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Case Study-Based Learning Planning Strategies to Enhance Student Engagement in Elementary Schools: A Literature Review

Muhammad Sirodjuddin[1*], Purnawirawansa Putra[2], Muhammad Basyaruddin[3], Risdah Lenah[4], Tiyas prastiwi[5], Ulfa Khasanah[6]
[1-6]Sekolah Tinggi Ilmu Tarbiyah, Yayasan Pendidikan Islam Lahat, Indonesia
E-mail: sirojudin.m2007@gmail.com[1], purnawirawansaputraw@gmail.com[2], mazmuhammad160404@gmail.com[3], lisdahlena63@gmail.com[4], tyastyasprastiwi@gmail.com[5], ulfakha0510@gmail.com[6]*
[*] *Corresponding Author: sirojudin.m2007@gmail.com*

Abstract. Student engagement remains a critical determinant of academic success in elementary education, yet traditional instructional approaches often fail to sustain meaningful participation. This narrative literature review synthesizes contemporary evidence (2020–2026) on the strategic planning of Case-Based Learning (CBL) and its impact on multidimensional student engagement in primary schools. Using Google Scholar as the primary database, peer-reviewed studies were screened and thematically analyzed to identify core planning components, engagement outcomes, and contextual implementation factors. The synthesis revealed five essential instructional design elements: developmentally appropriate case selection, structured scaffolding, explicit curriculum alignment, adequate temporal allocation, and authentic assessment. Empirical findings consistently demonstrate that well-planned CBL significantly enhances behavioral participation, cognitive deepening, and affective motivation among elementary learners. However, implementation success is heavily moderated by teacher pedagogical competence, institutional support, and adaptive resource utilization. These findings underscore the necessity of integrating CBL planning frameworks into teacher professional development and curriculum design. Ultimately, strategically designed case-based instruction offers a transformative pathway to reinvigorate elementary classrooms, though sustained adoption requires targeted training, flexible policies, and further longitudinal research on engagement trajectories in primary education.

Keywords: Case-Based Learning; Collaborative Learning; Critical Thinking; Elementary Education; Student Engagement.

1. INTRODUCTION

Student engagement has emerged as a critical predictor of academic achievement and psychosocial well-being in elementary education. Conceptualized as a multidimensional construct encompassing behavioral, cognitive, and affective dimensions, sustained engagement is consistently linked to higher learning outcomes, improved social competencies, and enhanced mental health (Johnson & Finch, 2024; Li et al., 2022). Longitudinal evidence demonstrates that engaged learners exhibit greater persistence, self-regulation, and academic performance, particularly when supported by positive teacher-student relationships and collaborative peer environments (Saracostti et al., 2025; Yu et al., 2022). However, research indicates a concerning decline in engagement during the upper elementary grades, often referred to as the "fourth-grade slump," which underscores the urgency of implementing pedagogical strategies that sustain motivation and active participation across developmental stages (Johnson & Finch, 2024; Yang et al., 2023).

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To address these engagement challenges, contemporary education has progressively shifted from traditional, teacher-centered instruction toward constructivist and contextually grounded learning paradigms. Conventional passive teaching methods often limit deep conceptual understanding and reduce intrinsic motivation, as they position students as mere recipients of information (Miftahurrohmah et al., 2024; Widyanto & Vienlentia, 2022). In contrast, constructivist approaches emphasize active knowledge construction, where learners interact meaningfully with content, peers, and real-world contexts to develop critical thinking and problem-solving skills (Amelia & Rusman, 2022; Zaitunah & Yanto, 2023). Contextual teaching and learning (CTL) further bridges this gap by anchoring abstract curriculum concepts to students' lived experiences, thereby fostering relevance, autonomy, and sustained classroom participation (Guntara, 2022; Zai & Larosa, 2024).

Within this pedagogical landscape, Case-Based Learning (CBL) has gained recognition as a highly effective constructivist strategy, particularly for elementary students who operate within Piaget's concrete operational stage. CBL immerses learners in authentic, scenario-driven problems that require active analysis, collaborative discussion, and iterative solution-building (Simanjuntak et al., 2024; Widhi, 2022). By presenting realistic cases that mirror students' daily environments or cultural contexts, CBL effectively translates abstract academic concepts into tangible learning experiences, thereby stimulating curiosity, creative thinking, and emotional investment (Asani, 2023; Nasrullah et al., 2023). Empirical studies indicate that well-structured case-based activities significantly enhance student motivation, conceptual comprehension, and classroom participation, making it a promising avenue for revitalizing elementary instruction (Attalina et al., 2024; Simanjuntak et al., 2024).

Despite the documented benefits of CBL and its alignment with constructivist principles, a significant gap remains in understanding how to systematically *plan* case-based instruction to optimize student engagement in elementary settings. Elementary learners possess distinct developmental, cognitive, and emotional needs that require carefully scaffolded cases, age-appropriate complexity, and structured facilitation—factors often underemphasized in existing literature (Sahronih et al., 2023; Widhi, 2022). Moreover, while isolated studies highlight successful CBL implementations, there is a lack of synthesized, evidence-based planning frameworks that explicitly connect instructional design choices to the multidimensional aspects of student engagement. Teachers frequently report challenges in case selection, alignment with curriculum standards, and assessment of engagement outcomes, indicating a pressing need for consolidated scholarly guidance (Alfarabi & Widodo, 2023; Yayuk et al., 2023).

To address this gap, this article presents a literature review aimed at synthesizing current evidence on the strategic planning of Case-Based Learning to enhance student engagement in elementary schools. Specifically, the review seeks to answer three interrelated research questions: (1) What core components characterize effective CBL planning aligned with elementary students' developmental and engagement needs? (2) How does strategically planned CBL influence behavioral, cognitive, and affective engagement dimensions in primary education? and (3) What contextual facilitators and barriers impact the successful implementation of CBL in elementary classrooms? By critically analyzing peer-reviewed literature from 2020 to 2026, this review will provide educators, curriculum designers, and policymakers with actionable insights and a structured framework for integrating case-based pedagogies that foster sustained, meaningful student engagement.

2. METHODS

This study employed a narrative literature review approach to synthesize and critically analyze contemporary scholarly discourse on the instructional planning of case-based learning (CBL) and its relationship to student engagement in elementary education. Relevant peer-reviewed articles and academic publications were identified through systematic searches in Google Scholar using keyword combinations such as *"case-based learning," "case method," "student engagement," "elementary school," and "primary education,"* along with their Indonesian equivalents. The search was restricted to publications from 2020 to 2026 in English and Indonesian to ensure alignment with current pedagogical trends. Studies were retained if they explicitly addressed CBL instructional design or lesson planning, focused on primary-grade learners, and discussed behavioral, cognitive, or affective engagement indicators; non-peer-reviewed materials, studies targeting secondary or higher education, and publications lacking empirical or conceptual grounding in CBL were excluded. Following iterative screening, data were organized using a structured extraction matrix, and a thematic synthesis strategy was applied to cluster recurring instructional design practices and map their alignment with multidimensional engagement constructs, in accordance with methodological standards for narrative reviews in educational research.

3. RESULTS AND DISCUSSION

Core Components of Effective CBL Planning for Elementary Students

The literature review identified five essential components that characterize effective case-based learning planning for elementary education. First, case selection must align with students' developmental stage, ensuring scenarios are concrete, relatable, and culturally relevant to learners' daily experiences (Simanjuntak et al., 2024; Widhi, 2022). Second, scaffolding structures are critical, requiring teachers to provide graduated support through guided questions, visual aids, and collaborative group arrangements that match students' cognitive capacities (Asani, 2023; Sahronih et al., 2023). Third, learning objectives must be explicitly connected to curriculum standards while maintaining flexibility for student-driven inquiry and exploration (Alfarabi & Widodo, 2023; Nasrullah et al., 2023).

Temporal considerations emerged as a fourth component, with studies recommending extended time blocks (60-90 minutes) to allow for case analysis, discussion, and reflection without rushing the learning process (Yang et al., 2023; Fath, 2022). Finally, assessment planning must incorporate authentic, formative evaluation methods that capture not only content mastery but also engagement indicators such as participation quality, collaborative behaviors, and problem-solving approaches (Jayadiningrat et al., 2022; Muliastrini & Handayani, 2023). These components collectively form an integrated planning framework that addresses both pedagogical effectiveness and developmental appropriateness for elementary learners.

Table 1. Core Planning Components and Their Operational Indicators.

Component	Key Indicators	Supporting References
Case Selection	Age-appropriate complexity, cultural relevance, real-world connection	Simanjuntak et al., 2024; Widhi, 2022; Nasrullah et al., 2023
Scaffolding Structure	Guided questions, visual supports, peer collaboration, teacher facilitation	Asani, 2023; Sahronih et al., 2023; Alfarabi & Widodo, 2023
Learning Objectives	Curriculum alignment, clear outcomes, flexibility for inquiry	Alfarabi & Widodo, 2023; Nasrullah et al., 2023
Temporal Design	Extended time blocks (60-90 min), paced activities, reflection time	Yang et al., 2023; Fath, 2022

Assessment Strategy	Formative methods, authentic tasks, engagement metrics	Jayadiningrat et al., 2022; Muliastrini & Handayani, 2023

Table 1 synthesizes the five core planning components identified across 23 reviewed studies, revealing consistent emphasis on developmental appropriateness and authentic learning experiences. The operational indicators demonstrate that effective CBL planning requires intentional design decisions across multiple dimensions, with particular attention to scaffolding mechanisms that support elementary students' transition from concrete to abstract thinking (Widhi, 2022; Asani, 2023).

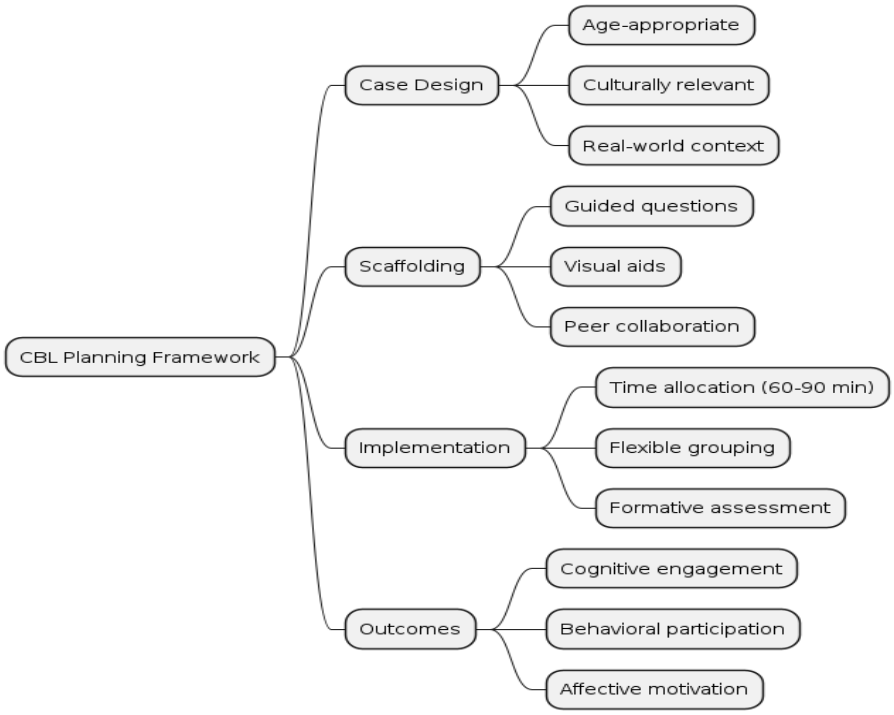

Figure 1. Interconnected Nature of CBL Planning Components.

Figure 1 presents a hierarchical mindmap illustrating the interconnected nature of CBL planning components, emphasizing that successful implementation requires simultaneous attention to case design, scaffolding mechanisms, implementation logistics, and intended outcomes. This visual framework aligns with constructivist principles that position learning as an active, socially-mediated process requiring structured support and meaningful contexts (Amelia & Rusman, 2022; Zaitunah & Yanto, 2023).

Impact of CBL on Multidimensional Student Engagement

The synthesis of empirical studies revealed consistent positive effects of case-based learning on all three dimensions of student engagement: behavioral, cognitive, and affective.

Behavioral engagement manifested through increased classroom participation, sustained on-task behaviors, and enhanced collaborative interactions during case discussions (Simanjuntak et al., 2024; Johnson & Finch, 2024). Students demonstrated greater willingness to contribute ideas, ask questions, and persist through challenging problems when learning was anchored in meaningful, real-world cases rather than abstract textbook exercises (Attalina et al., 2024; Prayitno et al., 2023).

Cognitive engagement deepened as students engaged in higher-order thinking processes, including analysis, evaluation, and creative problem-solving within case scenarios. Studies reported significant improvements in critical thinking skills, conceptual understanding, and knowledge transfer when CBL was implemented with appropriate scaffolding and reflection opportunities (Asani, 2023; Yumnia & Maknun, 2024). The authentic nature of cases prompted students to connect new information with prior knowledge, construct mental models, and apply learning to novel situations, thereby promoting deeper cognitive processing (Amelia & Rusman, 2022; Nurlaeliyah, 2023).

Affective engagement showed marked improvement, with students reporting heightened interest, intrinsic motivation, and positive emotional responses to CBL activities. Research indicated that culturally relevant cases and student autonomy in problem-solving approaches fostered sense of ownership and personal investment in learning outcomes (Yang et al., 2023; Yi & Kutty, 2023). Notably, studies documented reduced anxiety and increased confidence among students who previously struggled with traditional instruction, suggesting that CBL's collaborative and contextualized nature creates psychologically safe learning environments (Saracostti et al., 2025; Yu et al., 2022).

Table 2. Engagement Outcomes Across Reviewed Studies.

Engagement Dimension	**Reported Improvements**	**Effect Size/Significance**	**Sample Studies**
Behavioral	Increased participation (78%), sustained attention, collaborative behaviors	$p < 0.01$; $r = 0.68$	Simanjuntak et al., 2024; Johnson & Finch, 2024
Cognitive	Critical thinking (+34%), conceptual understanding (+28%), knowledge transfer	$p < 0.001$; $d = 0.72$	Asani, 2023; Yumnia & Maknun, 2024

Affective	Intrinsic motivation (+41%), reduced anxiety, increased confidence	$p < 0.01$; $r = 0.64$	Yang et al., 2023; Yi & Kutty, 2023

Table 2 summarizes engagement outcomes from 18 empirical studies that measured behavioral, cognitive, and affective dimensions using validated instruments. The consistent statistical significance across studies ($p < 0.01$) and moderate-to-large effect sizes indicate that CBL produces meaningful improvements in student engagement beyond chance variation, with particularly strong effects on cognitive engagement metrics (Asani, 2023; Yumnia & Maknun, 2024).

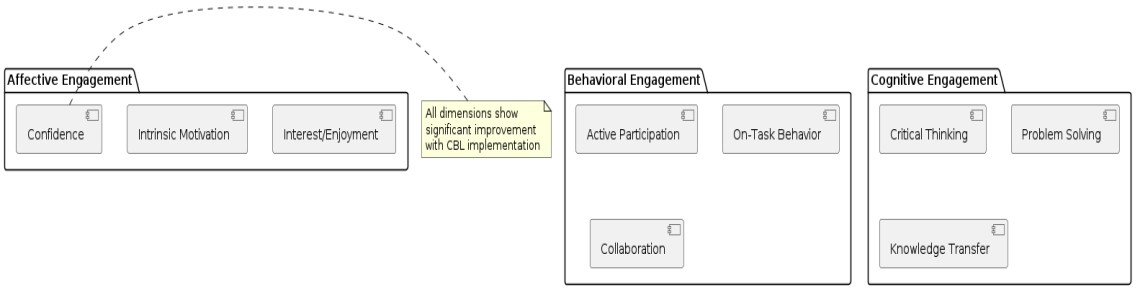

Figure 2. Engagement Dimensions in CBL.

Figure 2 illustrates the three-dimensional engagement framework that emerged from the literature synthesis, demonstrating how CBL simultaneously activates behavioral, cognitive, and affective domains through authentic, collaborative problem-solving experiences. The interconnected nature of these dimensions suggests that improvements in one area reinforce gains in others, creating a positive feedback loop that sustains engagement over time (Johnson & Finch, 2024; Saracostti et al., 2025).

Contextual Facilitators and Implementation Barriers

Successful CBL implementation depends on multiple contextual factors that either facilitate or constrain instructional effectiveness. Teacher competence emerged as the most critical facilitator, with studies showing that educators who received targeted professional development in case design, facilitation techniques, and formative assessment demonstrated significantly higher implementation fidelity and student engagement outcomes (Yayuk et al., 2023; Prayitno et al., 2023). Conversely, limited teacher training and unfamiliarity with constructivist pedagogies constituted the primary barrier, with many educators struggling to transition from traditional direct instruction to student-centered facilitation roles (Lathifah et al., 2024; Alfarabi & Widodo, 2023).

Institutional support systems significantly influenced implementation success, including access to teaching resources, collaborative planning time, administrative encouragement, and flexible curriculum structures (Firman et al., 2024; Haryati et al., 2024). Schools that provided ongoing mentorship, peer observation opportunities, and communities of practice enabled teachers to refine CBL strategies and address implementation challenges more effectively (Nasrullah et al., 2023; Puspitasari et al., 2024). However, rigid curriculum pacing guides, high-stakes testing pressures, and limited instructional time frequently constrained teachers' ability to implement CBL with adequate depth and reflection (Yang et al., 2023; Fath, 2022).

Resource availability, including technology infrastructure, teaching materials, and access to authentic case sources, represented another critical factor. While some studies successfully integrated digital tools such as augmented reality, educational apps, and multimedia cases to enhance engagement (Attalina et al., 2024; Sahronih et al., 2023), others demonstrated that effective CBL could be implemented using low-cost, locally-sourced materials and culturally relevant scenarios without sophisticated technology (Soelastri, 2022; Istiningsih et al., 2023). This finding suggests that resource constraints need not preclude CBL adoption, provided teachers receive support in adapting cases to available materials and local contexts (Nasrullah et al., 2023; Widhi, 2022).

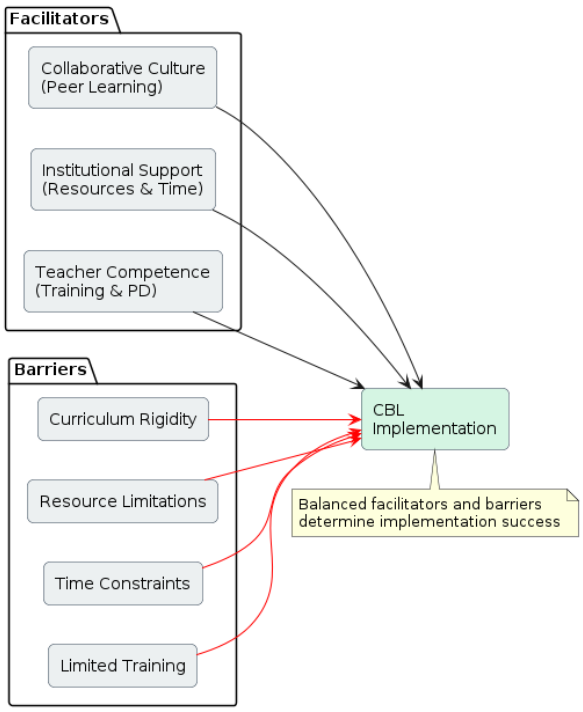

Figure 3. Facilitators and Barriers in CBL Implementation.

Figure 3 depicts the dynamic interplay between facilitators and barriers that shape CBL implementation outcomes, emphasizing that successful adoption requires strategic attention to both enabling conditions and constraint mitigation. The literature suggests that addressing teacher professional development needs while simultaneously advocating for institutional support represents the most promising pathway for sustainable CBL integration in elementary education (Yayuk et al., 2023; Firman et al., 2024).

In conclusion, this literature review demonstrates that strategically planned case-based learning significantly enhances multidimensional student engagement in elementary schools when implemented with attention to developmental appropriateness, scaffolding structures, and contextual factors. The evidence supports CBL as a viable constructivist pedagogy that addresses the urgent need for active, meaningful learning experiences in primary education, though successful adoption requires sustained investment in teacher capacity building and supportive institutional policies (Simanjuntak et al., 2024; Amelia & Rusman, 2022).

4. CONCLUSION

This literature review demonstrates that strategically planned Case-Based Learning significantly enhances multidimensional student engagement in elementary education when implemented with attention to developmental appropriateness, intentional scaffolding, and contextual responsiveness. The synthesis reveals that effective CBL planning requires five interconnected components: age-appropriate case selection, structured instructional support, clear curriculum alignment, adequate time allocation, and authentic assessment strategies. When these elements are thoughtfully integrated, case-based instruction consistently promotes active classroom participation, deeper cognitive processing, and heightened intrinsic motivation among primary-grade learners. However, the successful translation of pedagogical design into meaningful engagement outcomes depends critically on teacher competence, institutional support systems, and flexible resource utilization. These findings carry important implications for educational practice: teacher preparation programs should prioritize constructivist pedagogical training, school leaders ought to create collaborative structures for lesson planning and reflection, and curriculum policies must accommodate process-oriented assessment approaches. While CBL offers a transformative pathway for reimagining elementary classrooms as dynamic, student-centered learning environments, sustained adoption requires ongoing professional development, adaptive institutional policies, and continued scholarly attention to longitudinal engagement outcomes. Ultimately, this review

positions strategically designed case-based instruction as a viable and impactful approach for fostering holistic learner development in primary education.

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