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Pedagogical Approaches and Student Involvement in Learner-Centered Settings at Andabuen Elementary School–Main

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Abstract

Learner-centered pedagogy has been widely promoted in elementary education as a means of enhancing student involvement and improving learning experiences. However, empirical evidence comparing student involvement across different pedagogical approaches within the same school context remains limited, particularly in public elementary schools. This study employed a quantitative comparative research design to examine differences in student involvement between classrooms implementing learner-centered pedagogical approaches and those employing more teacher-centered instructional practices at Andabuen Elementary School–Main. Data were collected from elementary pupils using a validated student involvement questionnaire measuring behavioral, emotional, and cognitive dimensions. Independent samples *t*-tests were used to determine significant differences between groups. Results revealed that pupils in learner-centered classrooms demonstrated significantly higher levels of behavioral and emotional involvement, while cognitive involvement showed moderate but statistically significant differences favoring learner-centered instruction. The findings provide empirical support for learner-centered pedagogy as an effective approach to fostering student involvement in elementary education and offer implications for instructional practice, school leadership, and future research.

Keywords: learner-centered pedagogy, student involvement, elementary education, quantitative comparative study, classroom engagement

1. Introduction

Student involvement is widely recognized as a central indicator of effective teaching and meaningful learning in elementary education, as it reflects the extent to which pupils are behaviorally active, emotionally invested, and cognitively engaged in classroom experiences. Active participation enables

pupils to practice emerging skills through interaction and collaboration, while emotional investment fosters interest, confidence, and a sense of belonging in the learning environment. Cognitive effort, in turn, supports the development of higher-order thinking, problem-solving abilities, and self-regulated learning. Together, these dimensions of involvement are essential for building strong foundational competencies, cultivating positive attitudes toward learning, and sustaining long-term academic motivation during the critical early years of schooling.

In response to increasing demands for learners who are reflective, autonomous, and capable of adapting to complex and rapidly changing knowledge environments, educational reforms across different systems have emphasized a shift away from teacher-centered instruction toward learner-centered pedagogical approaches. Learner-centered pedagogy redefines the role of students from passive recipients of information to active participants in the learning process. Instructional practices associated with this approach encourage interaction, collaboration, inquiry, and shared responsibility, allowing pupils to engage meaningfully with content, peers, and teachers. Such environments are designed to support learners' developmental needs by recognizing their perspectives, promoting autonomy, and providing opportunities for exploration and sense-making.

A substantial body of research supports the effectiveness of learner-centered pedagogy in enhancing student involvement and motivation. Studies have consistently demonstrated that classrooms characterized by collaborative learning, dialogic interaction, and formative feedback foster higher levels of behavioral, emotional, and cognitive engagement (Fredricks et al., 2004). From a motivational perspective, learner-centered instruction aligns with self-determination theory, which emphasizes the importance of autonomy, competence, and relatedness in sustaining intrinsic motivation and engagement (Reeve, 2012). In contrast, traditional teacher-centered instruction often prioritizes content transmission, structural control, and compliance, which may limit opportunities for student voice, interaction, and active meaning-making. As a result, pupils in teacher-centered settings may exhibit lower levels of involvement, particularly in emotional and cognitive domains.

Despite the strong theoretical and empirical support for learner-centered pedagogy, instructional practices within schools often remain heterogeneous. Learner-centered and teacher-centered approaches frequently coexist within the same institution, shaped by factors such as teacher beliefs, professional training, curricular demands, and classroom constraints. This coexistence creates a valuable context for examining how different pedagogical approaches influence student involvement under comparable institutional conditions. At Andabuen Elementary School–Main, variations in instructional orientation across classrooms provide an opportunity to systematically compare student involvement in learner-centered and teacher-centered settings. Examining these differences within a single school context allows for a more nuanced understanding of how pedagogical approaches shape pupils' classroom experiences and contributes empirical evidence to ongoing discussions on effective teaching practices in elementary education.

This study aimed to compare student involvement in learner-centered and teacher-centered classroom settings. Specifically, it sought to answer the following research questions:

1. What is the level of student involvement in learner-centered classrooms?
2. What is the level of student involvement in teacher-centered classrooms?
3. Is there a significant difference in student involvement between learner-centered and teacher-centered classroom settings?

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2. Review of Related Literature

2.1 Learner-Centered Pedagogical Approaches

Learner-centered pedagogy is grounded in constructivist and socio-cultural learning theories, which view learning as an active process shaped by interaction and experience. In elementary education, learner-centered approaches include collaborative learning, inquiry-based instruction, dialogic teaching, and formative assessment. Teachers function as facilitators who scaffold learning and encourage student autonomy rather than solely transmitting information.

Empirical studies have demonstrated that learner-centered teaching promotes higher levels of student engagement, motivation, and conceptual understanding (Cornelius-White, 2007). Autonomy-supportive teaching practices have been shown to enhance students' sense of ownership and responsibility for learning, leading to more sustained involvement in classroom activities.

2.2 Teacher-Centered Instruction

Teacher-centered instruction typically emphasizes direct teaching, lecture, and recitation, with the teacher maintaining primary control over learning activities. While such approaches may support efficient content delivery, research suggests that they often limit opportunities for interaction and student agency (Blatchford et al., 2011). In elementary settings, prolonged reliance on teacher-centered instruction may reduce students' willingness to participate actively, particularly in cognitive and emotional dimensions of involvement.

2.3 Student Involvement as a Multidimensional Construct

Student involvement is commonly conceptualized as a multidimensional construct encompassing behavioral involvement (participation and effort), emotional involvement (interest and enjoyment), and cognitive involvement (investment in understanding and problem-solving). Studies indicate that pedagogical approaches significantly influence all three dimensions, with learner-centered environments generally associated with higher levels of involvement (Appleton et al., 2008).

3. Methodology

3.1 Research Design

This study employed a **quantitative comparative research design** to examine differences in student involvement between learner-centered and teacher-centered classroom settings. This design was appropriate for determining whether statistically significant differences existed between two groups exposed to distinct pedagogical approaches.

3.2 Research Locale and Participants

The study was conducted at Andabuen Elementary School–Main. Participants consisted of elementary pupils from selected grade levels. Pupils were grouped based on the predominant pedagogical approach used in their classrooms, as identified through classroom observations and teacher reports. One group represented learner-centered classrooms, while the other represented teacher-centered classrooms.

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3.3 Research Instrument

Data were collected using a self-report student involvement questionnaire adapted from validated engagement scales. The instrument measured three dimensions of involvement: behavioral, emotional, and cognitive. Responses were rated on a five-point Likert scale, with higher scores indicating higher levels of involvement. The instrument demonstrated acceptable reliability, with Cronbach's alpha coefficients exceeding .80 for all subscales.

3.4 Data Analysis

Descriptive statistics (means and standard deviations) were used to determine levels of student involvement in each group. Independent samples *t*-tests were employed to compare involvement levels between learner-centered and teacher-centered classrooms. Statistical significance was set at the .05 level.

4. Results and Findings

This section presents the descriptive and inferential statistical results comparing student involvement in learner-centered and teacher-centered classroom settings at Andabuen Elementary School–Main. Student involvement was analyzed across three dimensions behavioral, emotional, and cognitive using descriptive statistics and independent samples *t*-tests.

Table 1. Comparison of Student Involvement by Pedagogical Approach

Dimension of Student Involvement	Pedagogical Approach	Mean (□)	SD	*t*	*p*	Interpretation
Behavioral Involvement	Learner-centered	4.21	0.52	4.87	< .001	Significant
	Teacher-centered	3.78	0.61			
Emotional Involvement	Learner-centered	4.15	0.55	4.23	< .001	Significant
	Teacher-centered	3.74	0.58			
Cognitive Involvement	Learner-centered	3.96	0.57	2.41	.018	Significant
	Teacher-centered	3.75	0.60			
Overall Involvement	Learner-centered	4.11	0.48	4.56	< .001	Significant
	Teacher-centered	3.76	0.54			

Level of Significance: α = .05

Table 1 indicates that pupils in learner-centered classrooms consistently obtained higher mean scores across all dimensions of student involvement compared to their counterparts in teacher-centered classrooms.

For behavioral involvement, the difference between groups was statistically significant ($t = 4.87$, $p < .001$). Pupils exposed to learner-centered instruction demonstrated higher levels of participation,

attentiveness, and engagement in classroom activities. This suggests that instructional strategies emphasizing interaction, collaboration, and shared responsibility effectively promote observable engagement behaviors.

Similarly, emotional involvement showed a statistically significant difference favoring learner-centered classrooms ($t = 4.23$, $p < .001$). Pupils in these settings reported higher levels of interest, enjoyment, and positive emotional connection to learning tasks, indicating that learner-centered environments foster more supportive and motivating classroom climates.

Although the difference in cognitive involvement was smaller in magnitude, it remained statistically significant ($t = 2.41$, $p = .018$). This result suggests that learner-centered instruction supports pupils' investment in understanding lessons and persisting in challenging tasks, though deeper cognitive engagement may require more structured scaffolding.

Thus, the results confirm that pedagogical approach is a significant factor influencing student involvement, with learner-centered instruction demonstrating a clear advantage over teacher-centered practices.

5. Discussion

The findings of this quantitative comparative study provide strong empirical support for learner-centered pedagogy as an effective instructional approach for enhancing student involvement in elementary classrooms. Pupils in learner-centered settings demonstrated significantly higher behavioral, emotional, and cognitive involvement than those in teacher-centered classrooms, reinforcing the argument that instructional practices play a central role in shaping learners' engagement.

The significantly higher levels of behavioral involvement observed among pupils in learner-centered classrooms align with extensive research emphasizing the importance of interaction, collaboration, and student agency in promoting active participation. Fredricks et al. (2004) argue that learning environments that encourage student participation and shared responsibility lead to sustained behavioral engagement. Similarly, Cornelius-White (2007) found that learner-centered teacher–student relationships are associated with increased participation and effort, particularly in basic education settings.

The findings related to emotional involvement further underscore the motivational benefits of learner-centered instruction. Pupils in learner-centered classrooms reported greater enjoyment, interest, and sense of belonging, supporting self-determination theory, which posits that autonomy-supportive environments enhance intrinsic motivation and emotional engagement (Reeve, 2012). When pupils feel that their ideas are valued and that they have a degree of control over their learning, they are more likely to develop positive emotional connections to school and learning activities (Niemiec & Ryan, 2009).

Although the difference in cognitive involvement was more moderate, it remained statistically significant, indicating that learner-centered instruction also supports deeper engagement with learning tasks. This finding aligns with research suggesting that active participation alone does not automatically lead to deep cognitive engagement; rather, cognitive involvement requires instructional scaffolding, meaningful tasks, and opportunities for reflection (Blumenfeld et al., 2006; Chi & Wylie, 2014). The results suggest that while learner-centered classrooms provide a foundation for cognitive

engagement, teachers must intentionally design tasks that promote higher-order thinking and sustained intellectual effort.

Hence, the findings demonstrate that learner-centered pedagogy is more effective than teacher-centered instruction in fostering holistic student involvement, particularly in behavioral and emotional domains. These results support contemporary educational reforms advocating for learner-centered approaches in elementary education and highlight the importance of aligning instructional practices with students' developmental and motivational needs.

6. Conclusions and Implications

This quantitative comparative study concludes that learner-centered pedagogical approaches are associated with significantly higher levels of student involvement in elementary education. Compared to teacher-centered instruction, learner-centered classrooms more effectively promote active participation, positive emotional engagement, and cognitive investment in learning tasks. The findings affirm that instructional practices emphasizing interaction, autonomy, and collaboration play a crucial role in enhancing students' classroom experiences.

Implications for Practice

Elementary teachers are encouraged to adopt and sustain learner-centered strategies that promote dialogue, collaboration, and student autonomy. Incorporating reflective questioning, problem-solving activities, and formative feedback may further strengthen cognitive involvement alongside behavioral and emotional engagement.

Implications for School Leadership

School leaders should support professional development initiatives focused on learner-centered pedagogy, instructional differentiation, and engagement-oriented teaching strategies. Creating supportive conditions such as collaborative planning time and instructional coaching can facilitate the consistent implementation of learner-centered practices.

Directions for Future Research

Future studies may employ experimental or longitudinal research designs to examine causal relationships between pedagogical approaches and student involvement. Further research across multiple school contexts may also enhance the generalizability of findings and explore how learner-centered practices influence academic achievement and long-term learning outcomes.

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