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HABIT-BASED ROUTINES, SELF-REGULATED ENGAGEMENT, AND FRIENDSHIP QUALITY IN ELEMENTARY EDUCATION: A GENERATION ALPHA CONCEPTUAL REVIEW

RUTINITAS BERBASIS KEBIASAAN, KETERLIBATAN TEREGULASI DIRI, DAN KUALITAS PERSAHABATAN DALAM PENDIDIKAN DASAR: KAJIAN KONSEPTUAL GENERASI ALPHA

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Abstrak

Artikel ini bertujuan mengkaji bagaimana rutinitas kelas berbasis kebiasaan berpotensi mendukung keterlibatan teregulasi diri dan kualitas persahabatan dalam pendidikan dasar pada konteks pembelajaran Generasi Alpha. Penelitian ini menggunakan pendekatan konseptual melalui tinjauan literatur terfokus dengan strategi penelusuran purposif dan iteratif. Penelusuran utama dilakukan pada Desember 2024 hingga Januari 2025 dan diperbarui secara terarah sepanjang 2025, terutama melalui Google Scholar. Sebanyak 16 sumber dipilih untuk sintesis inti dan dianalisis secara tematik berdasarkan lima tema: perhatian dan gangguan digital, pembentukan kebiasaan dan rutinitas, keterlibatan teregulasi diri, hubungan teman sebaya dan kualitas persahabatan, serta partisipasi berbasis identitas. Hasil sintesis menunjukkan bahwa isyarat yang jelas, tahapan tugas yang terkelola, struktur berulang, dan umpan balik tepat waktu berpotensi mendukung perhatian, ketekunan, dan partisipasi siswa. Konteks teman sebaya dan kualitas persahabatan juga relevan karena dapat mendukung atau menghambat tanggung jawab serta keterlibatan di kelas. Artikel ini mengusulkan kerangka konseptual yang menempatkan rutinitas kelas sebagai penghubung potensial antara keterlibatan teregulasi diri dan kualitas persahabatan, dengan kondisi pembelajaran digital sebagai konteks yang lebih luas. Hubungan tersebut bersifat konseptual dan masih memerlukan pengujian empiris.

Abstract

This article examines how habit-based classroom routines may support self-regulated engagement and friendship quality in elementary education within the learning context of Generation Alpha. It adopts a conceptual approach based on a focused literature review using a purposive and iterative search strategy. The primary search was conducted from December 2024 to January 2025 and updated selectively throughout 2025, mainly through Google Scholar. Sixteen sources were retained for the core synthesis and analyzed thematically across five themes: attention and digital distraction, habit and routine formation, self-regulated engagement, peer relationships and friendship quality, and identity-based participation. The synthesis indicates that clear cues, manageable task steps, repeated structures, and timely feedback may support students' attention, persistence, and participation. Peer contexts and friendship quality are also relevant because they may support or hinder responsibility and classroom engagement. The article proposes a conceptual framework positioning classroom routines as a potential link between self-regulated engagement and friendship quality, with digital learning conditions serving as the broader context. These relationships are conceptual rather than empirically established and require further testing in elementary classrooms.

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INTRODUCTION

Elementary education is increasingly shaped by learning conditions that are socially dense, digitally saturated, and behaviorally fast-moving. In this environment, students are expected to develop not only foundational literacy, numeracy, and classroom participation, but also the capacity to regulate attention, persist through difficulty, and collaborate responsibly with peers. These expectations are especially salient in discussions of Generation Alpha, a cohort often described as the first to grow up fully immersed in digital technology. At the same time, recent scholarship advises caution in how this label is used. A systematic literature review shows that the term Generation Alpha is widely employed in educational discussions, yet direct evidence for stable generational distinctiveness remains limited (Höfrová et al., 2024). What appears more firmly supported is the importance of digital immersion, changing learning conditions, and evolving social-emotional demands in contemporary schooling. In this sense, Generation Alpha is most usefully treated as a contextual marker for present educational realities rather than as a rigid psychological category.

For elementary classrooms, the relevance of this context lies not in essentializing children by generation, but in recognizing the environments in which many now learn. Digital device use among students is increasingly connected to distraction during lessons and to broader concerns about school belonging and learning conditions (OECD, 2024). Nearly one in three students across OECD countries reports being distracted by using digital devices in class (OECD, 2024). This does not imply that digital tools are inherently harmful to learning. Rather, it suggests that attention in contemporary schooling is an ecological issue shaped by competing stimuli, patterns of immediate reward, and the classroom conditions under which focus is expected to emerge. These concerns are especially significant in elementary education because young learners are still developing the cognitive and behavioral capacities needed to resist distraction and sustain purposeful effort.

This developmental dimension is central to the present article. Self-regulation in preschool and early elementary classrooms is closely associated with academic achievement, classroom behavior, and the gradual development of learning independence (Savina, 2021). Early self-regulation depends on neurocognitive processes such as response inhibition, voluntary attention, and working memory, all of which are essential for managing distractors, delaying impulsive responses, and maintaining task-relevant goals (Savina, 2021). Because these capacities are still forming in childhood, young students benefit from environments that provide strong external supports for appropriate behavior. From this perspective, weak persistence, short attention spans, or quick disengagement should not be interpreted only as student deficits. They should also be read as signs that classroom structures, routines, and social expectations may not yet be sufficiently aligned with the developmental needs of early learners.

This is one reason the concept of engagement deserves particular attention in elementary education. A systematic review of 35 years of research on school engagement in elementary school concluded that engagement in the early years is shaped by multiple layers of support, including peers, teachers, and parents, and that understanding engagement at this level is important for both theory and intervention design (Martins et al., 2022). The review is especially relevant because it treats engagement not simply as an internal disposition, but as something relational and contextual that develops within everyday school life (Martins et al., 2022). In practical terms, this means that engagement is not only about whether a child wants to learn. It is also about whether the classroom environment makes beginning, persisting, and participating feel possible, meaningful, and socially supported.

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The same literature suggests that peer relationships are not peripheral to this process, but integral to it. Peer relationships are associated with academic engagement and may operate through mediators such as grit, especially when considered alongside teacher–student relationships (Lee & Ha, 2023). In some contexts, the quality of student–peer relationships may be more closely associated with academic achievement than student–parent or student–teacher relationships (Yu et al., 2023). These findings do not diminish the role of teachers or families. Rather, they highlight that peer culture is one of the conditions through which effort, responsibility, and participation are interpreted in school. In elementary classrooms, friendship is therefore not merely a social backdrop. It is part of the pedagogical environment that helps shape whether effort is supported, whether distraction spreads, and whether academic responsibility is shared fairly or displaced through dependence.

A distinction is necessary between peer relationships and friendship quality. In this review, peer relationships refer to the broader social context in which students interact with classmates and experience peer influence, support, and expectations. Friendship quality is treated more specifically as the relational characteristics of closer friendships, including dimensions such as closeness, support, reciprocity, and conflict. This distinction is supported by research showing that friendship quality is associated with children's school engagement, academic functioning, and school adjustment (Hosan & Hoglund, 2017; Liu et al., 2022). Accordingly, studies examining broader peer relationships are used to establish the academic relevance of the peer context, whereas evidence specifically addressing friendship quality is used to support claims concerning the relational quality of friendships.

The theoretical foundation of this review therefore draws on complementary scholarship on habit formation, self-regulation, engagement, and peer relationships. Habit research explains how repeated cues and contextual conditions can stabilize behavior over time (Fiorella, 2020). Self-regulation research clarifies how attention, monitoring, and persistence develop through environmental support and gradual internalization (Savina, 2021; Schunk & Greene, 2017; Vosniadou et al., 2024). Engagement scholarship positions participation as relational and context-dependent rather than solely motivational (Martins et al., 2022), while peer and friendship research demonstrates that classmates and friendship experiences form important social conditions for academic participation and adjustment (Hosan & Hoglund, 2017; Knifsend et al., 2022; Lee & Ha, 2023; Liu et al., 2022; Yu et al., 2023). These theoretical strands provide the primary basis for the conceptual synthesis developed in this article.

This creates an important conceptual urgency. If engagement is shaped by classroom context and peer relations are part of that context, then friendship quality should be treated as academically relevant. Yet these strands of scholarship are often discussed separately. Research on self-regulated learning typically emphasizes attention, planning, monitoring, and persistence (Schunk & Greene, 2017; Vosniadou et al., 2024). Research on peer relationships often focuses on belonging, social adjustment, or emotional support (Knifsend et al., 2022; Lee & Ha, 2023). Research on digital distraction tends to foreground fragmented attention and task-switching (Chen et al., 2025; Martin et al., 2025). Each of these strands is valuable, but the intersection between them remains less developed. There is still limited conceptual work that explicitly integrates classroom routines, self-regulated engagement, and friendship quality in elementary education under contemporary digitally mediated conditions.

A habit-based perspective is particularly useful for building this connection. Habits are critical to student learning and well-being because they help explain why beneficial or unproductive behaviors become the default over time (Fiorella, 2020). Educational research often prioritizes

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motivation and metacognition while underestimating how contextual factors sustain good or bad habits (Fiorella, 2020). This insight is highly relevant for elementary classrooms. Students do not decide how to behave from a neutral starting point each time a task begins. Their conduct is shaped by repeated cues, familiar routines, social expectations, and prior experiences of reward or frustration. If classroom transitions are vague, task demands feel overwhelming, or off-task peer behavior is more visible and rewarding than sustained effort, disengagement may become habitual. Conversely, if routines make focused work more obvious, more manageable, and more immediately reinforcing, productive participation may become easier to repeat.

At this point, a habit-based framework becomes useful in a carefully delimited way. The idea of making behavior obvious, attractive, easy, and satisfying offers an accessible way to translate broader educational scholarship into classroom design principles (Clear, 2018). This interpretive usefulness becomes stronger when connected with identity-based motivation research. Learning environments are more effective when students can interpret effort and difficulty as meaningful and identity-congruent (Oyserman & Dawson, 2021). In elementary classrooms, this suggests that routines are most powerful when they are not merely procedural but also identity-supportive, helping students see themselves as responsible learners, fair partners, and trustworthy classmates (Oyserman & Dawson, 2021).

The argument of this article follows from that synthesis. The central proposition is that habit-based classroom routines may serve as a potential bridge between self-regulated engagement and friendship quality in elementary education. The article does not suggest that routines alone can address all forms of disengagement or relational difficulty. Rather, repeated classroom structures may provide conditions that support attention, effort, and responsible peer participation during the foundational years of schooling (Martins et al., 2022; Savina, 2021). Small repeated structures, such as visible work-start cues, short focus cycles, explicit norms for fair collaboration, and timely feedback, may therefore support both academic participation and relationally constructive classroom interaction.

Against this background, this article synthesizes literature on habit formation, self-regulated engagement, peer relationships, friendship quality, and contemporary digital learning conditions in elementary education. The novelty of this conceptual review lies in integrating domains that are often discussed separately by positioning friendship quality as a relational dimension of engagement and habit-based classroom routines as a potential pedagogical bridge between self-regulation and constructive peer interaction. Rather than treating attention, engagement, and friendship as independent concerns, the article proposes a classroom-centered conceptual framework showing how repeated routines may support both responsible learning participation and relational quality. This integration offers a conceptual contribution to elementary education by linking behavioral, self-regulatory, and relational perspectives within the contemporary context of Generation Alpha.

METHOD

This article is a conceptual paper based on a focused literature review using a purposive and iterative search strategy. The primary literature search was conducted from December 2024 to January 2025, followed by targeted literature updating through 2025. The search was conducted primarily through Google Scholar, while relevant scholarly publishing platforms were used to locate and access academic sources. Search terms included combinations of "self-regulated learning," "self-regulated engagement," "classroom routines," "habit formation," "student engagement," "peer relationships," "friendship quality," "digital distraction," and related terms such as "elementary

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education" and "primary education." Priority was given to literature published between 2017 and 2025, while earlier sources were retained when conceptually important.

Sources were selected based on their relevance to the relationships among classroom routines, self-regulation, engagement, peer interaction, friendship quality, and contemporary digital learning conditions. Peer-reviewed journal articles, scholarly books or chapters, and reputable research reports were prioritized, while sources with limited relevance to the conceptual aims of the review were excluded. Through this purposive selection process, 16 sources were retained for the final synthesis.

The literature was analyzed through thematic synthesis by organizing sources around attention and digital distraction, habit and routine formation, self-regulated engagement, peer relationships and friendship quality, and identity-based participation. These themes were compared and integrated to develop the proposed classroom-centered conceptual framework. Atomic Habits (Clear, 2018) was used as a practical interpretive lens for translating established educational and psychological principles into classroom routine-design principles rather than as the primary theoretical foundation.

RESULTS AND DISCUSSION

Results

The synthesis of the 16-source core corpus produced three interconnected domains corresponding to the central focus of this article: habit-based classroom routines, self-regulated engagement, and friendship quality. Contemporary digital learning conditions emerged as an important contextual factor across these domains. The findings are therefore presented according to these three aspects, followed by an integrative conceptual synthesis.

Habit-Based Classroom Routines

The reviewed literature indicates that repeated classroom structures may help make productive learning behaviors more accessible and predictable. Habit research emphasizes the importance of contextual cues, repetition, and stable environments in shaping recurring student behavior (Fiorella, 2020). Identity-based motivation research further suggests that engagement may be strengthened when students interpret effort and difficulty as meaningful and consistent with valued learner identities (Oyserman & Dawson, 2021).

In primary education, structured learning supports can provide students with visible opportunities for planning, task completion, self-assessment, and reflection. Kersna et al. (2025), for example, show how written learning guides can create classroom conditions supportive of self-regulated learning through structured tasks, choice, feedback, and teacher and peer support. Collectively, these sources indicate that clear cues, manageable steps, repeated expectations, and timely feedback are relevant features of classroom routine design. Clear's (2018) habit framework is used in this synthesis as a practical interpretive lens for translating these established principles into accessible classroom practices rather than as the primary theoretical foundation.

Self-Regulated Engagement

The literature indicates that self-regulated engagement develops within structured and supportive learning environments rather than through individual motivation alone. Young learners

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are still developing capacities related to response inhibition, voluntary attention, working memory, monitoring, and persistence and therefore benefit from environmental and instructional support (Savina, 2021). Broader scholarship on self-regulated learning similarly emphasizes planning, monitoring, regulation, and adaptive participation as central components of effective learning (Schunk & Greene, 2017; Vosniadou et al., 2024).

Research focused specifically on elementary school engagement further demonstrates that participation is embedded within school contexts and influenced by support from peers, teachers, and parents (Martins et al., 2022). These findings position engagement as both an individual regulatory process and a contextually supported form of participation. Digital learning conditions add another contextual demand. Research on mobile multitasking and digital distraction indicates that competing digital stimuli and task-switching can interfere with sustained attention and learning under some conditions (Chen et al., 2025; Martin et al., 2025; OECD, 2024). These sources are used primarily to characterize the contemporary digital context rather than as direct evidence concerning elementary students. Taken together, the literature suggests that attention and persistence are more likely to be supported when classroom environments provide clear and repeated structures for beginning, monitoring, and completing learning activities.

Friendship Quality

The synthesis distinguishes friendship quality from the broader construct of peer relationships. Peer relationships refer to the wider social environment in which students interact with classmates and experience peer influence, support, expectations, and group norms. Within the core corpus, evidence is stronger for this broader peer context. Peer relationships have been linked to school engagement, learning engagement, and academic functioning across school contexts (Knifsend et al., 2022; Lee & Ha, 2023; Shao & Kang, 2022; Yu et al., 2023).

Friendship quality is treated more specifically as the relational characteristics of closer peer relationships, including support, reciprocity, constructive interaction, and the management of conflict. Supplementary construct-specific evidence indicates that friendship quality is associated with children's school engagement, academic functioning, and school adjustment (Hosan & Hoglund, 2017; Liu et al., 2022). These supplementary sources clarify the construct without replacing the 16-source core synthesis corpus. Accordingly, the present synthesis does not treat findings concerning general peer relationships as direct evidence of friendship quality. Rather, broader peer-relationship research establishes the educational relevance of the peer context, while friendship-specific literature supports the narrower relational dimension emphasized in the proposed conceptual framework.

Integrative Conceptual Synthesis

Across the literature, habit-based classroom routines, self-regulated engagement, and relational dimensions of classroom participation appear conceptually complementary. Habit scholarship identifies the importance of repeated cues and stable contexts; self-regulation research describes how environmental support can facilitate attention, monitoring, and persistence; and peer-relationship research establishes the broader social context in which classroom participation occurs. Digital learning conditions provide an additional contextual layer by increasing demands on attention and behavioral regulation.

The synthesis therefore identifies a theoretically plausible relationship in which habit-based classroom routines may provide structured conditions relevant to both self-regulated engagement and relationally constructive classroom participation. These relationships are conceptual rather than

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empirically established causal pathways. Table 1 summarizes the principal findings across the four domains.

Table 1. Main findings of the literature synthesis

Aspect	Synthesized finding	Relevance to elementary education
Habit-based classroom routines	Repeated cues, manageable tasks, predictable structures, and feedback are relevant to the development and maintenance of productive learning behaviors.	Classroom routines can provide external structure while students develop greater regulatory independence.
Self-regulated engagement	Attention, monitoring, persistence, and participation develop within supportive learning environments.	Structured classroom conditions can scaffold regulatory processes in young learners.
Friendship quality and peer context	Peer relationships are academically relevant, while friendship quality represents a more specific relational dimension involving support and reciprocity.	Relational conditions should be considered alongside individual regulation when examining classroom participation.
Digital learning conditions	Digital distraction and task-switching can increase demands on sustained attention and regulation.	Contemporary digital conditions strengthen the relevance of attention-supportive classroom structures.

To make the evidential basis of the synthesis more transparent, Table 2 presents the 16 sources in the core corpus according to their primary focus, design or source type, context, principal finding or argument, and contribution to the present synthesis.

Table 2. Source Matrix of the 16-Source Core Literature Corpus

Source	Focus, method, and context	Main finding/argument	Contribution to synthesis
Clear (2018)	Habit formation; practical scholarly book; general behavioral context	Cues, manageable actions, reinforcement, and identity are central to habit development	Practical lens for classroom routine design
Fiorella (2020)	Habits in learning; review; educational psychology	Context and repetition help explain recurring student behavior	Academic foundation for habit-based routines
Höfrová et al. (2024)	Generation Alpha education; systematic review; contemporary education	Evidence for fixed generational traits is limited, while digital immersion is a recurring context	Positions Generation Alpha as a contextual marker
Kersna et al. (2025)	Self-regulated learning; qualitative study; primary education	Structured learning guides support choice, reflection, feedback, and self-regulatory opportunities	Classroom evidence for structured regulatory support
Knifsend et al. (2022)	Peer relationships and engagement; scholarly review; school settings	Peer experiences are relevant to academic and extracurricular engagement	Establishes the broader peer context
Lee & Ha (2023)	Peer relationships and academic functioning; empirical study; elementary students	Peer relationships are relevant to academic engagement and functioning	Elementary-level peer-context evidence
Martin et al. (2025)	Digital distraction; systematic review; educational settings	Digital distraction can interfere with concentration and learning	Digital-context evidence

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Martins et al. (2022)	Elementary school engagement; systematic review; elementary education	Engagement is shaped by individual, contextual, and relational support	Establishes engagement as contextual and relational
OECD (2024)	Digital-device use; research report; school students	Digital-device use is associated with classroom distraction under some conditions	Contemporary digital-learning context
Oyserman & Dawson (2021)	Identity-based motivation; theoretical synthesis; learning environments	Effort is more sustainable when interpreted as identity-congruent	Links routines with learner identity
Savina (2021)	Self-regulation; review; preschool and early elementary classrooms	Attention, inhibition, and working memory can be environmentally supported	Developmental basis for classroom scaffolding
Schunk et al. (2017)	Self-regulated learning; scholarly handbook; educational settings	Planning, monitoring, motivation, and regulation are central to learning	Broad theoretical foundation for self-regulated engagement
Shao & Kang (2022)	Peer relationships and engagement; cross-sectional SEM; middle-school students	Peer relationships are associated with engagement directly and through psychological mechanisms	Broader relational evidence
Vosniadou et al. (2024)	Self-regulated learning; theoretical framework and observation; classrooms	Classroom supports provide opportunities for self-regulated learning	Connects theory with classroom practice
Yu et al. (2023)	Student relationships and achievement; large-sample empirical study; Grades 4 and 8	Peer relationships show meaningful associations with academic achievement	Supports academic relevance of peer context
Chen et al. (2025)	Mobile multitasking; meta-analysis; young-adult learning contexts	Mobile distraction is associated with poorer immediate learning performance	Contextual evidence on divided attention

The source matrix demonstrates that the synthesis integrates different forms of evidence rather than relying on a single theoretical tradition or population. Importantly, sources based on adolescents, young adults, or broader school populations are used only for the conceptual domains they directly support and are not treated as direct evidence about elementary students.

This mapping helps clarify the article's central contribution. The literature does not support a narrow claim that engagement can be strengthened simply by instructing students to develop better habits. Instead, the synthesis indicates that repeated classroom structures, self-regulatory support, and relational conditions can be considered together when examining participation in elementary education. Everyday routines such as how tasks begin, how progress is monitored, how help is requested, and how collaborative responsibilities are organized provide the practical classroom context in which these domains may intersect.

Taken together, these findings suggest a conceptual pathway linking contemporary digital learning conditions, habit-based classroom routines, self-regulated engagement, and friendship quality. Figure 1 summarizes these proposed relationships.

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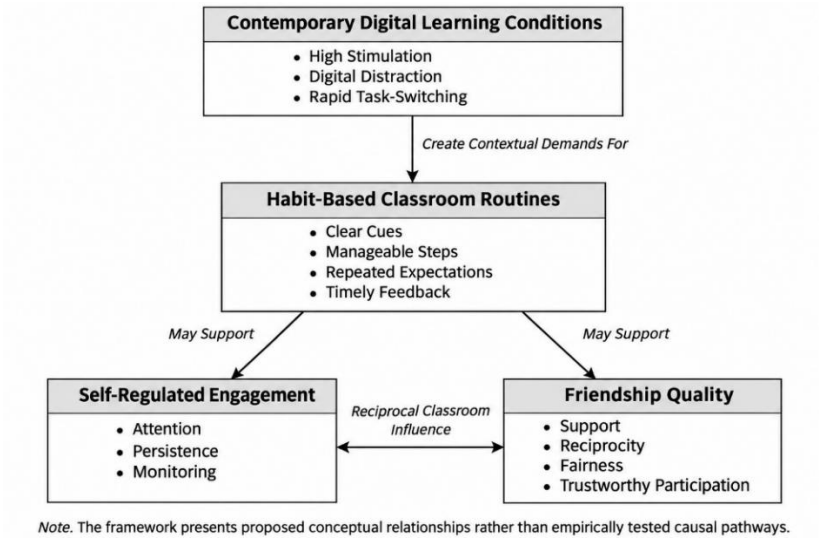

Figure 1. Conceptual Framework Linking Digital Learning Conditions, Habit-Based Classroom Routines, Self-Regulated Engagement, and Friendship Quality

As shown in Figure 1, digital learning conditions provide the broader context in which structured classroom routines may support both self-regulated engagement and friendship quality. Self-regulated engagement and friendship quality are treated as distinct but potentially reciprocal dimensions of classroom participation. The framework represents conceptual relationships rather than empirically tested causal pathways.

Discussion

Habit-Based Classroom Routines

The findings reinforce the view that classroom routines should be understood as more than procedural management. As summarized in Table 1, repeated cues, manageable tasks, predictable structures, and feedback may provide external conditions that make productive participation easier to initiate and sustain. This interpretation is consistent with habit research emphasizing the role of stable contextual cues in recurring behavior (Fiorella, 2020) and with evidence that structured learning supports can create opportunities for planning, reflection, and self-assessment in primary classrooms (Kersna et al., 2025).

The source matrix in Table 2 further shows that the argument for habit-based routines is grounded primarily in educational psychology and self-regulated learning rather than in Clear's (2018) framework alone. Atomic Habits is therefore most useful as a practical translation lens: making expectations visible, tasks manageable, progress noticeable, and repeated participation easier to enact. Its role is not to replace established educational theory but to help translate broader findings about cues, repetition, feedback, and identity into accessible classroom practices.

Self-Regulated Engagement

The second aspect concerns the relationship between classroom structure and self-regulated engagement. The findings in Table 1 indicate that attention, monitoring, persistence, and participation develop within supportive learning environments. This is particularly important in elementary education, where regulatory capacities are still developing and students may rely more heavily on external structure before these processes become increasingly internalized (Savina, 2021;

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Vosniadou et al., 2024).

As reflected in Table 2, the evidence also suggests that engagement should not be reduced to motivation alone. Martins et al. (2022) position elementary school engagement within a broader ecology of individual, relational, and contextual support, while Schunk et al. (2017) and Vosniadou et al. (2024) emphasize the regulatory processes involved in purposeful learning. From this perspective, routines may support engagement not because repetition automatically produces self-regulation, but because predictable classroom structures can reduce unnecessary uncertainty and provide repeated opportunities to practice attention, monitoring, and persistence.

Digital learning conditions add another layer to this interpretation. The literature summarized in Tables 1 and 2 indicates that distraction, competing stimuli, and task-switching can increase demands on sustained attention (Chen et al., 2025; Martin et al., 2025; OECD, 2024). Figure 1 therefore positions digital conditions as a broader contextual factor rather than as a direct cause of disengagement. Within such conditions, clear classroom routines may function as one form of environmental support for self-regulated participation.

Friendship Quality

The third aspect concerns friendship quality and its relationship with classroom participation. A central clarification of this review is that friendship quality should not be treated as interchangeable with the broader concept of peer relationships. Table 2 shows that much of the core literature establishes the academic relevance of the wider peer context, including its associations with engagement, resilience, and academic functioning (Lee & Ha, 2023; Shao & Kang, 2022; Yu et al., 2023). Supplementary evidence focusing specifically on friendship quality further indicates that supportive friendship experiences are associated with school engagement, academic functioning, and school adjustment (Hosan & Hoglund, 2017; Liu et al., 2022).

This distinction strengthens the relational argument of the article. Self-regulated engagement is not formed in isolation from classroom social life. Students participate in environments where effort, help-seeking, collaboration, fairness, and responsibility are interpreted socially. Consequently, friendship quality may represent one relational condition through which responsible participation is supported or undermined. This does not imply that friendship quality directly causes engagement; rather, it suggests that the relational quality of classroom life should be considered alongside individual regulatory processes.

Figure 1 captures this position by presenting self-regulated engagement and friendship quality as distinct but potentially reciprocal dimensions of classroom participation. The framework therefore avoids reducing friendship to an academic instrument while still recognizing that relational experiences can form part of the conditions in which learning takes place.

Integrative Implications for Elementary Education

Taken together, the three aspects suggest that elementary classroom participation can be understood as the product of interacting behavioral, regulatory, and relational conditions. Habit-based classroom routines provide repeated structures; self-regulated engagement concerns how students direct attention and effort within those structures; and friendship quality reflects the relational conditions surrounding everyday participation. Digital learning conditions operate as a broader contextual layer that can increase the demands placed on attention and regulation.

The conceptual framework in Figure 1 integrates these elements without assuming empirically established causal pathways. Its main contribution is to show how classroom routines may provide a practical point of connection between self-regulatory and relational dimensions of elementary

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learning. In practice, this may include consistent work-start cues, visible task sequences, clear procedures for requesting help, fair distribution of collaborative roles, and timely feedback. Such routines potentially support not only academic participation but also classroom expectations concerning reciprocity, responsibility, and trustworthy interaction.

At the school level, this perspective suggests that engagement should be approached as partly architectural rather than solely motivational. Classroom systems can be designed so that responsible participation is easier to understand and repeat, while remaining developmentally appropriate and flexible. Habit-based routines should therefore be viewed as one component within a broader pedagogical ecology that also includes relational care, differentiated instruction, and support for students whose difficulties cannot be addressed through routine design alone.

CONCLUSIONS AND RECOMMENDATIONS

This conceptual review suggests that habit-based classroom routines provide a useful framework for understanding possible connections between self-regulated engagement and friendship quality in elementary education. The synthesis indicates that structured and developmentally appropriate routines may support focused participation, self-regulatory practice, and relationally constructive peer interaction, while friendship quality should be considered as part of the learning environment rather than as a separate social concern. In practice, teachers may use simple and consistent routines that support task initiation, appropriate help-seeking, fair collaboration, and responsible participation. However, this review is conceptual, does not include primary field data, and the proposed framework has not yet been empirically tested in elementary classrooms; some supporting evidence also derives from broader school-age or non-elementary populations. Future research should therefore examine the framework through observational, longitudinal, or intervention-based studies to determine whether specific routine designs are associated with changes in self-regulated engagement and friendship quality and under what classroom, developmental, and contextual conditions these relationships are most likely to occur.

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