

Beyond Task Completion: Multidimensional Scaffolding and Developmental Tensions in Inclusive Classrooms

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ABSTRACT

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This explanatory sequential mixed-methods study examines how teachers scaffold learners with diverse learning needs in inclusive classrooms, focusing not only on the forms of support used but also on their developmental functions. A 24-item questionnaire completed by 186 teachers was followed by interviews with 12 teachers. The four scaffolding dimensions differed significantly, $F(3, 555) = 120.48, p < .001, \eta^2 = .394$: affective scaffolding was highest ($M = 4.13$), followed by cognitive ($M = 3.94$), social ($M = 3.59$), and metacognitive scaffolding ($M = 3.34$). Interviews showed that affective support often reopened participation before cognitive support could become effective, whereas metacognitive scaffolding and fading were more difficult to sustain under time and class-size pressures. Peer support likewise did not automatically produce inclusion; teachers had to scaffold the helping process itself to prevent doing-for and exclusion. Three contributions emerged from integration: (1) the affective access gateway, through which affect regulation enables cognitive access; (2) completion-development asymmetry, distinguishing support that enables task completion from support that transfers strategy; and (3) contingency compression, describing how structural constraints shorten the diagnosis-adjustment-fading cycle and pull practice toward direct assistance. The findings extend scaffolding research by locating contingency, affect, self-regulation, and classroom conditions within a single micro-level account of inclusive practice.

Keywords: Inclusive education, Scaffolding, Learner diversity, Affective scaffolding, Sociocultural theory

Introduction

Inclusive education is increasingly understood not simply as placing learners in the same classroom (Chitiyo et al., 2025), but as enabling them to access, participate in, and develop through shared activity. Inclusive pedagogy therefore emphasizes extending what is ordinarily available to everyone rather than assuming that a separate system is always required for a designated group of "special"

learners (Florian & Black-Hawkins, 2011). From a teacher-agency perspective, teachers are likewise expected not merely to apply techniques but to read context, collaborate, and adapt practice in ways that sustain equity and participation (Pantić & Florian, 2015). Yet a substantial gap remains between these principles and the micro-decisions of classroom life: when a learner does not begin a task, remains silent after a question, gives up after

a minor error, or can proceed only while the teacher remains nearby, the teacher must rapidly decide whether the bottleneck concerns task understanding, strategy regulation, affective state, or the learner's position in interaction.

Most inclusive-education research has established an important knowledge base concerning teacher attitudes, beliefs, self-efficacy, professional preparation, and implementation barriers. Reviews suggest that teacher beliefs are associated with inclusive practice and that professional development can improve knowledge and skills, although effects vary across components (Dignath et al., 2022; Donath et al., 2023). Research on inclusive practices has also identified clusters of action such as instructional support, collaboration, assessment, organization, and social-emotional-behavioral support (Finkelstein et al., 2021). However, knowing that teachers endorse inclusion or report a repertoire of strategies does not explain how support is adjusted to learner response, when it is withdrawn, or whether responsibility actually returns to the learner.

Scaffolding offers a useful lens for this micro-level problem (Nguyen, 2026). Within sociocultural theory (SCT), learning and development are mediated through other people, tools, and signs in socially organized activity (Vygotsky, 1978). Although the term scaffolding was not coined by Vygotsky, it has been used to describe support that enables learners to accomplish what exceeds their current independent capacity (Wood et al., 1976). Crucially, a strategy such as modelling or prompting does not automatically constitute scaffolding. Van de Pol et al. (2010) identify contingency, fading, and transfer of responsibility as three core characteristics, while a recent review of teacher-implemented scaffolding shows that ongoing diagnosis and fading remain less frequently documented than the provision of scaffold types themselves (Dominguez & Svihla, 2023). This distinction is especially consequential in inclusive classrooms, where support needs are both diverse and rapidly changing.

A further limitation is that scaffolding research has historically foregrounded cognitive and metacognitive support, whereas affect and

participation have often been examined in separate literatures. Learners, however, do not enter tasks in emotionally neutral states. Emotional support and the quality of teacher-student relationships are associated with motivation and aspects of self-regulated learning (de Ruig et al., 2023), and recent work shows that teacher scaffolding can shape affective engagement with learning activity (Cheng et al., 2024; Wu & Song, 2026). In inclusive classrooms, anxiety or fear of error may arise before a cognitive difficulty becomes observable; similarly, placement in a group does not guarantee that a learner has a voice or retains responsibility for the task. A model focused only on cognitive scaffolding may therefore overlook the conditions that make renewed participation possible.

The Vietnamese context makes these concerns particularly salient. Research on inclusive practice has identified policy-practice gaps, limited professional preparation, resource constraints, and time pressure for teachers (Dinh et al., 2022). More recently, Hà (2026) showed that Vietnamese teachers require practical pedagogical support and reflexivity to move from categorical understandings of inclusion toward responsiveness to diversity in mainstream classrooms. Yet these studies largely describe beliefs, experiences, or broad strategies. Few studies quantify specific scaffolding functions simultaneously and then use qualitative evidence to explain why some functions are prioritized over others under real classroom conditions.

The present study addresses this gap by conceptualizing inclusive scaffolding as a multidimensional mediational system comprising cognitive, metacognitive, affective, and social functions, while also asking whether support is oriented toward immediate task completion or toward the transfer of self-regulatory capacity. Three contributions are developed from the data. First, the affective access gateway describes affective support as a re-entry mechanism that makes cognitive activity available again. Second, completion-development asymmetry captures the possibility that support for continuing a task is more common than support that makes strategies visible and reusable. Third, contingency compression describes how class size, time

pressure, and professional preparation can shorten the diagnosis-response-observation-fading cycle, pushing teachers toward faster and more direct support without implying a lack of commitment to inclusion.

1.1. Previous studies and positioning of the contribution

The closest strands of research illuminate different parts of the problem, but they have not brought multidimensional scaffolding, developmental orientation, and structural constraints into the same design. Table 1 summarizes what the present study inherits from prior work and where it extends the literature.

Table 1 *Positioning the present study within research on inclusive pedagogy and teacher scaffolding*

Study	Main contribution	Remaining gap	Extension in the present study
Florian & Black-Hawkins (2011)	Inclusive pedagogy emphasizes extending participation opportunities for all learners.	Does not operationalize micro-level support through contingency and fading.	Measures four scaffolding functions and traces support mechanisms in inclusive classrooms.
van de Pol et al. (2010)	Establishes contingency, fading, and transfer of responsibility as core features of scaffolding.	Affect and inclusive contexts receive less attention; measurement remains difficult.	Links developmental features with cognitive, metacognitive, affective, and social profiles.
Finkelstein et al. (2021)	Synthesizes inclusive classroom practices into instructional, social-emotional, collaborative, and assessment-related domains.	Does not organize these practices as a scaffolding process oriented toward transfer.	Examines mediational function and completion versus development orientation.
Dominguez & Svihla (2023)	Reviews teacher-implemented scaffolding in K-12 and identifies limited attention to ongoing diagnosis and fading.	Does not focus on inclusive classrooms or a multidimensional scaffolding structure.	Quantifies four dimensions and explains why contingency and fading are compressed in practice.
de Ruig et al. (2023)	Links teacher interaction and emotional/instructional support with SRL and metacognition.	Does not locate SRL within an inclusive-scaffolding ecology.	Treats metacognitive scaffolding as a transfer mechanism and compares it with other dimensions.
Dinh et al. (2022); Hà (2026)	Clarifies policy-practice gaps, training needs, and teacher agency in Vietnamese inclusive education.	Provides limited evidence about moment-to-moment scaffolding functions.	Moves from macro challenges to how classroom structures alter the nature of support.

1.2. Research questions

RQ1. To what extent do teachers report using cognitive, metacognitive, affective, and social scaffolding practices when supporting learners

with diverse learning needs in inclusive classrooms?

RQ2. How do teachers explain differences among the four scaffolding dimensions, and how do classroom conditions shape contingency, fading,

and the transfer of responsibility in their scaffolding practices?

1.3. Theoretical framework

1.3.1. From presence to participation and learning

In this study, inclusion is conceptualized in participation-based rather than placement-based terms. Learners may be physically present in a classroom yet remain functionally excluded if they do not understand the task, do not feel able to request help, or have their work completed by peers. Inclusive pedagogy therefore requires teachers to expand access without fixing difference into deficit labels (Florian & Black-Hawkins, 2011). Pantić and Florian (2015) further argue that teacher agency for inclusion requires competence, collaboration, and reflexivity in context. Scaffolding is used here as a smaller unit of analysis for examining how such agency is enacted when learner participation begins to weaken.

The term diverse learning needs are used functionally rather than diagnostically and does not replace disability assessment. The focus is on difficulties manifested in activity: understanding requirements, sustaining attention, planning, regulating emotion, participating in groups, or self-monitoring. This definition is consistent with inclusive pedagogy's view of difference as ordinary and allows the study of pedagogical responses without inferring students' medical status.

1.3.2. SCT, contingency, and transfer of responsibility

SCT conceptualizes development as change in how learners participate in activity and use socially and culturally mediated resources (Vygotsky, 1978). In scaffolding research, contingency requires support to vary in response to evidence of current understanding; fading refers to reducing the amount or level of support as competence increases; and transfer of responsibility refers to shifting control of activity back to the learner (Nguyen, 2026; van de Pol et al., 2010). These features distinguish scaffolding from help in general (Nguyen, 2025). A teacher prompt has developmental value only when embedded in a responsive sequence of adjustment and

withdrawal, not merely because it takes the form of a question.

This distinction leads to an important premise of the present study: completion is not equivalent to development. A learner may complete a task by following a model or near-complete answer yet remain unable to initiate a similar task independently. Conversely, a slower questioning sequence may make strategy visible and create opportunities for learner control. Dominguez and Svihla (2023) show that contingency processes, particularly ongoing diagnosis and fading, remain underreported in K-12 scaffolding research. The present study therefore examines not only the frequency of strategies but also the orientation of support.

1.3.3. Four mediational functions of inclusive scaffolding

The study organizes reported practices into four predominant functions. Cognitive scaffolding makes tasks more accessible through chunking, examples, modelling, prompting, and adjustment of task difficulty (Nguyen & Le, 2026). Metacognitive scaffolding makes planning, monitoring, diagnosis of difficulty, self-evaluation, and strategy change visible. Affective scaffolding regulates anxiety, frustration, fear of error, and low perceived competence to maintain or restore engagement. Social scaffolding structures opportunities to participate, mobilizes peer support, and reduces the risk of learners being pushed to the margins of interaction.

The four dimensions are not independent boxes. Emotional support may reopen access to a cognitive prompt; social interaction may generate cognitive explanation but also create face threat; and metacognitive questioning may simultaneously provide the teacher with diagnostic evidence about cognition. De Ruig et al. (2023) show that emotional support, instructional support, and relationship quality are all associated with components of self-regulated learning. The analytic value of the four-dimension framework therefore lies in identifying the dominant mediational function of a practice, not in claiming functional separation.

1.3.4. From completion-development asymmetry to contingency compression

In real classrooms, contingency depends on a scarce resource: teacher attention. Teachers must notice a signal, try a minimally sufficient scaffold, wait for a response, adjust the support, and return later to determine whether fading is possible. When classes are large and time is short, this cycle may be compressed. The study calls this process contingency compression: support does not necessarily disappear, but the time available for diagnosis and feedback loops is reduced, increasing the likelihood of direct explanation, near-answer modelling, or peer substitution in order to maintain lesson progress.

This concept connects micro-scaffolding with macro conditions. Vietnamese research has documented limited training, resource constraints, and policy-practice gaps in inclusive education (Dinh et al., 2022; Hà, 2026). The present study examines a more proximal consequence: structural pressure may shift the goal of scaffolding from developing regulation toward completing the immediate task. This interpretive proposition is examined through convergence between the quantitative profile and teachers' accounts.

2. Methodology

2.1. Research design

The study employed an explanatory sequential mixed-methods design (Haynes-Brown, 2023). The quantitative phase identified the profile of use across four scaffolding dimensions and tested within-teacher differences; the subsequent qualitative phase explained why the dimensions differed and clarified the conditions under which support shifted between a completion orientation and a development orientation. Integration occurred through interview sampling, the construction of follow-up probes from quantitative findings, and a joint display.

2.2. Context and participants

The quantitative phase included 186 teachers with complete valid responses to all 24 items. The study was situated in mainstream classrooms operating under inclusive-education principles, where teachers regularly supported students displaying

diverse learning needs. Mean class size was 40.16 students ($SD = 2.68$; range = 1453-1466), indicating that teacher attention had to be distributed across large groups. Regarding inclusive-education preparation, 69/186 teachers (37.1%) had received none, 87/186 (46.8%) had attended only workshops or short courses, and 30/186 (16.1%) had completed a formal course or certification program.

The qualitative phase comprised 12 teachers purposively selected to maximize variation in scaffolding profiles. The purpose of qualitative sampling was not to estimate prevalence among all 186 teachers, but to explain mechanisms underlying prominent quantitative patterns. Participants are identified as T1-T12.

2.3. Scaffolding-practice questionnaire

The questionnaire comprised 24 behavioral items, six for each cognitive, metacognitive, affective, and social scaffolding dimension, rated on a five-point frequency scale (1 = never; 5 = always). The items were theory-informed rather than adapted wholesale from a single existing scale. Contingency, fading, and transfer of responsibility were informed by scaffolding research (van de Pol et al., 2010; Dominguez & Svihla, 2023), while the multidimensional scope of support was aligned with inclusive-practice and self-regulation literature (Finkelstein et al., 2021; de Ruig et al., 2023). Items were written as concrete behaviors to measure reported practice rather than general attitudes.

Internal consistency was good across all four subscales: cognitive $\alpha = .882$, metacognitive $\alpha = .879$, affective $\alpha = .862$, and social $\alpha = .861$. Each dimension score was calculated as the mean of its six items.

2.4. Interviews and qualitative analysis

Semi-structured interviews examined how teachers identified difficulty, decided the amount of support, modified scaffolds in response to learners, provided affective support, promoted self-monitoring, organized peer assistance, and managed classroom constraints. Coding combined deductive and inductive logic: the four scaffolding dimensions and the characteristics of contingency,

fading, and transfer served as sensitizing concepts, while mechanisms such as small success, peer substitution, time pressure, and completion orientation were allowed to emerge from the data. The number of teachers mentioning a pattern is reported as $n/12$ to indicate the breadth of evidence within the interview sample, not as an inferential statistic.

2.5. Quantitative analysis and integration

Means, standard deviations, and Cronbach's α were calculated for each dimension and item. A repeated-measures ANOVA tested differences among the four dimension scores within teachers. Mauchly's test did not indicate a violation of sphericity, $W = .988$, $\chi^2(5) = 2.25$, $p = .814$; therefore, uncorrected degrees of freedom were used. Bonferroni-adjusted pairwise comparisons examined all six dimension pairs. Final integration was conducted through a joint display linking quantitative signals, qualitative mechanisms, and SCT-informed meta-inferences.

Table 2

Use and reliability of the four scaffolding dimensions (N = 186)

Rank	Dimension	M	SD	Cronbach alpha
1	Affective	4.13	0.55	.862
2	Cognitive	3.94	0.60	.882
3	Social	3.59	0.60	.861
4	Metacognitive	3.34	0.63	.879

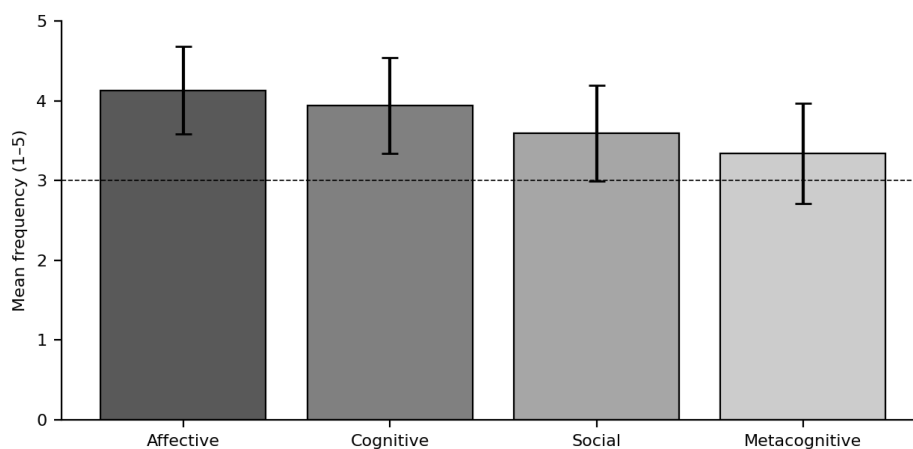


Fig. 1. Mean profile of the four scaffolding dimensions; error bars represent SD.

At item level, this pattern was not driven by only a few extreme questions. Affective items were

3. Results

The Results are organized according to the QUAN→QUAL logic. The quantitative profile first identifies the most prominent and least frequently reported support dimensions; interviews then explain the functions, conditions, and developmental orientation underlying these differences.

3.1. An uneven scaffolding profile: high affective and cognitive support, lower metacognitive support

Table 2 shows a clear hierarchy: affective scaffolding had the highest mean ($M = 4.13$, $SD = 0.55$), followed by cognitive ($M = 3.94$, $SD = 0.60$), social ($M = 3.59$, $SD = 0.60$), and metacognitive scaffolding ($M = 3.34$, $SD = 0.63$). The repeated-measures ANOVA confirmed a significant overall difference, $F(3, 555) = 120.48$, $p < .001$, $\eta^2 = .394$. All six pairwise comparisons remained significant after Bonferroni adjustment ($p < .001$).

generally around 4.0 or higher, with positive feedback for progress the highest item on the scale

(A3; $M = 4.23$) and encouragement of persistence next (A6; $M = 4.18$). Cognitive support was also high for providing examples (C2; $M = 4.08$) and task chunking (C1; $M = 4.03$), whereas fading support was lower (C6; $M = 3.72$). At the opposite end, the lowest metacognitive item asked students

to explain the strategy they had used (M3; $M = 3.17$). This gap suggests that practices helping learners re-enter or continue activity are reported more often than practices that make strategy visible and transfer responsibility.

Table 3 *Descriptive statistics for the 24 scaffolding practices*

Code	Practice	M	SD
C1	Break complex learning tasks into smaller, more manageable steps	4.03	0.74
C2	Provide additional examples when students have difficulty understanding a concept	4.08	0.73
C3	Adjust task difficulty in response to students' learning needs	3.88	0.77
C4	Use prompts or guiding questions rather than immediately giving the answer	3.98	0.74
C5	Provide a model or demonstrate before a difficult task	3.97	0.75
C6	Gradually reduce support as students become more independent	3.72	0.78
M1	Help students plan how to approach difficult learning tasks	3.40	0.79
M2	Encourage students to monitor their own understanding	3.31	0.74
M3	Ask students to explain the strategy they used	3.17	0.80
M4	Help students identify the cause of their learning difficulty	3.28	0.77
M5	Encourage students to evaluate their own learning progress	3.37	0.78
M6	Guide students to change strategy when their current approach is ineffective	3.49	0.76
A1	Reassure students when they are anxious about a difficult task	4.11	0.73
A2	Encourage students to view mistakes as part of learning	4.14	0.69
A3	Provide positive feedback when students make progress	4.23	0.71
A4	Adjust support when students become frustrated or discouraged	4.09	0.74
A5	Create opportunities for less confident students to experience success	4.05	0.72
A6	Encourage students to persist when they encounter difficulty	4.18	0.70
S1	Organize peer support for students who are experiencing difficulty	3.55	0.77
S2	Encourage students to seek help from classmates	3.52	0.74
S3	Create opportunities for students of different ability levels to work together	3.71	0.73
S4	Teach students how to support peers constructively	3.45	0.78

Code	Practice	M	SD
S5	Ensure that students experiencing difficulty participate in group activities	3.71	0.75
S6	Intervene when classroom interaction tends to exclude particular students	3.60	0.76

Table 4 Bonferroni-adjusted post hoc comparisons among the four scaffolding dimensions

Comparison	Mean difference	t(185)	Adjusted p
Cognitive - Metacognitive	0.598	13.81	< .001
Affective - Cognitive	0.185	4.13	< .001
Cognitive - Social	0.357	7.88	< .001
Affective - Metacognitive	0.782	17.30	< .001
Social - Metacognitive	0.241	5.07	< .001
Affective - Social	0.541	11.89	< .001

3.2. Cognitive scaffolding: reopening access to the task

Cognitive scaffolding ranked second in reported use. Ten of the 12 interviewees described it as an initial response when a learner did not know how to begin or could not continue. Two recurring mechanisms were reducing the size of the immediate demand and changing the representation of the problem.

"If I see a student looking at the whole worksheet and just sitting there, I no longer ask them to do everything. I circle the first two questions and say: just do question one first, then call me. Once they complete the first step, I give them the next part." (T2)

"I do not start with a long explanation. I give one hint first. If the student still does not respond, I model part of it. Some students need only one keyword; others need me to go through three or four steps with them." (T1)

These excerpts show that cognitive support becomes scaffolding when the teacher changes the degree of control in response to learner performance. Rather than assuming a fixed level of assistance, the teacher tries a small cue, observes the response, and increases support if necessary. This is contingency in the SCT/scaffolding sense:

what matters is not the technique of chunking or modelling itself, but how it is adjusted in interaction. Fading, however, appears more fragile. C6 was lower than the other cognitive items, and T9 acknowledged that near the end of a lesson prompting can shift into direct instruction. Cognitive accessibility is therefore strongly prioritized, whereas transfer of responsibility does not always keep pace.

3.3. Affective scaffolding as a gateway to cognitive access

Affective scaffolding had the highest mean, and 11/12 teachers included emotion in their accounts of learner difficulty. Anxiety, fear of error, and anticipated failure were frequently described as preceding disengagement. Under such conditions, additional explanation may not create learning access because the learner has not yet re-entered the activity.

"Some students look at the task and immediately say, 'I cannot do this, teacher.' If I keep explaining the procedure at that point, they hardly listen. I usually say: you do not need to do the whole thing; try one sentence with me. When they manage one sentence, their whole expression changes." (T3)

"Some students are very afraid of answering incorrectly in front of the class. I tell them that today I need to hear their thinking, not a perfect answer. Only then do they start speaking. Once they say something, I can see where they are stuck and support them." (T8)

The convergent pattern follows a sequence: threat reduction → learner re-engagement → cognition becomes visible → the teacher gains evidence for more precise academic support. The study terms this mechanism the affective access gateway. The novelty is not the general claim that emotion matters, but the functional position of affective scaffolding within the mediational sequence: it can be a precondition for cognitive contingency. Nine of the 12 teachers also described creating "small successes," in which the demand was reduced so that the learner could achieve a genuine unit of success before challenge was increased. Affective and cognitive scaffolding therefore often operated as a coupled sequence rather than as independent forms of support.

3.4. The metacognitive gap and completion-development asymmetry

Metacognitive scaffolding had the lowest mean, and M3 - asking learners to explain their strategy - was the lowest item in the entire scale. Seven of the 12 teachers said they often helped students complete work but had less time for self-explanation, self-monitoring, or diagnosing the source of difficulty.

"I do ask, 'Do you understand?' but when I think about it, that question does not tell me very much. Students usually say yes. I rarely ask them to explain the strategy again because I worry about losing time." (T12)

"On many days the practical goal is simply to help students finish before the lesson ends. I can model the task and let them follow. But the next day, when they meet a slightly different version, some of them ask again from the beginning." (T2)

These excerpts clarify the distinction between task completion and regulation development. "Do you understand?" may close an episode without producing evidence of strategy awareness; modelling may produce correct performance without the learner appropriating how to begin or check the task. This is completion-development

asymmetry: support for immediate success appears more frequently than support that makes strategy visible and transferable. Five teachers nevertheless described development-oriented moves, such as asking learners to identify the exact point of difficulty, choose between two strategies, and explain why. The finding therefore does not mean that teachers "lack" metacognitive practice; rather, development-oriented scaffolding is harder to sustain routinely.

3.5. The social scaffolding paradox: peer support also requires scaffolding

Social scaffolding had a mean of 3.59. Seven of the 12 teachers used peers as a resource, particularly in large classes, but six emphasized that peer support could become substitution or face threat. S3 and S5 - opportunities for learners of different abilities to work together and ensuring participation - both had $M = 3.71$, higher than S4, teaching students how to support peers constructively ($M = 3.45$). Organizing group presence therefore appears easier than organizing the quality of help.

"I pair a stronger student with someone who is slower, but sometimes the stronger student simply does the work for the other one. From the outside the group finishes very quickly, but when I ask the second student, they still do not know why." (T5)

"I have to teach them how to help. I tell them not to read out the answer, but to ask what their partner understands so far. If I do not make that explicit, they think helping means doing it for the other person." (T8)

This is the social scaffolding paradox: peer support is mobilized to broaden participation, yet it can narrow learner responsibility when "help" becomes doing-for. Teachers therefore need to scaffold the scaffolders by establishing norms for prompting, wait time, role distribution, and accountability. From an SCT perspective, social mediation has developmental value only when the learner receiving help remains involved in reasoning and retains the capacity to perform the next step.

3.6. Contingency compression under class-size, time, and preparation pressures

All 12 interviewees identified at least one structural barrier. With a mean class size of 40.16, the cycle

of observe → diagnose → prompt → wait → adjust → fade is difficult to sustain for multiple students at the same time. Teachers' accounts show that pressure does not merely reduce the quantity of support; it changes the form of support.

"There are more than forty students in my class. Five or six students may need five different kinds of support. I cannot stay beside one student for too long, so sometimes I choose the fastest way to get them moving again." (T4)

"The curriculum moves quite quickly. If I stop and ask each student to explain how they are learning, we may not finish the lesson content. I have to balance things, and reflection is usually the first part to be cut." (T12)

The study calls this pattern contingency compression. Under time pressure, teachers have fewer opportunities to verify a diagnosis, provide sufficient wait time for learner response, and return to decide whether fading is appropriate. Support can consequently shift from contingent probing to direct guidance and from a development orientation to a completion orientation. This pattern also helps explain why metacognitive support was lowest: reflection and transfer often have delayed payoffs, whereas task progress is immediately visible.

Professional preparation amplifies this issue. In the quantitative sample, 37.1% of teachers had never received inclusive-education training and 46.8% had attended only workshops or short courses; 9/12 interviewees said that their strategies had developed largely through experience and trial and error. T9 summarized the tension: "If I help too little, the student cannot do it; if I help too much, the student waits for me." Contingency compression should therefore not be read as a deficit in teachers' commitment, but as an interaction between professional judgment and structural conditions.

3.7. Joint display: from four dimensions to a model of inclusive scaffolding

Table 5 integrates the quantitative profile with qualitative mechanisms. The central meta-inference is that inclusive scaffolding operates along two simultaneous axes: mediational function (cognitive, metacognitive, affective, social) and developmental orientation (completion to development). Structural constraints do not necessarily eliminate scaffolding; they can reposition practice along the second axis.

Table 5 Joint display integrating quantitative and qualitative findings

QUAN result	QUAL explanation	Meta-inference
Affective: M = 4.13; 11/12: emotion can block task highest	access; 9/12: small success	Affective access gateway: affect regulation reopens participation and makes cognition observable.
Cognitive: M = 3.94	10/12: chunking/examples/prompts; 8/12: adjustment to learner response	Cognitive accessibility is high, but developmental value depends on contingency and fading.
Metacognitive: M = 3.34; lowest	7/12: limited time for self-explanation/monitoring; strategy transfer	Completion-development asymmetry: immediate progress is more common than explicit transfer of regulation.
Social: M = 3.59	7/12: peer support; 6/12: risk of doing-for or interactional pressure	Social scaffolding paradox: participation depends on teacher mediation of the quality of peer help.
F(3, 555) = 120.48; η^2 = .394; class M = 40.16	12/12: structural barriers; 9/12: limited professional preparation	Contingency compression: structural pressure shortens the diagnosis-response-fading cycle.

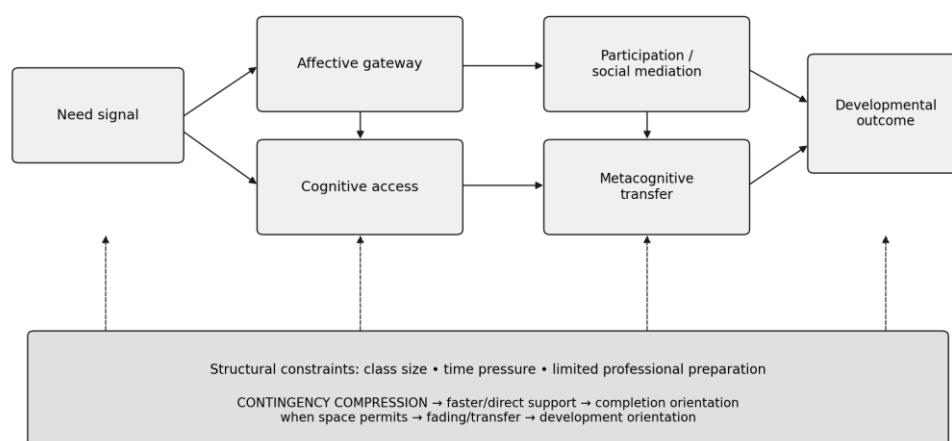


Fig. 2. Integrated model of multidimensional inclusive scaffolding and contingency compression.

4. Discussion

4.1. From lists of inclusive practices to a multidimensional mediational architecture

The first contribution is to shift analysis from "Which inclusive practices do teachers use?" to "What mediational function does a practice perform, and to what extent does it return control to the learner?" Finkelstein et al. (2021) showed that inclusive teaching includes instructional, organizational, collaborative, and social-emotional practices. The present study does not reject these categories; rather, it reorganizes them through a scaffolding logic: support has developmental meaning when it responds to current difficulty and enables continued participation, fading, or transfer. This is why the same behavior, such as peer grouping, can provide a social opportunity without necessarily constituting scaffolding if one learner has the task done for them.

The four-dimensional profile also extends Dominguez and Svihla's (2023) review, which found that teacher-scaffolding studies more often describe scaffold types than ongoing diagnosis and fading. In the present data, cognitive and affective supports - responses with readily observable outcomes - were reported more frequently than metacognitive transfer. The result therefore reveals an asymmetry within the scaffolding ecology rather than merely differences among technique categories.

4.2. Affective access gateway: emotion inside, not outside, the mediational sequence

The high mean for affective scaffolding is notable because traditional scaffolding research has often concentrated on cognitive and metacognitive activity (van de Pol et al., 2010). Recent work has broadened this focus: Cheng et al. (2024) show that teacher scaffolding can promote positive emotions and engagement, while Wu and Song (2026) demonstrate clear affective-engagement differences associated with affective scaffolding in another context. The present study extends this work by specifying a mechanism in inclusive classrooms: affective support may not merely accompany cognition; it can precede it.

The sequence threat reduction → re-engagement → cognitive visibility → contingent academic support explains why affective scaffolding can be reported more frequently than cognitive scaffolding without implying that teachers prioritize "encouragement" over instruction. When a learner refuses to attempt the task, the teacher has insufficient evidence for diagnosing conceptual difficulty. The affective gateway reopens interaction so that cognitive mediation becomes possible. This interpretation is also consistent with de Ruig et al. (2023), who link emotional support and high-quality teacher-student interaction with motivation and components of self-regulated learning. The

novelty is to locate emotional support functionally within the scaffolding sequence.

4.3. Completion-development asymmetry: immediate success is not yet transfer

The third finding directly refines the developmental criterion in scaffolding theory. Van de Pol et al. (2010) treat fading and transfer of responsibility as core components, while research on regulated-learning scaffolding shows that strategy-focused support can promote regulation and performance (Shao et al., 2023). Yet the metacognitive dimension was lowest, and the strategy-explanation item was the lowest on the scale, suggesting that classroom conditions favor forms of support with immediate, visible payoffs.

Completion-oriented support is not "bad scaffolding." In inclusive settings, direct modelling or narrowing a task may sometimes be necessary to prevent a learner from being excluded from activity. The problem arises when completion repeatedly becomes the endpoint. Interviews indicated that some learners returned the next day and became dependent again when the task changed slightly. The developmental criterion should therefore not be whether the task was finished, but whether the learner recovered some control. Completion-development asymmetry makes visible the gap between access and appropriation: inclusion needs both, but access is easier to prioritize when time is scarce.

4.4. The social scaffolding paradox and substantive participation

Florian and Black-Hawkins (2011) argue that inclusive pedagogy must expand participation, not merely place learners in the same space. The peer-support findings provide a micro-level explanation for this distinction. Pairing a stronger learner with a struggling learner may produce rapid task completion without participation if the stronger learner performs the task. Social scaffolding therefore requires teacher mediation of the helping relationship itself.

The novelty of the social scaffolding paradox is that it separates the presence of peer help from the quality of peer mediation. Teachers must design roles, prompting norms, and wait time so that the

learner receiving support retains responsibility for reasoning. This also connects Pantić and Florian's (2015) relational agency with scaffolding theory: inclusive teacher agency is enacted not only in teacher-student dyads but also in how teachers organize student relationships so that assistance does not reproduce dependency or face threat.

4.5. Contingency compression: structural conditions change the nature, not only the amount, of support

The strongest conceptual contribution may be contingency compression. Research on inclusive education in Vietnam has documented limited professional training, time pressure, and policy-practice gaps (Dinh et al., 2022; Hà, 2026). The present study shows how such conditions enter the micro-process of scaffolding. When teachers lack time to wait for learner response or return to a group, the contingency cycle is shortened. Support becomes faster, more generic, and more likely to end at task continuation.

This extends the meaning of structural barriers. Large classes do not simply make teachers "provide less support"; they can change the goal and granularity of that support. Time pressure does not merely reduce the number of metacognitive questions; it makes direct answers more rational from the perspective of classroom management. Donath et al. (2023) found that professional development has its clearest effects on knowledge and more moderate effects on skills, suggesting that training must go beyond awareness. Teachers' accounts in the present study point toward decision rehearsal: what signals to read, which minimal scaffold to try, how long to wait, when to increase support, and when to withdraw it. This is a concrete implication of contingency compression.

4.6. Pedagogical and professional-development implications

First, professional development should teach diagnosis-to-fading sequences rather than lists of techniques. One routine could involve five questions: What is the learner doing? What is the observable signal of difficulty? What is the smallest scaffold that can be tried? What does the response show? Which next step can be returned to the

learner? This routine directly develops contingency.

Second, affective scaffolding should be integrated into instructional decision-making. Teachers need to distinguish generic encouragement from evidence-based small success. The goal is not simply to make learners "feel happier," but to reduce threat enough for them to re-enter reasoning.

Third, metacognitive transfer should be built into short micro-routines that reduce time costs, such as an end-of-task question: "Where would you start next time you meet a task like this?" or "At exactly which step do you need help?" Such routines may protect a development orientation even in large classes.

Fourth, peer support requires explicit scaffolding. Students can be taught three principles: ask where a partner is stuck before offering a suggestion; do not give the answer before the partner attempts the step; and check whether the partner can perform the next step independently. This transforms peer grouping from an organizational solution into social mediation with quality control.

4.7. Limitations

The study has four main limitations. First, the quantitative phase relies on teacher self-report, so reported frequency may be affected by social desirability and cannot substitute for observation of actual contingency. A teacher may report frequent prompting, but if prompts do not change in response to student performance, developmental scaffolding may still be limited.

Second, the interview sample of 12 teachers was used to explain mechanisms and does not represent prevalence among all 186 participants. The n/12 counts indicate only the breadth of evidence in the qualitative sample.

Third, diverse learning needs was defined broadly and functionally; the findings therefore do not support conclusions about specific disability or

SEN categories. Future studies should test the model with particular learner groups and across subject areas.

Finally, the affective access gateway, completion-development asymmetry, and contingency compression are currently data-grounded interpretive concepts. Classroom observation, audio/video interaction analysis, and longitudinal student outcomes are needed to test whether these concepts predict fading, transfer, or independent performance over time.

5. Conclusion

The study shows that inclusive scaffolding cannot be understood adequately by asking whether teachers "provide help." Across 186 teachers, the reported profile followed a clear order: affective > cognitive > social > metacognitive. Interviews suggest that this order reflects not only preference but also the function and sustainability of support. Affective support often reopens participation; cognitive support makes the task manageable; social support creates additional access but itself requires teacher scaffolding to avoid substitution; and metacognitive support is more directly tied to the transfer of regulation but is harder to sustain under classroom pressure.

Three contributions connect these findings. The affective access gateway places emotion inside the mediational sequence; completion-development asymmetry distinguishes immediate access from strategy transfer; and contingency compression explains how structural conditions pull support toward direct completion. Together they suggest a common principle: the quality of inclusive scaffolding lies not in the quantity of support, but in whether support both opens a path to participation and preserves or progressively returns control of activity to the learner. This is the point at which inclusive pedagogy and SCT meet at the level of micro-level classroom decision-making.

6. References

- Cheng, X., Gao, L. X., & Liu, Y. (2024). The enactment of positive emotions via teacher scaffolding: The case of Chinese high school EFL learners' engagement with teacher written feedback. *System*, 124, 103375.

- Chitiyo, J., Simone, K., Muresherwa, E., Chitiyo, G., & Chitiyo, M. (2025). Inclusive education in Zimbabwe: An assessment of teachers' self-efficacy and attitudes in Masvingo. *Journal of Research in Special Educational Needs*, 25(1), 132–144.
- de Ruig, N. J., de Jong, P. F., & Zee, M. (2023). Stimulating elementary school students' self-regulated learning through high-quality interactions and relationships: A narrative review. *Educational Psychology Review*, 35, Article 71.
- Dignath, C., Rimm-Kaufman, S., van Ewijk, R., & Kunter, M. (2022). Teachers' beliefs about inclusive education and insights on what contributes to those beliefs: A meta-analytical study. *Educational Psychology Review*, 34, 2609–2660.
- Dinh, N. T. T., Luong, T. T. T., Blackburn, C., & Puttick, M.-R. (2022). Towards an ecological model of inclusive practice for children with special educational needs in Vietnam: Perceptions of primary school teachers. *PRACTICE*, 4(3), 239–260.
- Dominguez, S., & Svihla, V. (2023). A review of teacher implemented scaffolding in K–12. *Social Sciences & Humanities Open*, 8(1), 100613.
- Donath, J. L., Lüke, T., Graf, E., Tran, U. S., & Götz, T. (2023). Does professional development effectively support the implementation of inclusive education? A meta-analysis. *Educational Psychology Review*, 35, Article 30.
- Finkelstein, S., Sharma, U., & Furlonger, B. (2021). The inclusive practices of classroom teachers: A scoping review and thematic analysis. *International Journal of Inclusive Education*, 25(6), 735–762.
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5), 813–828.
- Hà, T. A. (2026). Teachers as agents of inclusive education: Developing a reflexivity cycle and examining teachers' conceptions and practices in Vietnam. *The Asia-Pacific Education Researcher*, 35, 819–833.
- Haynes-Brown, T. K. (2023). Using theoretical models in mixed methods research: An example from an explanatory sequential mixed methods study exploring teachers' beliefs and use of technology. *Journal of Mixed Methods Research*, 17(3), 243–263.
- Nguyen, V. H. (2025). Senior-junior scaffolding in academic writing in IELTS classes. *International Journal of Language Studies*, 19(4), 23–36.
- Nguyen, V. H. (2026). Micro-level peer scaffolding in academic essay writing among symmetrical Vietnamese EFL learners. *Theory and Practice in Language Studies*, 16(7), 2209–2220.
- Nguyen, V. H., & Le, P. H. H. (2026). Peer scaffolding as mediational mechanism in academic essay writing among EFL university students. *International Journal of English Language and Literature Studies*, 15(3), 173–189.
- Pantić, N., & Florian, L. (2015). Developing teachers as agents of inclusion and social justice. *Education Inquiry*, 6(3), 333–351.
- Shao, J., Chen, Y., Wei, X., Li, X., & Li, Y. (2023). Effects of regulated learning scaffolding on regulation strategies and academic performance: A meta-analysis. *Frontiers in Psychology*, 14, 1110086.
- van de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacher–student interaction: A decade of research. *Educational Psychology Review*, 22(3), 271–296.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89–100.
- Wu, S., & Song, T. (2026). Effects of affective vs. instructional teacher scaffolding on preschoolers' emotional engagement and social attention in picturebook reading. *Frontiers in Psychology*, 17, 1743106.

8. Author Declaration

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