

A Conceptual Review: Understanding Task Engagement Difficulties in Autistic Students Through Emotion Regulation and Classroom Practices

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Abstract: *Task engagement difficulties among students with autism spectrum disorder (ASD) are frequently observed in inclusive classroom settings and are often interpreted as noncompliance or low motivation. However, increasing evidence suggests that disengagement more accurately reflects a mismatch between students' regulation needs and everyday classroom demands, including transitions, time constraints, group-based instruction and unpredictable routines. When such mismatches occur, students may experience difficulties sustaining attention, initiating tasks and persisting during academic activities, thereby limiting their access to meaningful learning opportunities. This conceptual paper reconceptualises task disengagement as a regulation-sensitive process shaped by dynamic interactions between emotion regulation and classroom practices. Drawing on Gross's Extended Process Model, emotion regulation is conceptualised as a phased process involving emotion identification, strategy selection, implementation and monitoring, where difficulties at any stage may undermine students' capacity to remain organised, flexible and attentive during cognitively demanding classroom tasks. Complementing this perspective, the Neural Preferencing Locus of Control formulation highlights how preferences for predictability and control shape emotional responses to learning demands with avoidance and withdrawal functioning as adaptive responses to perceived uncertainty or loss of control. Building on these theoretical perspectives, this paper proposes an integrative conceptual framework that positions emotion regulation as a foundational mechanism influencing task engagement, while classroom practices operate as contextual conditions that can either buffer or intensify regulatory load. The framework reframes disengagement as an adaptive response rather than a behavioural deficit and highlights important implications for inclusive classroom design, emotionally responsive teaching and future research aimed at strengthening the conceptual integration of emotion regulation and classroom practices in understanding task engagement among autistic learners.*

Keywords: Autism spectrum disorder, task engagement, emotion regulation, classroom practices, inclusive education

1. Introduction

Students with Autism Spectrum Disorder (ASD) frequently experience difficulties sustaining task engagement during classroom learning, commonly manifested through reduced attention, task avoidance and limited persistence across academic activities (Mallory & Keehn, 2021;

Zajic et al., 2020). In inclusive classrooms, such difficulties are often interpreted through behavioural or motivational lenses and labelled as noncompliance or lack of effort. However, a growing body of research challenges these interpretations, suggesting that disengagement more accurately reflects a mismatch between students' regulation needs and the everyday demands of classroom learning, including transitions, time constraints, group-based instruction and unpredictable routines. When such mismatches occur, students may struggle to access instruction, demonstrate understanding and participate meaningfully in classroom activities.

In this paper, task engagement refers to students' active participation in academic tasks, reflected through sustained attention, task initiation, behavioural persistence and responsive involvement during instruction. Task engagement is critical because it enables access to instruction, participation in learning interactions and completion of academic tasks that support cumulative academic progress. Sustained disengagement therefore places students at increased risk of learning gaps and negative schooling experiences. Evidence from studies examining engagement during authentic classroom activities indicates that engagement difficulties are closely associated with attentional regulation and task-related behavioural organisation, underscoring that engagement is shaped by regulatory processes rather than motivation alone (Zajic et al., 2020; Zajic et al., 2021). Within inclusive education contexts, developing a clear conceptual understanding of engagement is therefore essential for informing effective classroom design and instructional decision-making.

Recent scholarship increasingly positions emotion regulation as a central mechanism influencing learning behaviour among students with ASD. Emotion regulation refers to the capacity to monitor, manage and adapt emotional responses in ways that support goal-directed behaviour in learning contexts. Syntheses of the literature highlight that emotion regulation in autism involves complex neurobiological and psychological processes, including differences in attentional control and executive functioning that shape how classroom demands are perceived and managed (Lim, 2020). From this perspective, disengagement may emerge when emotional arousal exceeds a student's capacity to remain organised, flexible and attentive during learning activities. Empirical evidence further supports this view by demonstrating meaningful associations between emotion regulation, school engagement and academic learning (Chen & Jahromi, 2025; Chu et al., 2020).

Contemporary theoretical developments provide further clarity on how emotion regulation difficulties translate into observable disengagement. Drawing on Gross's Extended Process Model, Cai and Samson (2025) conceptualise emotion regulation as a dynamic sequence involving emotion identification, strategy selection, implementation and monitoring, in which difficulties at any stage may undermine engagement during cognitively demanding tasks. Complementing this account, Greaves's (2025) Neural Preferencing Locus of Control formulation highlights preferences for predictability and control in shaping emotional responses to learning demands. When classroom activities are experienced as unpredictable or uncontrollable, avoidance and withdrawal may function as adaptive responses aimed at restoring a sense of control, resulting in reduced persistence and disengagement.

Alongside individual regulation processes, classroom practices and the broader inclusive learning environment play a critical role in shaping engagement. Inclusive practice is strengthened when teachers plan proactively using flexible design principles, such as Universal Design for Learning (UDL) and implement strategies that reduce unnecessary barriers while supporting participation (Khazanchi & Khazanchi, 2023; Oliver-Kerrigan et al., 2021). Teacher capacity and system-level support further influence how consistently inclusive practices

addressing social, emotional and academic needs are enacted in mainstream classrooms (Alhassan et al., 2025; Petersson Bloom & Hansson, 2025). Although emerging approaches, including gamified learning and technology-supported instruction, show potential for supporting engagement while addressing emotional needs, their integration into everyday classroom practice remains uneven and context dependent (Howorth et al., 2025; Jiang et al., 2025; Koomaran & Sani, 2025).

Despite these advances, significant conceptual gaps remain in how emotion regulation and classroom practices are integrated to explain task engagement difficulties. Regulation-focused interventions often report positive outcomes without clearly articulating how regulation processes interact with everyday instructional practices, while classroom-based engagement interventions may improve time on task while treating emotion regulation as a secondary consideration rather than a central explanatory mechanism (Panganiban et al., 2022). Furthermore, autistic students' perspectives on engagement supports remain underrepresented, limiting understanding of how such supports are experienced within daily classroom contexts (McKeegan & Zanuttini, 2025).

Accordingly, this conceptual paper positions task engagement difficulties as emerging from dynamic interactions between emotion regulation processes and classroom practices rather than as isolated behavioural challenges. In response, the paper proposes an integrative framework linking emotion regulation and classroom practices to provide a coherent explanation of task engagement difficulties among students with ASD in inclusive classrooms, with the aim of informing inclusive teaching practices and guiding future research on engagement and regulation in authentic learning contexts.

This paper adopts a conceptual review approach to integrate theory and selected empirical evidence on task engagement difficulties among autistic students in inclusive classrooms. Unlike systematic reviews that aim for exhaustive coverage or effect estimation, this review prioritises theory-driven synthesis to clarify how emotion regulation processes and classroom practices jointly shape engagement outcomes. Recent peer-reviewed literature in autism, educational psychology and inclusive education was selectively used to develop an integrative framework that explains task disengagement as regulation-sensitive and context-dependent, offering a foundation for future empirical research and inclusive classroom design.

2. Literature Review

This literature review synthesises recent research on task engagement difficulties among students with ASD in classroom contexts. Rather than conceptualising engagement difficulties as isolated behavioural challenges, the literature increasingly positions task engagement as an outcome shaped by emotion regulation processes and classroom practices. To organise current knowledge and clarify conceptual gaps relevant to inclusive education, five interrelated themes are reviewed: emotion regulation, task engagement difficulties, classroom practices, technology-supported approaches, and the need for conceptual integration.

2.1 Emotion Regulation among Autistic Students

Table 1 summarises key literature on emotion regulation among autistic students in educational contexts.

Table 1: Emotion Regulation among Autistic Students

Focus Area	Key Insights	Implications for Learning	Key References
Neurobiological and cognitive processes	Emotion regulation linked to attentional and executive control	Dysregulation reduces readiness to engage	Lim (2020); Cai & Samson (2025)
Regulation difficulties in classrooms	Heightened emotional arousal under classroom demands	Increased withdrawal and avoidance	Greaves (2025)
Emotion regulation interventions	Skills-based and psychosocial approaches show promise	Need classroom integration	Bennett et al. (2024)

Recent literature positions emotion regulation as a foundational mechanism influencing learning behaviour among autistic students. Syntheses of the literature emphasise that emotion regulation difficulties reflect complex neurobiological and psychological processes, particularly differences in attentional control and executive functioning that shape how students perceive and respond to instructional demands, transitions, and uncertainty in classroom settings (Lim, 2020). When regulatory demands exceed students' coping capacity, emotional arousal may increase, reducing readiness to engage with academic tasks.

Contemporary theoretical models further clarify the relationship between regulation and learning. Drawing on Gross's Extended Process Model, Cai and Samson (2025) conceptualise emotion regulation as a dynamic sequence involving emotion identification, strategy selection, implementation, and monitoring. Difficulties at any stage of this process may compromise engagement during academic tasks that require sustained attention and behavioural flexibility. Complementing this account, Greaves's (2025) Neural Preferencing Locus of Control formulation highlights how preferences for predictability and control may lead to disengagement when classroom demands are perceived as overwhelming or uncontrollable. Together, these perspectives frame disengagement as a regulatory response rather than a behavioural deficit.

2.2 Classroom Factors and Student Characteristics Influencing Task Engagement

This section focuses on contextual and learner characteristics that shape engagement demands in inclusive classrooms. Table 2 summarises key classroom factors and student characteristics associated with task engagement among students with ASD.

Table 2: Classroom Factors and Student Characteristics Influencing Task Engagement

Classroom / Student Factor	Description	Interaction with Student Characteristics	Effect on Engagement	Key References
Instructional format	Explicit versus implicit instruction	Processing and attentional demands	Structured formats associated with higher engagement	Dykstra Steinbrenner & Watson (2015)
Task structure and pacing	Rapid pacing, verbally dense tasks	Attentional control limitations	Reduced task initiation and persistence	Dykstra Steinbrenner & Watson (2015)
Communication abilities	Expressive and receptive language skills	Access to interaction-based tasks	Higher communication skills linked to higher engagement	Dykstra Steinbrenner & Watson (2015)

Peer interaction demands	Group work and collaborative activities	Social communication challenges	Variable engagement in inclusive settings	Fasano et al. (2023)
Teacher perceptions	Disengagement interpreted as noncompliance	Regulatory difficulties overlooked	Compliance-focused instructional responses	Milley & Machalicek (2012)

Collectively, the studies summarised in Table 2 illustrate that engagement difficulties are less attributable to student deficits and more to mismatches between instructional demands and regulatory capacity. Findings across this strand indicate that task engagement emerges from the interaction between classroom practices and student characteristics, rather than from student traits alone. Instruction that is implicit, verbally dense, or rapidly paced may increase cognitive and emotional load, thereby limiting students' capacity to regulate attention and sustain engagement (Dykstra Steinbrenner & Watson, 2015). Communication abilities and peer interaction demands further shape engagement, particularly in inclusive classrooms where social expectations are heightened (Fasano et al., 2023). Teacher interpretations play a critical mediating role: when disengagement is framed as behavioural noncompliance, regulatory difficulties may be overlooked, resulting in compliance-focused responses that do not support sustained engagement (Milley & Machalicek, 2012). Collectively, this strand supports a regulatory interpretation of engagement difficulties grounded in instructional–contextual fit.

2.3 Task Engagement Difficulties in Classroom Contexts

This section summarises how engagement difficulties manifest behaviourally and attentionally during academic tasks. Table 3 summarises key dimensions of task engagement difficulties observed in classrooms.

Table 3: Task Engagement Difficulties among Autistic Students

Engagement Dimension	Classroom Manifestation	Conceptual Interpretation	Key References
Attention	Reduced sustained focus	Contextual overload	Banire et al. (2021); Mallory & Keehn (2021)
Persistence	Early task termination	Regulation fatigue	Zajic et al. (2021)
Task avoidance	Withdrawal from tasks	Adaptive coping	Mallory & Keehn (2021)

Classroom-based studies consistently report difficulties in sustaining attention, persistence, and task initiation, particularly during cognitively demanding academic activities such as writing and problem solving (Zajic et al., 2021). Importantly, engagement difficulties are not uniform across contexts, suggesting that engagement is not a stable student trait but varies according to task characteristics and instructional conditions.

Integrative reviews further indicate that sensory and attentional processing differences contribute significantly to engagement patterns. Heightened sensory input and competing stimuli may increase emotional and cognitive load, prompting disengagement as an adaptive coping response (Mallory & Keehn, 2021). Eye-tracking and observational studies in mainstream classrooms demonstrate that attention allocation is shaped by classroom environments, reinforcing the view that engagement emerges from the interaction between learner regulation capacities and contextual demands (Banire et al., 2021).

2.4 Classroom Practices and Instructional Contexts

Table 4 summarises classroom practices associated with engagement and regulation.

Table 4: Classroom Practices Influencing Task Engagement

Practice Dimension	Description	Engagement Outcome	Key References
Instructional structure	Clear routines and expectations	Increased engagement	Khazanchi & Khazanchi (2023)
Teacher implementation	Consistency and responsiveness	Sustained participation	Zhang et al. (2025)
Emotional scaffolding	Supportive teacher–student interaction	Reduced disengagement	Bennett et al. (2024)

The literature consistently emphasises the critical role of classroom practices in shaping engagement outcomes. Inclusive instructional approaches that provide predictable routines, clear expectations and flexible task structures can reduce emotional load and support sustained engagement (Khazanchi & Khazanchi, 2023). However, systematic reviews suggest that inclusive placement alone does not guarantee engagement, as outcomes depend heavily on instructional quality, teacher responsiveness, and system-level support (Zhang et al., 2025).

Notably, many classroom practices continue to prioritise behavioural compliance over emotional readiness. Bennett et al. (2024) argue that regulation support is most effective when embedded within everyday instruction rather than delivered as isolated interventions. This perspective positions teachers as co-regulators whose instructional decisions directly influence students’ emotional stability and capacity to engage meaningfully with academic tasks.

2.5 Technology-Supported and Innovative Approaches

Table 5 summarises technology-based approaches supporting engagement and regulation.

Table 5: Technology-Supported Engagement Approaches

Approach	Purpose	Engagement Outcome	Key References
Emotion-aware e-learning	Regulation-integrated instruction	Improved engagement	Chu et al. (2020)
Gamified learning	Motivation and autonomy	Increased engagement	Koomaran & Sani (2025)
Immersive digital tools	Reduced social-emotional load	Promising early outcomes	Atsalaki & Kazanidis (2025)

Technology-supported interventions increasingly seek to address both regulation and engagement by providing structured, responsive and motivating learning environments. Studies indicate that emotion-aware e-learning systems and gamified platforms can enhance attention and persistence by offering clear feedback, autonomy and predictable task structures (Chu et al., 2020; Koomaran & Sani, 2025). Immersive digital tools also show promising early outcomes by reducing social-emotional demands during learning activities (Atsalaki & Kazanidis, 2025). However, concerns remain regarding sustainability, transferability and consistent implementation within everyday classroom contexts.

2.6 Research Gaps and Need for Conceptual Integration

Table 6 summarises key gaps in the current literature.

Table 6: Identified Research Gaps

Gap Area	Description	Implication
Fragmented frameworks	Regulation and engagement examined separately	Need integrated models
Academic focus	Social outcomes prioritised	Academic engagement underexplored
Student perspectives	Limited autistic voice	Context-sensitive understanding needed

Despite growing interest in emotion regulation and engagement, the literature remains conceptually fragmented. Regulation-focused interventions often report positive outcomes without clearly articulating how regulation processes interact with classroom practices over time. Conversely, classroom-based engagement interventions may improve observable time on task while treating emotion regulation as a secondary consideration rather than a central explanatory mechanism (Panganiban et al., 2022). Furthermore, autistic students’ perspectives on academic adjustments and engagement supports remain underrepresented, limiting understanding of how supports are experienced within daily classroom contexts (McKeegan & Zanuttini, 2025).

Taken together, the reviewed literature supports a conceptualisation of task engagement difficulties as emerging from dynamic interactions between emotion regulation processes and classroom practices. This synthesis provides a theoretical foundation for the integrative framework proposed in the following section.

3. Linking Emotion Regulation and Task Engagement: A Conceptual Framework

Emotion regulation and task engagement are closely interconnected processes within classroom learning, particularly for autistic students who experience heightened sensitivity to cognitive, emotional and environmental demands. Rather than functioning independently, emotion regulation shapes how students attend to, persist in and disengage from academic tasks, while classroom practices influence how these regulatory demands are experienced and managed. In response, this paper proposes an integrated conceptual framework that links emotion regulation, classroom practices and task engagement in inclusive classroom contexts. Unlike prior models that treat emotion regulation or instructional practices as parallel predictors of engagement, this framework explicitly theorises their interaction as the core mechanism shaping task engagement outcomes.

As depicted in Figure 1, emotion regulation is positioned as the primary internal mechanism directly influencing task engagement outcomes. Classroom practices are conceptualised not as independent predictors of engagement, but as contextual conditions that shape regulatory demands and moderate how emotion regulation capacities translate into observable engagement behaviours. Supportive practices such as predictable routines, clear instructional structure and emotional scaffolding may buffer regulatory load and promote sustained engagement, whereas unpredictable, rapidly paced or compliance-oriented practices may intensify emotional demands, increasing the likelihood of disengagement. In this way, task disengagement is understood as an adaptive regulatory response emerging from the interaction between internal regulation processes and external classroom conditions, rather than as a fixed student characteristic.

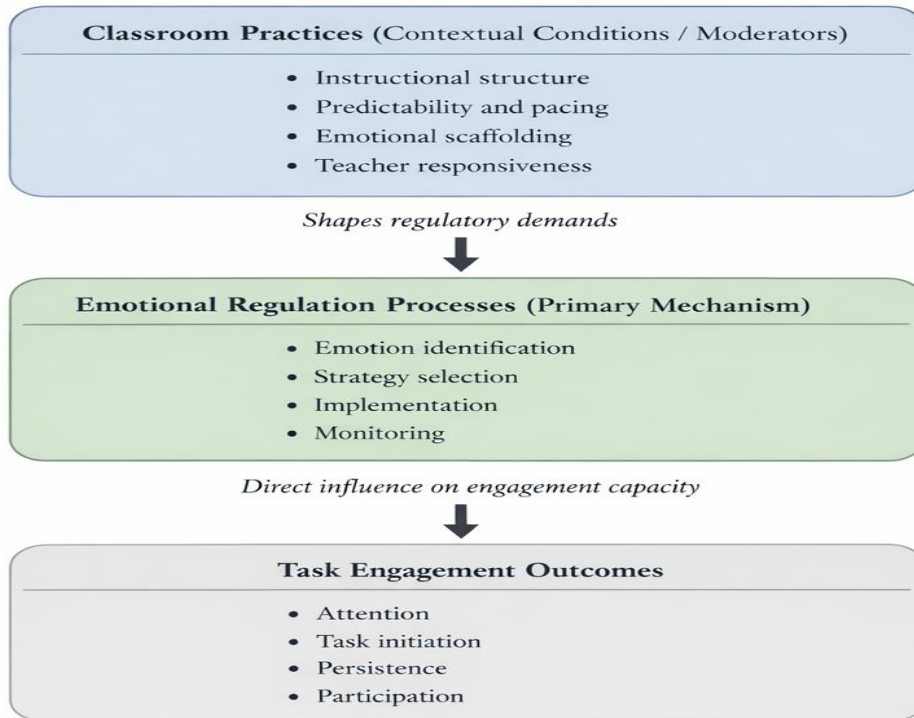


Figure 1: A Conceptual Framework Illustrating Task Engagement Among Autistic Students as An Outcome of Dynamic Interactions Between Emotion Regulation Processes and Classroom Practices in Inclusive Classroom Contexts

Within the proposed framework, emotion regulation is conceptualised as exerting a direct influence on task engagement. Students with more stable regulatory capacities are better able to allocate attention, maintain effort and remain engaged with academic tasks, even under moderate classroom demands. Conversely, regulatory breakdowns may manifest as task avoidance, withdrawal or inconsistent participation. This view aligns with contemporary models of emotion regulation that emphasise dynamic processes of emotional identification, strategy selection, implementation and monitoring, all of which may be challenged during cognitively and socially demanding classroom activities (Cai & Samson, 2025). Classroom practices, in turn, shape regulatory load by altering predictability, cognitive pacing, sensory demand and the availability of co-regulation support during learning. In this way, classroom conditions influence whether emotion regulation capacities translate into sustained engagement or disengagement.

However, emotion regulation does not operate in isolation. As depicted in Figure 1, classroom practices operate as contextual conditions that may either buffer or intensify the relationship between emotion regulation and task engagement. Classroom environments characterised by predictable routines, clear instructional structure and responsive teacher support may reduce regulatory load and buffer the impact of emotional vulnerabilities. In contrast, instructional practices that are verbally dense, rapidly paced or unpredictable may intensify emotional demands, increasing the likelihood that regulatory difficulties translate into observable disengagement (Dykstra Steinbrenner & Watson, 2015; Mallory & Keehn, 2021).

Supportive classroom practices may strengthen engagement by promoting emotional stability and adaptive engagement behaviours. Instructional clarity and environmental predictability can reduce uncertainty and anxiety, enabling students to allocate cognitive resources more effectively to learning tasks. Similarly, emotionally responsive teaching practices may support

co-regulation, allowing students to regain emotional control and re-engage with academic activities (Bennett et al., 2024; De Neve et al., 2023). In this way, classroom practices do not merely accommodate engagement difficulties but actively shape how emotion regulation capacities are expressed during learning.

Importantly, the framework recognises that classroom practices may either amplify or mitigate engagement difficulties. Inclusive classrooms that emphasise behavioural compliance without attending to underlying emotion regulation demands may inadvertently increase disengagement, particularly when emotional signals are misinterpreted as behavioural resistance (Milley & Machalicek, 2012). Conversely, instructional approaches that integrate emotional support with academic expectations are more likely to foster sustained engagement and meaningful participation (Zhang et al., 2025).

Overall, the proposed conceptual framework positions task engagement as an outcome of dynamic interactions between emotion regulation and classroom practices, rather than as a fixed student characteristic. By conceptualising classroom practices as contextual conditions that shape how regulatory capacities translate into engagement outcomes, the framework provides a theoretically grounded explanation of task engagement difficulties among autistic students and offers a foundation for designing inclusive classroom practices that support both emotion regulation and academic participation.

4. Implications for Classroom Practice and Research

The proposed conceptual framework contributes to the literature on autism and classroom engagement by offering an integrated explanation of task engagement difficulties that bridges emotion regulation processes and classroom practices. Much of the existing literature has examined engagement, emotion regulation or instructional strategies as separate domains, resulting in fragmented accounts of classroom behaviour among autistic students. By explicitly linking emotion regulation to observable engagement outcomes through the role of classroom practices, this framework provides a more coherent and theoretically grounded account of how engagement difficulties emerge within inclusive learning environments (Lim, 2020; De Neve et al., 2023). In extending emotion regulation theories, particularly Gross's Extended Process Model into classroom-based learning contexts, the framework addresses a key conceptual gap by illustrating how everyday instructional and environmental demands can either intensify or buffer regulatory challenges during academic tasks (Cai & Samson, 2025; Greaves, 2025). From this perspective, task disengagement is reframed not as a direct behavioural manifestation of autism characteristics or low motivation, but as the outcome of dynamic interactions between students' regulatory capacities and the structure and demands of classroom learning. This regulation-sensitive account also advances engagement theory by shifting attention away from motivation-centred explanations towards models that recognise variability in emotional and regulatory demands across tasks, activities and settings (Zajic et al., 2020; Zhang et al., 2025), thereby offering a stronger conceptual foundation for future research.

Table 7: Framework Connecting Emotion Regulation, Teaching Practices, and Engagement Outcomes

Framework Component	Core Idea	Implication for Research	Implication for Practice
Integration of Emotion Regulation and Engagement	Task disengagement is shaped by interaction between students' emotion regulation and classroom demands, not simply autism traits or motivation.	Moves engagement research beyond fragmented domains by linking regulation processes to observable classroom behaviour.	Encourages educators to consider emotional demands of tasks when interpreting disengagement.
Extension of Emotion Regulation Theory	Applies the Extended Process Model of emotion regulation (e.g., James Gross) to classroom learning contexts.	Provides a stronger theoretical explanation of how instructional environments influence regulatory load.	Supports designing learning environments that buffer regulatory challenges rather than intensify them.
Regulation-Sensitive View of Engagement	Engagement varies depending on emotional, social and cognitive demands of tasks and settings.	Shifts engagement theory away from purely motivation-based explanations toward context-sensitive models.	Helps teachers interpret disengagement as situational rather than purely student-driven.
Role of Teachers as Co-Regulators	Teachers influence engagement through routines, pacing, structure, and emotional responsiveness.	Positions classroom practices as central variables in engagement research.	Encourages predictable routines, clear task design, flexible pacing, and supportive interactions.
Impact of Classroom Environment	High sensory load, rapid pacing, or rigid behaviour control can increase dysregulation and disengagement.	Highlights the importance of environmental and instructional variables in inclusive classrooms.	Supports proactive classroom design rather than reactive behaviour management.
System-Level Implications	Regulation-sensitive teaching should be embedded in professional development and everyday instruction.	Encourages future studies to examine regulation-informed teaching models.	Promotes emotion scaffolding, structured supports, and regulation-informed technology use.

From a practical standpoint, the framework highlights the central role of teachers and classroom practices in shaping engagement outcomes for autistic learners. Rather than viewing emotion regulation as an individual skill that students must independently master, the model positions teachers as key co-regulators whose instructional decisions influence emotional stability and adaptive engagement behaviours, particularly during complex academic tasks, transitions, and social interactions (Bennett et al., 2024; Chen & Jahromi, 2025). Inclusive classroom practices such as predictable routines, clear task structures, flexible pacing and

emotionally responsive teacher–student interactions can reduce regulatory load and promote sustained engagement.

In contrast, learning environments characterised by high sensory demand, rapid instructional pacing, or compliance-oriented behaviour management may exacerbate emotional dysregulation and disengagement (Mallory & Keehn, 2021; Milley & Machalicek, 2012). At the school and system levels, the framework supports professional development approaches that equip teachers with strategies for recognising regulation-related challenges and embedding regulation-sensitive practices into daily instruction. Approaches such as emotion scaffolding, structured engagement supports and regulation-informed use of technology are likely to be most effective when implemented as part of routine classroom practice rather than as isolated interventions (Chu et al., 2020; Jiang et al., 2025). Overall, the framework encourages a shift from reactive behaviour management towards proactive, emotionally responsive teaching that fosters meaningful and sustained engagement for autistic learners in inclusive classroom settings.

5. Future Research Directions

While the proposed conceptual framework advances understanding of task engagement difficulties among students with autism by integrating emotion regulation and classroom practices, several directions for future research remain important. First, empirical studies are needed to examine how emotion regulation processes unfold during authentic classroom learning. Although prior research has established associations between regulation difficulties and engagement outcomes, future work should investigate how specific phases of emotion regulation—such as emotion identification, strategy selection, and regulation monitoring—are activated or disrupted during real-time academic tasks. Such process-oriented research would enable a more precise examination of how regulatory demands interact with task characteristics, instructional pacing, and classroom transitions, thereby strengthening the explanatory power of regulation-based models of engagement.

Future research should also explore the contextual role of classroom practices in greater depth. While the framework conceptualises classroom practices as shaping regulatory demands, empirical evidence examining how instructional structure, emotional scaffolding, and teacher responsiveness buffer or intensify engagement difficulties remains limited. Longitudinal and classroom-based studies could examine how regulation-sensitive practices influence engagement trajectories over time, moving beyond short-term or task-specific outcomes. Research designs that capture variability across subjects, instructional formats, and inclusive settings would further clarify how contextual factors condition the relationship between emotion regulation and task engagement.

Finally, future studies should prioritise methodological approaches that capture the dynamic and lived nature of engagement in inclusive classrooms. Fine-grained observational methods, multimodal data (e.g., behavioural, attentional, and physiological indicators) and qualitative inquiry can provide richer insight into moment-to-moment fluctuations in engagement and disengagement. Importantly, greater inclusion of autistic students' perspectives is needed to understand how regulation demands and classroom supports are experienced from the learner's standpoint. Incorporating these perspectives would enhance the ecological validity of conceptual models and ensure that future research remains responsive to the realities of inclusive classroom learning.

6. Conclusion

Task engagement difficulties among autistic students are often interpreted through behavioural or motivational frameworks that overlook the complex regulatory demands embedded within classroom learning. This conceptual paper has argued that such difficulties are more accurately understood as the outcome of dynamic interactions between emotion regulation processes and classroom practices. By integrating contemporary emotion regulation theory with classroom-based engagement research, the proposed framework positions emotion regulation as a foundational mechanism shaping how autistic learners attend to, persist in, and disengage from academic tasks, while highlighting the critical role of instructional and environmental conditions in buffering or intensifying regulatory demands. In reframing disengagement as an adaptive response rather than a behavioural deficit, this paper contributes to greater conceptual coherence within the autism and education literature and aligns with inclusive education principles that recognise variability in learners' regulatory capacities across contexts. The framework offers a theoretically grounded lens for interpreting engagement difficulties in inclusive classrooms and provides a foundation for future research and practice aimed at designing emotionally responsive learning environments that support meaningful and sustained engagement for autistic students.

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Conflict of Interest Statement

The author declares that there are no conflicts of interest regarding the publication of this study.

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