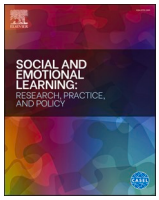
Social and Emotional Learning: Research, Practice, and Policy 4 (2024) 100068

Contents lists available at ScienceDirect

Social and Emotional Learning: Research, Practice, and Policy

journal homepage: www.journals.elsevier.com/social-and-emotional-learning-research-practice-and-policy



Promoting emotion understanding in middle childhood: A systematic review of school-based SEL programs☆,☆☆

Aneyn M. O'Grady [a,*], Sonali Nag [b]

[a] Global Partnership for Education, France
[b] University of Oxford Department of Education, United Kingdom

ARTICLE INFO

Keywords:
Social-emotional learning
Middle childhood
Emotion understanding
Systematic review
Conceptual mapping
Child development

ABSTRACT

Emotion understanding (EU) describes the ability to identify, interpret, and communicate about emotions, and is often targeted by social-emotional learning (SEL) programs. Still, the theoretical framing of SEL programs and their impact on specific areas of social-emotional development, such as EU, for different age bands is not always transparent. This systematic review synthesized emotion-focused content in SEL programs used in quantitative outcome studies in middle childhood to identify which EU components are targeted and examine content congruence with an integrated EU development model drawing on the Pons EU developmental model and the Crick and Dodge social-information processing (SIP) model that posits emotion identification as fundamental to social decision-making in childhood. A total of 38 programs for Grades 3 to 5 across 54 studies in 20 countries were reviewed. Program aims, lesson topics, and activities were extracted and mapped to a 10-component EU framework integrating the nine Pons model components ('recognition, external cause, reminder, desire, belief, hiding, regulation, mixed, morality') with one based on the SIP model ('decision/action'). At least 87 % of emotion-focused SEL content targeted EU components of recognition, regulation, and social decision-making. Findings indicate a good level of congruence between emotion-focused SEL program content and prevailing EU development models. Many programs emphasized the external causes of emotions, underscoring the importance of scenarios to explain emotions—discussed further in light of cross-cultural variation in emotion socialization. We encourage SEL intervention research to be more transparent in reporting SEL program content and activities to move toward causal explanations of program impact.

Understanding emotions is crucial to a child's positive development as it relates to their self-awareness and interpersonal behavior. Emotion understanding (EU) is defined as the ability to identify, interpret, and communicate about emotions, whether experienced by the self or by others (Castro et al., 2016; Denham, 1998; Harris, 1989). EU is integral to emotional competence (Saarni, 1999) as it encompasses an individual's conceptual knowledge of emotion, including understanding the nature of emotions, their potential causes/external triggers and associated physiological reactions, and the awareness of strategies to regulate emotions.

The EU developmental model by Pons et al. (2004) outlines a trajectory for EU from ages 3 to 11, identifying nine components that emerge in three's across three empirically-verified hierarchical levels: external, mental, and reflective. EU components within a level are intercorrelated. The external EU level begins at age 3 as children develop the ability to identify and label emotions ('recognition'), and to understand that emotions can be 'caused,' in that they result from external events ('external cause'), and are linked with memory ('reminder') in that a past emotional experience can be triggered by events in the present. The mental level also begins at age 3 with the 'desire' component that describes understanding how people can have different emotions tied to the same stimulus depending on their desires,

☆ This research was funded by the KindOx doctoral studentship. ☆☆ *Impact Statement:* This research evidence review is the first to identify which areas of emotion understanding are commonly targeted by 38 social-emotional learning (SEL) programs across 54 studies conducted in 20 countries to teach children about emotions in middle childhood—namely the abilities to identify and regulate emotions and to use them in decision-making for social situations. Findings confirm alignment between emotion-focused SEL program content and prevailing theoretical models of child development. The review encourages increased reporting of SEL program components to build an evidence base that explains how SEL program participation impacts on specific areas of child development across age bands.

* Correspondence to: 3 Rue Sainte-Elisabeth, 75003 Paris, France.
E-mail address: aneyn.m@gmail.com (A.M. O'Grady).

https://doi.org/10.1016/j.sel.2024.100068
Received 30 January 2024; Received in revised form 8 September 2024; Accepted 27 September 2024
Available online 30 September 2024

followed at age 4 by the understanding that emotions are tied to individual beliefs ('belief') and may not necessarily match an individual's outward facial expression ('hiding'). At age 6, the reflective level begins as children understand emotions can be regulated through different strategies ('regulation'), followed at age 8 by understanding one can experience simultaneous and even conflicting emotions ('mixed'), and that morally-laudable actions are tied to positive emotional states and morally-reprehensible actions, to negative emotional states ('morality'). Sprung et al. (2015) used the Pons EU model in their meta-analysis of child EU training studies finding robust effects on external (Hedge's g =.62), mental (Hedge's g =.31), and reflective EU levels (Hedge's g =.64).

Childhood EU has been linked to academic success (Denham et al., 2013; Franco et al., 2017; Ursache et al., 2020), especially through components of emotion recognition (Samos, 2018; Voltmer & von Salisch, 2017) and regulation (Djambazova-Popordanoska, 2016; Harrington et al., 2020; see Andrés et al., 2017 for review), and is understood to support a child's 'school readiness' (Miller et al., 2006) described as their ability to adjust to a school setting (Blair, 2002). White et al. (2021) found low ability to recognize emotional facial expressions at 8 and a half years was associated with low academic achievement at age 16, mediated by peer problems in middle childhood (ages 10 to 11). Additional longitudinal evidence suggests higher emotion regulation at ages 4 and 8 is tied to better academic achievement three years later (Wong et al., 2023), and that social-emotional competence (comprising EU) developed in childhood impacts on later outcomes, including postsecondary performance and adjustment as well as adult depression levels (Domitrovich et al., 2017). Consequently, how to support children's EU is important for positive development and academic success not just in childhood, but across the lifespan.

Promoting emotion understanding through social-emotional learning

Structured conversations about emotional states have been found to promote EU in preschool children (Gavazzi & Ornaghi, 2011) and in middle childhood (Ornaghi et al., 2014), involving explanatory discussions for emotions (e.g., Roy-Charland et al., 2021) and encouraged use of emotion vocabulary (e.g., Michaud et al., 2021). Social-emotional learning (SEL) programs adopt a teaching and learning approach that is also often discussion-based, and include content dedicated to emotions concerned with student abilities to identify, label, and regulate internal states (that can be emotional, cognitive, or physiological). Some SEL programs even focus entirely on emotions (e.g., RULER Feeling Words Curriculum, Brackett et al., 2012; EMOScope, Papieska et al., 2019).

When considering how to promote child EU, it is vital to consider the process of emotion socialization defined as the environmental influence shaping how emotions are expressed, regulated, experienced, and understood from childhood to adolescence (Zahn-Waxler, 2010). Education settings are an important environment for emotion socialization wherein children experience different emotional experiences and social situations (Valiente et al., 2020). Incorporating a SEL program within a school can be seen as a contribution to a child's emotion socialization process. Consequently, which EU components are emphasized in SEL programs will have an important influence on how children understand, experience, regulate, and express emotional states.

Emotion socialization has largely been researched in relation to caregiver practices, with cross-cultural differences being observed (Cho et al., 2022; Pintar Breen et al., 2018). There is also evidence of cross-cultural differences in the experience of emotions (Basnight-Brown & Altarriba, 2018) attributed to cultural differences in emotion regulation (De Leersnyder et al., 2013), as well as in emotion values and beliefs (Senft et al., 2022). Consequently, emotion-focused SEL content needs to be sensitive and adaptive to context-specific needs, including children's age and cultural background. This aligns with CASEL's updated definition of SEL—being "an integral part of education and human development" to promote equity and excellence (CASEL, 2020)—that emphasizes the importance of environment (including relationships and individual realities) in shaping learning and social-emotional development. This updated definition draws on a form of SEL advanced by Jagers et al. (2019) termed 'transformative SEL' that is anchored in justice-oriented citizenship and issues of culture, agency, identity, engagement, and belonging as they relate to the five core CASEL social-emotional competencies of: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The use of culturally responsive pedagogy within SEL can be beneficial to engage and support students (Jacob, 2021), also advanced in McCallops et al.'s (2019) systematic review, but can be better reinforced when SEL program content is consistently rooted in child development research.

The need for a developmental lens in SEL programs

Underlying an intervention's design and potential impact is a theory of change (or action) that outlines specific intervention components or activities as well as how they interact to result in a positive outcome (Fraser et al., 2009). Having a theory of change based on research-informed theoretical models (that is to say, empirically tested and verified) is both a rigorous approach for designing and implementing a program, as well as basis for explaining program impact (Funnell & Rogers, 2011). Knowledge of how children understand emotions at different age bands—the developmental trajectory for EU—is crucial to the design of interventions to develop child EU, such as SEL programs. Denham (2018) underscores the importance of a developmental lens for SEL to ensure tasks, content, and standards are age appropriate and to amplify impact. Consistency between SEL program components and developmental theory can ensure SEL programs are evidence-based, and also allow for research to be more effective in explaining SEL program impact on different social-emotional skills,[1] let alone different child participants, that can also inform program adaptations. Dussault and Thompson (2024) present a meaningful contribution to the SEL field with their proposed framework of fundamental themes in SEL to unify research on development, education, and mental health. Based on a narrative literature review, their hierarchy of social-emotional skills deconstructs SEL as a concept, narrowing down definitions across research fields, and constitutes a framework for the development of social-emotional skills that can be used by researchers, practitioners, and policy makers. Still, it is difficult to tease out emotion understanding as understood in child development research from within the social-emotional competencies identified by Dussault and Thompson (2024) of self-regulation, critical thinking, self-motivation, compassion, and collaboration, much like CASEL's core competencies cited earlier. Consequently, further analysis of SEL programs is needed to unpack how EU is addressed.

The present research

The present research is a systematic review that synthesizes SEL program content dedicated to promoting EU in middle childhood to continue on a trend within the SEL field: building a body of evidence informed by child development research to support causal explanations of SEL program impact on specific social-emotional outcomes. The content of SEL programs at the level of lesson topics, aims, and activities is rarely analyzed in systematic reviews as the focus is more geared toward highlighting impact, but incorporating focus on SEL program components can be beneficial to contextualizing evidence of program effects. Wigelsworth et al. (2021) set an important precedent with their

[1] Also referred to as 'social and emotional skills,' 'socio-emotional skills,' and '21st century skills' in the global literature.

review of SEL programs as they aimed to describe the relationship between SEL program theory and program components by identifying both instructional and practice-based core components for SEL, as has Zieher et al. (2024) in their focus on pedagogies for SEL. The online taxonomy project 'Explore SEL' (EASEL Lab, n.d.) should also be noted as part of an effort within the SEL field to clarify what is meant by social-emotional skill (as done by Dussault and Thompson cited earlier) as the project indicates content overlap among SEL programs and offers tools that help educators, researchers, and parents to identify and compare how programs target different SEL skill domains.

Different areas encompassed by SEL, such as EU, are often subsumed in composite assessments of overall social-emotional skill. Composite measures are more accurate in representing child social-emotional skill from a holistic perspective (McKown, 2017), but knowledge of how specific social-emotional skills are taught using SEL program content can allow researchers and practitioners to better understand evidence of SEL program impact. This review sets a precedent for research on EU promotion through SEL programs by synthesizing how emotions are taught across SEL programs in middle childhood and indicating program congruence with theoretical models of child EU development. At the time of this review's search in December 2020, several reviews and meta-analyses of intervention studies using universal school-based SEL programs for typically developing children were available. Durlak et al. (2011) reviewed programs for students in kindergarten through high school to assess impact on social-emotional skills, attitudes, behavior, and academic achievement. Sklad et al. (2012) focused on studies aimed at primary and secondary school students to assess impact on social-emotional skills, positive self-image, anti/prosocial behavior, substance abuse, mental health disorders, and academic achievement. Corcoran et al. (2018) reviewed 50 years of research in SEL, including programs implemented in pre-Kindergarten through 12th grade, to solely assess impact on academic achievement. Taylor et al. (2017) reviewed SEL interventions conducted in kindergarten through high school to assess impact on social and emotional assets (grouping social and emotional skills with attitudes toward the self, others, and school) as well as indicators of well-being, including: positive social behavior, academic performance, conduct problems, emotional distress, and substance use. Siddiqui and Ventista (2018) reviewed studies conducted with a smaller age range of children (6 to 12 years) of interest to this review and focused on non-cognitive outcomes including motivation, social and communication skills, self-regulation, self-esteem, resilience, emotional literacy, and well-being. Connolly et al. (2018) also published a review protocol with a more constrained age range (3 to 11 years) of interest to this review, but their primary outcome was overall social-emotional competence and not EU skill. A publication on the completed systematic review as described by the protocol was also not found.

These previous reviews have not focused on SEL program impact on child EU specifically—a gap the present systematic review seeks to address. Furthermore, previous reviews have included a wide age range and as such, findings do not readily inform on specific developmental phases such as middle childhood as is done in the present review. Lastly, previous reviews do not include analysis of SEL program content—another focus of the present systematic review to address the following research questions: which components of child EU have been targeted in school-based SEL interventions for Grades 3 to 5? And does emotion-focused SEL program content align with established theoretical models of EU development?

Method

This review aimed to identify which specific components of EU have been targeted by SEL programs designed for children ages 8 to 11 to frame understanding of SEL program impact on EU skill for this age band and to determine congruence with theoretical models of child EU as summarized in an integrated EU framework. The 10-component EU framework (see supplementary material S1 for component descriptions) integrated the nine components of the Pons developmental model (2004) (as described earlier) with one component ('decision/action') from the Crick and Dodge (1994) social-information processing (SIP) model to capture the role of emotion in social cognition and behavior (Cooke, 2017; Lemerise & Arsenio, 2000). SEL programs administered to whole classrooms during the school day were the focus as integration within the daily curriculum is seen as one way to make SEL programs more effective in schools (Fenwick-Smith et al., 2018). As such, targeted 'pull-out' or afterschool SEL programs were outside the review's scope. Middle childhood was selected as it marks a dynamic period for education research from both developmental and pedagogical perspectives (Manning, 1998). Children ages 8 to 11 continue to acquire important social-emotional skills and develop more complex aspects of EU, including emotion concept differentiation (Eccles, 1999) and strategic emotion regulation (Eisenberg & Morris, 2002). More broadly, social-emotional competence at the start of middle childhood can buffer against adverse mental health, which in turn has been found to be directly linked to later academic success at the start of adolescence (Panayiotou et al., 2019). As such, there is potential for children's social-emotional development to be meaningfully supported by SEL programs in middle childhood that can also help throughout adolescence, allowing for a positive transition to secondary school and beyond (Klein & Englund, 2021; Okano et al., 2019).

The year 2009 was selected as a starting point for the review as several reports were produced in the realm of social and public policy relevant to social-emotional development in that year. In the USA, the National Research Council & Institute of Medicine US (2009) released a report on how the prevention of mental, emotional, and behavioral disorders among young people could be accomplished, citing the promotion of mental health as a national top priority; and Elias (2009) made a call for the social-emotional and character development of students to be a prominent concern in American educational policy making. Within the UK, the National Institute for Health and Care Excellence (NICE, 2009) produced public health guidance at the request of the Department of Health on how the social-emotional wellbeing of young people could be promoted via secondary education, and by 2010, the Social and Emotional Aspects of Learning (SEAL) program was to be implemented in 90 % of UK primary schools and 70 % of UK secondary schools (Humphrey et al., 2010). On a more global scale, UNESCO stressed the importance of student social-emotional development for schools in their review of initiatives in 16 countries, calling for the implementation of an inclusive school model to improve education (Govinda, 2009).

Search method for identification of studies

PRISMA guidelines were followed to report on this systematic review (see S9 for PRISMA checklist). Two approaches were adopted to search for and identify studies in December 2020 using predetermined search terms (see S2): the first (search strategy 1 in Fig. 1) was a search of 17 online databases in psychology, education, and linguistics (see S3 for list), and the second (search strategy 2 in Fig. 1) involved searching meta-analyses of social-emotional interventions published during the same timeframe used for search strategy 1 to serve as a cross-reference of relevant studies. Names of specific SEL programs included in search strategy 1 were based on the list recommended by the CASEL (2013) guide of effective and evidence-based SEL programs.

Study selection and quality rating

The search via online databases (search strategy 1) returned 11,249 records that were uploaded to Rayyan QCRI (the systematic review web-based application) for pre-screening of titles and abstracts. A total of 68 relevant records were identified through search strategy 2 from the reference lists of 18 different meta-analyses. After deduplication, the

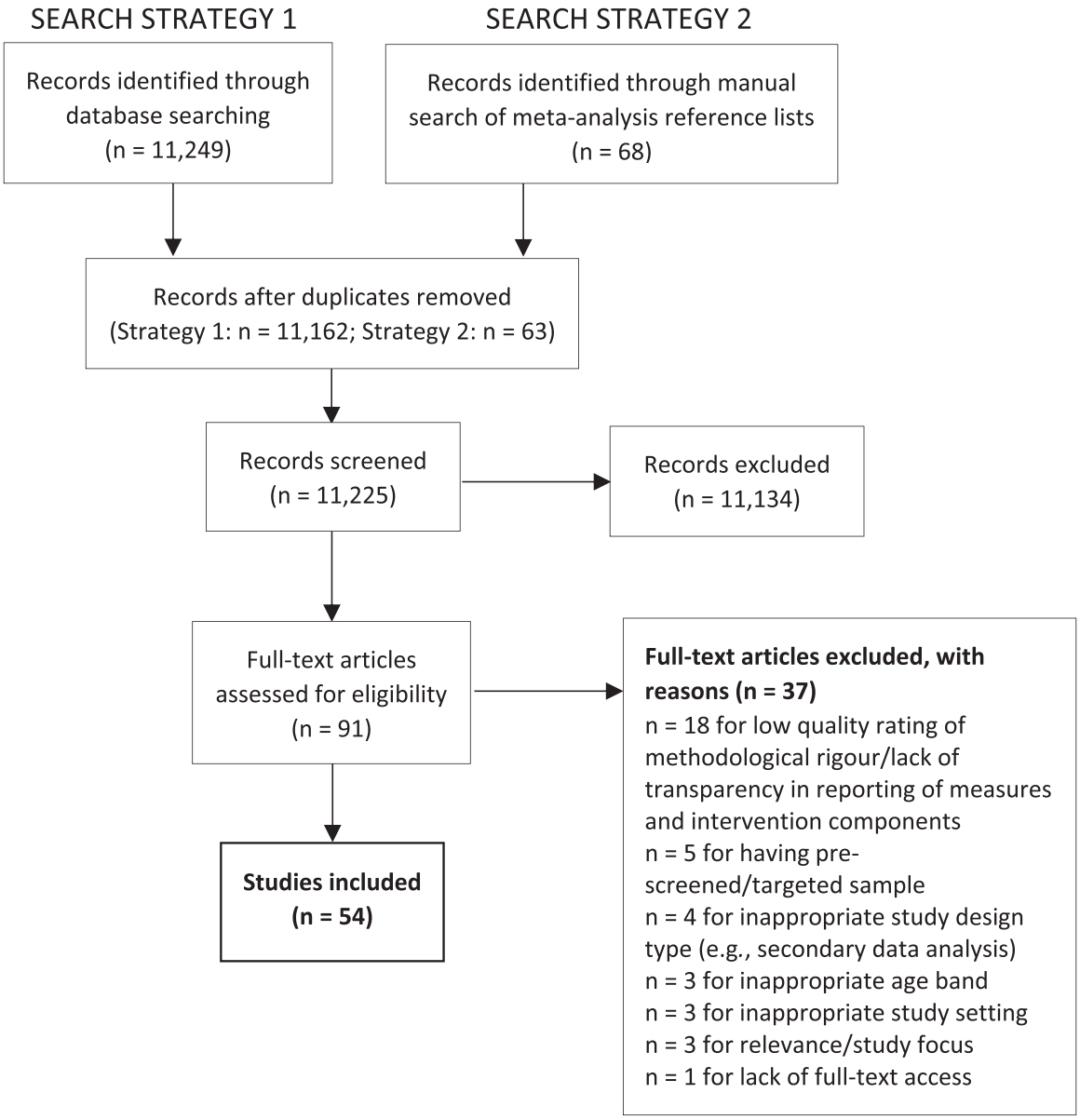


Fig. 1. PRISMA Search Flow Diagram of Studies Included in Review.

total number of records for pre-screening was 11,225. Records were pre-screened using pre-set inclusion and exclusion criteria (see S4). Pre-screening of titles and abstracts reduced the number of records to $n = 91$, whose full texts were then assessed for inclusion. Fig. 1 reflects the study flow from article search to review to inclusion decisions. All assessed full-text articles underwent a quality rating process focused on relevancy, methodological rigor, and study risk of bias informed by Mertens' (2015) criteria. Two independent reviewers assigned a quality rating on a scale of 1 to 4 for all full-text articles (1 = "poor"; 4 = "good"). Studies assigned a quality rating of '1' or '2' were excluded (see S5 for description of rating values). In instances where there was disagreement in quality ratings, both reviewers discussed their reasoning before reaching consensus on final rating and subsequent.

inclusion decisions. The following information was then extracted from included studies ($n = 54$): study design, sample size, study country, sample age band and school grade, SEL program used, and SEL program lesson names, aims, and activities as reported in studies (either in main text or supplemental material), and input into an Excel spreadsheet. Extracted SEL program lesson topics and activities (see S6 for examples) were used for the program mapping exercise, described next.

SEL program content mapping

To address research questions, a mapping exercise of SEL program content to the integrated EU framework was completed. Extracted SEL program lesson names, aims, and activities were listed by program in a spreadsheet, and then coded to framework elements. Mapping was primarily based on the focus of a lesson's topic, using additional information from description of lesson activities when reported. A value of 1 indicated a SEL program component (e.g., lesson topic) targeted a particular framework component; one program component could be coded to multiple framework components. Two researchers trained in child social-emotional development and interventions independently coded all SEL programs to mitigate potential biases in the interpretation of reported SEL program content. Discussion also allowed coders to share instances of uncertainty and their rationale for coding decisions so that there was unanimous interpretation for all SEL program content reviewed. Coding disagreements were also discussed to reach final mapping decisions via consensus before mapping trends were analyzed by generating frequency tables reflecting which EU components were commonly targeted by reviewed SEL programs.

Results

A total of 38 SEL programs were identified across 54 studies included in this systematic review. All studies fully reported lesson aims and topics. Activities to teach emotions were reported for 31 programs and included the use of boardgames, discussion, dramatization (e.g., skits), drawing, guided visualization/games to promote awareness of internal states, audio-recordings, meditation and breathing/muscle relaxation techniques, music, reading to children, roleplay, writing activities (e.g., creating a fear hierarchy), but they were not consistently linked to a specific lesson in a program and rather described in general statements. Studies were conducted from 2010 to 2020 (prior to the onset of the COVID-19 pandemic) in 20 countries across North America (35 % in the USA/Canada/Mexico combined), continental Europe (30 %), the UK and Oceania (each reflecting 13 % of studies), and 9 % collectively from South America (Chile and Brazil), Asia (Japan and South Korea), and the Middle East (Turkey) (see Table 1 for study characteristics). The total number of SEL programs was less than that of included studies as some intervention studies used the same SEL program. Specifically, two studies conducted in Canada and Portugal implemented MindUP, two studies in the USA used the RULER Feeling Words Curriculum (one of which was conducted by the US research team that developed the RULER program), three studies conducted in Australia.

implemented the Aussie Optimism Program: Positive Thinking Skills (two studies had the same research team), three studies conducted in England, Sweden, and Mexico used the FRIENDS for Life program, four studies (three in the USA and one in Portugal) used Positive Action, and eight studies conducted in the Netherlands, the UK (three studies in England, one in Northern Ireland) and the USA (two by the same research team) implemented the PATHS (Providing Alternative Thinking Strategies) program. All of these SEL programs were originally developed in English, either in Australia or the USA. Although lesson plans were translated when programs were implemented in a language other than English, there was no evidence of further content adaptation based on what was reported. As such, we cannot speak to whether emotion-focused content presented cultural differences across countries implementing the same SEL program.

The remaining 32 intervention studies used either programs developed by research teams based in Australia, Portugal, Scotland, Turkey, and South Korea (5 studies) or different SEL programs already available (27 studies conducted across schools in Australia, Brazil, Canada, Chile, England, Finland, Germany, Japan, Poland, Portugal, Spain, the Netherlands, and the USA). Extracted emotion-focused SEL content was largely non-culture specific, except for a researcher-developed empathy program in South Korea that anchored lessons in the history, values, people's life experience, and architecture during the 'Three Kingdoms (Samhan)' period (c. 57 BCE to 668 CE) on the Korean peninsula to teach about perspective-taking, connecting with and appreciating others without alienation or prejudice, and respect. Potential culture-specific references were found in 13 programs at the level of activities—including mention of a 'piggy bank' as a metaphor for one's reserve of resilience in the 'You Can Do It! Education' program used in Japan (originally developed in the USA), the use of specific storybooks ("Sasha and the Wriggly Tooth" in the Roots of Empathy program to discuss mixed feelings), story topics (in the SSIS-CIP program, 'The King and the Falcon' to teach emotion regulation and its importance, 'The Magic Car' to teach emotional autonomy by verbally expressing the importance of positive aspects/qualities we all possess, and 'The Star Student' to reinforce self-esteem and valuing one's strength; in the InnerKids Program, imagining the trajectory of an apple from starting as a seed to being in a stomach once eaten as part of mindfulness practice), animals as main characters ('Okki the Octopus' in the KooLKids Whole of Class program), and games to promote empathic/collaborative behaviors (musical chairs in the MSEL program, adapted so that it was a 'collaborative chair game' that ensures all still have a seat after a round of music plays); and at the level of naming programs through the choice

Table 1
Studies Included in Systematic Review.

Study [Country]	Study Design	n[a]	Age Band (Years)/ School Year	SEL Program
Ahlen et al. (2018) [Sweden]	Cluster-randomized Effectiveness Study	695	9 to 10/ Grades 3 and 4	FRIENDS for Life
Akay (2019) [Turkey]	Single group pre-test/post-test	1224	6 to 10/ Grades 1 to 4	Researcher-developed emotional awareness/anti-bullying program
Amundsen et al. (2020) [UK—England]	Pre-test/Post-test (with waitlist & active controls)	108	9 to 10/Grade 4	Living Mindfully Programme, UK
Bavarian et al. (2016) [USA]	Matched-pair CRT	1170	8 to 14/ Grades 3 to 8	Positive Action (PA)
Beaudoin et al. (2016) [USA]	Pre-test/post-test (with waitlist control)	353	8 to 10/ Grades 3 and 4	Narrative Therapy
Berger et al. (2014) [Chile]	Quasi-experiment	647	8 to 10/ Grades 3 and 4	BASE (Bienestar y Aprendizaje Socioemocional)
Brackett et al. (2012) [USA]	Quasi-experiment	273	9 to 13/ Grades 5 and 6	RULER Feeling Words Curriculum
Carroll et al. (2020b) [Australia]	Pre-test/Post-test within subjects	524	8 to 12/ Grades 4 to 6	KooLKids Whole of Class
Cartmel et al. (2019) [Australia]	Mixed method evaluation study	185	10 to 12/ Grades 5 and 6	Journey to the Island of Calm
Coelho et al. (2016) [Portugal]	Quasi-experiment	1237	9 to 10/Grade 4	Program Positive Attitude
Coelho & Sousa (2017) [Portugal]	Quasi-experiment	982	10 to 12/ Grades 5 and 6	Positive Action (PA)
Collins et al. (2014) [UK—Scotland]	Between subjects; 3 (group) x 3 (time) mixed design	317	9 to 10/Grade 3	Researcher-developed CBT-based
Crean & Johnson (2013) [USA]	CRT	779	8 to 11/ Grades 3 to 5	Providing Alternative Thinking Strategies (PATHS)
Daunic et al. (2012) [USA]	RCT	1296	7 to 12/ Grades 2 to 6	Tools for Getting Along (TFGA)
de Carvalho et al. (2017) [Portugal]	Quasi-experiment	454	8 to 10/ Grades 3 and 4	MindUp
Duncan et al. (2019) [USA]	CRT	1169	8 to 14/ Grades 4 to 9	Positive Action
Filella-Guiu et al. (2014) [Spain]	Quasi-experiment pre-test/post-test (with control)	651	6 to 12/ Grades 1 to 6	Social Skills Improvement System Classwide Intervention Program (SSIS-CIP)
Flook et al. (2010) [USA]	RCT	64	7 to 9/ Grades 2 and 3	InnerKids Program
Fraser et al. (2014) [USA]	Sequential Cohort-Control	688	8 to 9/Grade 3	Making Choices Program
Gallegos et al. (2013) [Mexico]	Quasi-experiment (non-	1030	8 to 13/ Grades 4 and 5	FRIENDS for Life (Spanish Version)

(continued on next page)

Table 1 (*continued*)

Study [Country]	Study Design	n[a]	Age Band (Years)/ School Year	SEL Program
	equivalent control group)			
Goossens et al. (2012) [The Netherlands]	Quasi-experiment	1223	5 to 11/ Kindergarten, Grades 3 and 7	Providing Alternative Thinking Strategies (PATHS)
Humphrey et al. (2016) [UK—England]	RCT	4516	7 to 9/Grades 2 and 3	Providing Alternative Thinking Strategies (PATHS)
Humphrey et al. (2018) [UK—England]	CRT	5218	7 to 9/Grades 2 to 4	Providing Alternative Thinking Strategies (PATHS)
Isensee et al. (2014) [Germany]	Two-arm Prospective CRT (with follow-up)	3444	10 to 12/ Grades 5 and 6	Eigenständig werden 5 + 6
Johnstone et al. (2014) [Australia]	RCT	370	8 to 9/Grade 3	Aussie Optimism Program Positive Thinking Skills (AOP-PTS)
Joyce et al. (2010) [Australia]	Pre-test/Post-test within subjects (pilot)	743	10 to 13/ Grades 5 and 6	Researcher-developed Mindfulness Program
Kiviruusu et al. (2016) [Finland]	CRT	3704	6 to 9/Grades 1 to 3	Together at School
Kraag et al. (2009) [The Netherlands]	CRT (delayed intervention with random assignment)	1467	11 to 12/ Grades 5 and 6	Learn Young, Learn Fair
Lee et al. (2018) [South Korea]	Pre-test/post-test (with control)	54	10 to 11/ Grade 5	Researcher-developed empathy program
Lewis et al. (2016) [USA]	CRT	1, 178	8 to 14/ Grades 3 to 8	Positive Action
Mateu-Martinez et al. (2013) [Portugal]	Quasi-experiment, pre-test/post-test (non-equivalent control group)	94	8 to 12/ Grades 3 to 6	Researcher developed CBT program
Mira-Galvañ & Gilar-Corbi (2020) [Spain]	Quasi-experiment, pre-test/post-test (non-equivalent control group)	86	9 to 12/ Grades 3 to 5	OKAPI (emotional education program)
Panayiotou et al. (2020) [UK—England]	CRT	5218	7 to 9/Grades 2 and 3	Providing Alternative Thinking Strategies (PATHS)
Papieska et al. (2019) [Poland]	Quasi-experiment, pre-test/post-test	339	8 to 9/Grade 3	EMOScope
Pophillat et al. (2016) [Australia]	RCT	206	6 to 9/Grades 1 to 3	Aussie Optimism Program: Feelings and Friends (AOP-FF)
Raimundo et al. (2013) [Portugal]	Quasi-experiment	318	9 to 10/Grade 4	Slowly but Steadily
Rivers et al. (2013) [USA]	CRT	3824	10 to 12/ Grades 5 and 6	RULER Feeling Words Curriculum
Rooney et al. (2013a) [Australia]	Nested cohort (with 1 random factor and 2 fixed factors)	910	9 to 10/Grade 4	Aussie Optimism Program Positive Thinking Skills (AOP - PTS)
Rooney et al. (2013b) [Australia]	Longitudinal RCT	910	9 to 10/Grade 4	Aussie Optimism Program Positive Thinking Skills (AOP - PTS)
Santos & Langill (2020) [Canada]	Stratified RCT (no treatment control)	98	7 to 9/Grade 3	MindMasters 2
Schonert-Reichl & Lawlor (2010) [Canada]	Quasi-experiment	246	9 to 13/ Grades 4 to 6	MindUP
Schonert-Reichl et al. (2012) [Canada]	Quasi-experiment	585	8 to 12/ Grades 4 to 7	Roots of Empathy (RoE)
Schonert-Reichl et al. (2015) [Canada]	RCT	99	9 to 11/ Grades 4 and 5	Mindfulness Education (ME)
Schonfeld et al. (2012) [USA]	Longitudinal RCT	1394	8 to 12/ Grades 3 to 6	Providing Alternative Thinking Strategies (PATHS)
Schonfeld et al. (2015) [USA]	CRT	705	8 to 12/ Grades 3 to 6	Providing Alternative Thinking Strategies (PATHS)
Sheard et al. (2012) [UK—Northern Ireland]	Longitudinal RCT	1711	4 to 10/Pre-K to Grade 1, Grades 3 and 4	Providing Alternative Thinking Strategies (PATHS)
Sibinga et al. (2016) [USA]	RCT	300	10 to 14/ Grades 5 to 8	Mindfulness-Based Stress Reduction (MBSR) program, adapted
Stallard et al. (2014) [UK—England]	CRT	1448	9 to 10/Grade 4	FRIENDS for Life
Terjestam et al. (2016) [Sweden]	Pre-test/post-test (with control)	358	10 to 14/ Grades 5, 7, and 8	COMPAS (Compassion and Attention in the Schools)
Viguer et al. (2017) [Spain]	Pre-test/post-test (with control)	228	10 to 11/ Grade 5	EDI Program
von Marees & Petermann (2010) [Germany]	Quasi-experiment	372	6 to 10/ Grades 1 to 4	Verhaltenstraining in der Grundschule
Waldemar et al. (2016) [Brazil]	Pre-test/post-test (waitlist control)	132	10 to 11/ Grade 5	Mindfulness and Social-Emotional Learning (MSEL)
Wang & Goldberg (2017) [USA]	Quasi-experiment	84	8 to 9/Grade 3	Bullying Literature Project (BLP)-Moral Disengagement (MD)
Yamamoto et al. (2017) [Japan]	Quasi-experiment, 2 (group) x 2 (time) between-subjects	125	9 to 10/Grade 4	You Can Do It! (YCDI) Education Program – Resilience Lessons

Note. CRT = cluster-randomized trial; RCT = randomized controlled trial. See S7 for study references.

[a] reflects only number of child participants included in study

of acronym and other abbreviation techniques ('BASE,' 'COMPAS,' 'EMOScope,' 'FRIENDS,' 'KooLKids,' 'MindUP,' 'OKAPI,' 'PATHS') that might not easily translate in other languages. It is possible more (if not all) SEL programs incorporated elements familiar to children's contexts to discuss emotions, but this level of detail was not reported in studies except for the aforementioned and as such, cross-cultural analysis of emotion socialization practices (such as rules tied to emotional displays and expression) was not possible.

Mapping SEL programs to an integrated emotion understanding framework

Six EU components out of the 10 in the integrated framework were targeted by at least half of SEL programs ($n = 19$ programs) in this review (see Table 2), suggesting a degree of consistency in emotion-focused content across programs despite the variety in intervention study setting, sample, and choice of SEL program implemented. Commonly targeted components, in order of frequency, were: 'recognition' ($n = 38$ programs)—the ability to recognize and identify emotional states via facial expressions and emotion term labels; 'regulation' ($n = 33$ programs)—understanding that emotions can be regulated via the use of different strategies; 'decision/action' ($n = 33$ programs)—understanding the role of emotion in social decision-making, whether by representing others' emotions or considering the emotional consequences of a decision; 'external cause' ($n = 30$ programs)—understanding that external events give rise to emotional states; 'belief' ($n = 26$ programs)—understanding that emotions are linked to beliefs (e.g., about situations, other people); and 'desire' ($n = 20$ programs)—understanding that emotional states are linked to individual desires.

The least commonly targeted EU components were: 'mixed' ($n = 4$ programs)—understanding that one can simultaneously experience emotions of opposing valence (both positive and negative) or that are contradictory in nature; 'reminder' ($n = 4$ programs)—understanding that although the emotional intensity of an event can diminish over time, aspects of the present can trigger emotional states experienced in the past; and 'hiding' ($n = 1$ program) that describes how an individual's outward physical emotion expression may not match their internally experienced emotional state. The 'morality' component—capturing the understanding that morally laudable actions give rise to positive emotions and morally reproachable actions give rise to negative emotions—was targeted by a third of SEL programs ($n = 12$) (see S8 for mapping by program).

Discussion

This systematic review mapped emotion-focused content of 38 SEL programs used in 54 school-based intervention studies in Grades 3 to 5 across 20 countries to address two research questions: which EU components are targeted by SEL programs in middle childhood? And does emotion-focused SEL program content align with established theoretical models of child EU? Components of the Pons model and SIP model were integrated to form at 10-component EU framework to which SEL programs were mapped to address research questions. The review's aim was to add to the growing trend within the SEL field to analyze the content of SEL programs (at the level of lesson aims, topics, and activities) and better align with child development research as a way to frame understanding of SEL program effects and move toward causal explanations of program impact. In contrast to other SEL program reviews, this review narrowed its focus to EU, that is to say one area of social-emotional development, as well as one age band to set precedent and provide initial evidence for research on how SEL programs promote EU in middle childhood specifically.

Table 2
Frequency Table of Mapping to EU Framework by Total Number of SEL Programs.

Recognition	External cause	Reminder	Belief	Desire
38	30	4	26	20
Hiding	**Regulation**	**Mixed**	**Morality**	**Decision/Action**
1	33	4	12	33

For the first research question, the review found SEL programs primarily focused teaching on emotion recognition (all programs focused on this component), emotion regulation, and accounting for emotions in social decision-making, followed by teaching understanding that external events can cause or give rise to emotional states and that people's emotions are based on their individual beliefs and desires. A third of SEL programs focused on teaching the link between emotions and morality, and less than 10% focused on the link between memory and emotion, understanding emotions can be experienced simultaneously (even when contradictory), and that people's emotional states may not match their physical expressions. Regarding the second research question, this review's synthesis supports a high level of congruence between the focus of emotion content across SEL programs and components of prevailing models of child EU development as summarized in the review's integrated 10-component EU framework. All 10 EU components were addressed by at least one SEL program, and at minimum half of all SEL programs targeted 60% of components in the framework. This is a striking finding given the variety of SEL programs used with differing theories of change for child social-emotional development. A little over half of studies (59%) used 32 different programs (84% of programs reviewed) while the rest of studies ($n = 22$) used one of six programs (PATHS being the most common, implemented in six studies).

The finding that all programs focused on emotion recognition is not surprising as knowing how to recognize and name an emotion lays the foundation for overall EU development (Bassett et al., 2012; Herba & Phillips, 2004), and has an important role as it relates to self-regulation (Gross, 2015). The link between emotion recognition, regulation, and decision-making in social situations was central to SEL program lessons, which is also not surprising as these components can be considered essential to managing both classroom behavior and school social interactions. SEL programs encouraged children to identify their own emotions and to regulate them as a way to avoid negative social interactions with peers and adults, and disrupting learning in the classroom. The uneven SEL program emphasis on certain EU components is not necessarily problematic as it aligns with past research supporting a link between EU and social skill wherein an individual's emotion knowledge has been linked to their level of social competence through emotion regulation ability (Trentacosta & Fine, 2010). A prominent focus of emotion-related SEL program content on recognition and regulation is thus both relevant and likely to be effective to promote EU development in middle childhood. Moreover, SEL programs emphasizing only some EU components may reflect assumptions about or evidence of what can be trained or improved upon in children's EU development.

Overall, this review found SEL programs implemented in Grades 3 to 5 often targeted EU components that begin to develop prior to Grade 1 as well as those children may have just begun to acquire before Grade 3. From a pedagogical and interventions perspective, combining developmentally varied EU components within one program can be deemed appropriate as it blends a) reinforcing components children may have acquired but can further develop with b) components children are only beginning to grasp. Reviewed SEL programs often targeted understanding the external causes of emotions, that is to say specific situations or scenarios likely to give rise to certain emotions, highlighting the importance of context to a child's understanding of emotional states. This has important implications for the design of emotion-focused SEL program content, namely which scenarios and facial expressions are included to illustrate emotional states. Emotions do have a social dimension in their experience and expression (van Kleef, 2016) and as such, emotion-focused SEL content needs to be mindful of what children

may be familiar with in their context, especially in terms of rules tied to displays and expressions of emotion.

Furthermore, there has been a call for culture-grounded SEL programs (Hoffman, 2009; Ramirez et al., 2021; Savina & Wan, 2017; Sharxhi et al., 2024) and for SEL practice to be inclusive (Cipriano & McCarthy, 2023), transformative in the service of education equity (McGovern et al., 2023), and more person-centered (Cipriano et al., 2024; Lerner et al., 2024; Reicher, 2010), that is taken up by CASEL's updated definition of SEL described earlier. In addition to better incorporating cultural sensitivity within SEL program content tied to EU, implementing SEL programs going forward also requires factoring in the impact of the COVID-19 pandemic on children's emotional experiences (Maftei et al., 2022) and that of their caregivers (Spinelli et al., 2021), child ability to regulate emotions in an adaptive way (Domínguez-Álvarez et al., 2020; Karaaslan et al., 2023; Moran et al., 2023), and how teachers act as a source of emotional support (Frei-Landau et al., 2024). Turning to child development research can be a fruitful approach to inform such adaptations and sustain SEL within the classroom (Meland & Brion-Meisels, 2024). As highlighted by this review, SEL programs across the world before the pandemic already largely focused on EU components of recognition, regulation, and social decision-making aligned with established theoretical models of child EU development. Future emotion-focused SEL program content can potentially address emotions tied to global events that have impacted child EU, such as the COVID-19 pandemic and climate change, to support their ability to understand, regulate, and cope with emotions in a culturally relevant way.

Limitations and areas for future research

SEL programs included in the mapping exercise were constrained to those included in reviewed SEL intervention studies. The search also did not include unpublished work. Consequently, the present review cannot be said to reflect the true focus and variety of all emotion content of SEL programs designed for middle childhood. The review's SEL program mapping was further limited by being surface level, relying on information reported in studies versus consulting complete implementation manuals (often held behind payment walls). Studies were also often limited in their description of specific activities tied to lessons which directly impacted the level of depth of analysis possible for this present review. As such, this review provides a preliminary answer to 'how' emotions are taught in middle childhood via school-based SEL programs by identifying which areas are commonly targeted versus not. A detailed linking of lesson activities to EU components should be taken up in future research to nuance understanding of the impact of SEL program participation on child EU. Future SEL studies could also support evidence synthesis efforts through more detailed reporting of SEL program content. It would also be of interest to understand how emphasis on emotion recognition ability in middle childhood as indicated by this review of SEL programs may influence later social-emotional development as Rowsell et al. (2016) found a reciprocal developmental influence model between emotion identification skill and perceived social support in their three-year longitudinal study with adolescents in Years 10 to 13.

Conclusions

The goal of this review was to provide an initial synthesis of trends across SEL programs in how they teach emotions in middle childhood by identifying which EU components are commonly targeted by SEL programs. The review is the first, to the researchers' knowledge, to undertake SEL program mapping to an integrated component-based EU framework derived from child development literature to uncover trends in emotion-focused content and alignment with developmental models of child EU. The review also offers a glimpse of how emotions have been taught across roughly a decade in classrooms across the world—evidence of a global trend supporting SEL in education tied to the United Nations' Sustainable Development Goals (Brush et al., 2022) and echoed by institutional and governmental calls previously discussed.

This review supports that SEL programs in middle childhood include emotion-focused content that is developmentally appropriate and relevant based on theoretical models of child EU development. Findings stress the importance of which scenarios are selected in SEL programs to broach emotions in classroom discussion to establish links between specific situations and emotions for children participating in SEL programs. This study's synthesis of trends in emotion-focused SEL program content reinforces the perspective that lived experiences are used to promote EU in middle childhood. Consequently, emotion-focused SEL content needs to be flexible enough to be localized to the children and larger community in which they are implemented as opposed to relying solely on strictly scripted content, aligning with a child's context and their emotional experiences to positively support their ability to recognize, regulate, and use emotions in social situations—the foundation for their EU underpinning well-being and interpersonal relationships throughout childhood and beyond.

CRediT authorship contribution statement

Sonali Nag: Writing – review & editing, Supervision, Resources, Project administration, Methodology, Funding acquisition, Conceptualization. **Aneyn Mara O'Grady:** Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.sel.2024.100068.

References

Andrés, M. L., Stelzer, F., Juric, L. C., Introzzi, I., Rodríguez-Carvajal, R., & Navarro Guzmán, J. I. (2017). Emotion regulation and academic performance: A systematic review of empirical relationships. *Psicologia Em Estudo, 22*(3), 299–311. https://doi.org/10.4025/psicolestud.v22i3.34360

Basnight-Brown, D. M., & Altarriba, J. (2018). The influence of emotion and culture on language representation and processing. In In. C. Faucher (Ed.), *Advances in Culturally-Aware Intelligent Systems and in Cross-Cultural Psychological Studies* (pp. 415–432). Springer International Publishing. https://doi.org/10.1007/978-3-319-67024-9_19.

Bassett, H. H., Denham, S. A., Mincic, M., & Graling, K. (2012). The structure of preschoolers' emotion knowledge: Model equivalence and validity using a structural equation modeling approach. *Early Education and Development, 23*(3), 259–279. https://doi.org/10.1080/10409289.2012.630825

Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist, 57*(2), 111–127. https://doi.org/10.1037/0003-066X.57.2.111

Brackett, M. A., Rivers, S. E., Reyes, M. R., & Salovey, P. (2012). Enhancing academic performance and social and emotional competence with the RULER feeling words curriculum. *Learning and Individual Differences, 22*(2), 218–224. https://doi.org/10.1016/j.lindif.2010.10.002

Brush, K. E., Jones, S. M., Bailey, R., Nelson, B., Raisch, N., & Meland, E. (2022). Social and Emotional Learning. In J. DeJaeghere, & E. Murphy-Graham (Eds.), *From Conceptualization to Practical Application in a Global Context BT - Life Skills Education for Youth: Critical Perspectives* (pp. 43–71). Springer International Publishing. https://doi.org/10.1007/978-3-030-85214-6_3.

CASEL. (2020). *A retintroduction to SEL: CASEL'S definition and framework*. YouTube. https://www.youtube.com/watch?v=0N_Y34tjQm8.

Castro, V. L., Halberstadt, A. G., & Garrett-Peters, P. (2016). A three-factor structure of emotion understanding in third-grade children. *Social Development, 25*(3), 602–622. https://doi.org/10.1111/sode.12162

Cho, S. in, Song, J.-H., Trommsdorff, G., Cole, P. M., Niraula, S., & Park, S.-Y. (2022). Mothers' Reactions to Children's Emotion Expressions in Different Cultural Contexts: Comparisons across Nepal, Korea, and Germany. *Early Education and Development, 33*(5), 858–876. https://doi.org/10.1080/10409289.2022.2035178

Cipriano, C., Ha, C., Wood, M., Sehgal, K., Ahmad, E., & McCarthy, M. F. (2024). A systematic review and meta-analysis of the effects of universal school-based SEL programs in the United States: Considerations for marginalized students. *Social and*

Emotional Learning: Research, Practice, and Policy, 3, Article 100029. https://doi.org/10.1016/j.sel.2024.100029
Cipriano, C., & McCarthy, M. F. (2023). Towards an inclusive social and emotional learning. *Social and Emotional Learning: Research, Practice, and Policy, 2*, Article 100008. https://doi.org/10.1016/j.sel.2023.100008
Collaborative for Academic Social and Emotional Learning (CASEL). (2013). *2013 CASEL guide: Effective social and emotional learning programs–Preschool and elementary school edition*.
Connolly, P., Miller, S., Hanratty, J., Roberts, J., & Sloan, S. (2018). Protocol for a systematic review: Universal school-based programmes for improving social and emotional outcomes in children aged 3–11 years: a systematic review and meta-analysis. *Campbell Systematic Reviews, 14*(1), 1–39. https://doi.org/10.1002/cl2.210
Cooke, T. (2017). Social information processing: A useful framework for educational psychology. *Educational Psychology Research and Practice, 3*(1), 50–69. https://doi.org/10.15123/uel.8870z
Corcoran, R. P., Cheung, A. C. K., Kim, E., & Xie, C. (2018). Effective universal school-based social and emotional learning programs for improving academic achievement: A systematic review and meta-analysis of 50 years of research. *Educational Research Review, 25*, 56–72. https://doi.org/10.1016/j.edurev.2017.12.001
Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*(1), 74–101. https://doi.org/10.1037/0033-2909.115.1.74
De Leersnyder, J., Boiger, M., & Mesquita, B. (2013). Cultural regulation of emotion: individual, relational, and structural sources. *Frontiers in Psychology, 4*(February), 1–11. https://doi.org/10.3389/fpsyg.2013.00055
Denham, S. A. (1998). *Emotional development in young children*. Guilford Press. https://psycnet.apa.org/record/1998-08043-000.
Denham, S. A. (2018). Keeping SEL developmental: The importance of a developmental lens for fostering and assessing SEL competencies. *In Measuring SEL: Using Data to Inspire Practice Framework Briefs*. https://casel.org/casel-resources-keeping-sel-developmental/.
Denham, S. A., Bassett, H. H., Brown, C., Way, E., & Steed, J. (2013). I Know How You Feel": Preschoolers' emotion knowledge contributes to early school success. *Journal of Early Childhood Research, 13*(3), 252–262. https://doi.org/10.1177/1476718X13497354
Djambazova-Popordanoska, S. (2016). Implications of emotion regulation on young children's emotional wellbeing and educational achievement. *Educational Review, 68*(4), 497–515. https://doi.org/10.1080/00131911.2016.1144559
Domínguez-Álvarez, B., López-Romero, L., Gómez-Fraguela, J. A., & Romero, E. (2020). Emotion regulation skills in children during the COVID-19 pandemic: Influences on specific parenting and child adjustment. *Revista de Psicología Clínica Con Niños y Adolescentes, 7*(3), 81–87. https://doi.org/10.21134/rpcna.2020.mon.2042
Domitrovich, C. E., Durlak, J. A., Staley, K. C., & Weissberg, R. P. (2017). Social-emotional competence: An essential factor for promoting positive adjustment and reducing risk in school children. *Child Development, 88*(2), 408–416. https://doi.org/10.1111/cdev.12739
Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Weissberg, R. P., & 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. https://doi.org/10.1111/j.1467-8624.2010.01564.x
Dussault, M., & Thompson, R. B. (2024). Fundamental Themes in Social–Emotional Learning: A Theoretical Framework for Inclusivity. *International Journal of Environmental Research and Public Health, 21*(4). https://doi.org/10.3390/ijerph21040506
EASEL Lab. (n.d.). *Explore SEL*. ⟨http://exploresel.gse.harvard.edu/⟩.
Eccles, J. S. (1999). The development of children ages 6 to 14. *The Future of Children, 9*(2), 30. https://doi.org/10.2307/1602703
Eisenberg, N., & Morris, A. S. (2002). Children's emotion-related regulation. In In. R. V. Kail (Ed.), *Advances in child development and behavior* (Vol. 30, pp. 189–229) Academic Press. https://psycnet.apa.org/record/2003-02423-005.
Elias, M. J. (2009). Social-Emotional and Character Development and Academics as a Dual Focus of Educational Policy. *Educational Policy, 23*(6), 831–846. https://doi.org/10.1177/0895904808330167
Fenwick-Smith, A., Dahlberg, E. E., & Thompson, S. C. (2018). Systematic review of resilience-enhancing, universal, primary school-based mental health promotion programs. *BMC Psychology, 6*(1), 30. https://doi.org/10.1186/s40359-018-0242-3
Franco, M. da G., Beja, M. J., Candeias, A., & Santos, N. (2017). Emotion understanding, social competence and school achievement in children from primary school in Portugal. *Frontiers in Psychology, 8*, 1376. https://doi.org/10.3389/fpsyg.2017.01376
Fraser, M. W., Richman, J. M., Galinsky, M. J., & Day, S. H. (2009). *Intervention research: Developing social programs*. Oxford University Press.
Frei-Landau, R., Mirsky, C., & Sabar-Ben-Yehoshua, N. (2024). Supporting grieving students amidst COVID-19: Emotion- and problem-focused coping strategies of teachers who supported grieving children during the COVID-19 pandemic. *Current Psychology, 43*(29), 1–14. https://doi.org/10.1007/s12144-024-06080-8
Funnell, S. C., & Rogers, P. J. (2011). Some research-based theories of change (First). *In Purposeful program theory: Effective use of theories of change and logic models* (pp. 319–350). Jossey-Bass/Wiley (First).
Gavazzi, I. G., & Ornaghi, V. (2011). Emotional state talk and emotion understanding: A training study with preschool children. *Journal of Child Language, 38*(5), 1124–1139. https://doi.org/10.1017/S0305000910000772
Govinda, R. (2009). *Towards inclusive schools and enhanced learning: A synthesis of case study findings from different countries*. https://unesdoc.unesco.org/ark:/48223/pf0000186030.
Gross, J. J. (2015). The extended process model of emotion regulation: Elaborations, applications, and future directions. *Psychological Inquiry, 26*(1), 130–137. https://doi.org/10.1080/1047840X.2015.989751
Harrington, E. M., Trevino, S. D., Lopez, S., & Giuliani, N. R. (2020). Emotion regulation in early childhood: Implications for socioemotional and academic components of school readiness. *Emotion, 20*(1), 48–53. https://doi.org/10.1037/emo0000667
Harris, P. L. (1989). *Children and emotion: The development of psychological understanding*. Basil Blackwell.
Herba, C., & Phillips, M. (2004). Annotation: Development of facial expression recognition from childhood to adolescence: behavioural and neurological perspectives. *Journal of Child Psychology and Psychiatry, 45*(7), 1185–1198. https://doi.org/10.1111/j.1469-7610.2004.00316.x
Hoffman, D. M. (2009). Reflecting on social emotional learning: A critical perspective on trends in the united states. *Review of Educational Research, 79*(2), 533–556. https://doi.org/10.3102/0034654308325184
Humphrey, N., Lendrum, A., & Wigelsworth, M. (2010). *Social and emotional aspects of learning (SEAL) programme in secondary schools: National evaluation (Research Brief)*. https://assets.publishing.service.gov.uk/media/5a7b0ce6ed915d429748c77a/DFE-RR049.pdf.
Jacob, D.J. (2021). *Effects of Simultaneously Integrating SEL and Culturally Responsive Pedagogy on Students' Perceptions About Themselves and Their Abilities* (Publication No. 2916) [Master's thesis, Rowan University]. Rowan Digital Works. https://rdw.rowan.edu/etd/2916.
Jagers, R. J., Rivas-Drake, D., & Williams, B. (2019). Transformative social and emotional learning (SEL): Toward SEL in service of educational equity and excellence. *Educational Psychologist, 54*(3), 162–184. https://doi.org/10.1080/00461520.2019.1623032
Karaaslan, B. T., Akoğlu, G., Özyurt, G., & Oral, E. (2023). Changes in emotion regulation skills of school age children from the eyes of healthcare workers during the COVID-19 pandemic in Turkey: A cross-sectional study. e964-n/a *Health Science Reports, 6*(1). https://doi.org/10.1002/hsr2.964.
Klein, R. J., & Englund, M. M. (2021). Developmental pathways to adult happiness: Social competence and timely high school graduation. *Journal of Happiness Studies*, 1–19. https://doi.org/10.1007/s10902-021-00354-9
Lemerise, E. A., & Arsenio, W. F. (2000). An Integrated Model of Emotion Processes and Cognition in Social Information Processing. *Child Development, 71*(1), 107–118. https://doi.org/10.1111/1467-8624.00124
Lerner, R. M., Yu, D., Abbasi-Asl, R., Keces, N., Gonçalves, C., Buckingham, M. H., Dowling, E. M., Tirrell, J. M., Mackin, M., Olander, K., Hasse, A., & Dunham, Y. (2024). Towards a dynamic, idiographic approach to describing, explaining, and enhancing the development of SEL. *Social and Emotional Learning: Research, Practice, and Policy, 4*, Article 100050. https://doi.org/10.1016/j.sel.2024.100050
Maftei, A., Merlici, I.-A., & Roca, I.-C. (2022). Implications of the COVID-19 Pandemic on Children and Adolescents: Cognitive and Emotional Representations. *Children, 9*(3), 359. https://doi.org/10.3390/children9030359
Manning, M. L. (1998). The importance of research on middle childhood and early adolescence: Suggestions for the future. *Journal of Research in Childhood Education, 13*(1), 5–6. https://doi.org/10.1080/02568549809594722
McCallops, K., Barnes, T. N., Berte, I., Fenniman, J., Jones, I., Navon, R., & Nelson, M. (2019). Incorporating culturally responsive pedagogy within social-emotional learning interventions in urban schools: An international systematic review. *International Journal of Educational Research, 94*(February), 11–28. https://doi.org/10.1016/j.ijer.2019.02.007
McGovern, G., Pinetta, B. J., Montoro, J. M., Channey, J., Rosario-Ramos, E., & Rivas-Drake, D. (2023). Stretching towards social justice: A case study of transformative social and emotional learning (SEL). *Social and Emotional Learning: Research, Practice, and Policy, 2*, Article 100018. https://doi.org/10.1016/j.sel.2023.100018
McKown, C. (2017). Social-Emotional Assessment, Performance, and Standards. *The Future of Children, 27*(1), 157–178. https://doi.org/10.1353/foc.2017.0008
Meland, E. A., & Brion-Meisels, G. (2024). An integrative model for culturally sustaining SEL in the classroom. *Social and Emotional Learning: Research, Practice, and Policy, 3*, Article 100042. https://doi.org/10.1016/j.sel.2024.100042
Mertens, D. M. (2015). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods (Fourth)*. SAGE Publications, Inc.
Michaud, M., Roy-Charland, A., Richard, J., Nazair, A., & Perron, M. (2021). The role of vocabulary skills in a storybook-based intervention to stimulate emotion comprehension in preschoolers. *The Journal of Genetic Psychology, 182*(6), 471–487. https://doi.org/10.1080/00221325.2021.1969884
Miller, A. L., Fine, S. E., Gouley, K. K., Seifer, R., Dickstein, S., & Shields, A. (2006). Showing and telling about emotions: Interrelations between facets of emotional competence and associations with classroom adjustment in Head Start preschoolers. *Cognition and Emotion, 20*(8), 1170–1192. https://doi.org/10.1080/02699930500405691
Moran, M. J., Murray, S. A., LaPorte, E., & Lucas-Thompson, R. G. (2023). Associations Between Children's Emotion Regulation, Mindful Parenting, Parent Stress, and Parent Coping During the COVID-19 Pandemic. *Sage Publications*. https://doi.org/10.1177/10664807221123562
National Institute for Health and Care Excellence (NICE). (2009). *Social and emotional wellbeing in secondary education* (NICE Public Health Guideline PH20). Author.
National Research Council & Institute of Medicine (US). (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. National Academies Press.
Okano, L., Jeon, L., Crandall, A., Powell, T., & Riley, A. (2019). Developmental cascades of social competence, achievement in school, and achievement on standardized

assessments during the transition to adolescence and secondary school. *Journal of Adolescence, 74*, 91–102. https://doi.org/10.1016/j.adolescence.2019.06.001
Ornaghi, V., Brockmeier, J., & Grazzani, I. (2014). Enhancing social cognition by training children in emotion understanding: A primary school study. *Journal of Experimental Child Psychology, 119*, 26–39. https://doi.org/10.1016/j.jecp.2013.10.005
Panayiotou, M., Humphrey, N., & Wigelsworth, M. (2019). An empirical basis for linking social and emotional learning to academic performance. *Contemporary Educational Psychology, 56*, 193–204. https://doi.org/10.1016/j.cedpsych.2019.01.009
Papieska, J., Spilt, J. L., Roorda, D. L., & Laevers, F. (2019). Promoting socioemotional competence in primary school classrooms: Intervention effects of the EMOscope. *European Journal of Developmental Psychology, 16*(1), 97–112. https://doi.org/10.1080/17405629.2017.1342620
Pintar Breen, A. I., Tamis-LeMonda, C. S., & Kahana-Kalman, R. (2018). Latina mothers' emotion socialization and their children's emotion knowledge. *Infant and Child Development, 27*(3), Article e2077. https://doi.org/10.1002/icd.2077
Pons, F., Harris, P. L., & de Rosnay, M. (2004). Emotion comprehension between 3 and 11 years: Developmental periods and hierarchical organization. *European Journal of Developmental Psychology, 1*(2), 127–152. https://doi.org/10.1080/17405620344000022
Ramirez, T., Brush, K., Raisch, N., Bailey, R., & Jones, S. M. (2021). Equity in Social Emotional Learning Programs: A Content Analysis of Equitable Practices in PreK-5 SEL Programs. *Frontiers in Education, 6*, 1–14. https://doi.org/10.3389/feduc.2021.679467
Reicher, H. (2010). Building inclusive education on social and emotional learning: Challenges and perspectives - A review. *International Journal of Inclusive Education, 14*(3), 213–246. https://doi.org/10.1080/13603110802504218
Rowsell, H. C., Ciarrochi, J., Deane, F. P., & Heaven, P. C. L. (2016). Emotion identification skill and social support during adolescence: A three-year longitudinal study. *Journal of Research on Adolescence, 26*(1), 115–125. https://doi.org/10.1111/jora.12175
Roy-Charland, A., Lewis, S., Pallister, M., Richard, J., Michaud, M., & Perron, M. (2021). The use of dyadic reading in stimulating the comprehension of emotions. *The Journal of Genetic Psychology, 182*(2), 75–88. https://doi.org/10.1080/00221325.2020.1868969
Saarni, C. (1999). *The development of emotional competence*. Guilford Press.
Samos, N.J. (2018). *The role of emotion recognition and externalising behaviour for educational outcomes* (Publication No. 432445) [Doctoral dissertation, University of Southampton]. University of Southampton Institutional Repository. https://eprints.soton.ac.uk/432445/.
Savina, E., & Wan, K. P. (2017). Cultural Pathways to Socio-Emotional Development and Learning. *Journal of Relationships Research, 8*, Article e19. https://doi.org/10.1017/jrr.2017.19
Senft, N., Doucerain, M. M., Campos, B., Shiota, M. N., & Chentsova-Dutton, Y. E. (2022). Within and Between-Group Heterogeneity in Cultural Models of Emotion Among People of European, Asian, and Latino Heritage in the United States. *Emotion, 23*(1), 1–14. https://doi.org/10.1037/emo0001052
Sharxhi, E., O'Grady, A.M., & Nag, S. (2024). Stories, emotions and words: Examining a contextualized social-emotional learning intervention for Albanian kindergartens. [Manuscript in Preparation].
Siddiqui, N., & Ventista, O. M. (2018). A review of school-based interventions for the improvement of social emotional skills and wider outcomes of education. *International Journal of Educational Research, 90*(May), 117–132. https://doi.org/10.1016/j.ijer.2018.06.003
Sklad, M., Diekstra, R., de Ritter, M., 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. https://doi.org/10.1002/pits
Spinelli, M., Lionetti, F., Setti, A., & Fasolo, M. (2021). Parenting Stress During the COVID-19 Outbreak: Socioeconomic and Environmental Risk Factors and Implications for Children Emotion Regulation. *Family Process, 60*(2), 639–653. https://doi.org/10.1111/famp.12601
Sprung, M., Münch, H. M., Harris, P. L., Ebesutani, C., & Hofmann, S. G. (2015). Children's emotion understanding: A meta-analysis of training studies. *Developmental Review, 37*, 41–65. https://doi.org/10.1016/j.dr.2015.05.001
Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development, 88*(4), 1156–1171. https://doi.org/10.1111/cdev.12864
Trentacosta, C. J., & Fine, S. E. (2010). Emotion knowledge, social competence, and behavior problems in childhood and adolescence: A meta-analytic review. *Social Development, 19*(1), 1–29. https://doi.org/10.1111/j.1467-9507.2009.00543.x
Ursache, A., Kiely Gouley, K., Dawson-McClure, S., Barajas-Gonzalez, R. G., Calzada, E. J., Goldfeld, K. S., & Brotman, L. M. (2020). Early emotion knowledge and later academic achievement among children of color in historically disinvested neighborhoods. *Child Development, 91*(6), e1249–e1266. https://doi.org/10.1111/cdev.13432
Valiente, C., Swanson, J., DeLay, D., Fraser, A. M., & Parker, J. H. (2020). Emotion-related socialization in the classroom: Considering the roles of teachers, peers, and the classroom context. *Developmental Psychology, 56*(3), 578–594. https://doi.org/10.1037/dev0000863
van Kleef, G. A. (2016). In *Studies in Emotion and Social Interaction. The Interpersonal Dynamics of Emotion*. Cambridge University Press. https://doi.org/10.1017/CBO9781107261396
Voltmer, K., & von Salisch, M. (2017). Three meta-analyses of children's emotion knowledge and their school success. *Learning and Individual Differences, 59*, 107–118. https://doi.org/10.1016/j.lindif.2017.08.006
White, R., Russell, G., Qualter, P., Owens, M., & Psychogiou, L. (2021). Do peer relationships mediate the association between children's facial emotion recognition ability and their academic attainment? Findings from the ALSPAC study. *Contemporary Educational Psychology, 64*(January), Article 101942. https://doi.org/10.1016/j.cedpsych.2021.101942
Wigelsworth, M., Mason, C., Verity, L., Qualter, P., & Humphrey, N. (2021). Making a case for core components: New frontiers in SEL theory, research, and practice. *School Psychology Review*, 1–14. https://doi.org/10.1080/2372966X.2021.2004863
Wong, T. K. Y., Colasante, T., & Malti, T. (2023). A longitudinal examination of school-related and mental health mediators linking emotion regulation to academic achievement. *Journal of School Psychology, 101*, Article 101253. https://doi.org/10.1016/j.jsp.2023.101253
Zahn-Waxler, C. (2010). Socialization of emotion: Who influences whom and how? In A. Kennedy-Root, & S. A. Denham (Eds.), *New directions for child and adolescent development* (pp. 101–109). Jossey-Bass. https://doi.org/10.1002/cd.271.
Zieher, A. K., Bailey, C. S., Cipriano, C., McNaboe, T., Smith, K., & Strambler, M. J. (2024). Considering the "How" of SEL: A framework for the pedagogies of social and emotional learning. *Social and Emotional Learning: Research, Practice, and Policy, 3*, Article 100030. https://doi.org/10.1016/j.sel.2024.100030