Bridging developmental theory & SEL practice: Findings from a systematic review of emotion-focused SEL program content

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Today's focus

- Defining social-emotional learning (SEL)/origins of the field

- The need for a developmental lens in SEL programs/current state of the field—new SEL definition/approaches in practice

- Child emotion understanding within SEL

- Method for systematic review, findings and implications

- Role of emotion-focused SEL content in current learning context and next steps for research inquiry

What is SEL & why does it matter for learning?

- Form of pedagogy focused on developing social-emotional skills to promote academic success, positive development, and well-being

- Rooted in a holistic view of the child in education/ 'student-centered approach'

- Meta-analytic evidence linking academic outcomes to social-emotional development

What is SEL & why does it matter for learning?

- Term "social and emotional learning" coined 1994/first CASEL conference; "Promoting Social and Emotional Learning: Guidelines for Educators" (Elias et al., 1997), but concepts present earlier:

  ➢ 1968: James P. Comer "Comer School Development Program": A reflection - "The contrast between a child's experiences at home and those in school deeply affects the child's psychosocial development and that this in turn shapes academic achievement" (Comer, 1988)

  ➢ 1987-1992: Weissberg/Shriver "K-12 New Haven Social Development Program"

  ➢ 1992: Weissberg/Elias Framework to integrate SEL skills in school "W.T. Grant Consortium on the School-Based Promotion of Social Competence"

SEL today: COVID-19 pandemic, conflict, climate change, social equity

Updated CASEL Definition/Framework (Oct 2020): "[…] an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.

SEL advances educational equity and excellence through authentic school-family-community partnerships to establish learning environments and experiences that feature trusting and collaborative relationships, rigorous and meaningful curriculum and instruction, and ongoing evaluation. SEL can help address various forms of inequity and empower young people and adults to co-create thriving schools and contribute to safe, healthy, and just communities."

SEL today

- SEL increasingly understood as a **core element to education** within the 'post' COVID-19 pandemic era/global backdrop of climate change impacts, conflict, and fragility
  - Link with sustainable development goals (see Brush et al., 2022, 43-71)

- March 2023: **OECD Survey on Social and Emotional Skills 2023** with students aged 10 and 15: working paper "Schools as hubs for social and emotional learning"; 2-volume report: April 2024 - "Social and Emotional Skills for Better Lives" & Oct 2024 - "Nurturing Social and Emotional Learning Across the Globe"

- UNESCO/International Bureau of Education (IBE) Discussion Paper (Feb 2024): "Strengthening Social and Emotional Learning in Hybrid Modes of Education: Building Support for Students, Teachers, Schools and Families"—the role of SEL to transform education on a global scale, serving as a "healing tool" and key to addressing global challenges

The need for a developmental lens in SEL:

For age-appropriate tasks, content and standards (Denham, 2018)

The importance of a **theory of change** in interventions/programs (Fraser et al., 2009) and alignment with theoretical models that are empirically tested and verified (research informed)

Allows for programs to be **evidence based**, **developmentally appropriate**, and provides a basis to **explain program impact** (on different skills/participants) (Funnell & Rogers, 2011)

Dussault & Thompson (2024) **framework of fundamental SEL themes** to unify research on child development, education and mental health: self-regulation, critical thinking, self-motivation, compassion, collaboration

How can SEL in schools promote child emotion understanding?

What is emotion understanding (EU)?

- The ability to identify, interpret, and communicate about emotions experienced by the self and others (Castro et al., 2016; Denham, 1998; Harris, 1989)

- Encompasses an individual's **conceptual knowledge of emotion** = one's understanding of the nature of emotions, their potential causes and/or external triggers, linked physiological reactions/physical displays

What is emotion understanding (EU)?

- Integral to **emotional competence** (Saarni, 1999): "demonstration of self-efficacy in emotion-eliciting social transactions" "the development of a mature emotional response that supports an individual's social goals" "negotiating interpersonal exchanges"; 8 skills:
  - 1) awareness of own emotional state; 2) ability to discern others' emotions; 3) ability to describe emotions; 4) capacity to empathize; 5) ability to realize the difference between inner emotional states and outward expression; 6) capacity for adaptive coping with aversive emotions; 7) awareness of the role of emotions in relationships; 8) the capacity for self-efficacy

Emotion understanding & education

- Childhood EU correlated with academic success, especially through:
  - Emotion **recognition** (Samos, 2018; Voltmer & von Salisch, 2017)
  - Emotion **regulation** (Djambazova-Popordanoska, 2016; Harrington et al., 2020; see Andrés et al., 2017 for review)

- Longitudinal evidence supporting child emotion recognition/regulation and social-emotional competence in childhood correlated with later academic achievement (White et al., 2021; Wong et al., 2023) and adult depression levels (Domitrovich et al., 2017)

- Supports **school readiness**: child ability to adjust to a school setting (Blair, 2002)

- School as social-emotional environment part of a child's **emotion socialization** (Zahn-Waxler, 2010)

Pons (2004) developmental model of emotion understanding

LEVEL	COMPONENT		
EXTERNAL	RECOGNITION	EXTERNAL CAUSE	REMINDER
	Identifying and labelling emotions.	Emotions are 'caused' in that they result from external events.	The intensity of an emotional experience can diminish over time and aspects of a present situation can trigger emotional states experienced in the past.
MENTAL	DESIRE	BELIEF	HIDING
	Different individuals can have different emotional reactions to the same stimulus, shaped by their individual desires.	Beliefs about a situation can shape emotional reactions to said situation.	One's outward (i.e., externalized) emotional display may not necessarily match one's internal state.
REFLECTIVE	REGULATION	MORALITY	MIXED
	Emotional experiences can be regulated with different strategies.	Morally reprehensible actions/behaviors are linked to negative emotions; those deemed morally laudable are linked to positive emotions.	One can have multiple and/or contradictory emotional reactions to one stimulus.

The present review

- Research questions:

  1) Which components of child emotion understanding have been targeted by school-based SEL programs for Grades 3 to 5/Years 4 to 6 (ages 8 to 11)?

  2) Does emotion-focused SEL program content align with established theoretical models of EU development? (summarized in integrated EU-component model)

- Aims:

  - Provide an analysis of SEL program content not found in previous reviews; determine congruence with child development models

  - Inform on the use of SEL programs to promote emotion understanding skills specifically, for a specific age band
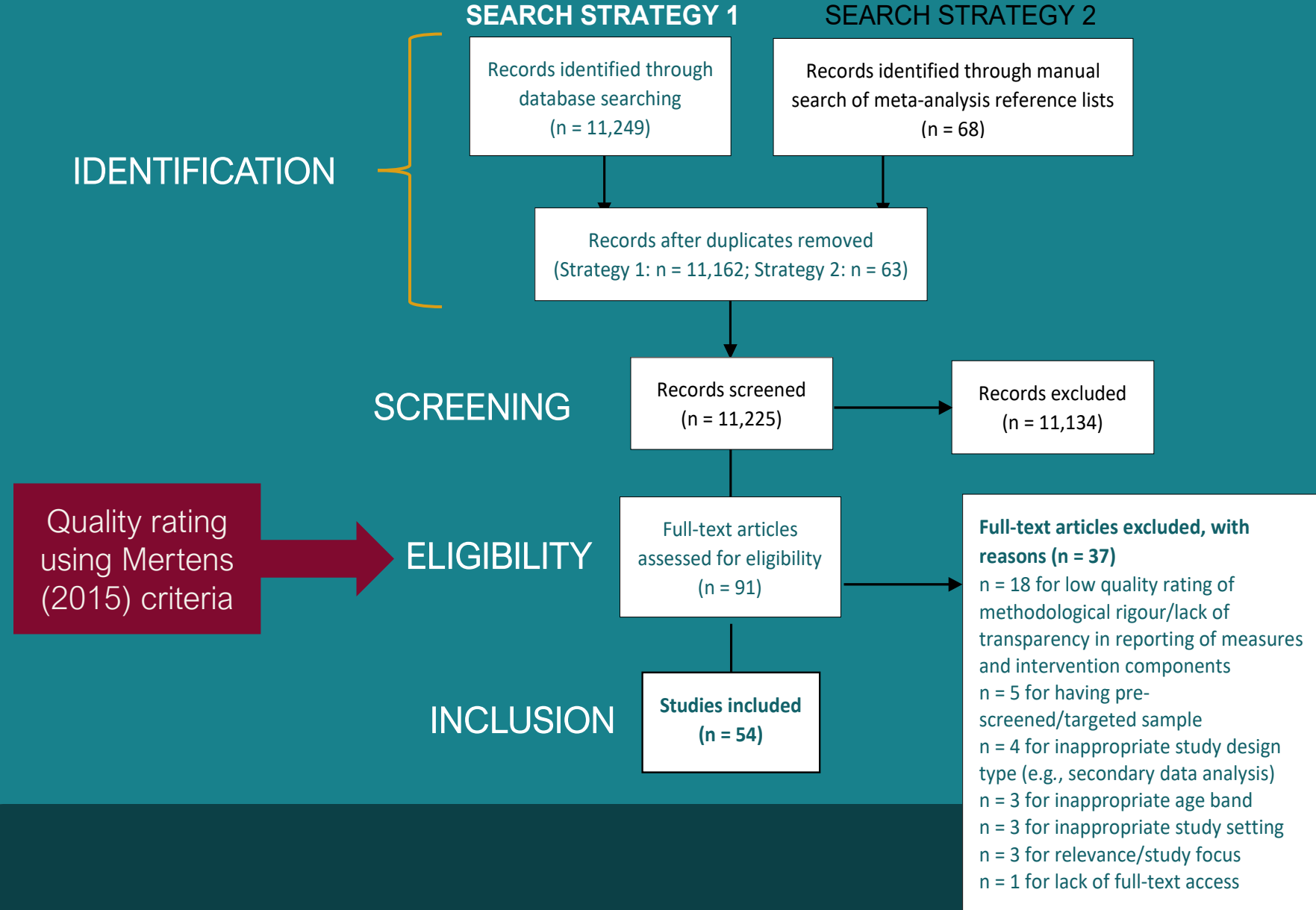
The present review

- **17 Databases:** Fields of psychology, education, social sciences, linguistics, international

- **Study year range & type:** January 2009 – December 2020; quantitative outcome studies

- **Previous reviews at time of search:** Durlak et al. (2011), Sklad et al. (2012), Corcoran et al. (2018), Taylor et al. (2017), Siddiqui & Ventista (2018), Connolly et al. (2018)
  - Focus on a wide age range that does not allow us to answer specific questions for different developmental phases
  - Emotion understanding not isolated as an outcome (subsumed in composite scores)
  - Concerned more with SEL impact on academic performance than SEL skill

Method: Study Selection Criteria

Inclusion	Exclusion
Study published 2009 – 2020	Study published prior to 2009 or post December 2020
Peer-reviewed article	Not an article from peer-reviewed journal (e.g., conference proceeding, thesis)
Full-text available	Full-text unavailable
Written in English, French, German, or Spanish	Written in language not understood by research team
Presence of SEL program that: has content dedicated to developing at least one component of emotion understanding; is school-based/delivered during school day; and is universal for classroom participants	Lack of SEL program or program does not have explicit focus on emotion understanding
Intervention study focuses on impact of SEL program; accepted study designs include randomized controlled trial (RCT), pre-/post-test, and quasi-experiment	Not an intervention study/focus is not on the impact of participation in a SEL program on student outcomes
	SEL program is administered after-school or in home/to family
	Participant sample is atypical or targeted; there is pre-screening for participation in SEL program; does not include students in Grades 3 - 5

PRISMA Search Flow Diagram

IDENTIFICATION

SEARCH STRATEGY 1

Records identified through database searching
(n = 11,249)

SEARCH STRATEGY 2

Records identified through manual search of meta-analysis reference lists
(n = 68)

Records after duplicates removed
(Strategy 1: n = 11,162; Strategy 2: n = 63)

SCREENING

Records screened
(n = 11,225)

Records excluded
(n = 11,134)

Quality rating using Mertens (2015) criteria

ELIGIBILITY

Full-text articles assessed for eligibility
(n = 91)

Full-text articles excluded, with reasons (n = 37)
n = 18 for low quality rating of methodological rigour/lack of transparency in reporting of measures and intervention components
n = 5 for having pre-screened/targeted sample
n = 4 for inappropriate study design type (e.g., secondary data analysis)
n = 3 for inappropriate age band
n = 3 for inappropriate study setting
n = 3 for relevance/study focus
n = 1 for lack of full-text access

INCLUSION

Studies included (n = 54)

Study characteristics

- **38 SEL programs across 54 studies; all studies reported on lesson aims and topics** but did not consistently describe specific activities per lesson

- Conducted 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)

Study characteristics: SEL program choice

- 24 studies (≈ 44%) used a program also used in another study:

  - 2 in Canada and Portugal used **MindUP**

  - 2 in the USA used the **RULER Feelings Words Curriculum**

  - 3 in Australia used the **Aussie Optimism Program: Positive Thinking Skills**

  - 3 in England, Sweden and Mexico used **FRIENDS for Life**

  - 4 (3 in USA, 1 Portugual) used **Positive Action**

  - 8 used **PATHS** (Providing Alternative Thinking Strategies)—1 in The Netherlands, 3 in England, 1 in Northern Ireland, 2 in the USA

- 32 remaining studies:

  - 5 used programs developed by research teams in Australia, Portugal, Scotland, Turkey and South Korea

  - 27 studies used other SEL programs

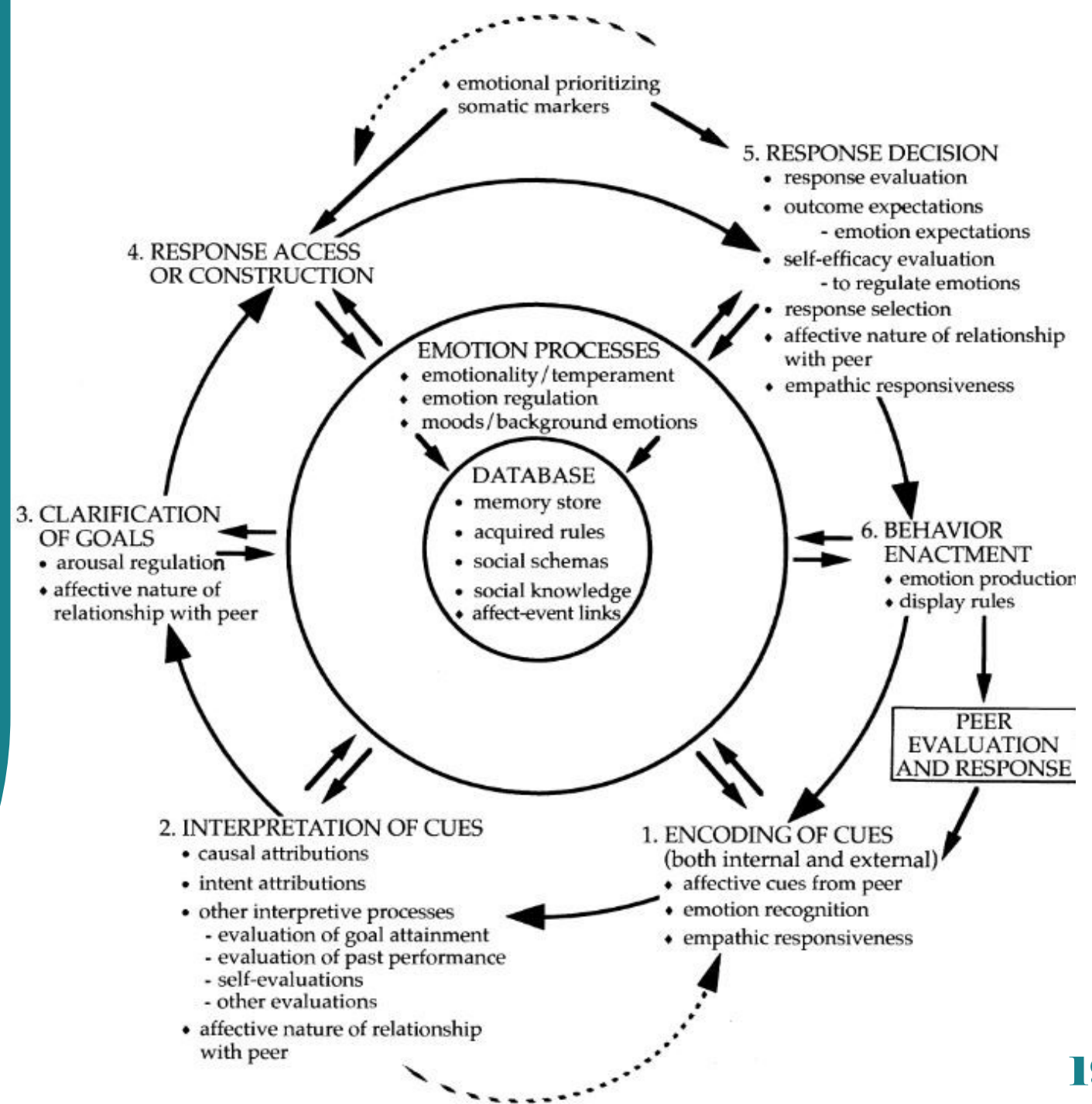# Mapping programs to developmental frameworks

- **Information extracted**: SEL program name and lesson names, aims, and activities (when reported)

- Framework combines components from **Pons EU developmental model** and **Crick & Dodge (1994) social-information processing (SIP) model**

10 EMOTION UNDERSTANDING COMPONENTS

Recognition	External Cause	Reminder	Belief	Desire
Hiding	Regulation	Mixed	Morality	Decision/ Action

Crick & Dodge Social Information Processing Model

(Lemerise & Arsenio, 2000)

SEL program frequency mapping to EU framework

LEVEL	Component		
EXTERNAL	**Recognition**	**External Cause**	**Reminder**
	38	30	4
MENTAL	**Desire**	**Belief**	**Hiding**
	20	26	1
REFLECTIVE	**Regulation**	**Mixed** **Morality**	**Decision/Action**
	33	4 12	33

Frequently targeted emotion understanding components

LEVEL	Component		
EXTERNAL	**Recognition**	**External Cause**	**Reminder**
	38	**30**	**4**
MENTAL	**Desire**	**Belief**	**Hiding**
	20	**26**	**1**
REFLECTIVE	**Regulation**	**Mixed** **Morality**	**Decision/Action**
	33	**4** **12**	**33**

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Least targeted emotion understanding components

LEVEL	Component		
EXTERNAL	Recognition	External Cause	Reminder
	38	30	4
MENTAL	Desire	Belief	Hiding
	20	26	1
REFLECTIVE	Regulation	Mixed	Morality	Decision/Action
	33	4	12	33

Main findings

- At least 1 program targeted a component in the EU framework

- At least half of SEL programs targeted 60% of components in the emotion understanding framework

- SEL program activities were reported overall for 31 programs, but not by lesson plans
  - Use of boardgames, discussion, dramatization (e.g., skits), drawing, guided visualization/games, audio-recordings, meditation and breathing/muscle relaxation techniques, music, reading to children, roleplay, writing activities (e.g., creating a fear hierarchy)

Main take aways

- Good level of congruence with developmental models & across SEL program emotion content despite variety in SEL program/theories of change as well as study setting & sample

Main findings

- All programs focused on promoting emotion recognition

- Emotion recognition, regulation, and the role of emotions in decision-making in social situations was central
  - promoted children to identify emotions to regulate them to avoid negative social interactions (peers/adults) and disrupting learning in the classroom

Main take aways

- Not surprising (but reassuring)—foundation for EU development (Bassett et al., 2012; Herba & Philips, 2004) and important to self-regulation (Gross, 2015)
- Uneven EU component emphasis not problematic; could be reflection of what can be trained

Situating findings in current SEL field

- Emotion-focused program content reviewed here emphasized components that can be deemed essential to **managing classroom behavior** and **social interactions within school**, whether peer-to-peer or student-teacher relationships

- Programs for Grades 3-5/Year 4-6, but targeted components children began to acquire before Grade 3/Year 4 => **SEL program content largely developmentally appropriate/relevant** based on previous theoretical models of child development

- Emphasis on using scenarios/facial expressions to promote emotion understanding reinforces **importance of context**; lived experiences are used to teach about emotions/make meaning

Situating findings in current SEL field

- Links to calls for SEL programs to be **culture grounded** (Hoffman, 2009; Ramirez et al., 2021; Savina & Wan, 2017; Sharxhi et al., 2024), **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)
  - Evidence supporting **context-specific acquisition** of social-emotional skills (McCoy et al., 2019)

- Accounting for emotional impacts of COVID-19 pandemic (Maftei et al., 2022; Domínguez-Álvarez et al., 2020; Karaaslan et al., 2023; Moran et al., 2023), climate change (see Martin et al., 2021 for scoping review) and conflict (on children and caregivers) (e.g., Burgin et al., 2022; Hazer & Gredebäck, 2023)
  - Teachers as source of **emotional support** (Frei-Landau et al., 2024); consider the impact of their emotion regulation (Braun et al., 2020) and burnout (Oberle & Schonert-Reichl, 2016; see Madigan & Kim, 2021 for review) on students/classroom environment

Conclusions & next steps

1. Review sets precedent for analyzing impact of SEL interventions studies by focusing on SEL program content and aligning SEL practice with developmental research—flagged as fruitful approach to adapting SEL programs and to sustaining SEL within classrooms (Meland & Brion-Meisels, 2024).

    ➢ Forthcoming paper on meta-analysis pulled from studies included in systematic review to see statistical impact of SEL program participation on EU development (it has one!)

    ➢ Future reviews should consider/incorporate program evaluation reports to get fuller scope of global efforts to implement SEL in all countries

Conclusions & next steps

2. Emotion-focused SEL content needs to be flexible enough to be localized to children and larger community in which programs are implemented.

   ➢ Flexibility in program design/content can stem from more evidence on nature/development of emotion concepts across cultures

   ➢ Forthcoming paper on internal state language—relation between how children speak about/understand emotions and use of mental state terms (important to social cognition)
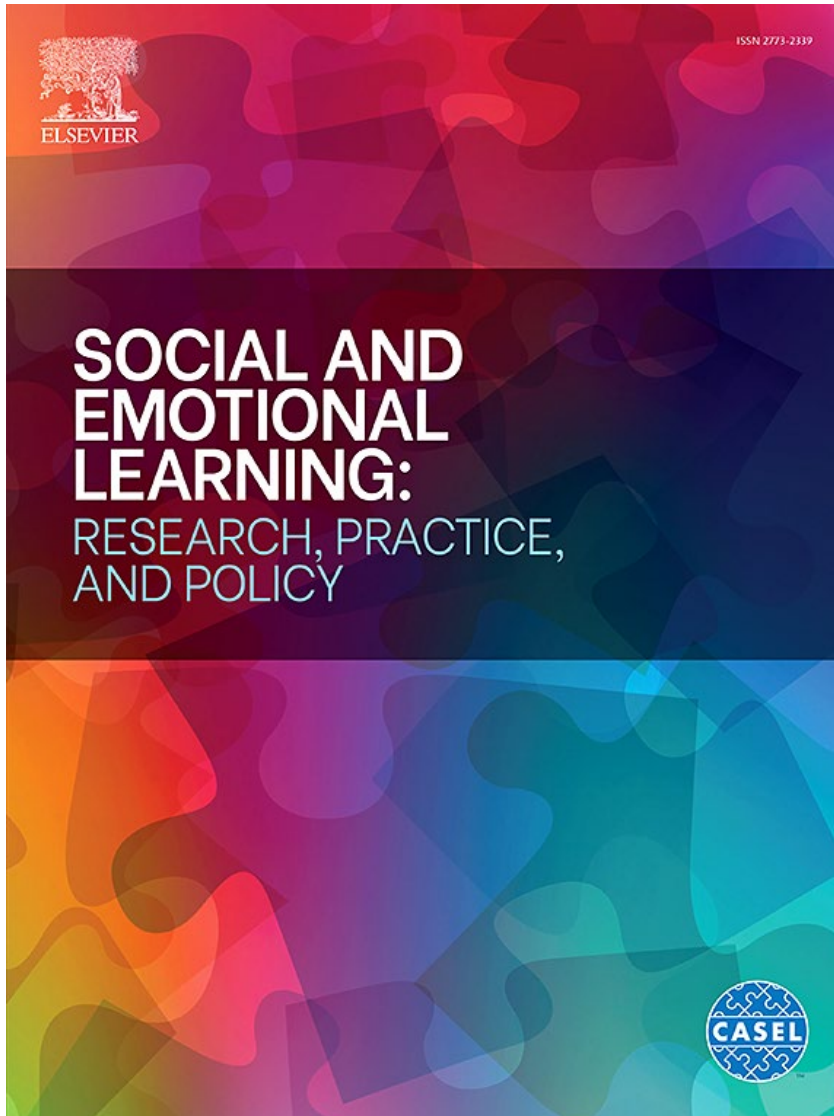
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Thank you

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Method: Quality Rating Criteria

Low Quality Studies	
Rating of 1 (Poor)	**Rating of 2 (Average)**
Absence of control group	Absence of control group
No random assignment to control/intervention conditions	No random assignment to control/intervention conditions
Outcome measures do not align with research questions/intervention focus	Lack of capture of baseline competencies; only outcome measures
Significant differences between participant groups (if present)	Some differences between groups
Lack of transparency in reporting of methodology and results, & description of intervention programs	Imbalanced sample and across age groups
Study rationale is illogical	Unclear reporting of methods/study intervention components (inconsistent logic in study rationale)
Findings are not generalizable	Findings are not generalizable
Lack of treatment fidelity	Questionable treatment fidelity

Quality Studies	
Rating of 3 (Fair)	**Rating of 4 (Good)**
Absence of control group	Presence of control group
Random assignment or partial to control/intervention conditions	Random assignment to control/intervention conditions
Superficial description of sample demographics/composition	Clear description of sample demographics/composition (control & intervention)
Capture of baseline competencies	Capture of baseline competencies
Some differences between groups	No significant differences between intervention and control groups
Balanced gender sample and across age groups	Balanced gender sample and across age groups
Clear/transparent reporting of methods	Clear, transparent and sufficient detail in reporting of methods and intervention components (lessons + activities) (external validity)
Logical study rationale and interpretation of findings	
Minimal description of intervention: should have enough content to map each lesson to the EU framework; ok if there is a reference to the intervention description with further detail that we then look up	Has a clear table or written description of all lesson plan aims/activities
	Internally valid: has logical study rationale & interpretation of/conclusions regarding findings
Choice of outcome measures is reliable overall (need not all be standardized, potential mixture of standardized and non)	Choice of outcome measures: reliable (e.g., standardized OR if researcher-developed, efforts made to increase psychometric properties)
Reporting of psychometric properties of measures may not be present	Reporting of psychometric properties of measures
Findings are limited in level of generalizability, but provide insights for future studies/relevance for other population samples	Findings are generalizable
Dropout is low/minimal impact on findings (study checks for potential significant differences between final sample & first sample during analysis to consider impact of dropout on findings)	Low dropout from study participation, start to finish
	Measures fidelity to treatment
Measures fidelity to treatment	