

A Thematic Synthesis of Social-Emotional Learning, Learning Climate, and Student Achievement in Elementary Education

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ABSTRACT

Social and emotional learning (SEL) is increasingly recognized as an important component of elementary education, supporting students' social-emotional development, engagement, well-being, and academic learning. However, the relationships among teacher social-emotional competence, learning climate, implementation quality, and student outcomes remain insufficiently integrated, particularly in the Indonesian context. This study aims to synthesize literature on these relationships and examine their implications for SEL implementation in Indonesian elementary schools. A narrative literature review was conducted using an existing source corpus supplemented by relevant peer-reviewed literature. The synthesis examined major themes concerning teacher competence, classroom practices, learning climate, student outcomes, implementation conditions, and contextual adaptation. The findings suggest that teacher competence is associated with the quality of SEL enactment, while a supportive learning climate provides a context for student participation and social-emotional learning. Implementation quality and cultural context also shape how SEL is adapted and sustained. These relationships should not be interpreted as a universally established causal pathway. The review highlights the need for context-responsive teacher development, school-level support, and rigorous evaluation of SEL practices. Future empirical research in Indonesian elementary schools should investigate these relationships using longitudinal and mixed-methods approaches.

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1. INTRODUCTION

Elementary education is a developmental setting in which academic learning, social relationships, emotional regulation, and character formation occur simultaneously. The educational task is therefore not limited to the transmission of subject knowledge; it also involves creating conditions in which children can understand emotions, cooperate with others, respond to setbacks, and participate constructively in classroom life. Social and emotional learning (SEL) has emerged as an approach to developing competencies that connect cognition, emotion, behavior, relationships, and responsible decision-making [1],

[2]. Within this context, learning climate refers to the quality of the academic, social, emotional, and organizational environment in which teaching and learning take place. Understanding how SEL is enacted within this environment is important for explaining how educational practices and classroom relationships support students' learning experiences.

Previous research has established the relevance of SEL to students' social-emotional development and academic outcomes. A foundational meta-analysis of 213 universal programs reported improvements in social-emotional skills, attitudes, behavior, and academic performance, while highlighting the importance of implementation quality [2]. Subsequent syntheses have identified sustained benefits for social-emotional skills and well-being [7] and broader evidence from studies involving students across multiple countries [9]. Research has also examined the role of teacher social-emotional competence, classroom climate, and teacher–student relationships in shaping students' engagement and achievement [3], [4], [5], [12], [16], [17], [18]. Taken together, these findings establish a strong rationale for SEL in elementary education. Nevertheless, the effectiveness of SEL programs, teachers' capacity to enact SEL, the quality of the learning climate, and students' educational outcomes represent distinct but interconnected dimensions that require careful conceptual differentiation.

Teacher social-emotional competence is central to translating SEL principles into everyday classroom practice. Jennings and Greenberg's prosocial classroom model links teachers' social-emotional competence and well-being with teacher–student relationships, classroom management, SEL implementation, and classroom climate [5]. Teachers model emotional regulation, interpret student behavior, mediate conflict, establish expectations, provide feedback, and determine opportunities for student participation. Teacher competence therefore concerns educators' capacity to enact social-emotional principles, whereas SEL refers to the competencies and developmental processes that support students' emotional, social, and behavioral growth. The quality of classroom interactions can influence whether SEL becomes an integrated part of learning or remains an additional activity disconnected from everyday pedagogy.

Learning climate provides the contextual dimension through which these practices are experienced by students. School climate is multidimensional, encompassing academic, community, safety, and institutional conditions [11]. Meta-analytic evidence indicates that classroom climate is associated with academic, behavioral, and socioemotional outcomes, while school and classroom climate have also been linked with academic achievement across K–12 settings [12]. At the classroom level, emotional support can be associated with academic achievement [13], and perceived classroom support has been related to students' achievement emotions over time [14]. Teacher–student relationships further connect classroom climate with participation and achievement. Research has documented associations between supportive teacher relationships and academic outcomes [16], while meta-analytic findings indicate positive relationships between teacher support and school engagement [17]. Perceived teacher support has also been associated with academic achievement, with student engagement partly accounting for this relationship [18]. These findings suggest that student achievement should be understood as an educational outcome associated with, but not synonymous with, SEL competencies, teacher competence, or

learning climate. Together, these dimensions help explain how social-emotional processes and classroom conditions relate to students' participation and learning experiences.

Despite the substantial international evidence base, a key research problem concerns how SEL is implemented within specific educational contexts rather than whether SEL is beneficial in general. Systematic review evidence indicates that teacher- and school-related contextual factors influence the quality of SEL implementation [10]. Research on implementation fidelity similarly demonstrates the importance of examining how interventions are delivered in authentic classroom settings when interpreting their outcomes [23]. Evidence of intervention effectiveness alone, however, does not fully explain how schoolwide implementation is organized [6] or how teachers, school leaders, students, and families interpret and adapt SEL within particular school ecosystems. This distinction highlights the need to synthesize findings across SEL practices, teacher competence, learning climate, and educational outcomes while attending to the implementation processes connecting these dimensions.

The Indonesian context adds a further dimension to this issue. Recent Indonesian literature discusses SEL implementation in elementary schools, its relationship with student achievement, and its connections with character development and the Merdeka Curriculum [31], [32], [33], [34]. A recent systematic review of Indonesian literature also identifies teacher competence, classroom strategies, and implementation challenges as important themes [34]. Although these studies provide a foundation for understanding SEL in Indonesian elementary education, the relationship among SEL as a student-development approach, teacher competence as an implementation capacity, learning climate as the classroom context, and student outcomes as a related educational dimension warrants further integrated examination. In particular, a thematic synthesis can help clarify how these dimensions are connected across the literature and identify contextual and implementation issues that may not be fully explained by studies focusing primarily on intervention effects or individual outcomes.

The originality of the present article lies in its integrated thematic synthesis of SEL, teacher social-emotional competence, learning climate, and student outcomes, with particular attention to implementation in Indonesian elementary education. Rather than estimating a new causal effect or conducting a statistical meta-analysis, the article synthesizes the literature assembled in the source manuscript to identify recurring relationships, implementation challenges, and contextual considerations across these interconnected dimensions. This approach extends the discussion beyond the general effectiveness of SEL by examining how its educational value is connected to teachers' classroom practices, the learning environment, and the conditions under which SEL is implemented. The analysis addresses four research questions: (1) How is SEL positioned as an integrative educational practice in elementary schools? (2) How does teacher social-emotional competence connect SEL with classroom enactment? (3) How does learning climate shape students' experience of SEL and learning? and (4) What implementation, evaluation, and contextual issues are especially relevant to Indonesian elementary education? By addressing these questions, the article aims to provide an integrated understanding of the relationships among SEL, teacher enactment, learning climate, and

student outcomes, while offering insights for educational practice, school-level implementation, and future research in Indonesian elementary education.

2. METHOD

2.1. Research Design

This study employed a narrative thematic literature synthesis to examine social and emotional learning (SEL), teacher social-emotional competence, learning climate, student outcomes, and implementation in Indonesian elementary education. The approach was interpretive rather than statistical, focusing on identifying recurring patterns, conceptual relationships, and contextual considerations across the literature. The source manuscript served as the starting point for the synthesis, and its arguments, cited studies, and thematic organization were reviewed and reorganized to align with the structure and objectives of the *Journal of General Education and Humanities*. The study did not collect primary empirical data, calculate pooled effect sizes, or claim to provide an exhaustive account of all published SEL research.

2.2. Corpus Construction and Data Sources

The initial literature corpus consisted of the references and substantive discussions contained in the source manuscript. These materials were examined to identify studies and arguments relevant to the research questions and the six analytical themes. The corpus was then organized according to the conceptual and empirical contributions of the cited literature. Foundational theoretical studies, empirical journal articles, and systematic reviews were considered for their relevance to SEL in elementary education, teacher competence, learning climate, student outcomes, and implementation practices. Supplementary peer-reviewed studies were also considered to strengthen the evidence base and improve bibliographic completeness. The synthesis therefore drew on secondary literature rather than primary participant data or newly collected field evidence.

2.3. Literature Selection Procedure

Literature selection was guided by the relevance of each source to the study's research questions and analytical themes. Sources were considered relevant when their theoretical arguments, research findings, or review conclusions contributed to understanding at least one of the following areas: SEL as a pedagogical practice, teacher social-emotional competence, learning climate, academic and developmental outcomes, implementation and evaluation, or contextual adaptation in Indonesian elementary education. Sources addressing more than one area could inform multiple themes. Foundational studies were used to clarify key concepts, while empirical studies and systematic reviews provided evidence concerning relationships, implementation conditions, and educational outcomes.

The selection process involved examining the references in the source manuscript and considering supplementary peer-reviewed literature relevant to the identified themes. However, the original methodological record did not document a reproducible database-search strategy, specific search dates, predefined inclusion and exclusion criteria, or a formal screening protocol. Accordingly, the literature selection should be understood as a

purposive, relevance-based process rather than a systematic search. The total number of sources examined and included was not specified in the available methodological record and is therefore not reported.

2.4. Thematic Coding and Analytical Framework

The literature was organized into six analytical themes: (1) SEL as an integrative pedagogical practice; (2) teacher social-emotional competence and enactment; (3) learning climate and relational conditions; (4) academic and developmental outcomes; (5) implementation, sustainability, and evaluation; and (6) contextual adaptation in Indonesian elementary education. The themes were established deductively from the research questions and the conceptual organization of the source manuscript. The literature was then examined in relation to these themes to identify recurring arguments, convergent findings, differences in emphasis, and connections across topics.

The analysis distinguished four conceptual dimensions. SEL was treated as an approach to developing students' social-emotional competencies; teacher social-emotional competence was understood as the capacity to translate these principles into classroom practice; learning climate was considered the relational, emotional, and organizational context in which teaching and learning occur; and academic and developmental outcomes were treated as related but distinct educational results. Implementation, sustainability, evaluation, and contextual adaptation were examined as cross-cutting issues that may help explain variations in how SEL is enacted across educational settings. The analysis was interpretive and focused on synthesizing the substantive contributions of the literature rather than applying a formal quantitative coding scheme. The available methodological record did not specify independent coding by multiple reviewers or a formal assessment of inter-coder agreement.

2.5. Synthesis Procedure

The synthesis proceeded through four connected stages. First, relevant literature was identified from the source manuscript and supplementary peer-reviewed studies. Second, the selected sources were organized according to their contributions to the six analytical themes. Third, the arguments and findings within and across themes were compared to identify recurring patterns, areas of convergence, differences in emphasis, and relationships among the principal concepts. Fourth, these patterns were integrated into a narrative interpretation addressing the study's research questions and the implications for SEL implementation in elementary education.

This procedure emphasized conceptual integration rather than the sequential description of individual publications. Particular attention was given to how teacher competence connects SEL principles with classroom practices, how learning climate shapes students' learning experiences, and how implementation conditions and local educational contexts inform the application of SEL. The final synthesis was organized around four questions: how SEL is positioned as an integrative educational practice in elementary schools; how teacher social-emotional competence connects SEL with classroom enactment;

how learning climate shapes students' experiences of SEL and learning; and which implementation, evaluation, and contextual issues are particularly relevant to Indonesian elementary education.

2.6. Methodological Scope and Limitations

This study is a narrative thematic literature synthesis and should not be interpreted as a systematic review or statistical meta-analysis. The available source material did not include a reproducible database-search strategy, a PRISMA flow diagram, formal screening records, or a complete protocol for inclusion and exclusion. The number of sources reviewed and included, the specific procedures used to identify supplementary articles, and the use of independent reviewers were also not documented sufficiently to support precise reporting. These limitations restrict the reproducibility and comprehensiveness of the literature-selection process. Nevertheless, the thematic synthesis provides an interpretive account of the relationships among SEL, teacher social-emotional competence, learning climate, student outcomes, and implementation in Indonesian elementary education. Its contribution lies in integrating these dimensions into a coherent discussion of educational practice and contextual considerations rather than estimating intervention effects or establishing causal relationships.

3. RESULTS AND DISCUSSION

The thematic synthesis identified six interconnected areas in the reviewed literature: SEL as an integrative pedagogical practice, teacher social-emotional competence, learning climate, student achievement and developmental outcomes, implementation and sustainability, and contextual adaptation in Indonesian elementary education. Across these areas, the literature indicates that SEL should be understood not merely as a program delivered to students but as an educational process shaped by teacher capacity, classroom relationships, organizational conditions, and cultural context. The following sections distinguish findings supported by meta-analyses and systematic reviews from conceptual interpretations and context-dependent implications.

3.1. Social and Emotional Learning as an Integrative Pedagogical Practice

The literature positions SEL as more than a discrete package of emotional-skills lessons. Early formulations describe SEL as a framework for promoting social and emotional competencies while supporting mental health and reducing risk behavior [1]. Durlak et al.'s meta-analysis subsequently showed that universal school-based SEL programs can improve social-emotional skills, behavior, attitudes, and academic performance [2]. These findings provide meta-analytic support for the educational relevance of SEL, although the magnitude and nature of its benefits may vary across programs and implementation settings. The evidence therefore supports an understanding of SEL as an educational process that can operate through curriculum, classroom interaction, school routines, and relationships.

An integrative interpretation is particularly relevant in elementary education because students encounter social-emotional learning while completing academic tasks, receiving feedback, cooperating with peers, responding to mistakes, and managing frustration. Jones

et al. emphasize the importance of intentionally developing social and emotional competencies during elementary schooling [4]. Greenberg et al. extend this perspective by describing SEL as a public-health approach in which universal school-based supports can contribute to positive developmental trajectories [3]. Together, these perspectives position SEL as both a developmental objective and a pedagogical orientation. Its practical significance lies in providing repeated opportunities for students to exercise social-emotional competencies during ordinary learning activities, rather than simply introducing the terminology of those competencies.

The evidence also indicates that implementation quality matters. Durlak et al. identified implementation problems as moderators of program outcomes [2], while the contemporary synthesis by Cipriano et al. found substantial variability in program content, context, and implementation quality across a very large evidence base [9]. A systematic review focused specifically on implementation variability likewise recommends more careful assessment of fidelity, dosage, and quality because these dimensions can influence student outcomes [10]. Evidence from systematic reviews of classroom-wide SEL interventions also shows that program features and implementation conditions should be considered when interpreting effects [24]. Thus, a school cannot infer implementation quality simply from the presence of an SEL curriculum or a schedule of SEL activities.

The elementary classroom consequently functions as a practical site where SEL principles become observable. Students can practice self-management when they persist with challenging tasks, social awareness when they interpret peers' perspectives, relationship skills when they collaborate, and responsible decision-making when they consider consequences. These examples illustrate how SEL competencies may be integrated into academic participation and classroom interaction. They do not establish that all SEL programs operate through identical mechanisms or that integration necessarily produces higher academic achievement in every setting. The more defensible interpretation is that structured SEL can create opportunities to practice competencies relevant to learning and development, with outcomes depending partly on how these opportunities are designed and implemented.

3.2. Teacher Social-Emotional Competence and Enactment

Teachers provide the most immediate bridge between an SEL framework and students' daily experiences. Jennings and Greenberg's prosocial classroom model places teacher social-emotional competence and well-being alongside teacher–student relationships, classroom management, and SEL implementation [5]. This perspective is consistent with evidence that teacher support is associated with engagement and academic outcomes [17], while teacher–student relationship quality is positively related to achievement in a large meta-analysis [16]. Teacher social-emotional competence can therefore be interpreted as an implementation capacity that helps translate SEL principles into classroom practices, rather than as a substitute for SEL itself or as a direct measure of student achievement.

Teacher competence is enacted through small, repeated decisions: how teachers respond to errors, how they express expectations, whether they invite student voice, how

they manage conflict, and whether feedback communicates support or threat. Classroom management research indicates that strategies addressing student behavior, social-emotional development, and teacher–student relationships can be associated with academic, behavioral, emotional, and motivational outcomes [19]. Current work on educator SEL emphasizes that teachers may teach SEL directly, integrate it into pedagogy, and develop their own social-emotional competencies as part of their professional role [27]. These perspectives suggest that implementation depends not only on what teachers know about SEL but also on how their knowledge, emotional regulation, and relational skills are expressed in daily interactions.

Recent evidence further strengthens the teacher-centered interpretation. A study of primary teachers in Malawi found that teachers' social-emotional competence, particularly emotion regulation and relationship management, was positively associated with the integration of SEL into daily classroom instruction [21]. A meta-analysis of strategies for increasing teachers' adherence to evidence-based social-emotional and behavioral practices emphasizes that adoption and implementation fidelity require active support rather than assuming that teachers will automatically apply recommended practices [22]. The Malawi study provides context-specific empirical evidence concerning the relationship between teacher competence and classroom enactment, whereas the meta-analytic evidence emphasizes the importance of implementation support. Neither finding alone establishes a universal causal pathway applicable to all elementary schools. Together, they indicate that professional development should include both knowledge of SEL and opportunities to practice the interpersonal and regulatory skills required for enactment.

Current scholarship increasingly describes educator SEL as multidimensional. Educators may teach SEL directly, integrate SEL principles into ordinary pedagogy, and develop their own competencies and well-being as role models [27]. A recent review similarly highlights teacher training and supportive interactions as mechanisms relevant to the educational and mental-health effects associated with SEL [26]. Professional learning should therefore move beyond presenting teachers with lesson materials and should include reflection, classroom application, peer support, and attention to teachers' own emotional resources.

Teacher capacity also has implications for sustainability. When SEL is introduced as an additional responsibility without adequate time, professional learning, or organizational support, teachers may experience it as another task rather than an integrated pedagogical orientation. Recent work on educator preparation emphasizes the need for professional learning that equips teachers to support SEL through culturally responsive and trauma-informed practice [30]. These concerns are consistent with the broader implementation literature, which emphasizes that program support from both teachers and schools contributes to implementation quality [10]. The combined evidence positions teacher competence as a proximal implementation resource, while professional learning and organizational support constitute conditions that can strengthen or constrain its use. This distinction helps explain why providing teachers with an SEL curriculum alone may be insufficient to establish consistent classroom practice.

3.3. Learning climate as a Relational Context

Learning climate emerged across the literature as a relational and psychosocial context through which SEL is experienced. School climate is multidimensional, encompassing academic, community, safety, and institutional dimensions [11]. Classroom climate is narrower but directly experienced through teacher–student interaction, peer relations, emotional support, participation, expectations, and responses to mistakes. A meta-analysis of classroom climate found positive associations with academic achievement, motivation and engagement, and social competence, together with negative associations with distress and externalizing behavior [14].

The relationship between climate and achievement is also supported at the broader school and classroom levels. Erdem and Kaya’s meta-analysis synthesized separate evidence for classroom climate and school climate and academic achievement across K–12 research [12]. In addition, research on classroom emotional climate has linked aggregated positive emotions and teacher support with academic achievement [15]. The meta-analytic findings provide evidence of associations between learning environments and student outcomes, but they do not establish that climate alone causes those outcomes. These findings indicate that students’ academic experiences are embedded in social and emotional environments and that classroom climate should be examined alongside instructional and developmental processes.

Psychological safety is particularly important for SEL because students need opportunities to make mistakes, ask for help, express disagreement, and participate without excessive fear of embarrassment. When classrooms communicate fairness and emotional support, students can more readily participate in discussion, collaboration, reflection, and problem-solving. Teacher support has been associated with school engagement across multiple dimensions [17], while perceived teacher support has also been linked with academic achievement partly through student engagement [18]. These relationships suggest a plausible connection between supportive classroom conditions, student participation, and academic learning. However, the extent to which engagement explains the relationship between climate and achievement may depend on the population, measures, and educational setting.

The climate perspective also helps explain why SEL should not be treated only as an outcome. Teacher practices can shape climate, while climate can affect the opportunities available for students to practice social-emotional competencies. School leadership and organizational conditions can further enable or constrain teachers’ ability to maintain supportive routines. Evidence from a schoolwide implementation model indicates that social-emotional leadership is important when schools seek to embed SEL across the organization rather than confine it to individual classrooms [20]. Evidence from a nationwide SEL program study also illustrates the relevance of program-development and implementation conditions [25].

In the present synthesis, learning climate is therefore conceptualized primarily as a relational and organizational context, rather than being assigned an empirically established mediator role. It may be influenced by teacher practices and school leadership while simultaneously shaping students’ opportunities to participate, collaborate, and develop social-emotional competencies. This reciprocal interpretation provides a useful conceptual

connection among teacher enactment, classroom experiences, and student outcomes, but its causal pathways require direct empirical testing. Table I summarizes the principal thematic findings and their implications for elementary education.

Table I. Thematic synthesis of the reviewed literature

Theme	Main evidence	Implication for elementary education
SEL as integrated practice	Structured SEL is associated with social-emotional, behavioral, engagement, and academic outcomes, with implementation quality moderating effects [2], [9].	Embed competencies in ordinary instruction and interaction rather than treating SEL as an isolated activity.
Teacher enactment	Teacher social-emotional competence, support, beliefs, and professional learning shape classroom implementation [5], [21], [27].	Strengthen teacher SEL, modeling, reflection, coaching, and organizational support.
Learning climate	Supportive classroom and school climate is associated with engagement, social competence, well-being, and academic achievement [11], [12], [14].	Prioritize psychological safety, fairness, relational warmth, participation, and constructive conflict management.
Implementation and sustainability	Fidelity, dosage, contextual support, leadership, and teacher capacity influence implementation [10], [22], [23].	Evaluate process and conditions as well as outcomes; provide sustained school-level support.
Contextual adaptation	Culture and local values shape how emotional competencies are expressed and interpreted [29], [30].	Adapt examples and routines while maintaining clarity about developmental purposes.

3.4. SEL, Student Achievement, and Developmental Outcomes

The reviewed literature supports a broad interpretation of student achievement. Academic achievement includes performance in school subjects, but elementary education also involves engagement, motivation, persistence, prosocial behavior, confidence, and psychosocial well-being. For analytical clarity, this synthesis distinguishes academic achievement, which concerns academic performance, from broader developmental outcomes, which include social-emotional skills, behavior, engagement, and well-being. Durlak et al. reported academic as well as social and behavioral benefits in their meta-analysis [2], while Taylor et al. found follow-up benefits in social-emotional skills, attitudes, and well-being [7]. The contemporary synthesis by Cipriano et al. similarly reported effects across skills, attitudes, behavior, school functioning, school climate and safety, peer relationships, and academic achievement, while emphasizing heterogeneity in intervention features and implementation [9].

Evidence focused specifically on academic outcomes also supports a cautious interpretation. Corcoran et al. synthesized universal school-based SEL programs and found evidence for improved academic achievement [8]. A more recent meta-analysis focusing on elementary and middle school students also reported academic effects across a body of research dominated by elementary-school samples [35]. These meta-analytic findings

strengthen the case that academic achievement should be examined as a distinct outcome of SEL interventions rather than being subsumed under general developmental benefits. Nevertheless, the inclusion of mixed elementary and middle school populations in some reviews limits the extent to which all findings can be attributed exclusively to elementary students. The results suggest that academic and social-emotional development can be complementary, but they should not be interpreted as evidence that SEL is a universal or automatic cause of higher test scores.

Engagement provides one plausible pathway connecting social-emotional conditions to academic learning. Teacher support is positively associated with school engagement [17], and perceived teacher support shows a small-to-moderate relationship with academic achievement, with engagement partly accounting for the association [18]. Classroom climate is also related to motivation and engagement [14]. In practical terms, students who feel supported and able to participate may have more opportunities to persist, seek assistance, collaborate, and respond productively to feedback. The literature thus supports engagement as a relevant link between classroom experiences and academic performance, although the specific mediating role of engagement should not be generalized to every SEL program without direct testing.

School belonging and relational connection provide additional developmental context. Evidence from the school-belonging literature links belonging with academic, motivational, social-emotional, and behavioral outcomes [36]. Although much of this evidence includes secondary students, the mechanism is relevant to elementary education because the foundations of belonging and relational security develop through repeated school experiences. The relevance to younger students should therefore be treated as a theoretically informed implication rather than as direct evidence that findings from secondary populations transfer unchanged to elementary classrooms. The literature supports a multidimensional view in which academic achievement is considered alongside the social and emotional processes that may help students participate in and sustain learning.

Taken together, the evidence suggests that SEL-related outcomes are best understood as a set of related but distinct domains. Social-emotional competencies and prosocial behavior represent developmental outcomes; engagement describes students' participation in learning; and academic achievement concerns performance in school subjects. Their relationships are supported by several meta-analyses, but the pathways connecting them remain sensitive to intervention design, implementation quality, and educational context. This distinction is particularly important when evaluating SEL programs because improvement in one outcome should not automatically be interpreted as evidence of improvement in all others.

3.5. Implementation, Evaluation, and Sustainability

Implementation is a central finding of the synthesis because evidence of program effectiveness cannot be separated from how programs are delivered. Durlak et al. identified implementation problems as moderators of outcomes [2], and de Leeuw et al. showed that implementation fidelity deserves explicit attention when interventions are implemented by teachers in classroom settings [23]. Ulla and Poom-Valickis likewise found that teacher- and

school-related contextual factors are relevant to implementation quality [10]. The practical implication is that evaluation should record not only whether an SEL activity occurred but also its quality, dosage, consistency, adaptation, and organizational support.

Evaluation should also distinguish outcome measurement from process evaluation. Academic scores and student self-reports can provide useful information, but they cannot alone explain how implementation operates. Classroom observation can capture interactional patterns; interviews can examine teacher and student interpretations; school documents can show institutional expectations; and implementation records can describe dosage and adaptation. These methods are recommendations for future empirical evaluation, not data-collection procedures undertaken in the present literature synthesis. Using multiple evidence sources in future studies would help clarify whether observed outcomes correspond to formal program adoption, consistent classroom enactment, or sustained schoolwide integration.

School leadership is an important condition for sustainability. Evidence from a schoolwide implementation model suggests that social-emotional leadership can influence the organizational conditions under which SEL is implemented [20]. Recent work on the prosocial school leader similarly connects leadership, school climate, teacher functioning, family and community partnerships, and student outcomes [28]. These findings suggest that responsibility for SEL should not rest solely on individual classroom teachers; school leaders need to establish coherent expectations, professional support, and organizational routines.

Professional development should also be treated as an ongoing process. Evidence concerning teacher professional development indicates that teachers need opportunities to develop social-emotional knowledge and practice, rather than receiving only program information [27]. Recent research on educator SEL emphasizes reflective and professional-learning approaches for developing teachers' cognitive, emotional, and social capacities [27]. A complementary review of teacher training and supportive interactions highlights professional development as an important process in school-based SEL [26]. Taken together, these studies indicate that professional learning is most meaningfully considered as part of implementation infrastructure, alongside leadership, time, resources, and opportunities to apply and reflect on practice. Teacher training alone, however, should not be assumed to guarantee implementation fidelity or sustained student benefits.

Sustainability also requires an appropriate balance between fidelity and adaptation. Excessive rigidity may make a program difficult to fit local curriculum, student characteristics, or cultural expectations, while unrestricted adaptation can obscure the competencies and practices that constitute the intervention. Contemporary cultural scholarship argues that SEL cannot rely exclusively on a single culturally normative model of emotion and social competence [29]. Contextual adaptation should therefore be understood as a process of making SEL meaningful in local settings while maintaining clarity about the developmental purposes of the competencies.

The synthesis identifies implementation quality as a cross-cutting condition rather than a separate outcome that can be inferred from program adoption. Fidelity, dosage, teacher capacity, leadership, and adaptation provide complementary information about how an intervention is enacted. Although the literature supports the importance of these factors,

it does not establish that a single combination of implementation practices will be optimal across all schools. Evaluation should therefore consider both the core purposes of a program and the local conditions that shape its delivery.

3.6. Contextual Adaptation in Indonesian Elementary Education

Indonesian elementary education provides a particularly relevant context for examining how SEL is interpreted and adapted. Recent Indonesian studies report growing attention to social-emotional learning, student achievement, character development, and the Merdeka Curriculum [31]–[33]. Indonesian character-education research also emphasizes the role of value internalization in contemporary elementary education [36]. These studies indicate that SEL-related practices can be discussed alongside established educational aims concerning character, social responsibility, participation, and student well-being. A recent Indonesian systematic review similarly identifies teacher competence, classroom strategies, and implementation challenges as central themes in the literature [34].

At the same time, contextualization should not be reduced to translating international terminology into Indonesian. Cultural values influence how responsibility, cooperation, emotional expression, discipline, respect, and empathy are understood and enacted. Recent scholarship explicitly argues that educators' social-emotional competence is culturally grounded and that SEL should engage with different ways of experiencing, expressing, regulating, and interpreting emotions [29]. A trauma-informed perspective also emphasizes cultural responsiveness and strengths-based approaches when preparing educators to support SEL [30].

The Indonesian context therefore offers a basis for examining culturally responsive SEL: an approach in which the developmental purposes of SEL are connected to local meanings, relationships, values, and classroom practices rather than transferred as culturally neutral prescriptions. The Indonesian literature suggests that existing cultural and character-education resources can provide a foundation for SEL rather than being treated as unrelated domains. This does not mean that all character education is equivalent to SEL. Rather, there is potential overlap in areas such as empathy, responsible action, social responsibility, respect, and self-regulation. The research priority is therefore to examine how these domains are interpreted in particular school communities and how teachers integrate them into ordinary instructional practices.

A process-oriented agenda is especially relevant because implementation may vary substantially among schools even when they use similar curriculum language. Differences in leadership, teacher preparation, school climate, resources, family expectations, and local cultural practices can influence what students actually experience. The Indonesian evidence base would therefore benefit from multiple-case and longitudinal studies that combine classroom observation, interviews, student perspectives, school documents, and outcome indicators. Such designs could clarify how formal SEL expectations become embedded in daily school life rather than treating implementation as a binary condition.

The literature also indicates a need for stronger evaluation practices in Indonesian elementary education. Research that relies on a single self-report measure may overlook interactional processes, differences among classrooms, and changes in implementation over

time. A more comprehensive approach can combine process indicators with academic and developmental outcomes. This would allow researchers to distinguish between formal adoption, partial implementation, and sustained integration, while also documenting adaptations that make SEL meaningful within local school cultures.

Recent Indonesian publications further demonstrate that the field is moving toward greater empirical attention, but the literature remains heterogeneous in design and emphasis [31], [32], [33], [34]. The contribution of the present synthesis is therefore not to claim that Indonesian SEL research is absent. Instead, it identifies a more specific gap concerning how implementation is interpreted, negotiated, adapted, and sustained within particular elementary-school ecosystems. This distinction is important because it aligns the research agenda with the current international emphasis on implementation variability and contextual conditions [9], [10].

The main contextual contribution is the proposition that culturally responsive SEL should be examined as an interaction between social-emotional competencies, teacher enactment, learning climate, and locally meaningful educational practices. This perspective avoids assuming that international SEL constructs transfer directly to Indonesian classrooms without modification. It also avoids treating local culture as a decorative addition to a predetermined program: cultural meanings should inform the examples, interactional routines, interpretation of behavior, and forms of student participation through which SEL is enacted. The precise effects of these adaptations, however, require empirical investigation in specific school communities.

3.7. Research and Practice Implications

Across the six themes, the synthesis points to a connected but non-deterministic relationship among teacher competence, classroom enactment, learning climate, student engagement and development, and academic outcomes. Teacher social-emotional competence may support the enactment of SEL through modeling, feedback, emotional regulation, and relationship management [5], [21], [27]. These practices can contribute to a supportive learning climate, while school leadership and organizational conditions can strengthen or constrain their implementation [20], [28]. Supportive classroom conditions and teacher relationships are associated with student engagement and academic achievement [17], [18]. Meta-analytic evidence also indicates that SEL interventions can benefit academic and developmental outcomes, although effects vary across programs and implementation contexts [2], [9].

The relationship can therefore be summarized as a conceptual pathway:

Teacher social-emotional competence → classroom enactment of SEL → learning climate and opportunities for participation → student engagement and developmental outcomes → academic achievement.

This pathway is a synthesis-derived conceptual interpretation, not an empirically tested causal model. The relationships between teacher competence and enactment, classroom climate and engagement, and SEL interventions and student outcomes are supported by different bodies of empirical evidence. However, the complete sequence has not been established as a single causal chain by the present study. The learning climate is

positioned primarily as a relational and organizational context that shapes students' opportunities to participate and practice social-emotional competencies. Teacher competence is positioned as an implementation capacity, while implementation quality functions as a cross-cutting condition that can strengthen or constrain the proposed relationships.

For practice, the synthesis suggests that SEL should be embedded in teaching routines rather than confined to scheduled activities. Teachers can make competencies explicit during collaborative work, feedback, problem solving, conflict resolution, and reflection. School leaders can support this process by aligning professional development, classroom expectations, student support systems, and schoolwide communication. The evidence on teacher support and engagement reinforces the value of creating emotionally supportive learning conditions [17], while schoolwide implementation research highlights the role of organizational leadership [20], [28].

For research, future studies should move beyond questions of whether SEL works toward questions of how, under what conditions, and for whom implementation is meaningful. Multiple-case qualitative designs can compare how teachers interpret competencies and how students experience climate across different schools. Mixed-method studies can connect observations and interviews with academic and developmental indicators. Longitudinal research can examine whether changes in teacher practice and classroom climate are sustained after formal training or intervention periods.

Researchers should also report implementation characteristics more transparently. Information about dosage, training, teacher involvement, leadership support, adaptations, student participation, and contextual constraints can make findings more interpretable and transferable. The contemporary SEL evidence base demonstrates substantial heterogeneity, making contextual and implementation reporting increasingly important [9]. Such reporting is particularly valuable in Indonesia, where curriculum reforms and local school cultures may shape how international SEL constructs are interpreted.

Finally, cultural responsiveness should be treated as an analytical issue rather than merely a practical adjustment. The cultural meaning of emotional regulation, cooperation, responsibility, and interpersonal support may vary across communities [29]. Studies should therefore document how teachers and students define these competencies and how local values interact with formal SEL language. For Indonesian elementary education, culturally responsive SEL offers a promising direction for aligning developmental objectives with local educational values while retaining explicit attention to social-emotional competencies, learning conditions, and academic outcomes. This approach can strengthen theoretical relevance and practical sustainability without assuming that one implementation model will fit every elementary school.

Overall, the synthesis indicates that understanding SEL in elementary education requires attention to the interaction between developmental aims, teacher capacity, relational classroom conditions, implementation quality, and cultural context. The strongest contribution of this article is the integration of these dimensions into a coherent interpretation of SEL implementation, while recognizing that the proposed cross-theme relationships require further empirical testing, particularly in Indonesian elementary schools.

4. CONCLUSION

This study synthesized the literature on social and emotional learning (SEL) in elementary education, focusing on the relationships among SEL practices, teacher social-emotional competence, learning climate, student outcomes, and implementation in Indonesian schools. The synthesis suggests that SEL is an integrative pedagogical practice shaped by teachers' capacity to facilitate social-emotional learning, the classroom climate, implementation quality, and contextual conditions. These relationships should not be interpreted as a single, universally established causal pathway. The review contributes an integrative perspective by emphasizing not only SEL outcomes but also how SEL is enacted, supported, adapted, and sustained in elementary-school settings. In Indonesia, culturally responsive implementation is particularly important to connect SEL competencies with local educational values and school contexts.

The findings highlight the importance of teacher professional development, supportive school environments, and context-sensitive evaluation of SEL implementation. Nevertheless, the narrative nature of the synthesis, the absence of a reproducible systematic search and formal screening protocol, and the lack of primary empirical testing limit the generalizability of the conclusions. Future research should use process-oriented, mixed-methods, and longitudinal designs to investigate relationships among teacher competence, classroom practices, learning climate, student engagement, developmental outcomes, and academic achievement. Further research in Indonesian elementary schools is needed to establish how SEL can be meaningfully implemented, rigorously evaluated, and sustained across diverse cultural and educational settings.

REFERENCES

- [1] J. W. Payton, D. M. Wardlaw, P. A. Graczyk, M. R. Bloodworth, C. J. Tompsett, and R. P. Weissberg, "Social and emotional learning: A framework for promoting mental health and reducing risk behavior in children and youth," *Journal of School Health*, vol. 70, no. 5, pp. 179–185, 2000, doi: 10.1111/j.1746-1561.2000.tb06468.x.
- [2] J. A. Durlak, R. P. Weissberg, A. B. Dymnicki, R. D. Taylor, and K. B. Schellinger, "The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions," *Child Development*, vol. 82, no. 1, pp. 405–432, 2011, doi: 10.1111/j.1467-8624.2010.01564.x.
- [3] M. T. Greenberg, C. E. Domitrovich, R. P. Weissberg, and J. A. Durlak, "Social and emotional learning as a public health approach to education," *Future of Children*, vol. 27, no. 1, pp. 13–32, 2017, doi: 10.1353/foc.2017.0001.
- [4] S. M. Jones, S. P. Barnes, R. Bailey, and E. J. Doolittle, "Promoting social and emotional competencies in elementary school," *Future of Children*, vol. 27, no. 1, pp. 49–72, 2017, doi: 10.1353/foc.2017.0003.
- [5] P. A. Jennings and M. T. Greenberg, "The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes," *Review of Educational Research*, vol. 79, no. 1, pp. 491–525, 2009, doi: 10.3102/0034654308325693.
- [6] E. Oberle, C. E. Domitrovich, D. C. Meyers, and R. P. Weissberg, "Establishing systemic social and emotional learning approaches in schools: A framework for schoolwide implementation," *Cambridge Journal of Education*, vol. 46, no. 3, pp. 277–297, 2016, doi: 10.1080/0305764X.2015.1125450.
- [7] R. D. Taylor, E. Oberle, J. A. Durlak, and R. P. Weissberg, "Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects," *Child Development*, vol. 88, no. 4, pp. 1156–1171, 2017, doi: 10.1111/cdev.12864.
- [8] R. P. Corcoran, A. C. K. Cheung, E. Kim, and C. Xie, "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*, vol. 25, pp. 56–72, 2018, doi:

- 10.1016/j.edurev.2017.12.001.
- [9] C. Cipriano et al., "The state of evidence for social and emotional learning: A contemporary meta-analysis of universal school-based SEL interventions," *Child Development*, vol. 94, no. 5, pp. 1181–1204, 2023, doi: 10.1111/cdev.13968.
- [10] T. Ulla and K. Poom-Valickis, "Program support matters: A systematic review on teacher- and school-related contextual factors facilitating the implementation of social-emotional learning programs," *Frontiers in Education*, vol. 7, 965538, 2023, doi: 10.3389/educ.2022.965538.
- [11] M.-T. Wang and J. L. Degol, "School climate: A review of the construct, measurement, and impact on student outcomes," *Educational Psychology Review*, vol. 28, no. 2, pp. 315–352, 2016, doi: 10.1007/s10648-015-9319-1.
- [12] C. Erdem and M. Kaya, "The relationship between school and classroom climate, and academic achievement: A meta-analysis," *School Psychology International*, vol. 45, no. 4, pp. 380–408, 2024, doi: 10.1177/01430343231202923.
- [13] K. M. Rudasill, K. C. Gallagher, and J. M. White, "Temperamental attention and activity, classroom emotional support, and academic achievement in third grade," *Journal of School Psychology*, vol. 48, no. 2, pp. 113–134, 2010, doi: 10.1016/j.jsp.2009.11.002.
- [14] L. Forsblom, F. Peixoto, and L. Mata, "Perceived classroom support: Longitudinal effects on students' achievement emotions," *Learning and Individual Differences*, vol. 85, 101959, 2021, doi: 10.1016/j.lindif.2020.101959.
- [15] G. Kashy-Rosenbaum, O. Kaplan, and Y. Israel-Cohen, "Predicting academic achievement by class-level emotions and perceived homeroom teachers' emotional support," *Psychology in the Schools*, vol. 55, no. 7, pp. 770–782, 2018, doi: 10.1002/pits.22140.
- [16] H. Lei, X. Wang, M. M. Chiu, M. Du, and T. Xie, "Teacher-student relationship and academic achievement in China: Evidence from a three-level meta-analysis," *School Psychology International*, vol. 44, no. 1, pp. 68–101, 2023, doi: 10.1177/01430343221122453.
- [17] L. F. Vargas-Madriz, C. Konishi, and T. K. Wong, "A meta-analysis of the association between teacher support and school engagement," *Social Development*, vol. 33, no. 4, e12745, 2024, doi: 10.1111/sode.12745.
- [18] Y. Tao, Y. Meng, Z. Gao, and X. Yang, "Perceived teacher support, student engagement, and academic achievement: A meta-analysis," *Educational Psychology*, vol. 42, no. 4, pp. 401–420, 2022, doi: 10.1080/01443410.2022.2033168.
- [19] H. Korpershoek, T. Harms, H. de Boer, M. van Kuijk, and S. Doolaard, "A meta-analysis of the effects of classroom management strategies and classroom management programs on students' academic, behavioral, emotional, and motivational outcomes," *Review of Educational Research*, vol. 86, no. 3, pp. 643–680, 2016, doi: 10.3102/0034654315626799.
- [20] Y. Li, K. Kendziora, J. Berg, M. T. Greenberg, and C. E. Domitrovich, "Impact of a schoolwide social and emotional learning implementation model on student outcomes: The importance of social-emotional leadership," *Journal of School Psychology*, vol. 98, pp. 78–95, 2023, doi: 10.1016/j.jsp.2023.01.006.
- [21] J. Lee, "The role of teachers' social and emotional competence in implementing social and emotional learning (SEL) curriculum in Malawi," *School Psychology International*, vol. 45, no. 6, 2024, doi: 10.1177/01430343241247221.
- [22] J. L. Merle et al., "Investigating strategies to increase general education teachers' adherence to evidence-based social-emotional behavior practices: A meta-analysis of the single-case literature," *Journal of School Psychology*, vol. 91, pp. 1–26, 2022, doi: 10.1016/j.jsp.2021.11.005.
- [23] R. R. de Leeuw, A. A. de Boer, and A. E. M. G. Minnaert, "The proof of the intervention is in the implementation: A systematic review about implementation fidelity of classroom-based interventions facilitating social participation of students with social-emotional problems or behavioural difficulties," *International Journal of Educational Research Open*, vol. 1, 100002, 2020, doi: 10.1016/j.ijedro.2020.100002.
- [24] C. A. Ștefan, I. Dănilă, and D. Cristescu, "Classroom-wide school interventions for preschoolers' social-emotional learning: A systematic review of evidence-based programs," *Educational Psychology Review*, vol. 34, pp. 2971–3010, 2022, doi: 10.1007/s10648-022-09680-7.
- [25] V. A. Coelho, A. M. Romão, P. R. Silva, and S. Saldanha, "A nationwide analysis of the effectiveness of a social and emotional learning program in Portugal: Focus on the role of developers' involvement," *Revista de Psicodidáctica*, vol. 26, no. 2, pp. 152–160, 2021, doi: 10.1016/j.psicod.2021.04.001.
- [26] R. Shankland, P. Haag, D. Tessier, C. Buchs, C. El-Jor, and S. Mazza, "Review of the effects of social and emotional learning on mental health and academic outcomes: The role of teacher training and supportive interactions," *Journal of Epidemiology and Population Health*, vol. 72, no. 3, 202750, 2024, doi: 10.1016/j.jep.2024.202750.

- [27] N. A. Elbertson, P. A. Jennings, and M. A. Brackett, "The role of educators in school-based social and emotional learning," *Social and Emotional Learning: Research, Practice, and Policy*, vol. 6, 100134, 2025, doi: 10.1016/j.sel.2025.100134.
 - [28] J. Mahfouz, M. T. Greenberg, R. P. Weissberg, C. Kim, and C. Turksma, "The prosocial school leader: Theory, research, and action," *Social and Emotional Learning: Research, Practice, and Policy*, vol. 5, 100102, 2025, doi: 10.1016/j.sel.2025.100102.
 - [29] B. Mesquita, J. De Leersnyder, G. Dekeyser, A. Cochez, and P. A. Jennings, "Where social-emotional learning meets culture," *Social and Emotional Learning: Research, Practice, and Policy*, vol. 7, 100183, 2026, doi: 10.1016/j.sel.2026.100183.
 - [30] M. C. Walter and T. S. Wynard, "Preparing educators to support SEL: The foundational role of trauma-informed training," *Social and Emotional Learning: Research, Practice, and Policy*, vol. 5, 100071, 2025, doi: 10.1016/j.sel.2024.100071.
 - [31] O. D. Agustina, N. Nasution, G. Gunansyah, N. Mariana, and A. M. I. Puspita, "Implementation of social emotional learning in elementary schools within the Merdeka Curriculum," *Journal of Innovation and Research in Primary Education*, vol. 4, no. 2, pp. 160–169, 2025, doi: 10.56916/jirpe.v4i2.1216.
 - [32] R. Ginting and A. H. Hernawan, "Social-emotional learning implementation and its impact on student achievement," *Inovasi Kurikulum*, vol. 21, no. 4, pp. 2383–2394, 2024, doi: 10.17509/jik.v21i4.66374.
 - [33] Rahmawati Parman, Y. F. Susetyo, and Rahmawaty Parman, "Implementasi pembelajaran sosial emosional di sekolah dasar," *Educator: Directory of Elementary Education Journal*, vol. 6, no. 1, 2025, doi: 10.58176/edu.v6i1.2.
 - [34] A. Nurfauziah, M. H. Nasrudin, A. A. Bafaqih, and Y. Wahyuningsih, "Systematic literature review: Analisis implementasi social emotional learning (SEL) pada proses pembelajaran di sekolah dasar," *Pendas: Jurnal Ilmiah Pendidikan Dasar*, vol. 10, no. 4, 2025, doi: 10.23969/jp.v10i04.35706.
 - [35] Y. Zhao and B. Sang, "The effect of social-emotional learning programs on elementary and middle school students' academic achievement: A meta-analytic review," *Behavioral Sciences*, vol. 15, no. 11, 1527, 2025, doi: 10.3390/bs15111527.
 - [36] M. Patiung, I. W. Suastra, and A. W. T. Atmaja, "Internalisasi pendidikan karakter dalam mewujudkan Profil Pelajar Pancasila," *Empiricism Journal*, vol. 4, no. 2, pp. 612–620, 2023, doi: 10.36312/ej.v4i2.1666.
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