

Collaborative and Empathetic Skills in Primary School Students in Sumenep: a Phenomenological Study

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Abstract: This study explores how students adapt collaboration and empathy in their daily classroom learning and what factors affect their development. This study uses a qualitative approach with Interpretative Phenomenological Analysis (IPA). It involved 27 participants: 18 students in Grades 4-6 (aged 9–12) and 9 teachers with at least 5 years of experience. The population was selected from three public elementary schools in Sumenep Regency, Madura, and data were collected through classroom observations, semi-structured interviews, and learning documents, then analyzed using IPA steps. The findings indicate three main ideas. First, collaboration often happens as group work guided by teachers. Second, empathy appears as a mix of caring feelings and limited understanding of others. Third, cultural values play an important role in shaping both skills. Collaboration is affected by teacher-centered practices, limited group learning structures, and harmony values. Students' development, external motivation, politeness, and few chances to practice seeing others' perspectives affect empathy. This study contributes to how collaboration and empathy develop in elementary classrooms in non-metropolitan Indonesia.

Keywords: Collaboration skills, empathetic attitudes, primary education



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A. Introduction

Global educational developments in the twenty-first century have repositioned schooling from a narrow focus on cognitive achievement toward the systematic cultivation of social and emotional competencies as a foundation for future academic, social, and professional life (OECD, 2021; Trilling & Fadel, 2009). International frameworks consistently identify collaboration and empathy as core competencies that must be deliberately developed, as both directly shape learners' capacity to work productively with others, appreciate diversity, and participate meaningfully in an increasingly complex society disrupted by rapid technological change and artificial intelligence. In this sense, collaboration and empathy are no longer merely complementary qualities but represent foundational social-emotional capital for twenty-first-century learners (OECD, 2022). Empirical research conducted over the past decade

has demonstrated that well-designed collaborative learning improves social skills, higher-order thinking, and academic outcomes, while empathy supports cooperative behaviour and active participation (Maria et al., 2025; Johnsen et al., 2024; Warsah et al., 2021). Nonetheless, the preponderance of this evidence originates from urban contexts, developed countries, or well-resourced institutions.

Studies conducted in non-metropolitan and regional educational settings, particularly in developing countries, remain scarce, and very few studies simultaneously examine collaboration and empathy within the same empirical framework. A systematic search of the Scopus database yielded no study specifically mapping elementary students' collaboration skills and empathy attitudes in Sumenep Regency, leaving the social-emotional landscape of this underrepresented context largely undocumented. Sumenep Regency, located on the eastern tip of Madura Island, constitutes a pedagogically relevant case because it combines the global demand for twenty-first-century competencies with distinctive socio-cultural and educational access characteristics, including a strong collectivist Madurese orientation toward harmony (*kerukunan*), politeness (*kesopanan*), and deference to authority. This cultural profile may shape how students enact collaboration and empathy in ways not fully captured by the Anglo-American and urban-centric literature. The present study, therefore, addresses two complementary gaps: a geographical gap (underrepresentation of non-metropolitan regional education in Indonesia) and a conceptual gap (the absence of a simultaneous, phenomenologically-grounded mapping of factors influencing collaboration skills and empathy attitudes at the elementary level).

Collaboration is recognized in contemporary educational scholarship as a multidimensional competency that goes far beyond the mere physical grouping of students. Johnson and Johnson (2018) conceptualize effective collaborative learning through five key elements: positive interdependence, individual accountability, promotive interaction, appropriate use of social skills, and group processing. When these elements are deliberately operationalized, collaborative learning demonstrably improves learning outcomes, social skills, and higher-order thinking (Gillies, 2016). From a social-constructivist standpoint (Daniels, 2016; Thorne, 2007; Vygotsky, 1978), collaboration is the primary medium through which learning occurs: students co-construct knowledge through dialogue, joint action, and distributed cognition within a shared zone of proximal development. Empirical studies confirm that collaboration at the elementary level is substantially influenced by the degree of structure provided by the learning design. Hansen (2022) found that unstructured collaborative problem-solving produced marked role imbalance and reduced individual accountability among primary students, while Zabolotna et al. (2025) demonstrated that task design meaningfully shapes the quality of collaborative knowledge construction and group-level regulation. In non-Western or collectivist contexts, however, collaboration may take culturally specific forms; students may cooperate to maintain relational harmony rather than for epistemic reasons, complicating the straightforward application of

Anglo-American cooperative learning frameworks (Grothaus, 2022; F. Wang et al., 2024).

Empathy is a complex concept that develops through both emotional (affective) and intellectual (cognitive) dimensions. Davis (2018) distinguishes affective empathy, the vicarious sharing of another's emotional state, from cognitive empathy, defined as the capacity to take another's perspective. Hoffman (2000) charts the developmental progression from global to mature empathy, arguing that the internalization of perspective-taking requires both cognitive maturation and deliberate social practice. Eisenberg (2021) further situates empathy within broader prosocial development, demonstrating its role as a motivational driver of cooperative and helping behaviour.

Cross-cultural research consistently demonstrates that the expression and development of social-emotional competencies are shaped by the cultural and institutional contexts in which learners are embedded (Brackett et al., 2019; Ma & Niu, 2025). In collectivist contexts, cooperative behaviour is frequently motivated by a desire to preserve group harmony rather than by autonomous prosocial values, which may inhibit the development of cognitive perspective-taking, a prerequisite for both high-quality collaboration and mature empathy (F. Wang et al., 2024). Madurese society exemplifies these tensions: the cultural imperatives of *kerukunan* (harmony) and *kesopanan* (politeness) generate strong normative pressure toward relational cooperation while simultaneously discouraging the open expression of divergent viewpoints (Grothaus, 2022). Understanding how such cultural values mediate collaboration and empathy in the classroom is, therefore, essential for designing pedagogical interventions that are both effective and culturally responsive.

Recent intervention research has demonstrated that empathy is not merely an innate trait but a learnable competency. Role-play, literature circles, dramatic performance, and structured reflection have all been shown to enhance perspective-taking in elementary and middle school students (Pira et al., 2025; Sultan & Khan, 2025; Troxler et al., 2023). From a neuroscientific perspective, the school emotional climate functions as a critical moderator of social-emotional skill development, with teacher warmth and structured emotional scaffolding activating the cognitive-regulatory pathways of empathy (Cagatan & Quirap, 2024; Vasquez et al., 2025). In a systematic review, Camacho and Alexander (2025) further establish that empathy and collaborative learning are mutually reinforcing: empathy facilitates perspective-taking in group settings, which in turn deepens collaborative engagement.

Guided by the gaps identified above, this study pursues three interrelated objectives: (1) to explore and interpret the lived experiences of elementary school students regarding collaboration skills and empathy attitudes in daily classroom learning in Sumenep Regency; (2) to identify and analyze the pedagogical, social, and cultural factors that influence the development of collaboration skills among elementary school students in a non-metropolitan Indonesian setting; and (3) to identify and analyze the pedagogical, developmental, and cultural factors that influence the development of empathy attitudes among elementary school students in the same context. Meanwhile,

the novelty of this study lies in its simultaneous phenomenological mapping of collaboration skills and empathy attitudes within a single idiographic framework situated in an underrepresented, non-metropolitan regional context, with explicit attention to the factors that mediate the development of each competency. By foregrounding the mediating role of Madurese cultural values alongside pedagogical practices, the study enriches the international discourse on social-emotional learning (SEL). It also provides an empirical basis for context-responsive pedagogical design and educational policy at the local, regional, and national levels.

B. Method

This study employed a qualitative design framed by Interpretative Phenomenological Analysis (IPA) as conceptualized by Smith, Flowers, and Larkin (2011). IPA was selected because it systematically captures how individuals make sense of significant personal and social experiences through an idiographic and double-hermeneutic process, which is directly aligned with the study's aim of exploring how children experience and interpret collaboration and empathy in their own learning worlds, and of identifying the pedagogical, developmental, and cultural factors that shape those competencies. The study was anchored in a critical-relativist paradigm that treats collaboration and empathy as socially constructed competencies shaped by experience, interaction, and local culture (Daniels, 2016; Thorne, 2007).

Fieldwork was conducted from August to November 2024 in three public elementary schools located in Sumenep Regency: *Sekolah Dasar Negeri* (SDN) GG (coastal), SDN BB (inland), and SDN KD (semi-urban). The multi-site design enabled a collective or multiple-case IPA approach (Larkin et al., 2019), which justifies a larger participant pool than the 3–8 range recommended for single-case IPA. Purposive, criterion-based sampling yielded 27 participants: 18 students (Grades IV–VI, aged 9–12) and 9 teachers with at least five years of teaching experience. Idiographic depth was preserved by conducting and analyzing each case individually before cross-case synthesis at the school and study levels.

Table 1. Characteristics of the Participants

School	Students	Grade	Age (yrs)	Student M/F	Teachers	Exp. (yrs)	Teacher M/F
SDN GG	6	IV–VI	9–12	3/3	3	8–22	1/2
SDN BB	6	IV–VI	9–12	3/3	3	6–18	1/2
SDN KD	6	IV–VI	9–12	3/3	3	5–25	1/2
Total	18	IV–VI	9–12	9/9	9	5–25	3/6

Table 2. Participant Inclusion Criteria

Group	Inclusion Criteria
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Group	Inclusion Criteria
Students	(1) Active status in Grades IV, V, or VI; (2) enrolled ≥ 1 academic year at the school; (3) adequate verbal communication for in-depth interview; (4) voluntary participation with written parental/guardian consent and child assent; (5) no condition that would preclude participation in observation or interview.
Teachers	(1) Active teacher at the school; (2) teaches Grades IV, V, or VI or holds a leadership role (principal/senior teacher); (3) ≥ 5 years of teaching experience; (4) voluntary participation in interview and classroom observation.

Ethical procedures were strictly followed due to the involvement of underage students. Written informed consent was obtained from each school principal, who then informed the students' parents or guardians of the study's purpose. All identifying information was removed or replaced with coded identifiers (e.g., S1/SDN-GG; T2/SDN-BB). Audio recordings and transcripts were stored in password-protected files accessible only to the research team.

Data were generated through three complementary techniques aligned with Creswell's (2018) framework for qualitative inquiry and IPA guidelines (Smith et al., 2011). First, non-participant classroom observations covered 12 learning sessions (120 minutes each, yielding 24 hours of observational data) focused on collaborative interaction, expressions of empathy, social dynamics, and teacher facilitation. Then, semi-structured interviews were conducted individually with all 27 participants (35–45 min for students; 45–55 min for teachers), audio-recorded with consent and transcribed verbatim. Finally, document analysis examined teaching modules, student group-work artifacts, teachers' anecdotal notes, and school policy documents. Instruments comprised an observation protocol, interview guides for students and teachers, a document-analysis matrix, and the researcher's reflexive field journal.

Data were analyzed through IPA's six iterative stages (Smith et al., 2011): (1) repeated reading and immersion in transcripts and field notes; (2) initial noting at descriptive, linguistic, and conceptual levels; (3) developing emergent themes per case; (4) searching for connections across themes within a case; (5) moving to the next case while bracketing prior interpretations; and (6) looking for patterns across cases to generate superordinate themes. Each case was analyzed idiographically before cross-case synthesis produced the final thematic structure. A consolidated codebook was maintained, and all transcripts were re-coded after member checking to ensure consistency.

Credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1979) were addressed through multiple strategies. Methodological and source triangulation combined observation, interview, and document data. Member checking was conducted with all 27 participants, who reviewed summaries and emerging interpretations. Peer debriefing sessions were held monthly with two external qualitative researchers unaffiliated with the study. An audit trail documented all analytical decisions, raw data, codes, memos, and version-controlled files. Thick description of

context, participants, and processes supports transferability. Reflexivity was practiced explicitly: the first author is a teacher-educator from Madura, which afforded cultural and linguistic access but required sustained bracketing of assumptions about harmony-oriented classroom norms; a reflexive journal was kept throughout fieldwork and analysis.

C. Results and Discussion

Results

Idiographic analysis of each case, followed by cross-case synthesis, produced three superordinate themes (Table 3). In line with IPA conventions, each theme is illustrated with verbatim quotations triangulated across student and teacher voices and coded by participant type, sequential number, and school (e.g., S03/SDN-GG; T02/SDN-GG). Results are reported descriptively in this section.

Table 3. Thematic Map of Collaboration and Empathy

Superordinate Theme	Core Pattern	Representative Voice
Collaboration as teacher-directed togetherness	Group work is initiated, structured, and sustained by explicit teacher direction; peer-led negotiation is rare.	"I have to wait for the teacher to tell us who does what."S03/SDN-GG
Empathy between affective concern and cognitive limits	Affective and norm-driven helping is readily expressed; cognitive perspective-taking under disagreement is limited.	"They are quick to help, but when there are differences of opinion, they are still easily offended." T06/SDN-KD
Cultural mediation through harmony	The Madurese ethic of rukun (harmony) and sopan (politeness) frames how students interpret cooperation and empathy.	"The important thing is to get along (rukun), not to fight."S01/SDN-GG

Theme 1: Collaboration as Teacher-Directed Togetherness

Across the three schools, students consistently described collaboration as an activity that begins, proceeds, and concludes within the boundaries of teacher direction. Group work was rarely initiated by peer negotiation; instead, students waited for explicit instructions about task roles and procedures. One student articulated this dependence with striking clarity:"When working in groups, I usually get assigned to work on problems, but I have to wait for the teacher to tell us who does what. (S03/SDN-GG)".

This pattern was corroborated by teachers, who recognized it both as a feature of student behaviour and as a consequence of their own facilitation choices. The same dynamic produced visible role asymmetry, in which a small number of academically strong students did most of the intellectual work while others adopted a passive

position: "The children want to work together, but they still need guidance. If roles are not defined, usually only certain students are active. (T02/SDN-GG)".

Taken together, these convergent student–teacher accounts portray collaboration as functional togetherness oriented toward quickly producing a finished task, rather than as a dialogic process of negotiation, role-sharing, and shared decision-making. The pattern was consistent across the three school sites. However, field notes recorded occasional divergent moments at SDN KD in which individual students questioned role distribution, reinforcing, by contrast, how exceptional peer-initiated negotiation was.

Theme 2: Empathy Between Affective Concern and Cognitive Limits

Empathy in these classrooms was readily expressed as immediate emotional concern for peers in difficulty. However, its motivational logic and cognitive depth proved more layered than a simple affective label would suggest. Students framed helping behaviour partly as care for the friend, but explicitly also as a strategy to keep the group out of trouble: "If a friend cannot do their work, I usually help them so the teacher will not get angry at us. (S04/SDN-KD)".

This account positions helping at the intersection of affective concern, normative compliance, and group self-protection rather than as a freely chosen prosocial act. The cognitive dimension of empathy, the capacity to understand and remain engaged with another's perspective when it diverges from one's own, was visibly weaker. When asked about disagreement in group work, teachers across all three schools reported a recurring pattern: "They are quick to help, but when there are differences of opinion, they are still easily offended. (T06/SDN-KD)".

The juxtaposition of these two voices captures the central asymmetry within Theme 2: emotional empathy is present and active, while cognitive perspective-taking under disagreement is fragile. Field observations corroborated this pattern in real time, with disagreements typically resolved by withdrawal or silence rather than by sustained, mutually-engaged dialogue. As a result, students more easily express empathy through observable actions, such as sharing food or lending items like pencils or erasers, but experience greater difficulty expressing their thoughts to others.

Theme 3: Cultural Mediation Through Harmony

Threading through both prior themes was a distinctly Madurese cultural framing. Students invoked the values of *kerukunan* (harmony) and *kesopanan* (politeness) as guiding principles of classroom interaction, valuing the preservation of relational stability above the open negotiation of difference: "The important thing is to get along (*rukun*), not to fight. (S01/SDN-GG)".

Field observations indicate that both teachers and parents actively reinforced this orientation. Teachers spoke of the importance of listening first and avoiding open disputation in front of the community, while students described family messages emphasising politeness and the avoidance of argument. In this cultural horizon, collaboration and empathy were understood less as reflective competencies to be cultivated and more as practices that protect *kerukunan*. Within Madurese cultural

norms, children are encouraged to subordinate personal interests to others' needs, regardless of whether it is right or wrong. It reflects a broader value of avoiding conflict, as social relationships are viewed as long-term and mutually dependent. The implications of this framing for the development of cognitive empathy and dialogic collaboration are taken up in discussion.

Emerging Factors from Cross-Case Analysis

Beyond the experiential themes above, cross-case analysis surfaced eight factors shaping the development of both competencies. For collaboration, four factors were consistently identified: (1) teacher-centered facilitation that minimized peer-led negotiation; (2) absence of structured cooperative protocols such as role rotation or jigsaw; (3) role asymmetry and passive participation, in which academically dominant students assumed most of the cognitive work; and (4) the cultural norm of *kerukunan*, which oriented cooperation toward harmony-maintenance rather than dialogic knowledge construction. For empathy, four parallel factors emerged: (1) developmental stage, consistent with the partial maturation of cognitive perspective-taking at ages 9–12; (2) external-sanction motivation, in which helping behaviour was driven by fear of teacher reprimand rather than internalized concern; (3) the cultural ethic of *kesopanan*, which supported affective warmth but restricted space for overt disagreement; and (4) scarcity of perspective-taking routines in everyday classroom practice. These eight factors are elaborated and discussed in the Discussion section that follows, with reference to the wider literature.

Discussion

This study set out to (1) explore and interpret students' lived experiences of collaboration and empathy, (2) identify factors that influence the development of collaboration skills, and (3) identify factors that influence the development of empathy attitudes in a non-metropolitan Indonesian context. The three superordinate themes jointly suggest that both competencies have emerged at a basic behavioural level but have not yet been internalized as reflective, self-regulated social-emotional competencies. Each objective is now addressed in the context of the wider literature.

Lived Experiences of Collaboration and Empathy

Students' lived experiences reveal collaboration as functional, product-oriented togetherness mediated by teacher authority, and empathy as affective and norm-driven concern that rarely extends to cognitive perspective-taking. These experiential profiles are not accidental but arise from the interaction of specific pedagogical, developmental, and cultural factors explored in detail in the following sections, as well as from a cultural framework that prizes relational harmony over dialogic engagement.

From a theoretical standpoint, the collaboration profile documented here is consistent with Vygotsky's (1978) account of the zone of proximal development: students operate within limits defined by the teacher because the scaffolding necessary for autonomous peer negotiation has not yet been internalized. In Daniels's (2016)

terms, collaboration in these classrooms remains at the stage of other-regulation and has not yet progressed toward self-regulation. Similarly, the empathy profile — dominated by affective concern with limited cognitive perspective-taking — aligns with Hoffman's (2000) developmental model, in which affective empathy emerges naturally and early, while cognitive empathy requires deliberate social practice and scaffolded experience to mature. The coexistence of warm relational feeling with fragile perspective-taking under disagreement is therefore not a paradox but a theoretically predictable outcome for children of this age and context who have not yet been provided the structured opportunities to practice perspective-taking as a reflective skill.

In practice, it is important to frame both profiles not as deficits but as developmentally appropriate starting points shaped and constrained by a specific pedagogical and cultural context. Students in Sumenep are cooperative and warm; what they lack are the structured opportunities, pedagogical protocols, and safe dialogic spaces to develop those dispositions into the reflective, self-directed social-emotional competencies that twenty-first-century learning demands. Without intentional intervention, however, these profiles risk becoming stable ceilings rather than developmental foundations. This finding underscores the need for pedagogical approaches that do not import Anglo-American social and emotional learning (SEL) frameworks wholesale but instead build on local assets — the genuine relational warmth, the communal orientation of *kerukunan*, and the students' readiness to help — while deliberately expanding the cognitive and dialogic dimensions of both collaboration and empathy (Grothaus, 2022; J. Wang, 2024). Understanding these lived experiences and the factors that shape them, therefore, constitutes the central empirical contribution of this study.

Factors Influencing the Development of Collaboration Skills

The second research objective was to identify and analyze the factors that influence collaboration development, which were divided into four categories. The first factor is teacher-centered facilitation. The most proximate factor shaping collaboration was the degree of structure and autonomy afforded by the teacher's facilitation style. The pattern of teacher-directed, product-oriented group work echoes long-standing findings that unstructured or loosely structured collaboration produces role imbalance and free-rider effects (Gillies, 2016; Hansen, 2022; Johnson & Johnson, 2018; Zabolotna et al., 2025). From a social-constructivist standpoint (Johnson & Johnson, 2017; Shimizu et al., 2021; Vygotsky, 1978), meaningful collaboration requires the explicit orchestration of positive interdependence, promotive interaction, individual accountability, and equal participation. In our cases, these principles were rarely planned pedagogically; collaboration was positioned as a procedural means to a finished product rather than as dialogic meaning-making.

The second factor is the absence of structured cooperative protocols. Unlike the deliberately engineered collaborative frameworks studied by Johnsen et al. (2024) and Zabolotna et al. (2025) this study illustrates the dynamics of collaboration when

structural scaffolding remains informal, and authority is centralized. The Sumenep classrooms lacked concrete protocols, such as structured cooperative learning, jigsaw, or role rotation, that operationalize Johnson and Johnson's (2018) principles. This absence is both a finding and a practical implication: locally-adapted cooperative protocols are urgently needed.

The third factor, role asymmetry and passive participation, reveals that the tendency for academically stronger students to dominate while others remain passive is a direct consequence of the facilitation gap above. Role asymmetry not only reduces individual learning but also reinforces the expectation that collaboration is the responsibility of the few, undermining the collective orientation that Madurese culture ostensibly values (Cagatan & Quirap, 2024).

Finally, the last factor is the Madurese cultural norm of *kerukunan*. At the deepest level, the *kerukunan* orientation frames collaboration as harmony-maintenance rather than as epistemic dialogue. Students cooperate to avoid disruption, not to co-construct knowledge. While this provides a positive motivational foundation for cooperative behaviour, it simultaneously constrains the emergence of the dialogic negotiation, constructive disagreement, and accountability structures that characterize high-quality collaboration (Grothaus, 2022; F. Wang et al., 2024).

Factors Influencing the Development of Empathy Attitudes

The third research objective was to identify and analyze the factors that influence empathy development, which were divided into four stages. In this case, the first stage is the developmental stage. The dominance of affective empathy over cognitive perspective-taking is partly consistent with developmental expectations for ages 9–12, during which affective empathy is typically well-established while cognitive empathy continues to mature into adolescence (Davis, 2018; Eisenberg, 2021; Hoffman, 2000). This developmental baseline is an important contextualizing factor: cognitive perspective-taking cannot be expected to develop fully without appropriate scaffolding at this stage.

The second stage is external-sanction motivation. Students' framing of helping as a strategy to avoid teacher reprimand resembles what Hoffman (2000) describes as sympathetic distress regulated by external sanction rather than by internalized perspective-taking. When prosocial behaviour is motivated primarily by fear of sanction rather than by genuine concern for the other, it remains at a superficial level. It also fails to develop into mature, reflective empathy. This is a pedagogical factor that teachers can directly address by reshaping reward and feedback structures.

The third stage is the cultural ethic of *kesopanan* (politeness). The Madurese cultural imperative to be polite and avoid confrontation provides fertile ground for affective empathy. Students are genuinely warm and concerned about peers' wellbeing but simultaneously narrow the space for the cognitive dimension of empathy. This observation aligns with cross-cultural research showing that collectivist contexts afford high relational warmth while often discouraging overt disagreement, which is a

prerequisite for perspective-taking practice (Brackett et al., 2019; Ma & Niu, 2025). Viewed through Vasquez et al.'s (2025) neuroscientific model, harmony-oriented classrooms optimize emotional climate but underuse the cognitive-regulatory pathway through which empathy becomes reflective.

The final stage is scarcity of perspective-taking routines. The absence of deliberate perspective-taking practices, such as role-play, literature circles, theatrical performance, or structured reflection, in the observed classrooms helps explain why cognitive empathy remained underdeveloped relative to the children's age. Recent interventions demonstrate that perspective-taking can be deliberately cultivated through exactly these approaches (Pira et al., 2025; Sultan & Khan, 2025; Troxler et al., 2023). Their absence is therefore both a diagnostic finding and a prescriptive implication: perspective-taking routines must be embedded as regular classroom practice, designed in culturally-appropriate forms that preserve *kerukunan* while creating space for polite dialogic divergence.

A Conceptual Model of Findings

Integrating the three themes and the factor analyses above, we propose a conceptual model in which Madurese cultural values (harmony, politeness, deference) and classroom pedagogical practices (teacher-centered facilitation, product orientation, absence of cooperative protocols) jointly mediate two observable outcomes: functional-procedural collaboration and affective-situational empathy. Transforming these into reflective, twenty-first-century social-emotional competencies requires four targeted pedagogical levers: (1) structured cooperative learning, (2) explicit perspective-taking routines, (3) culturally-sensitive dialogic spaces, and (4) teacher professional development focused on facilitation of dialogue and management of group dynamics, all inserted into the Madurese cultural fabric rather than against it (see Figure 1).

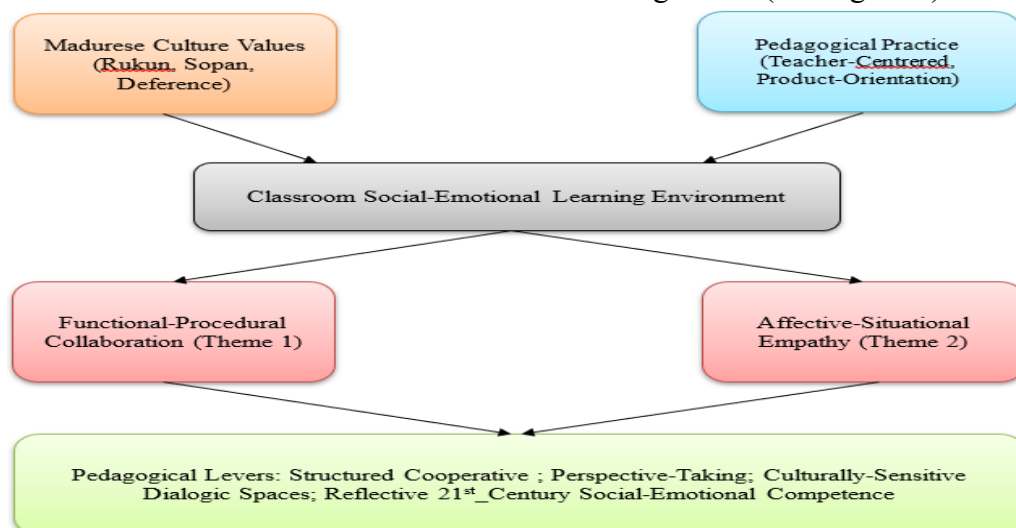


Figure 1. Conceptual model of how Madurese cultural values and classroom pedagogical practices jointly mediate the development of collaboration and empathy in non-metropolitan primary education, and the pedagogical levers required to develop both competencies to a reflective level

Practical Implications

Four concrete implications follow from the factor analyses. First, elementary teachers should replace open-ended group work with structured cooperative learning that explicitly operationalizes positive interdependence and individual accountability. Second, social-emotional learning should be embedded as explicit classroom routines, perspective-taking circles, role-play of disagreement, and fishbowl discussions rather than left implicit; recent evidence indicates that teacher perceptions and beliefs are decisive moderators of how such routines are enacted (Kushi & Alkahtani, 2026). Third, school leadership and regional education offices should invest in teacher professional development focused on facilitating dialogue and managing group dynamics, alongside culturally responsive SEL frameworks tailored to Madurese and other regional contexts. Fourth, technology-enabled SEL tools adapted to low-resource, non-metropolitan schools offer promising supplementary channels (Mukhemar et al., 2025; Palmquist et al., 2025). These four implications collectively constitute a coherent, evidence-based agenda for improving social-emotional competencies in Sumenep Regency and comparable non-metropolitan settings, grounded in the specific factors documented in this study.

D. Conclusion

This phenomenological study addressed three objectives. With respect to the first objective, elementary students in Sumenep Regency enact collaboration as functional, teacher-directed togetherness and express empathy predominantly as affective and norm-driven concern, with perspective-taking mediated and partly constrained by a harmony-oriented Madurese school culture. With respect to the second objective, four factors were identified as shaping collaboration development: teacher-centered facilitation, the absence of structured cooperative protocols, role asymmetry, and the cultural norm of *kerukunan*. With respect to the third objective, four factors were identified as shaping empathy development: developmental stage, external-sanction motivation, the cultural ethic of *kesopanan*, and the scarcity of perspective-taking routines. Both competencies have emerged at a basic level but are not yet internalized as reflective twenty-first-century competencies.

This study makes a dual contribution to the literature. Empirically, it provides the first phenomenologically grounded, simultaneous mapping of collaboration skills and empathy attitudes, along with the specific factors shaping each competency, in a non-metropolitan Indonesian primary education context that has hitherto been absent from the international literature. Theoretically, it demonstrates how Madurese cultural values (*kerukunan* and *kesopanan*) function as a double-edged mediator: enabling surface-level cooperation and affective warmth while constraining the reflective, dialogic engagement necessary for high-quality collaboration and cognitive empathy. Limitations include the study's restriction to three public schools in one regency, the use of cross-sectional rather than longitudinal data, and reliance on self-report and observational methods without experimental follow-up. Future research should replicate and extend this

phenomenological mapping across other non-metropolitan and culturally distinct Indonesian contexts, pilot perspective-taking and structured cooperative routines through design-based studies, and examine the role of teacher professional development as a lever for transforming collaboration and empathy from behavioural compliance into reflective social-emotional competencies.

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