organization websites and the reference lists of key sources. ECERA members and subject matter experts were asked to provide feedback on the initial list. The supplemental searches added 27 sources to the review pool.

Table A1. Sample of keyword combinations, qualifiers, and results for the systematic review of the literature on social and emotional learning

Query	Qualifiers	Number of hits	Number of articles retrieved
(Preschool*) AND (emotion*) AND (learning)	Published date from: 2003–14; Language: English; Population Group: Humans; Search in: Abstract Only	385	12
(Child*) AND (SEL)	Published date from: 2003–14; Language: English; Population Group: Humans	212	45
(Elementary) AND ("executive function"*) AND (learning)	Published date from: 2003–14; Language: English; Population Group: Humans	76	7
(Elementary) AND (behavior*) AND (classroom)	Published date from: 2003–14; Language: English; Population Group: Humans; Search in: Abstract Only; Ages: Childhood, school age, preschool	457	8

Note: The asterisk in the search term instructed the search engine to look for all instances of the root. For example, the root "child" would include the terms "children," "childcare," "child care," and so on.

Source: Authors' literature review as described in this appendix for literature published in 2003–15.

Revision of the range of publication dates. The review team initially included sources with a publication date of 2003 or later. However, because the review focused on secondary sources, including such a wide date span resulted in unnecessary duplication of studies (more recent sources tended to review and build on those published earlier). Therefore, the publication date criteria were revised to include only sources published in 2008 or later. Excluding sources published prior to 2008 left 83 sources to proceed to full coding and review.

Coding and analysis

Developing a review protocol was the first step in systematically reviewing and synthesizing the SEL literature. To guide this effort, the review team tailored the publicly available literature review and search procedures and review protocols of the U.S. Department of Education's What Works Clearinghouse to the needs of this review. Considerations for the review protocol included key definitions, inclusion criteria, and review-specific parameters such as characteristics of sources, populations, settings, and outcomes. Sources that met all initial inclusion criteria were then coded for the following:

- *Context.* Multiple contexts—the levels at which the program, strategy, or policy aims to create change to affect the target population of students—could be selected, including parent/family; home environment;[4] child-focused; classroom environment; child development/teaching staff; program management/school administration; other SEL providers; operations at the district, state, or federal level; and other.
- *Publication type.* Choices for publication type included journal article, report (with subcategories for government—federal, state, or local; nongovernmental organization; public-private partnership; and other), book or book chapter, dissertation, conference paper, working paper, or other.
- *Peer review.* It is becoming more common for respected research organizations, especially those in applied fields like education, to publish reports of their studies in online libraries rather than in academic journals that use a traditional peer review process. Accordingly, the review team used a tiered coding scheme for the peer review criterion rather than simply coding yes or no. Higher scores were assigned for more rigorous forms of peer review—3 for scholarly journal article, 2 for edited book/book chapter or periodical, 1 for report with some indication of internal or external review, and 0 for no indication of review or status unknown.
- *Methodology.* The methodology applied in the source was coded as meta-analysis, systematic literature review/research synthesis, narrative literature review/research synthesis, practice guide, policy paper, or other. Methodology was then recoded by level of rigor—3 for meta-analysis, 2 for systematic literature review/research synthesis, and 1 for other *narrative literature review/research synthesis; practice guide, policy paper, other).
- *Sum of peer review and methodology.* Peer review and methodological rigor are often used to assess the strength of the evidence. A combined score representing the sum of coding results for the peer review and methodology criteria was used as the strength of evidence measure.[5]
- *Ages/grades served.* Reviewers could select preK, elementary, both, or not specified.
- *Intervention settings.* Settings where social and emotional learning may be implemented include center-based childcare/preK, home daycare/family daycare, elementary/primary school, rural classrooms, urban classrooms, and mixed-age classrooms.
- *Relevant research questions.* Sources were coded by one or more of the four research questions.

Coder training consisted of an iterative process designed to pilot test the review protocol and establish coder reliability. Two experts in education research participated in training sessions on the review protocol and sample coding. In two pilot coding phases, these two coders and the principal investigator coded the same five sources and then discussed discrepancies, clarified questions, and ultimately reconciled and revised the coding forms. After the second pilot phase, the review team used a consensus coding model in

which pairs of coders read and rated each study independently, then met with the principal investigator to resolve any disagreements.

Once the studies were coded, a synthesis matrix was developed for each research question. The content that was coded for each research question was pulled into the matrix, along with any relevant resources in the texts. A narrative synthesis was generated for each research question, which involved identifying and summarizing similarities and differences across sources. Through this process, the review team identified areas of maximum consensus in the research findings and practical recommendations.

Coding results

The coding results for the 83 sources that met all study inclusion criteria appear in table A2.

Publication type. Sources were most commonly books or book chapters (28), followed by journal articles (27), and reports (20). A majority of the reports collected (11) were authored by nongovernmental entities, such as research organizations and universities, or by public-private partnerships (8). One report was authored by a federal government agency. None of the sources was a state, local, or school district report, although some of these sources were included in the resources section in the report series.

Peer review status. A tiered coding scheme was used to code for peer review status. Of the 83 sources, 25 were published in peer-reviewed journals and 32 in edited books or periodicals. An additional 19 sources were mostly reports published online by research organizations with some internal or external review by a board or expert consultants. Finally, for 7 sources, there was no indication of peer review, or the status was unknown.

Methodology. A majority of sources (67) were categorized as narrative literature reviews/research syntheses, practice guides, or policy papers. The review pool also included 6 meta-analyses and 10 systematic reviews.

Strength of evidence measure. Scores for peer review status and methodology were summed to provide a high-level measure of the strength of evidence for each review. The results approximate a normal curve, with an average score of 3.17.

Ages/grades served. Each source was coded by relevant age group. While some sources focused on social and emotional learning for elementary school–age children (21) and others on social and emotional learning for preschool populations (14), a majority of sources covered both age and grade groups (48).

Context. The context was defined as the level at which the program/strategy/policy discussed by the source aims to create change in the target population. For instance, a source that discussed class routines that promote social and emotional learning would be coded as classroom, while a source that discussed state social and emotional learning standards would be coded as operations/district/state. Coders could select multiple contexts, and many sources discussed multiple contexts. Most sources discussed SEL programs or strategies designed to affect teachers' behavior (60), followed by the classroom environment (44). Strategies for school administrators (principals and early childhood program directors), student strategies, and school-wide strategies were less common, but each represented slightly less than half the source pool.

Intervention setting. Of the sources that identified an intervention setting, 21 discussed SEL programs, strategies, or outcomes for students in urban environments, while 9 pertained to students in rural environments. Other settings (3) included home/family daycare and mixed-age classrooms.

Table A2. Characteristics of the 83 social and emotional learning sources reviewed

Topic	Description	Number	Percent
Publication type	Book or chapter	28	34
	Journal article	27	33
	Report	20	24
	Working paper	2	2
	Other	6	7
Peer review	Edited book/book chapter/periodical	32	39
	Scholarly journal article	25	30
	Report with internal/external review	19	23
	No/status unknown	7	8
Methodology	Narrative literature review/research synthesis, practice guide, policy paper, other	67	81
	Systematic literature review/research synthesis	10	12
	Meta-analysis	6	7
Strength of evidence measure[a]	6	5	6
	5	2	2
	4	21	25
	3	35	42
	2	14	17
	1	6	7
Ages/grades served	Elementary school	21	25
	Preschool	14	17
	Both	48	58
Context	Teacher	60	72
	Classroom	44	53
	Administration	38	46
	School	37	45
	Child	36	43
	Operations/district/state	31	37
	Parent/family	18	22
	Home environment	6	7
	Other providers	19	23
Intervention setting	Urban classrooms	21	25
	Rural classrooms	9	11
	Other	3	4
Research question	What are the characteristics of effective SEL programs?	65	78
	What implementation strategies and state and district policies support SEL programming?	64	77
	What teacher and classroom strategies contribute to social and emotional learning?	22	27
	What outcomes have SEL programs demonstrated among different student populations and settings?	29	35

a. Sum of the scores for peer review status and methodology. A high number means the source had rigorous peer review and strong methodology.

Source: Authors' analysis based on literature published between 2008 and 2015 and identified in the review.

Relevance to research question. Each source was coded for relevance to the four research questions. (Sources could address multiple research questions.) Many sources provided content relevant to the research questions on characteristics of effective programs and strategies (65) and on implementation strategies (56).

The results for each research question were summarized in the related report in this series: characteristics of effective SEL programs (part 1), implementation strategies and state and district policies that support SEL programming (part 2), teacher and classroom strategies that contribute to social and emotional learning (part 3), and outcomes of social and emotional learning among different child populations and settings (part 4).

Appendix B. Publications included in the review

This appendix lists the publications used in the review and maps each to the relevant research question:
- What are the characteristics of effective SEL programs?
- What implementation strategies and state and district policies support SEL programming?
- What teacher and classroom strategies contribute to social and emotional learning?
- What outcomes have SEL programs demonstrated among different student populations and settings?

Table B1. Relevant research question for each literature source

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Albright, M. I., Weissberg, R. P., & Dusenbury, L. A. (2011). *School-family partnership strategies to enhance children's social, emotional, and academic growth*. Retrieved from http://www.casel.org/wp-content/uploads/2016/06/school-family-partnership-strategies-to-enhance-childrens-social-emotional-and-academic-growth.pdf.	✔	✔	✔	
Barbarasch, B., & Elias, M. J. (2009). Fostering social competence in schools. In R. W. Christner & R. B. Mennuti (Eds.), *School-based mental health: A practitioner's guide to comparative practices* (pp. 125–148). New York, NY: Routledge/Taylor & Francis Group.	✔	✔		
Barnett, D. W., & Hawkins, R. O. (2009). Behavioral interventions for preschoolers. In A. Akin-Little, S. G. Little, M. A. Bray, and T. J. Kehle (Eds.). *Behavioral Interventions in Schools: Evidence-Based Positive Strategies. School Psychology Series.* (pp. 297–310). Washington, DC: APA Books.	✔		✔	✔
Bierman, K. L., & Torres, M. (2015). Promoting the development of executive functions through early education and prevention programs. In J. A. Griffin, L. S. Freund, & P. McCardle (Eds.). *Executive function in preschool age children: Integrating measurement, neurodevelopment and translational research.* Washington, DC: American Psychological Association.	✔			
Bohanon, H., & Wu, J. (2012). Integration of social, behavioral, and academic initiatives—Part 1. *Communique, 41*(2), 4–6. Retrieved from http://ecommons.luc.edu/education_facpubs/28/.	✔	✔		
Bronson, M. B. (2009). Recognizing and supporting the development of self-regulation in young children. In E. L. Essa, & M. M. Burnham (Eds.), *Informing our practice: Useful research on young children's development* (pp. 50–58). Washington, DC: National Association for the Education of Young Children.	✔			
Burke, A., & Hawkins, K. (2012). Mindfulness in education. *Encounter, 25*(4), 36–40.	✔			

Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Center for Health and Health Care in Schools (2014). The impact of school-connected behavioral and emotional health interventions on student academic performance: An annotated bibliography of research literature. Miliken Institute School of Public Health at George Washington University. Retrieved from http://www.healthinschools.org/wp-content/uploads/2016/10/CHHCS_2014-Annotated-Bibliography-FINAL1.pdf.	✔			
Collaborative for Academic, Social, and Emotional Learning, (2008). *Connecting social and emotional learning with mental health.* Washington, DC: National Center for Mental Health Promotion and Youth Violence Prevention. Retrieved from http://www.promoteprevent.org/sites/www.promoteprevent.org/files/resources/ConnectingSEL_2.pdf.	✔	✔		
Collaborative for Academic, Social, and Emotional Learning. (2008). *Social and emotional learning (SEL) and student benefits: Implications for the Safe Schools/Healthy Students Core Elements.* Washington, DC: National Center for Mental Health Promotion and Youth Violence Prevention. http://eric.ed.gov/?id=ED505369.	✔	✔		
Collaborative for Academic, Social, and Emotional Learning. (2012). *Effective social and emotional learning programs.* Retrieved from http://static.squarespace.com/static/513f79f9e4b05ce7b70e9673/t/526a220de4b00a92c90436ba/1382687245993/2013-casel-guide.pdf.	✔	✔	✔	
Chien, N., Harbin, V., Goldhagen, S., Lippman, L., & Walker, K. E. (2012). Encouraging the development of key life skills in elementary school-age children: A literature review and recommendations to the Tauck Family Foundation (Publication No. 2012–28). Retrieved from http://www.childtrends.org/wp-content/uploads/2013/06/2012–28KeyLifeSkills.pdf.	✔			
Child Trends (2014). *Measuring elementary school students' social and emotional skills: Providing educators with tools to measure and monitor social and emotional skills that lead to academic success* (Publication No. 2014–37). Retrieved from http://www.childtrends.org/wp-content/uploads/2014/08/2014-37CombinedMeasuresApproachandTablepdf1.pdf.	✔			
Cooper, J. L., Masi, R., & Vick, J. (2009). *Social-emotional development in early childhood: What every policymaker should know.* National Center for Children in Poverty. Retrieved from http://www.nccp.org/publications/pdf/text_882.pdf.	✔	✔		✔
Denham, S., Bassett, H., & Zinsser, K. (2012). Early childhood teachers as socializers of young children's emotional competence. *Early Childhood Education Journal, 40*(3), 137–143.	✔	✔	✔	

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Denham, S. A., & Brown, C. (2010). "Plays nice with others": Social-emotional learning and academic success. *Early Education and Development, 21*(5), 652–680.	✔			
Denham, S. A., Ji, P., & Hamre, B. (2010). *Compendium of preschool through elementary school social-emotional learning and associated assessment measures.* Chicago, IL: Collaborative for Academic, Social, and Emotional Learning and Social and Emotional Learning Research Group, University of Illinois at Chicago. Retrieved from http://www.casel.org/wp-content/ uploads/2016/06/compendium-of-preschool-through -elementary-school-social-emotional-learning-and -associated-assessment-measures.pdf.		✔		
Denham, S., & Zinsser, K. M. (2014). Social and emotional learning during early childhood. In T. Gullotta & M. Bloom (Eds.), *Encyclopedia of Primary Prevention and Health Promotion* (2nd ed.) (pp. 925–935). New York, NY: Kluwer Academic/Plenum Publishers.	✔	✔		
Diamond, K. E., Hong, S., & Baroody, A. E. (2008). Promoting young children's social competence in early childhood programs. In W. H. Brown, S. L. Odom, & S. R. McConnell (Eds.), *Social competence of young children: Risk, disability, and intervention.* (pp. 165–183). Baltimore, MD: Brookes Publishing.	✔			✔
Diamond, A., & Lee, K. (2011). Interventions shown to aid executive function development in children 4–12 years old. *Science, 333*, 959–964.	✔			
Diekstra, R. F. W. (2008). Effectiveness of school-based social and emotional education programmes worldwide. In C. Clouder, J. Argos, M. Pilar Ezquerra, L. Faria, J. M. Gidley, M. Kokkonen, et al. (Eds.) *Social and emotional education: An international analysis* (pp. 255–312). Santender, Spain: Fundacion Marcelino Botin.	✔	✔		
Domitrovich, C. E., Moore, J. E., Thompson, R. A., & the CASEL Preschool to Elementary School Social and Emotional Learning Assessment Workgroup. (2012). Interventions that promote social-emotional learning in young children. In R. Pianta (Ed.), *Handbook of Early Childhood Education* (pp. 393–415). New York, NY: Guilford Press.	✔	✔	✔	✔
Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405–432. http://eric.ed.gov/?id=EJ927868.	✔	✔	✔	✔

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Dusebury, L., Weissberg, R. P., Goren, P., & Domitrovich, C. (2014). *State standards to advance social and emotional learning: Findings from CASEL's state scan of social and emotional learning standards, preschool through high school.* Chicago, IL: Collaborative for Academic, Social, and Emotional Learning and Social and Emotional Learning Research Group, University of Illinois at Chicago. Retrieved from http://static.squarespace.com/static/513f79f9e4b05ce7b70e9673/t/52f95691e4b0a41caba778b8/1392072337661/casel-brief-on-state-standards-january-2014.pdf.		✔		
Epstein, M., Atkins, M., Cullinan, D., Kutash, K., & Weaver, R. (2008). *Reducing behavior problems in the elementary school classroom: A practice guide* (NCEE No. 2008–012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/PracticeGuide/4.	✔	✔		✔
Farahmand, F. K., Grant, K. E., Polo, A. J., & Duffy, S. N. (2011). School-based mental health and behavioral programs for low-income, urban youth: A systematic and meta-analytic review. *Clinical Psychology: Science and Practice, 18*(4), 372–390.	✔			✔
Figueroa-Sánchez, M. (2008). Building emotional literacy: Groundwork to early learning. *Childhood Education, 84*(5), 301–304.	✔	✔	✔	
Garner, P., Mahatmya, D., Brown, E., & Vesely, C. (2014). Promoting desirable outcomes among culturally and ethnically diverse children in social emotional learning programs: A multilevel heuristic model. *Educational Psychology Review, 26*(1), 165–189. http://eric.ed.gov/?id=EJ1036769.		✔		✔
Gordon, R., Ji, P., Mulhall, P., Shaw, B., & Weissberg, R. P. (2011). Social and emotional learning for Illinois students: Policy, practice and progress. In *The Illinois Report: 2011* (pp. 68–83). Urbana, IL: Institute for Government and Public Affairs. Retrieved from http://static.squarespace.com/static/513f79f9e4b05ce7b70e9673/t/526a24fce4b0dda0159b1a88/1382687996949/social-and-emotional-learning-for-illinois-students-policy-practice-and-progress.pdf.		✔		
Han, H. (2014). Supporting early childhood teachers to promote children's social competence: Components for best professional development practices. *Early Childhood Education Journal, 42*(3), 171–179.	✔	✔		✔
Heller, R. (2013). Social-emotional learning. *From Practice to Policy, 1*(1), 1–8. Retrieved from http://www.nasbe.org/wp-content/uploads/FPP-Social-Emotional-Learning.pdf.		✔		

Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Honigsfeld, A., & Lupeke, S. (2010). Emotional reactions. *Language Magazine, 9*(5), 18–22.				✔
Hromek, R., & Roffey, S. (2009). Promoting social and emotional learning with games: "It's fun and we learn things." *Simulation & Gaming, 40*(5), 626–644.	✔	✔	✔	
Huitt, W. G., & Dawson, C. (2011). Social development: Why it is important and how to impact it. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved from http://www.edpsycinteractive.org/papers/socdev.pdf	✔	✔		
Humphrey, N. (2013). *Social and emotional learning: A critical appraisal*. Washington, DC: Sage.	✔	✔		✔
Humphrey, N., Kalambouka, A., Wigelsworth, M., Lendrum, A., Deighton, J., & Wolpert, M. (2011). Measures of social and emotional skills for children and young people: A systematic review. *Educational & Psychological Measurement, 71*(4), 617–637.		✔		
Hyson, M., Whittaker, J. E. V., Zaslow, M., Leong, D., Bodrova, E., Hamre, B. K., & Smith, S. (2011). Measuring the quality of environmental supports for young children's social and emotional competence. In M. Zaslow, I. Martinez-Beck, K. Tout, & T. Halle (Eds.), *Quality measurement in early childhood settings* (pp. 105–134). Baltimore, MD: Paul H Brookes Publishing.		✔		✔
Isakson, E. A., Davidson, L. L., Higgins, L. B., & Cooper, J. L. (2011). *State-level indicators for social-emotional development: Building better systems*. National Center for Children in Poverty. Retrieved from http://www.nccp.org/publications/pdf/text_997.pdf.		✔		
January, A. M., Casey, R. J., & Paulson, D. (2011). A meta-analysis of classroom-wide interventions to build social skills: Do they work? *School Psychology Review, 40,* 242–256. http://eric.ed.gov/?id=EJ936452	✔			✔
Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research, 79*(1), 491–525.	✔	✔	✔	
Jones, S. M. Bailey, R., & Jacob, R. (2014). Social-emotional learning is essential to classroom management. *Phi Delta Kappan, 96*(2), 19–24.	✔	✔	✔	
Jones, S. M., & Bouffard, S. M. (2012). Social and emotional learning in schools: From programs to strategies (No. 1075–7031). *Social Policy* Report, 26(4). http://eric.ed.gov/?id=ED540203.	✔	✔		
Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional learning skills vital to learning. *Phi Delta Kappan, 94*(8), 62–65.	✔		✔	

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Kemple, K. M., & Ellis, S. M. (2009). Peer-related social competence in early childhood: Supporting interaction and relationships. In E. L. Essa, & M. M. Burnham (Eds.), *Informing our practice: Useful research on young children's development* (pp. 5–12). Washington, DC: National Association for the Education of Young Children.	✔		✔	✔
Kendziora, K., Weissberg, R. P., Ji, P., & Dusenbury, L. A. (2011). *Strategies for social and emotional learning: Preschool and elementary grade student learning standards and assessment.* Newton, MA: National Center for Mental Health Promotion and Youth Violence Prevention, Education Development Center, Inc. Retrieved from http://www.casel.org/wp-content/uploads/2016/06/stategies-assessment-SEL-EDC.pdf.		✔		
Kuebli, J., & Kusto, A. R. (2009). Young children's understanding of everyday emotions. In E. L. Essa, & M. M. Burnham (Eds.), *Informing our practice: Useful research on young children's development* (pp. 35–49). Washington, DC: National Association for the Education of Young Children.	✔			
Lantieri, L., & Nambiar, M. (2012). Cultivating the social, emotional, and inner lives of children and teachers. *Reclaiming Children and Youth, 21*(2), 27–33.	✔	✔		✔
Macklem, G. L. (2008). Emotion regulation in the classroom. In G. L. Macklem, *Practitioner's guide to emotion regulation in school-aged children* (pp. 63–81). New York, NY: Springer Science + Business Media.	✔	✔	✔	
Macklem, G. L. (2008). The intervention process: Strengthening interventions in the school setting. In G. L. Macklem, *Practitioner's guide to emotion regulation in school-aged children* (pp. 169–184). New York, NY: Springer Science + Business Media.	✔	✔		
Macklem, G. L. (2008). Strategies for parents and teachers: Strengthening skills for parents and teachers to help students regulate emotions. In G. L. Macklem, *Practitioner's guide to emotion regulation in school-aged children* (pp. 123–142). New York, NY: Springer Science + Business Media.		✔	✔	✔
Marchesi, A. G., & Cook, K. (2012). *Social and emotional learning as a catalyst for academic excellence.* Fairfax, VA: ICF International. http://eric.ed.gov/?id=ED532586.	✔	✔		
McCabe, P. C., & Altamura, M. (2011). Empirically valid strategies to improve social and emotional competence of preschool children. *Psychology in the Schools, 48*(5), 513–540. https://www.researchgate.net/profile/Paul_Mccabe5/publication/229983324_Empirically_valid_strategies_to_improve_social_and_emotional_competence_of_preschool_children/links/54e23c760cf2966637962bfe.pdf.	✔	✔	✔	✔

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Meiklejohn, J., et al. (2012). Integrating mindfulness training into K-12 education: Fostering the resilience of teachers and students. *Mindfulness*, *3*(4), 291–307. http://www.mindfulnesseveryday.info/pdf/ WhitePaperMindfulnessInEducation.pdf.	✔	✔		
Merrell, K. W., & Gueldner, B. A. (2010). Assessment and evaluation strategies in social and emotional learning. In K. W. Merrell, & B. A. Gueldner, *Social and emotional learning in the classroom: Promoting mental health and academic success* (pp. 123–147). New York, NY: Guilford.		✔		
Merrell, K. W., & Gueldner, B. A. (2010). The essentials of using social and emotional learning in the classroom. In K. W. Merrell, & B. A. Gueldner, *Social and emotional learning in the classroom: Promoting mental health and academic success* (pp. 48–67). New York, NY: Guilford.		✔		✔
Merrell, K. W., & Gueldner, B. A. (2010). One size does not fit all: Adapting social and emotional learning for use in our multicultural world. In K. W. Merrell, & B. A. Gueldner, *Social and emotional learning in the classroom: Promoting mental health and academic success* (pp. 83–102). New York, NY: Guilford.		✔		✔
Merrell, K. W., & Gueldner, B. A. (2010). Social and emotional learning curricula: A review of selected programs. In K. W. Merrell, & B. A. Gueldner, *Social and emotional learning in the classroom: Promoting mental health and academic success* (pp. 23–47). New York, NY: Guilford.	✔	✔		
Merrell, K. W., & Gueldner, B. A. (2010). Social emotional learning: What it is, and what it can do for your students. In K. W. Merrell, & B. A. Gueldner, *Social and emotional learning in the classroom: Promoting mental health and academic success* (pp. 1–22). New York, NY: Guilford.	✔	✔		✔
Merrell, K. W., & Gueldner, B. A. (2010). Using social and emotional learning within school systems. In K. W. Merrell, & B. A. Gueldner, *Social and emotional learning in the classroom: Promoting mental health and academic success* (pp. 148–164). New York, NY: Guilford.		✔		
Meyers, A. B., & Hickey, A. M. (2014). Multilevel prospective dynamics in school-based social and emotional learning programs. *Journal of Cognitive Education & Psychology, 13*(2), 218–231.	✔	✔		

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Morris, P., Mattera, S. H., Castells, N., Bangser, M., Bierman, K., & Raver, C. C. (2014). *Impact findings from the Head Start Cares Demonstration: National evaluation of three approaches to improving preschoolers' social and emotional competence* (OPRE Report 2014–44). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. http://eric.ed.gov/?id=ED546649.	✔	✔		✔
Nadeem, E., Maslak, K., Chacko, A., & Hoagwood, K. E. (2010). Aligning research and policy on social-emotional and academic competence for young children. *Early Education and Development Special Issue: Overlaps Between Socio-Emotional and Academic Development, 21*(5), 765–779.	✔	✔		✔
Nissen, H., & Hawkins, C. J. (2008). Observing and supporting young children's social competence. *Dimensions of Early Childhood, 36*(3), 21–29.		✔		
O'Brien, M. U., & Resnik, H. (2009). The Illinois social and emotional learning (SEL) standards: Leading the way for school and student success. *Illinois Principals Association Practitioners Bulletin, 16*(7), 1–5. Retrieved from http://www.casel.org/wp-content/ uploads/2016/08/PDF-20-the-illinois-sel-standards- leading-the-way-for-school-and-student-success.pdf.	✔	✔		
Payton, J., et al. (2008). *The positive impact of social and emotional learning (SEL) for kindergarten to eighth-grade students: Findings from three scientific reviews.* Chicago, IL: Collaborative for Academic, Social, and Emotional Learning. http://eric.ed.gov/?id=ED505370.	✔	✔		✔
Powell, D., & Dunlap, G. (2009). *Evidence-based social-emotional curricula and intervention packages for children 0–5 years and their families (Roadmap to effective intervention practices).* Tampa, Florida: University of South Florida, Technical Assistance Center on Social Emotional Intervention for Young Children. Retrieved from http://challengingbehavior.fmhi.usf.edu/ do/resources/documents/roadmap_2.pdf.	✔	✔		✔
Raver, C. C. (2008, October). Promoting children's socio-emotional development in contexts of early intervention and care: A review of the impact of federally-funded research initiatives on young children's school readiness. Working paper prepared for A Working Meeting on Recent School Readiness Research: Guiding the Synthesis of Early Childhood Research. Washington, DC.	✔	✔	✔	
Sainato, D. M., Jung, S., Salmon, M. D., & Axe, J. B. (2008). Classroom influences on young children's emerging social competence. In W. H. Brown, S. L. Odom, & S. R. McConnell (Eds.*), Social competence of young children: Risk, disability, and intervention* (pp. 99–115). Baltimore, MD: Brookes Publishing.	✔		✔	✔

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Schonert-Reichl, K. (2011). Promoting empathy in school-aged children: Current approaches and implications for practice. In K. Nader (Ed.), *School rampage shootings and other youth disturbances: Early preventative interventions* (pp. 159–203). New York, NY: Routledge/Taylor & Francis Group. https://www.researchgate.net/profile/ Kimberly_Schonert-Reichl/publication/299566650_ Promoting_empathy_in_school-aged_children_ Current_approaches_and_implications_for_practice/ links/56ffc38d08aee995dde81820.pdf.	✔	✔	✔	✔
Sheridan, S. M., Clarke, B. L., & Ihlo, T. B. (2012). Promoting young children's mental health through early childhood consultation: Ecological advances and research needs. In R. Pianta (Ed.), *Handbook of Early Childhood Education* (pp. 435–454). New York, NY: Guilford Press.		✔		
Sklad, M., Diekstra, R., Ritter, M. D., Ben, J., & Gravesteijn, C. (2012). Effectiveness of school-based universal social, emotional, and behavioral programs: Do they enhance students' development in the area of skill, behavior, and adjustment? *Psychology in the Schools, 49*(9), 892–909. http://eric.ed.gov/?id=EJ990237.	✔	✔		
Smith, D. C. (2008). Empirically supported interventions in school settings: Fostering children's social and emotional competence. In L. L'Abate (Ed.), *Toward a science of clinical psychology: Laboratory evaluations and interventions* (pp. 133–146). Hauppauge, NY: Nova Science Publishers.	✔	✔		✔
Thompson, J. E., & Twibell, K. K. (2009). Teaching hearts and minds in early childhood classrooms: Curriculum for social and emotional development. In O. A. Barbarin & B. H. Wasik (Eds.), *Handbook of child development and early education: Research to practice* (pp. 199–222). New York, NY: Guilford Press.	✔		✔	
Van Velsor, P. (2009). School counselors as social-emotional learning consultants: Where do we begin? *Professional School Counseling, 13*(1), 50–58. http:// eric.ed.gov/?id=EJ880415.	✔	✔		✔
Vega, V. (2012). Social and emotional learning research review. *Edutopia.* Retrieved from http://www. edutopia.org/sel-research-learning-outcomes.	✔	✔		
Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools: What does the evidence say? *Health Promotion International, 26,* 29–69.	✔	✔		
Webster-Stratton, C., & Reid, J. (2008). Strengthening social and emotional competence in young children who are socioeconomically disadvantaged. In W. H. Brown, S. L. Odom, & S. R. McConnell (Eds.), *Social competence of young children: Risk, disability, and intervention* (pp. 185–203). Baltimore, MD: Brookes Publishing.	✔	✔		

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Table B1. Relevant research question for each literature source *(continued)*

Reference	Effective SEL programs	Implementation strategies/ State & district policies	Teacher & classroom strategies	Outcomes
Wehby, J. H., & Lane, K. L. (2009). Proactive instructional strategies for classroom management. In A. Akin-Little, S. G. Little, M. A. Bray, and T. J. Kehle (Eds.). *Behavioral interventions in schools: Evidence-based positive strategies* (pp. 141–56). Washington, DC: APA Books.	✔	✔		✔
Weissberg, R. P., & Cascarino, J. (2013). Academic learning+ social-emotional learning= national priority. *Phi Delta Kappan*, 95(2), 8–13.	✔	✔		
Whitted, K. S. (2011). Understanding how social and emotional skill deficits contribute to school failure. *Preventing School Failure, 55*(1), 10–16. http://eric.ed.gov/?id=EJ903733.	✔	✔	✔	
Yoder, N. (2014). *Teaching the whole child: Instructional practices that support social-emotional learning in three teacher evaluation frameworks.* Washington, DC: Center on Great Teachers and Leaders at American Institutes for Research. Retrieved from http://www.gtlcenter.org/sites/default/files/TeachingtheWholeChild.pdf.	✔	✔	✔	
Zinsser, K. M., Denham, S. A. & Curby, T. W. (*in press*). Being a social-emotional teacher. *Young Children*.	✔		✔	
Zinsser, K. M., Weissberg, R. P., & Dusenbury, L. (2013). *Aligning preschool through high school social and emotional learning standards: A critical and doable next step.* Chicago, Il: Collaborative for Academic, Social, and Emotional Learning. Retrieved from http://www.casel.org/wp-content/uploads/2016/06/Zinsseretalbriefonstatestandards-20131214.pdf.		✔		

Source: Authors' analysis based on literature published between 2008 and 2015 and identified in the review.

Appendix C. Additional resources for selecting a social and emotional learning program

This appendix is a compilation of resources for educators and policymakers on selecting a social and emotional learning (SEL) program. The resources include logic models, descriptions of evidence-based SEL programs, reviews of research studies on SEL programs, selection guidelines, and toolkits from publications and websites. Although table C1 is not an exhaustive list of resources on selecting an SEL program, it provides a starting point.

Table C1. Additional resources for selecting evidence-based social and emotional learning programs

Resource	Description
Blueprints Programs: http://www.blueprintsprograms.com/.	The Blueprints Programs website provides evidence-based resources on healthy youth development programs. It distinguishes between model and promising programs on the basis of independent judgments of the quality of evaluation research, sustained effects, and multiple site replications.
CASEL (Collaborative for Academic, Social, and Emotional Learning). (2008). *Social and Emotional Learning (SEL) and student benefits: Implications for the Safe Schools/Healthy Students Core Elements*. Washington, DC: National Center for Mental Health Promotion and Youth Violence Prevention. http://eric.ed.gov/?id=ED505369.	This CASEL brief includes a logic model on how evidence-based SEL programs work to produce greater student success in school and life.
CASEL (2012). *Effective social and emotional learning programs*. http://static.squarespace.com/static/513f79f9e4b05ce7b70e9673/t/526a220de4b00a92c90436ba/1382687245993/2013-casel-guide.pdf.	This CASEL guide to effective SEL programs summarizes objective information about the characteristics of nationally available, multiyear programs in a clear, easy-to-read *Consumer Reports*-like format.
The Center on the Social and Emotional Foundations for Early Learning, *How to Choose a Social-Emotional Curriculum* (How Do I Decide? Series of Guidelines). http://csefel.vanderbilt.edu/documents/dmg_choose_se_curriculum.pdf.	This guide from the Center on the Social and Emotional Foundations for Early Learning provides step-by-step recommendations on choosing an SEL curriculum. This includes recommendations for compiling a diverse team for decisionmaking, key questions to consider, and promoting buy-in and implementation fidelity.
Character.org: http://character.org/.	The website Character.org has tools, methods, and strategies for character education. These are provided for educators, students, parents, and the community.
Epstein, M., Atkins, M., Cullinan, D., Kutash, K., & Weaver, R. (2008). *Reducing behavior problems in the elementary school classroom: A practice guide* (NCEE 2008–012). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/PracticeGuide/4.	This IES practice guide provides evidence-based prevention and intervention strategies that promote positive student behavior. Recommendations for reducing problem behavior and evidence to support each recommendation are provided in table 2, with additional detail in the text. It also provides a checklist for carrying out each recommendation including detailed instructions for each step on each checklist with examples, important factors, and potential roadblocks.
McCabe, P. C., & Altamura, M. (2011). Empirically valid strategies to improve social and emotional competence of preschool children. *Psychology in the Schools, 48*(5), 513–540. https://www.researchgate.net/profile/Paul_Mccabe5/publication/229983324_Empirically_valid_strategies_to_improve_social_and_emotional_competence_of_preschool_children/links/54e23c760cf2966637962bfe.pdf.	This journal article provides a review of evidence-based SEL intervention programs. Table 2 summarizes interventions to improve social and emotional development of preschool children. The table includes the intervention name and description, ages of participants, and the research evidence on the efficacy of the intervention.
Meiklejohn, J., et al. (2012). Integrating mindfulness training into K–12 education: Fostering the resilience of teachers and students. *Mindfulness, 3*(4), 291–307. http://www.mindfulnesseveryday.info/pdf/WhitePaperMindfulnessInEducation.pdf.	This journal article reviews the research and curricula on mindfulness training in K-12. Table 1 provides a summary of a sample of mindfulness-based programs for students including program name, target age group, number of years in use, description of the program, and an overview of peer-reviewed research.

(continued)

Table C1. Additional resources for selecting evidence-based social and emotional learning programs *(continued)*

Resource	Description
National Registry of Evidenced-Based Programs and Practices: http://nrepp.samhsa.gov/01_landing.aspx.	The National Registry of Evidenced-Based Programs and Practices provides a searchable directory of interventions with SEL programs under the umbrella of mental health promotion. The registry was developed to help the public learn more about evidence-based interventions available for implementation.
Powell, D., & Dunlap, G. (2009). Evidence-based social-emotional curricula and intervention packages for children 0–5 years and their families (Roadmap to effective intervention practices). Tampa, FL: University of South Florida, Technical Assistance Center on Social Emotional Intervention for Young Children. http://challengingbehavior.fmhi.usf.edu/do/resources/documents/roadmap_2.pdf.	This report from the Technical Assistance Center on Social Emotional Intervention for Young Children is a synthesis of information on social and emotional curricula and interventions for children ages birth through 5. Table 1 provides information on social and emotional interventions and curricula, including the name of the intervention/curriculum, a description, purpose, target population, and delivery method. Table 2 provides research evidence for each intervention/curriculum, including ratings on nine efficacious adoption criteria, citations for the studies used, descriptions of the populations, and student outcomes.
Schonert-Reichl, K. (2011). Promoting empathy in school-aged children: Current approaches and implications for practice. In K. Nader (Ed.), *School rampage shootings and other youth disturbances: Early preventative interventions* (pp. 159–203). New York, NY: Routledge/Taylor & Francis Group. https://www.researchgate.net/profile/Kimberly_Schonert-Reichl/publication/299566650_Promoting_empathy_in_school-aged_children_Current_approaches_and_implications_for_practice/links/56ffc38d08aee995dde81820.pdf.	This book chapter describes seven universal, evidence-based classroom SEL programs that promote empathy and empathy-related constructs. Table 7.1 includes program name, developer/website, target age/grade group, main components of the program, and research findings (examples). The text describes the programs.
Six Seconds' Center for Social Emotional Learning: http://www.6seconds.org/education/.	The Six Seconds' Center for Social Emotional Learning conducts and disseminates research and best practices for social and emotional learning. The website includes the latest SEL research, best practices for implementation, education resources (such as assessment tools and SEL curriculum), and professional development resources.
Yoder, N. (2014). *Teaching the whole child: Instructional practices that support social-emotional learning in three teacher evaluation frameworks*. Washington, DC: Center on Great Teachers and Leaders at American Institutes for Research. http://www.gtlcenter.org/sites/default/files/TeachingtheWholeChild.pdf	This brief from the Center on Great Teachers and Leaders at American Institutes for Research identifies teaching practices that are related to social and emotional learning. Table 1 describes skills related to the five overarching SEL competencies.

Source: Authors' analysis based on literature identified in the review and other sources from 2008–15.

Notes

1. The goal of the literature search was to summarize research syntheses and identify useful resources for stakeholders. The aim was not to conduct an exhaustive search and analysis of original research studies, which has already been done.
2. Examples of programs are included for demonstration only. The mention of trade names, commercial products, or organizations in the description of SEL programs or the reporting of study findings does not imply endorsement by the U.S. Government.
3. The four research questions differ from the original questions that were developed with the research alliance. The original question What are the characteristics of effective SEL programs and strategies? was broken into two questions based on the literature search findings. The original questions What implementation strategies support SEL programming? and What state and district policies contribute to social and emotional learning? were combined to form one question.
4. Sources that discussed only parent/family or home interventions were excluded because the review focused on school-based social and emotional learning.
5. Because the purpose of this series of reports was to synthesize research reviews and practical resources in the field of social and emotional learning, not to conduct a systematic evidence review, more detailed analysis of the rigor or quality of individual sources was outside the scope of the project.

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