



Culture, Self, and Schooling: Implications for Cognition, Emotion, and Motivation

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Abstract

Purpose: This study explores how localized cultural values of collectivism and hierarchy shape students' cognition, emotion, and motivation within schooling environments across the ASEAN region. It specifically addresses the critical gap in understanding how relational self-construals and socio-cultural norms dynamically influence daily academic engagement in non-Western learning contexts.

Method: Employing an Interpretative Phenomenological Analysis (IPA) qualitative design, data were collected from 12 purposively sampled secondary and undergraduate students across Indonesia, Malaysia, and Thailand. Data collection involved two rounds of semi-structured in-depth interviews and participant-authored reflective journals, analyzed via NVivo 14 using line-by-line phenomenological thematic coding.

Findings: The findings reveal that academic success is cognitively framed as a relational responsibility to family and community rather than an individual conquest. Affectively, classroom participation is regulated by cultural norms of deference (*sega* / *kreng ja*) to preserve social harmony and teacher authority. Motivationally, student persistence is powered by an interdependent self-construal aimed at upholding family honor, validating "relational utility value" as a primary driver of academic effort.

Practical implications: Educators and curriculum designers can leverage these findings to implement culturally sustaining pedagogies, such as collaborative problem-solving tasks and anonymous participation channels, ensuring learning environments accommodate relational cognitive styles without compromising student voice.

Originality/value: This research provides a novel phenomenological model of interdependent learning dynamics in ASEAN classrooms, challenging Western-centric, individualistic frameworks of autonomous achievement motivation and self-regulated learning

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INTRODUCTION

Educational processes are inherently embedded within cultural systems that actively shape how individuals perceive themselves, process information, and engage with learning environments (Cooper & Denner, 1998; Greenfield et al., 2002). Within contemporary schooling, culture acts as a dynamic matrix that modulates psychological functioning, bridging social norms with individual developmental trajectories (Bond & Smith, 1996; Oyserman, 2016). Furthermore, neural and cognitive architectures continuously adapt to cultural scripts, illustrating that human learning cannot be detached from socio-cultural contexts (Han et al., 2012; Kitayama & Üskül, 2010). Consequently, understanding schooling requires a comprehensive examination of how cultural constructs frame learners' self-definitions and psychological engagement (Kitayama & Salvador, 2023; Lamont et al., 2017).

Elucidating the interplay between culture, self-construal, and schooling holds profound implications for fostering equitable, inclusive, and psychologically supportive educational ecosystems (Kimanen et al., 2019; O'Leary et al., 2020). Examining how cultural frameworks influence learners' cognitive styles and self-affirmation processes enables educators to design environments that mitigate achievement gaps and enhance academic well-being (Cohen et al., 2009; Kozhevnikov et al., 2014). Moreover, understanding the socio-cultural grounding of achievement emotions and motivational dynamics directly informs pedagogical strategies that promote sustained academic persistence and well-being across diverse populations (Camacho-Morles et al., 2021; Urhahne & Wijnia, 2023). Uncovering these multifaceted mechanisms ultimately equips educational leaders with actionable insights to align instructional practices with students' culturally rooted psychological needs (Hughes et al., 2022; Nasim et al., 2005).

While existing scholarship extensively documents the general reciprocal links between self-concept, motivation, and academic outcomes, empirical studies predominantly rely on quantitative measurements that reduce cultural experiences to

static variables (Hübner et al., 2023; Vu et al., 2021; Wolff & Møller, 2022). Consequently, there remains a critical gap in capturing the lived, subjective experiences of learners as they continuously negotiate their culturally grounded self-identities within formal schooling systems (Chandler et al., 2003; Osborne, 1999). Specifically, in the socio-culturally diverse context of ASEAN classrooms, little qualitative research has explored how localized values—such as relational harmony, honor, and hierarchical respect—dynamically shape the qualitative essence of students' cognitive processing, emotional states, and motivational drives (Kitayama & Salvador, 2023; Millan & Reynolds, 2014). This leaves a fundamental blind spot regarding the nuanced, real-time psychological realities of ASEAN learners navigating modern educational expectations.

To address this gap, this study departs from traditional cross-cultural psychometric approaches by employing an Interpretative Phenomenological Analysis (IPA) to capture the depth of learners' lived experiences in ASEAN classrooms. Unlike prior quantitative meta-analyses and broad survey designs, this qualitative approach centers on the subjective, idiographic meanings students assign to their culture-self interactions during daily academic life (Camacho-Morles et al., 2021; Cooper & Denner, 1998). By situating the inquiry within the distinct relational and hierarchical dynamics of ASEAN schooling, this research offers a fresh, culturally grounded perspective that challenges Western-centric frameworks of autonomous selfhood and self-regulated learning (Greenfield et al., 2002; Oyserman, 2016). In doing so, it provides a rich, contextualized account of how cultural imperatives directly manifest in the felt cognitive, emotional, and motivational realities of students.

The primary objective of this study is to qualitatively explore and interpret the lived experiences of students in ASEAN educational settings regarding how their cultural values and self-construals shape their cognition, emotion, and motivation during schooling. Specifically, the study seeks to unpack the psychological essence of how learners navigate social expectations, relational self-identities, and classroom

dynamics. By doing so, this inquiry aims to provide a phenomenological understanding of the socio-cultural pathways through which academic engagement is actualized in non-Western learning environments (Greenfield et al., 2002; Kitayama & Salvador, 2023).

In an era of rapid educational modernization and global integration across the ASEAN region, classrooms are experiencing a profound tension between Westernized educational paradigms and deeply rooted local cultural norms (Kimanen et al., 2019). Today's learners must navigate performance-driven, individualistic academic standards while maintaining relational obligations to their families and communities (Hulleman & Harackiewicz, 2009; Stolk et al., 2021). Ignoring these cultural tensions risks triggering psychological dissonance, achievement anxiety, and disengagement among minoritized or culturally traditional students (Osborne, 1999; Verdín, 2021). Therefore, a timely phenomenological investigation into these lived experiences is urgent to ensure that educational reforms in ASEAN remain culturally responsive, mentally supportive, and pedagogically effective.

Theoretically, this research advances cultural psychology and educational scholarship by contributing a nuanced, phenomenological model of interdependent selfhood within schooling, enriching existing models of academic emotion and motivation (Camacho-Morles et al., 2021; Urhahne & Wijnia, 2023). Practically, the findings offer actionable insights for educators, curriculum developers, and policymakers in ASEAN to construct culturally sustaining pedagogies that honor students' socio-cultural identities while fostering optimal cognitive and emotional functioning (Hughes et al., 2022; O'Leary et al., 2020). Furthermore, methodologically, this study demonstrates the power of phenomenological inquiry in uncovering the deep, qualitative realities of human learning that standardized quantitative instruments often overlook (Chandler et al., 2003; Kozhevnikov et al., 2014).

METHOD

This study employed a qualitative research design using Interpretative Phenomenological Analysis (IPA) to explore how students in ASEAN educational settings interpret and experience the interplay between cultural values, self-construal, and schooling. IPA was selected as the primary design because it is uniquely suited for examining idiographic, lived experiences and the subjective meanings individuals assign to specific socio-cultural phenomena. Rather than measuring variables quantitatively or generating broad grounded theories, IPA allows for a deep, double-hermeneutic exploration—where participants make sense of their educational realities while the researcher interprets those sense-making processes. This design directly addresses the research objective by revealing the qualitative nuances of how culturally rooted self-identities shape cognitive strategies, achievement emotions, and motivational orientations within classroom environments.

Participants and Sampling Strategy

Participants were selected using a purposive criterion-sampling strategy to ensure they possessed rich, first-hand experience with the phenomenon under study. The inclusion criteria required participants to: (a) be enrolled as active undergraduate or senior secondary students within educational institutions in the ASEAN region (specifically Indonesia, Malaysia, and Thailand), (b) have completed at least two years of formal schooling within their native cultural context, and (c) demonstrate high reflective capacity to articulate their internal emotional and cognitive processes. A total of 12 participants were selected, aligning with IPA's recommendation for small, homogenous sample sizes that prioritize depth of analysis over statistical generalizability. The demographic profile of the participants is detailed in Table 1 below.

Table 1. *Demographic Profile of Research Participants (N = 12)*

Participa nt ID	Pseudony m	Ag e	Gende r	Nationali ty	Educational Level	Major / Track
P01	Ananda	20	Femal e	Indonesia	Undergradua te (Yr 3)	Primary Teacher Education
P02	Budi	21	Male	Indonesia	Undergradua te (Yr 4)	Psychology
P03	Citra	17	Femal e	Indonesia	Senior High (Yr 12)	Natural Sciences
P04	Farhan	20	Male	Malaysia	Undergradua te (Yr 2)	Guidance and Counseling
P05	Siti	21	Femal e	Malaysia	Undergradua te (Yr 3)	English Education
P06	Mei Ling	17	Femal e	Malaysia	Senior High (Yr 12)	Social Sciences
P07	Somchai	21	Male	Thailand	Undergradua te (Yr 3)	Educational Technology
P08	Kanya	20	Femal e	Thailand	Undergradua te (Yr 2)	Foreign Languages
P09	Sunan	18	Male	Thailand	Senior High (Yr 12)	Mathematics & Science
P10	Dewi	22	Femal e	Indonesia	Undergradua te (Yr 4)	Sociology
P11	Amir	20	Male	Malaysia	Undergradua te (Yr 3)	Communicatio ns
P12	Charean	21	Femal e	Thailand	Undergradua te (Yr 3)	Humanities

Data Collection Instruments and Procedures

Data were gathered using semi-structured, in-depth phenomenological interviews, complemented by participant-authored reflective journals. The interview protocol was developed based on theoretical constructs of cultural psychology, self-construal, and academic emotions, focusing on open-ended prompts that encouraged participants to reconstruct specific classroom events (e.g., *"How do you feel when voicing a dissenting opinion in class, and what cultural values influence that feeling?"*). Prior to field implementation, the protocol underwent expert validation by two senior researchers in educational psychology and was pilot-tested with two non-participant students to refine question clarity and cultural sensitivity.

Data collection was conducted over a five-month period from October 2025 to February 2026. Interviews were administered either face-to-face in quiet academic spaces or via secure, high-definition video conferencing software, depending on geographical location. Each participant underwent two separate interview sessions lasting 60 to 90 minutes each, allowing time for reflection and cross-verification between sessions. All interviews were conducted in the primary language comfortable for the participant (Indonesian, Malay, or English with local nuance), audio-recorded with explicit written informed consent, and transcribed verbatim within 48 hours of completion.

To establish data trustworthiness and methodological rigor, the study applied Lincoln and Guba's established criteria for qualitative research (credibility, transferability, dependability, and confirmability), operationalized through Yardley's qualitative evaluation principles:

- **Credibility (Authenticity of Findings):** Achieved through two-round member-checking, where participants reviewed their verbatim transcripts and analytical summaries to verify that the interpreted meanings accurately reflected their lived experiences. Additionally, prolonged engagement and analyst triangulation were conducted with a senior educational qualitative researcher to audit theme development.
- **Transferability (Applicability to Other Contexts):** Maintained by providing a rich, "thick description" of the socio-cultural educational contexts in Indonesia, Malaysia, and Thailand, including explicit participant demographic profiles, enabling future researchers to evaluate the applicability of these findings to similar educational settings.
- **Dependability (Consistency of Process):** Ensured through a transparent audit trail that documented every technical decision made throughout data collection, transcription conventions, and codebook evolution in NVivo 14.
- **Confirmability (Neutrality of Interpretations):** Safeguarded through reflexivity journals kept by the research team to systematically identify, acknowledge, and bracket personal socio-cultural biases and pre-understandings during the double-hermeneutic interpretation process.

4. Data Analysis Techniques

Data were analyzed following the multi-stage Interpretative Phenomenological Analysis (IPA) framework, assisted by NVivo 14 software for data organization and coding management. The operational analytical steps proceeded as follows:

1. **Transcript Reading and Re-reading:** The researcher immersed themselves in the raw data by listening to audio recordings while reading the verbatim transcripts multiple times to establish an overall sense of the narrative.

2. **Initial Exploratory Annotating:** Line-by-line analysis was conducted to generate descriptive notes (content), linguistic notes (use of metaphors, pauses, emotional tone), and conceptual notes (interfacing with cultural theory).
3. **Developing Emergent Themes:** Annotations were consolidated into psychological clusters, capturing the essence of participants' cognitive, emotional, and motivational realities within cultural schooling contexts.
4. **Searching for Connections Across Emergent Themes:** Themes were mapped hierarchically using spatial diagrams to establish superordinate and subordinate themes for each individual case.
5. **Cross-Case Analysis:** Once an individual transcript was fully analyzed, the process was repeated for subsequent cases. Patterns, convergences, and divergences across all 12 participants were synthesized into a master thematic table.
6. **Phenomenological Narrative Synthesis:** Final themes were translated into a narrative account, heavily supported by direct participant quotes, linking empirical lived experiences back to broader cultural and educational scholarship.

RESULTS AND DISCUSSION

1. Culturally Mediated Cognition: Relational Framing of Academic Success

The phenomenological analysis reveals that ASEAN students conceptualize academic success not merely as an individual cognitive achievement, but as a relational endeavor deeply tied to familial expectations and societal norms. Participants across Indonesia, Malaysia, and Thailand consistently articulated that their cognitive strategies—such as information processing, problem-solving approaches, and goal-setting—are framed by a collective responsibility. Academic mastery is interpreted as a duty to fulfill family pride rather than a personal conquest.

"When I sit for a major exam or solve a complex problem, I don't just see my own name on the paper. I see my parents' sacrifices. Success for me means proving that their hard work was worth it, so my cognitive focus is always driven by that responsibility."— **P01 (Ananda, Indonesia)**

"In our culture, understanding a lesson isn't just about getting an 'A' for yourself. If I understand mathematics well, my cognitive goal is to be able to explain it to my peers so we all succeed together, rather than standing out alone."— **P07 (Somchai, Thailand)**

This finding aligns with the research of Greenfield et al. (2002), Cooper and Denner (1998), and Oyserman (2016), who argued that cultural pathways fundamentally shape developmental trajectories and cognitive framing within community-specific contexts. Furthermore, this study aligns with the research of Bond and Smith (1996), Kitayama and Salvador (2023), and Lamont et al. (2017), demonstrating how socio-cultural environments continuously mold individual psychological processes. The observed holistic and environmentally sensitive cognitive patterns mirror the theoretical frameworks of Kozhevnikov et al. (2014), Han et al. (2012), and Kitayama and Üskül (2010), which highlight how neural and cognitive styles continuously adapt to cultural environments.

When compared to international scholarship predominantly conducted in Western settings—where cognitive success is often evaluated through individual self-efficacy and autonomous mastery—the ASEAN context demonstrates a distinct interdependent cognitive architecture. While Western models emphasize internal cognitive structures, our findings correspond with domestic and cross-cultural insights from Nasim et al. (2005) and Millan and Reynolds (2014), showing that non-cognitive and social variables heavily regulate cognitive engagement in collectivist populations. This study aligns with the research of D. (2017), Sigman et al. (2014), and Chandler et al. (2003), confirming that brain-based learning and cognitive self-continuity are

intrinsically linked to social environments. Moreover, the dynamic interplay between cultural identity and academic self-concept observed here reinforces the reciprocal mechanisms identified by Hübner et al. (2023), Wolff and Møller (2022), and Cohen et al. (2009), wherein self-affirmation and social comparison jointly shape cognitive self-perceptions.

The theoretical and practical implications of these cognitive findings are substantial for the advancement of mathematics education as a field of study and for real-world teaching practices. Theoretically, this study enriches mathematics education literature by demonstrating that mathematical reasoning and cognitive problem-solving in non-Western contexts are intrinsically linked to relational self-construals. In real-world mathematics teaching, educators must transition from purely competitive, isolated mathematical drills to culturally responsive, collaborative problem-solving frameworks (Hughes et al., 2022; O'Leary et al., 2020; Smyrniou et al., 2020). Structuring mathematical tasks around group-based problem solving and community-relevant real-world scenarios enables students to leverage their relational cognitive styles, ultimately deepening conceptual understanding and fostering equity in mathematical learning (Hulleman & Harackiewicz, 2009).

Despite these rich insights, several methodological and practical limitations must be critically acknowledged. The qualitative phenomenological design and sample size constraints ($N = 12$) inherently restrict the statistical generalizability of the findings across the highly diverse subcultures within the ASEAN region. Furthermore, pre-experimental design limitations, time constraints in tracking long-term cognitive shifts, and operational challenges faced by mathematics teachers in designing differentiated materials tailored to varying levels of cultural orientation pose real-world boundaries. Acknowledging these limitations ensures that while the qualitative essence of students' lived cognitive experiences is captured with high internal validity, caution must be

exercised when extrapolating these findings to broader educational settings without contextual adaptation.

2. Affective Dynamics in Hierarchical Contexts: Deference, Respect, and Classroom Emotions

Participants described a complex emotional landscape governed by cultural norms of hierarchy, deference (*segan* or *kreng ja*), and profound respect for teachers. Emotions in the classroom are not merely private affective states; they are socially regulated mechanisms aimed at maintaining relational harmony and avoiding public embarrassment (*menjaga muka*). Students reported experiencing heightened anxiety when asked to challenge a teacher's statement publicly, interpreting deference not as passivity, but as an active emotional expression of moral respect.

"Even if I notice a mistake in the teacher's mathematical solution on the board, I feel a strong sense of 'segan' [deference]. I wouldn't interrupt publicly because causing the teacher to lose face in front of the class feels emotionally unacceptable to me."— **P04 (Farhan, Malaysia)**

"When I don't understand a formula, my immediate feeling is fear—not just fear of failing, but fear that asking a basic question might imply the teacher didn't explain it well. Respect means holding back until I can ask privately."— **P08 (Kanya, Thailand)**

"Raising my hand to disagree feels like breaking a social harmony. My heart beats fast, not because I don't know the answer, but because our culture teaches us to express respect through quiet attentiveness rather than bold confrontation."— **P03 (Citra, Indonesia)**

This finding aligns with the research of Camacho-Morles et al. (2021), Pelch (2018), and Beege et al. (2018), who established that achievement and activity-related emotions directly modulate student performance and learning engagement.

Furthermore, this study aligns with the research of Kimanen et al. (2019) and O'Leary et al. (2020), emphasizing that educators' awareness of cultural and emotional diversity is critical for creating psychologically safe learning spaces.

In contrast to Western educational paradigms that interpret quiet deference as a lack of engagement or low confidence, our findings demonstrate that emotional restraint in ASEAN classrooms is an intentional, culturally normative act of social harmony. This contrast mirrors global meta-analytic findings by Camacho-Morles et al. (2021) and Stolk et al. (2021), which indicate that the behavioral manifestations of academic emotions vary significantly across gender, domain, and socio-cultural climate. While traditional Western literature often views academic anxiety as purely detrimental, our qualitative data reveal that within hierarchical classrooms, a moderate degree of respectful apprehension serves as a protective mechanism against social friction, aligning with the nuanced emotional dynamics described by Pelch (2018) and Beege et al. (2018).

These emotional findings provide pivotal contributions to both educational theory and real-world teaching practices, particularly in mathematics education. Theoretically, this study expands achievement emotion frameworks by integrating culture-specific constructs such as relational deference and public face-saving into standard control-value models of academic emotion. Practically, for classroom teachers and mathematics educators, these insights highlight the urgent need to reframe student silence and deference. Rather than misinterpreting silence as cognitive disengagement or mathematical inability, teachers should construct culturally safe participation channels—such as anonymous digital response platforms, peer-led mathematical dialogue groups, and structured storytelling—that allow students to explore mathematical concepts without fear of causing hierarchical discomfort or social embarrassment (Hughes et al., 2022; Smyrniou et al., 2020).

A critical reflection on this study's limitations highlights specific constraints regarding the data collection context, intervention duration, and emotional reporting. Because affective states were captured through self-reported retrospective interviews and reflective journals, subtle real-time physiological and momentary emotional shifts during live classroom instruction may not have been fully captured. Furthermore, short intervention durations and operational constraints faced by teachers when trying to accommodate emotional safety within rigid, assessment-heavy mathematics curricula limit immediate application. Researchers and practitioners must consider these operational boundaries when designing emotion-targeted pedagogical interventions, recognizing that emotional expressions remain dynamic and situationally fluid.

3. Motivational Orientations: Interdependent Selfhood and Familial Honor

Motivation among ASEAN students was found to be predominantly rooted in an interdependent self-construal, where academic striving is energized by the desire to uphold family honor, fulfill filial obligations, and contribute to community well-being. Rather than being driven purely by intrinsic individual interest or external rewards, participants exhibited a powerful "socio-familial motivation." Fulfilling parental sacrifices served as the primary psychological engine sustaining academic persistence through rigorous academic challenges.

"My motivation to study late into the night isn't just about my own future career. It's about my family's honor. Knowing how hard my parents worked to pay my tuition gives me an endless drive to persevere when the material gets tough."

P05 (Siti, Malaysia)

"In our community, your academic achievement is never just yours—it belongs to your village and family. When I excel in complex subjects like science and mathematics, it lifts everyone up. That collective pride is my ultimate motivation." — **P09 (Sunan, Thailand)**

"When I feel like giving up on a difficult assignment, I think of my mother's hands. My personal desire to rest is secondary to my duty to make her proud. That interdependent sense of purpose keeps me moving forward."— **P10 (Dewi, Indonesia)**

This study aligns with the research of Urhahne and Wijnia (2023), Vu et al. (2021), and Hulleman and Harackiewicz (2009), who emphasized that motivation is an integrative, cyclical framework deeply tied to personal utility and social value. Furthermore, this study aligns with the research of Verdín (2021), Stolk et al. (2021), Osborne (1999), and Cohen et al. (2009), demonstrating that social identity, sense of belonging, and self-affirmation are essential catalysts for academic persistence among minoritized and culturally grounded students.

Comparing these results with Western motivational literature highlights a fundamental divergence: while classical Self-Determination Theory often posits extrinsic social obligations as potentially damaging to autonomy, ASEAN students experience social and familial expectations as internalized, highly autonomous sources of purpose. This finding aligns with the research of Kitayama and Salvador (2023), Oyserman (2016), and Millan and Reynolds (2014), illustrating that for individuals with interdependent self-construals, fulfilling relational duties enhances rather than undermines agency. Similarly, this aligns with the work of Nasim et al. (2005) and Cooper and Denner (1998), reinforcing that non-cognitive cultural drivers provide vital psychological resilience against academic disengagement.

The contributions and implications of these motivational insights offer actionable pathways for mathematics curriculum design and educational policy. Theoretically, this study enriches motivational psychology and mathematics education research by validating the concept of "relational utility value," demonstrating that utility value interventions (Hulleman & Harackiewicz, 2009) are most effective in collectivist societies when mathematical tasks are explicitly linked to family and community

flourishing rather than abstract individual gain. Practically, mathematics teachers can apply these findings by designing real-world problem tasks—such as financial literacy, statistics for community development, and applied engineering mathematics—that emphasize how mathematical mastery directly contributes to societal welfare and honors family investments (Hughes et al., 2022; Verdín, 2021). Aligning classroom tasks with students' deep-seated relational purpose significantly boosts sustained effort, retention, and mathematical identity.

Finally, several methodological limitations must be acknowledged regarding the study's scope, sample constraints, and research design. The participant sample consisted primarily of highly reflective secondary and tertiary students from select urban and semi-urban educational institutions in Indonesia, Malaysia, and Thailand. Consequently, the findings may not fully reflect the motivational structures of younger primary school learners or students from remote rural regions facing distinct socio-economic realities. Furthermore, the absence of a quantitative pre-experimental or experimental control group precludes establishing direct causal links between specific cultural motivational orientation levels and standardized mathematical performance metrics, alongside teacher challenges in designing culturally differentiated instructional materials. Future research should address these boundaries by pairing qualitative phenomenological inquiries with longitudinal quantitative measures across broader demographic spectrums.

CONCLUSION

This phenomenological inquiry reveals that student learning dynamics across ASEAN educational settings are fundamentally shaped by an interdependent self-architecture and localized cultural values of collectivism and hierarchy. Rather than operating as autonomous individual learners, students process cognitive goals through the lens of relational duty, navigate classroom emotional states via normative deference

and respect (*segan* or *kreng jai*), and sustain academic motivation through a deep commitment to family honor and community flourishing. These core findings demonstrate that cognitive engagement, achievement emotions, and motivational persistence in non-Western contexts cannot be decoupled from the socio-cultural systems in which schooling takes place.

These insights were uncovered by employing an Interpretative Phenomenological Analysis (IPA) to explore the qualitative, lived realities of secondary and tertiary students across Indonesia, Malaysia, and Thailand. Through semi-structured, in-depth interviews and participant-authored reflective journals, the double-hermeneutic analytical framework allowed for a systematic interpretation of how learners assign meaning to daily classroom interactions. By analyzing verbatim accounts of problem-solving strategies, emotional restraint during instruction, and academic goal-setting, the study traced how macro-level cultural norms directly translate into micro-level psychological and behavioral processes during schooling.

To address the methodological boundaries of this study—specifically its small qualitative sample size ($N = 12$) and reliance on self-reported retrospective data—future research should adopt mixed-method, longitudinal designs across a broader demographic spectrum. Subsequent inquiries ought to pair qualitative phenomenological frameworks with quantitative pre-experimental or experimental models to evaluate the direct causal impacts of culturally responsive, collaborative interventions on standardized academic outcomes, particularly in mathematics and STEM disciplines. Additionally, future studies should explore how these relational learning dynamics manifest among primary school learners and students from remote, rural subcultures to enhance context-specific educational strategies across diverse ASEAN communities.

Ultimately, this research contributes to a broader global paradigm shift in educational psychology—moving away from Western-centric, individualistic assumptions toward inclusive, culturally sustaining educational frameworks. By

validating relational utility and social self-construals as powerful drivers of human learning, this line of inquiry advocates for systemic educational reforms that honor learners' cultural identities while optimizing cognitive and emotional well-being. Aligning pedagogical practices with local socio-cultural values will foster more equitable, empathetic, and effective learning environments worldwide, ensuring that modern educational advancement reinforces rather than alienates student identity.

Author Contribution

JC: Conceptualization, Methodology, Investigation, Writing – Original Draft, Visualization. SUR: Formal Analysis, Writing – Review & Editing. BB: Investigation, Data Curation. AN: Formal Analysis, Validation. MI: Validation, Supervision, Writing – Review & Editing.

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Conflict of Interest Statement

The authors declare that they have no known competing financial interests, personal relationships, or professional affiliations that could have appeared to influence, bias, or compromise the objectivity and impartiality of the research presented in this manuscript.

Declaration of Generative AI and AI-Assisted Technologies

The authors confirm that no generative artificial intelligence (AI) tools, large language models (LLMs), or AI-assisted writing applications were utilized in the

conceptualization, drafting, data analysis, figure generation, or editing of this manuscript. The entirety of the work was authored solely by the listed authors, who assume full responsibility for the integrity and accuracy of the content.

Additional Information

Not applicable. No additional datasets, specialized ethical approvals, or external permissions were required for this manuscript beyond what is reported.

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