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RESEARCH ARTICLE

Learner Engagement and Conceptual Understanding in Grade 5 Classrooms: Teaching Strategies and Classroom Practices in a Philippine Public Elementary School

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Abstract

Learner engagement and conceptual understanding are critical determinants of academic success in elementary education, particularly in upper primary grades where learners transition toward more abstract thinking. This mixed-methods study examined the relationship between teaching strategies, learner engagement, and conceptual understanding among Grade 5 learners at San Pedro Elementary School, a Philippine public elementary school. Quantitative data were collected from 120 Grade 5 learners using a validated learner engagement questionnaire and a teacher-made conceptual understanding test, while qualitative data were gathered through classroom observations and semi-structured interviews with teachers. Quantitative findings revealed a significant positive relationship between learner-centered teaching strategies and levels of behavioral, emotional, and cognitive engagement, which in turn significantly predicted conceptual understanding. Qualitative results supported these findings, showing that interactive strategies, contextualized instruction, and formative feedback fostered active participation and deeper understanding. The integration of quantitative and qualitative findings highlights the importance of learner-centered pedagogy and supportive classroom practices in enhancing engagement and conceptual learning in elementary classrooms. Implications for instructional practice, school leadership, and curriculum implementation are discussed.

Keywords: learner engagement, conceptual understanding, mixed methods, elementary education, Philippine public schools

Introduction

Learner engagement has been widely recognized as a foundational element of effective teaching and learning, particularly in elementary education where students' attitudes toward learning are formed (Skaalvik & Skaalvik, 2017). Engagement encompasses behavioral participation, emotional involvement, and cognitive investment in learning tasks, all of which influence how learners process and construct knowledge. In Grade 5 classrooms, where learners are introduced to increasingly complex concepts across subject areas, engagement plays a crucial role in supporting conceptual understanding.

Conceptual understanding refers to learners' ability to grasp underlying principles, relationships, and meanings rather than relying on rote memorization. Research suggests that conceptual understanding is strengthened when learners are actively involved in learning through inquiry, discussion, and real-life applications (Hallinger & Heck, 2010). However, despite curricular reforms promoting learner-centered instruction in Philippine public schools, classroom practices often remain teacher-directed, limiting opportunities for meaningful engagement and deep understanding.

While previous studies have examined learner engagement or conceptual understanding independently, fewer studies have explored their relationship using a mixed-methods approach in elementary school contexts. Addressing this gap, the present study investigates how teaching strategies and classroom practices influence learner engagement and conceptual understanding among Grade 5 learners at San Pedro Elementary School.

Review of Related Literature

Learner Engagement in Elementary Education

Learner engagement is a multidimensional construct comprising behavioral, emotional, and cognitive components. Behavioral engagement involves participation in learning activities, emotional engagement reflects interest and sense of belonging, and cognitive engagement refers to effortful learning and strategic thinking (Skaalvik & Skaalvik, 2017). Studies indicate that high levels of engagement are associated with improved academic achievement and positive learning dispositions in elementary learners.

Teaching Strategies and Classroom Practices

Learner-centered teaching strategies—such as collaborative learning, questioning, contextualization, and formative assessment—are associated with increased engagement and deeper learning. Leithwood, Harris, and Hopkins (2020) emphasize that instructional practices promoting learner autonomy and interaction enhance motivation and conceptual understanding. Conversely, teacher-dominated instruction often restricts opportunities for engagement and critical thinking.

Conceptual Understanding and School Effectiveness

Conceptual understanding is closely linked to instructional quality and classroom environment. Research shows that learners develop stronger conceptual foundations when instruction emphasizes explanation, application, and reflection rather than procedural recall (Spillane, 2012). Effective schools therefore align instructional strategies with engagement-focused practices to promote meaningful learning outcomes.

Research Questions

1. What is the level of learner engagement (behavioral, emotional, and cognitive) among Grade 5 learners?
2. What is the level of conceptual understanding of Grade 5 learners?
3. Is there a significant relationship between learner engagement and conceptual understanding?
4. How do teaching strategies and classroom practices influence learner engagement and conceptual understanding based on teachers' and learners' experiences?

Methodology

Research Design

This study employed a **convergent mixed-methods design**, integrating quantitative and qualitative data to provide a comprehensive understanding of learner engagement and conceptual understanding.

Research Locale and Participants

The study was conducted at **San Pedro Elementary School**, a public elementary school in the Philippines. Quantitative participants included **120 Grade 5 learners**, selected through total enumeration. Qualitative participants consisted of **six Grade 5 teachers**, purposively selected based on teaching experience.

Research Instruments

Quantitative data were collected using:

- A **Learner Engagement Questionnaire** measuring behavioral, emotional, and cognitive engagement (α = .86–.91).
- A **teacher-made conceptual understanding test**, validated by subject specialists.

Qualitative data were gathered through:

- Classroom observations using an observation guide.
- Semi-structured teacher interviews focusing on instructional strategies and classroom practices.

Data Analysis

Quantitative data were analyzed using descriptive statistics and Pearson correlation. Qualitative data were analyzed thematically. Integration occurred during interpretation through triangulation of findings.

Results and Findings

Quantitative Results

Results indicated that learners demonstrated high levels of behavioral and emotional engagement and moderate to high cognitive engagement. Conceptual understanding scores were generally above average. Pearson correlation analysis revealed a significant positive relationship between overall learner engagement and conceptual understanding ($r = .62$, $p < .01$).

Table 1. Levels of Learner Engagement and Conceptual Understanding of Grade 5 Learners (n = 120)

Variable	Mean	SD	Descriptive Level
Behavioral Engagement	4.18	0.46	High
Emotional Engagement	4.25	0.41	High
Cognitive Engagement	3.89	0.52	Moderate to High
Overall Learner Engagement	**4.11**	**0.45**	**High**
Conceptual Understanding	82.36	7.84	Above Average

The results indicate that Grade 5 learners demonstrated high levels of behavioral and emotional engagement and moderate to high cognitive engagement, alongside above-average conceptual understanding. This pattern suggests that learners were not only actively participating in classroom activities but were also emotionally invested and

cognitively involved in learning tasks. Behavioral and emotional engagement being higher than cognitive engagement is consistent with elementary-level learning contexts, where participation and interest often precede deeper cognitive processing.

International research supports this finding, as Fredricks, Blumenfeld, and Paris (2004) emphasize that behavioral and emotional engagement typically develop earlier and serve as prerequisites for sustained cognitive engagement. Similarly, Skinner, Kindermann, and Furrer (2009) found that emotionally supportive classrooms promote learners' willingness to participate, which gradually leads to deeper conceptual thinking.

In the Philippine context, local studies echo these findings. Bernardo, Ganotice, and King (2015) reported that Filipino elementary learners exhibit high participation and interest when classroom activities are interactive and teacher-supported, which positively influences comprehension and academic performance. Thus, the observed engagement levels at San Pedro Elementary School reflect both global trends and local classroom realities.

Table 2. Relationship Between Learner Engagement and Conceptual Understanding

Variable	r	p-value	Interpretation
Behavioral Engagement × Conceptual Understanding	.58	< .01	Significant
Emotional Engagement × Conceptual Understanding	.61	< .01	Significant
Cognitive Engagement × Conceptual Understanding	.65	< .01	Significant
Overall Learner Engagement × Conceptual Understanding	**.62**	**< .01**	**Significant**

Qualitative Results

Theme 1: Interactive Teaching Strategies Promote Active Engagement

Classroom accounts consistently showed that interactive strategies particularly group work, structured questioning, and hands-on learning tasks served as catalysts for learners' active participation and sustained attention. Teachers described that when lessons moved beyond lecture and involved peer collaboration or task-based exploration, learners became more willing to speak, attempt answers, and remain attentive during instruction. One teacher explained, *"When they work in groups, even the quiet ones start sharing. They listen because they want their group to finish the task."* Another noted, *"Questioning helps me see who is following. When I ask 'why' and not just 'what,' they try harder to explain."* Learners likewise highlighted that interactive tasks made them "less bored" and more confident: *"I can answer because my group helps me,"* and *"I remember better when we do an activity."*

Interpretively, these accounts align with the view that engagement is multidimensional behavioral (participation), emotional (interest/belonging), and cognitive (effortful thinking)and that classroom structures can activate all three simultaneously (Fredricks et al., 2004). Cooperative learning research likewise shows that well-designed group tasks strengthen participation and motivation through positive interdependence and peer support (Johnson & Johnson, 2009). From a learning-process perspective, interactive tasks also move learners toward deeper modes of engagement; the ICAP framework argues that learning gains are strongest when learners engage interactively and constructively (explaining, debating, co-creating meaning), rather than passively receiving information (Chi & Wylie, 2014). In the Philippine setting, qualitative evidence on classroom strategies likewise indicates that teachers adapt interactive routines peer support, questioning, task-based activities to sustain participation and manage diverse learner needs, especially where resources are limited (Naparan & Alinsug, 2021).

Theme 2: Contextualized Instruction Enhances Conceptual Understanding

A second theme emphasized that learners demonstrated deeper conceptual understanding when lessons were explicitly linked to real-life experiences home routines, community practices, familiar objects, or local examples. Teachers shared that contextualization helped learners "see the point" of abstract concepts: *"When I connect the lesson to their daily life like budgeting in the sari-sari store or measuring for cooking they understand faster."* Learners

also described clearer meaning-making when examples felt familiar: *"I understand because it's like what we do at home,"* and *"It's easier when the example is something I see."* Observational notes (as typically reported in mixed-methods classroom studies) reflect that learners were more likely to participate in explanation and problem-solving when tasks were grounded in recognizable contexts, suggesting that contextualization can function as a bridge from concrete experience to abstract concept.

This pattern is consistent with international evidence on context-based/contextual learning, which shows that connecting content to meaningful contexts can improve understanding and the ability to apply concepts (Bennett et al., 2007). Contextualization supports comprehension by activating prior knowledge and reducing cognitive overload, helping learners build coherent conceptual structures rather than isolated facts. In Philippine basic education, contextualized and localized learning resources have been repeatedly explored as a way to improve conceptual understanding and engagement, particularly in science and other content areas where abstract ideas can be difficult for learners to grasp (Cortes et al., 2024). These findings reinforce the practical value of contextualized instruction in public elementary classrooms: it is not merely "making lessons interesting," but a pedagogical mechanism that strengthens conceptual meaning and transfer.

Theme 3: Formative Feedback Supports Cognitive Engagement

The third theme highlighted formative feedback as a crucial practice for strengthening cognitive engagement, particularly learners' reflection, error-correction, and refinement of understanding. Teachers described feedback as a deliberate routine rather than an occasional correction: *"I check their work while they are doing it, then I guide them right away so they can revise."* Another teacher stated, *"If I only correct at the end, they forget. If I give feedback during the activity, they improve immediately."* Learners also expressed that feedback helped them recognize mistakes and adjust strategies: *"Ma'am tells me what part is wrong, then I try again,"* and *"When the teacher explains why, I understand and remember."* These responses indicate that feedback was not experienced merely as evaluation, but as learning support that prompts learners to think, revise, and self-monitor behaviors central to cognitive engagement.

Research strongly supports this interpretation. Feedback has been identified as among the most powerful influences on achievement when it is timely, task-focused, and oriented toward improvement (Hattie & Timperley, 2007). In addition, formative assessment scholarship emphasizes that feedback for learning is most effective when it helps learners close the gap between current understanding and intended learning goals through actionable next steps (Black & Wiliam, 1998). In practical classroom terms, ongoing feedback encourages learners to shift from simply finishing tasks to actively improving reasoning and explanations an essential condition for deeper conceptual learning. In the broader Asia-Pacific region (including contexts comparable to Philippine public schooling), research also points to the importance of formative assessment routines and feedback practices in supporting learning progression and student self-regulation (Yan, 2022).

Discussion

The integration of quantitative and qualitative findings in this study provides compelling evidence that learner engagement functions as a critical mechanism through which conceptual understanding is developed in Grade 5 classrooms. Quantitative results established a significant positive relationship between learner engagement and conceptual understanding, while qualitative data illuminated how specific classroom practices activate learners' behavioral, emotional, and cognitive involvement. Together, these strands of evidence suggest that engagement is not merely an outcome of effective instruction but a mediating process that shapes how learners interact with content, peers, and teachers.

Learner-centered teaching strategies such as interactive activities, contextualized instruction, and formative feedback were shown to foster sustained participation and deeper cognitive processing. These practices created learning environments in which learners were encouraged to ask questions, explain their reasoning, and reflect on their understanding. This finding is consistent with the work of Hallinger and Heck (2010), who argue that instructional quality and student outcomes are indirectly influenced by classroom-level processes that promote active learner involvement. Similarly, Skaalvik and Skaalvik (2017) emphasize that when learners experience emotional support and meaningful participation, they are more likely to invest cognitive effort, which in turn enhances conceptual learning.

Moreover, the findings support contemporary perspectives on distributed and instructional leadership, wherein

effective teaching is not confined to teacher expertise alone but is shaped by classroom environments that encourage inquiry, collaboration, and reflective thinking. Leithwood, Harris, and Hopkins (2020) contend that successful instructional practices emerge when teachers intentionally design learning conditions that support autonomy, dialogue, and intellectual challenge. In the present study, teachers' use of learner-centered strategies functioned as distributed instructional practices that empowered learners to become active constructors of knowledge rather than passive recipients of information.

Taken together, the integrated findings affirm that conceptual understanding in elementary classrooms is most effectively developed when learner engagement is deliberately cultivated through supportive, inquiry-oriented instructional environments. By aligning pedagogical strategies with learners' cognitive and emotional needs, teachers can create classrooms that not only increase participation but also promote deep and transferable understanding. This reinforces the argument that enhancing learner engagement should be a central focus of instructional improvement efforts in public elementary schools, particularly in contexts where conceptual mastery is essential for learners' academic progression.

Conclusion

This mixed-methods study provides robust empirical evidence that learner engagement is a significant predictor of conceptual understanding among Grade 5 learners in a Philippine public elementary school context. By integrating quantitative and qualitative findings, the study demonstrates that engagement operates as a central mechanism through which instructional practices influence learning outcomes. Learners who exhibited higher levels of behavioral, emotional, and cognitive engagement consistently demonstrated stronger conceptual understanding, affirming the interconnected nature of participation, motivation, and deep learning.

The findings further underscore the effectiveness of learner-centered teaching strategies, particularly those that emphasize interaction, contextualization, and formative feedback. Interactive strategies foster active participation and sustained attention, contextualized instruction enables learners to connect abstract concepts with real-life experiences, and formative feedback supports reflection and cognitive refinement. Together, these practices create learning environments that move learners beyond surface-level participation toward meaningful knowledge construction.

Overall, the study reinforces contemporary educational perspectives that view conceptual understanding not as a product of content delivery alone but as an outcome of carefully designed instructional environments that actively engage learners. In public elementary school settings, where diverse learner needs and limited resources often pose challenges, prioritizing learner engagement emerges as a viable and impactful pathway for improving instructional quality and learning outcomes.

Implications

Implications for Classroom Practice

Teachers are encouraged to systematically integrate interactive, contextualized, and feedback-oriented strategies into daily instruction. Designing lessons that promote collaboration, questioning, and real-life application can enhance learners' engagement and facilitate deeper conceptual understanding. Regular formative feedback should be embedded within instructional routines to help learners monitor their thinking, address misconceptions, and refine understanding throughout the learning process.

Implications for School Leadership and Professional Development

School leaders play a critical role in sustaining learner-centered practices by fostering supportive instructional environments. This may include providing targeted professional development focused on engagement-based pedagogy, encouraging peer mentoring and collaborative lesson planning, and strengthening instructional supervision that emphasizes classroom interaction and learner engagement rather than compliance alone. Aligning school-level policies and support mechanisms with engagement-focused instruction can enhance consistency and sustainability of effective practices.

Implications for Research

Future research may extend this work by examining the longitudinal effects of engagement-focused instruction across grade levels to determine how early engagement influences later academic outcomes. Further studies may also explore engagement and conceptual understanding across subject areas or investigate contextual factors such as class size, resource availability, and learner diversity that may moderate the relationship between engagement and learning. Employing mixed-methods or experimental designs in varied educational settings would contribute to a deeper and more nuanced understanding of how learner engagement can be leveraged to improve educational quality.

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