

Implementing Classroom Strategies to Enhance Student Engagement and Critical Thinking: Challenges and Opportunities at Rinchen Kuenphen Primary School

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Abstract

The action research explored the implementation of thinking classroom strategies to enhance student engagement and critical thinking at Rinchen Kuenphen Primary School. The study was motivated by the continued prevalence of teacher-centered practices despite national education reforms emphasizing competency-based and student-centered learning. Using a qualitative action research design, data were collected through classroom observations, interviews, focus group discussions, and document analysis involving 30 students and three teachers from classes IV and V. The findings revealed that the thinking classroom approach significantly improved students' behavioral, emotional, and cognitive engagement. Learners demonstrated increased confidence, collaboration, and participation, while teachers reported professional growth through reflective practice. However, challenges such as time constraints, syllabus pressure, classroom management issues, and initial student resistance were identified. Despite this constraint, the study confirmed that thinking classroom strategies effectively promote active learning, creativity, and higher order thinking, aligning with Bhutan's competency-based curriculum and Gross National Happiness (GNH) education values. Recommendations included continuous professional development, integration of thinking activities across subjects, and targeted support for less confident learners to sustain inclusive thinking-oriented classrooms.

Keywords: Thinking Classroom; Student Engagement; Critical Thinking; Action Research; Bhutan; Rinchen Kuenphen Primary School.

Chapter I

1.1 Introduction

This research was situated within the context of Rinchen Kuenphen Primary School (RKPS) and aligned closely with Bhutan's National Education Goals. It was also consistent with the Strategic Management Plan and Strategic Plan documents for RKPS for the period 2025–2030. The study aimed to investigate how the implementation of “Thinking Classrooms” enhanced students' engagement, participation, and critical thinking skills. In line with 21st-century educational priorities, which emphasized active learning, collaboration, and higher-order thinking, the concept of the Thinking Classroom offered a framework for fostering student agency, collaborative inquiry, and independent reasoning (Liljedahl, 2020). However, many classrooms at RKPS had continued to rely on traditional, teacher-centered methods of instruction,

which limited opportunities for student engagement and critical thinking. Evidence from lesson observations and lesson plan analyses revealed a predominant use of passive instructional practices. Adopting the Thinking Classroom approach reframed students not as passive recipients of knowledge, but as active participants in constructing and applying understanding. Given these considerations, the research was both timely and contextually relevant.

1.2 Context of the Study

This Action Research was situated within a growing need to transition from traditional, teacher-centred instruction to student-centred and thinking-oriented classrooms. In Rinchen Kuenphen Primary School (RKPS), classroom instruction had continued to rely predominantly on lecture-based teaching, with more than 70% of observed lessons during the 2024 academic year conducted through teacher talk, direct explanation, and note-taking. Student participation was often limited to answering closed-ended questions, with minimal opportunities for peer discussion, inquiry, or hands-on problem-solving. While this method had been effective in preparing students for examinations, it had also limited the development of essential 21st-century competencies such as critical thinking, creativity, collaboration, and independent problem-solving.

The effects of this approach were evident in classroom observations and student performance patterns. For example, while students at RKPS had often performed adequately in recall-based assessments, they struggled to apply concepts in unfamiliar contexts, interpret open-ended problems, or articulate reasoning processes. Many students remained passive learners, waiting for instructions rather than taking initiative in their own learning process. Recognizing this challenge, the Ministry of Education and Skills Development, through the Bhutan Professional Standards for Teachers (2020), emphasized the need for pedagogical practices that cultivated higher-order thinking skills. In the past, RKPS had attempted to introduce innovative pedagogies—such as cooperative learning projects in 2021 and problem-based learning activities in 2022. However, these initiatives did not progress beyond the pilot stage due to factors such as limited teacher training, time constraints within the syllabus, and a lack of structured follow-up support. Consequently, lecture-based teaching continued as the dominant mode of instruction.

The study addressed this gap by implementing the Thinking Classroom approach, which was designed to create an environment where students actively engaged in the learning process, thought independently, posed meaningful questions, and solved problems collaboratively. Rather than being defined by rigid content coverage, Thinking Classrooms were characterized by strategic pedagogies—such as open-ended questioning, group-based problem-solving, visual thinking tools, and inquiry-driven tasks that stimulated deep cognitive engagement and fostered student agency.

1.3 Problem Statement

As the principal of Rinchen Kuenphen Primary School (RKPS), I observed that despite national education reforms and ongoing professional development focused on competency-based learning, the majority of classroom practices remained largely teacher-centered. Lesson observations and teacher lesson plans indicated that approximately 70% of teaching relied heavily on lectures, with limited opportunities for inquiry, collaboration, or reflective thinking. Such approaches resulted in low student engagement, where learners often became passive recipients of knowledge rather than active participants in the learning process.

The consequences of this practice were evident in student performance. Results from competency-based examinations in 2023 and 2024 showed that while students could handle recall-based questions reasonably well, they struggled with open-ended tasks requiring analysis, synthesis, creativity, and application of

knowledge in unfamiliar contexts. This reflected a gap between instructional practices and the competencies expected under Bhutan's National Education Goals, which emphasized critical thinking, collaboration, problem-solving, and creativity as essential 21st-century skills.

If these issues were not addressed, RKPS risked continuing a culture of rote memorization and passive learning, leaving students unprepared for higher education and future workforce demands. This also undermined Bhutan's broader national aspiration to nurture independent, innovative, and reflective citizens. There was, therefore, an urgent need to adopt evidence-based pedagogical strategies, such as the Thinking Classroom model, which promoted inquiry-based learning, encouraged students to construct knowledge actively, and fostered the development of higher-order thinking skills.

1.4 Significance of the Study

This action research was significant because it directly addressed the gap between teacher-centered practices and the competencies expected in Bhutan's competency-based curriculum. The study generated practical insights into how Thinking Classroom strategies improved student engagement behaviorally, emotionally, and cognitively and strengthened critical thinking skills in day-to-day classroom learning. At the school level, the research findings served as a professional learning tool for teachers, offering concrete strategies to make lessons more interactive, student-centered, and aligned with Gross National Happiness (GNH) values. For the school leadership, it provided evidence to support teacher professional development, guided instructional supervision, and fostered a shared culture of innovation among staff. At the broader national level, the study contributed empirical evidence that could inform curriculum implementation, professional development frameworks, and assessment practices in Bhutan. By documenting both the challenges and opportunities of adopting the Thinking Classroom approach, the research also served as a reference for other schools facing similar constraints, such as limited resources, entrenched traditional teaching methods, and large class sizes. Finally, this action research contributed to international discourse on thinking classrooms by highlighting experiences from a Bhutanese primary school context. It demonstrated how global pedagogical innovations could be adapted meaningfully to local realities, thus bridging the gap between international best practices and local needs. In doing so, the study benefited RKPS and added to the growing movement toward equitable, quality, and competency-based education for all.

1.5 Objectives of the Study:

1. To examine the impact of implementing thinking classroom strategies on students' behavioral, emotional, and cognitive engagement in classroom activities at Rinchen Kuenphen School.
2. To assess how thinking classroom practices influence the development of students' critical thinking skills, as observed through their ability to analyze, evaluate, and create during learning tasks.
3. To identify specific challenges and opportunities faced by teachers and students during the implementation of thinking classroom strategies, based on classroom observations, feedback, and performance data.

1.6 Research Questions:

Main Research Question:

How does the implementation of Thinking Classroom strategies impact teaching and learning practices at Rinchen Kuenphen Primary School?

Sub-Research Questions:

1. In what ways does the implementation of Thinking Classroom strategies influence students' behavioral, emotional, and cognitive engagement during classroom learning?

2. How do Thinking Classroom strategies support the development of students' critical thinking skills, particularly in areas such as problem-solving, reasoning, and decision-making?
3. What pedagogical, logistical, and cultural challenges do teachers and students encounter during the transition to a Thinking Classroom approach?

Chapter II. Literature Review

2.1 National and School-Level Context

The promotion of critical thinking and problem-solving skills is a central objective of Bhutan's National Education Policy. According to the Ministry of Education and Skills Development (MoESD, 2025), empowering students with these skills, along with nurturing their potential and fostering a lifelong passion for learning, is vital for quality education. This national priority is reflected in the Strategic Management Plan of Rinchen Kuenphen Primary School (2025), which identifies the adoption of Thinking Classroom approaches as a key strategy in transitioning from traditional teacher-centered instruction to 21st-century, competency-based pedagogy. This vision emphasizes the integration of digital technologies with innovative, student-centered instructional practices to enhance higher-order thinking and holistic development.

2.2 Concept of the Thinking Classroom

Research strongly supports the development of thinking classrooms to promote deep and transferable learning. Liljedahl (2020) emphasizes that a thinking classroom is designed not merely to encourage thinking, but to foster structured and purposeful thinking through intentional teaching practices that promote collaboration and inquiry. Similarly, Tishman, Perkins, and Jay (1995) argue that thinking classrooms transform the culture of learning by explicitly teaching thinking as a core goal, thereby preparing students for thoughtful decision-making and lifelong learning. These perspectives align with MoESD (2020) call for classroom practices that move beyond rote memorization toward analytical, evaluative, and creative thinking in line with Bhutan's Gross National Happiness (GNH) values and competency-based curriculum.

2.3 Higher-Order Thinking Skills in Primary Education

The importance of higher-order thinking in primary education has been widely documented. Brookhart (2010) highlights that such skills enable learners to transfer knowledge across contexts, synthesize diverse information, and make reasoned judgments—skills critical for navigating complex, real-world problems. Similarly, Anderson and Krathwohl's (2001) revision of Bloom's Taxonomy situates analyzing, evaluating, and creating at the highest levels of cognitive engagement, underscoring their role in meaningful learning. In primary classrooms, embedding higher-order thinking pedagogies fosters collaborative inquiry, reflective learning, and improved academic outcomes, thereby supporting both cognitive and emotional development. For RKPS, the adoption of Thinking Classroom strategies provides a practical avenue for realizing national education goals and strengthening student engagement and learning outcomes.

2.4 Pedagogical Foundations of the Thinking Classroom

Theoretical perspectives further validate the principles of the Thinking Classroom. Hattie's (2009) meta-analysis identifies explicit feedback and student engagement as critical factors influencing achievement, arguing that "the most powerful single moderator that enhances achievement is feedback" (p. 173). This aligns with the need for responsive and visible teaching practices in a thinking classroom. Vygotsky's (1978) sociocultural theory reinforces the importance of social interaction and guided participation in

learning. His concept of the Zone of Proximal Development highlights how learning is most effective when facilitated by a More Knowledgeable Other—whether teacher or peer—who scaffolds student understanding through collaborative dialogue. Similarly, constructivist and cognitivist perspectives portray learning as an active process in which students build knowledge through inquiry, exploration, and critical reflection (Schunk, 2020). Together, these theories provide a strong foundation for implementing student-centered pedagogies that emphasize collaboration, problem-solving, and critical thinking.

2.5 Global Perspectives on Competency-Based Education

Globally, education systems are increasingly prioritizing competencies such as critical thinking, creativity, and collaboration. The Organization for Economic Co-operation and Development (OECD, 2018) underscores the need for student-centered learning approaches that prepare learners for the challenges of an interconnected and rapidly changing world. The OECD further highlights the evolving role of teachers as facilitators of deeper learning experiences, rather than transmitters of knowledge. In this context, the Thinking Classroom framework aligns with both Bhutan's national priorities and international educational trends, promoting pedagogies that nurture independent thought, intellectual curiosity, and adaptive skills essential for 21st-century learners.

Chapter III: Methodology

3.1 Introduction

The researcher chose the qualitative method for this study. Qualitative methods were appropriate for these research questions because they sought to explore the complex, subjective experiences of students and teachers regarding classroom strategies. This approach allowed for in-depth understanding of perceptions, motivations, and emotional responses, which were essential to grasp the detailed impact of these strategies on learning and engagement.

Additionally, qualitative research was well-suited for examining contextual factors and challenges encountered during the transition to a thinking classroom. It enabled the collection of rich, descriptive data through interviews, observations, and open-ended responses, providing comprehensive insights into pedagogical, logistical, and cultural issues faced by teachers and students.

3.2 Research Design

Qualitative Action Research

Participants: 30 students and three teachers from classes IV and V

3.3 Research Setting and context

The research was conducted at Rinchen Kuenphen Primary School (RKPS) with a purposive sample of 30 students from Classes IV and V, along with three teachers. While purposive sampling allowed for targeted data collection, it could introduce biases such as selection bias, where participants might not represent the broader student population, and confirmation bias, where participants could be chosen based on expected outcomes. To mitigate these risks, the selection process ensured diversity in student ability, gender, and background, and involved multiple stakeholders to validate neutrality and fairness in sampling.

To promote equity and inclusion, particular attention was given to involving students with learning challenges. These students received necessary support through differentiated instruction, scaffolding, and inclusive strategies aligned with the Thinking Classroom framework. Ethical considerations, including informed consent and voluntary participation, were upheld. The research design emphasized fair representation and access to learning, ensuring that all students, regardless of ability, benefited meaningfully from the intervention.

3.4 Participants/Sample

30 students from Class IV and V and 3 subject teachers at RKPS

Sampling technique

The study employed purposive sampling, a method commonly used in qualitative research. Participants were selected based on their relevance to the research focus the implementation of thinking classroom strategies. Two sections from Classes IV and V were purposively selected, along with subject teachers teaching English, Science, and Mathematics. These classes were chosen because students at this level were developmentally ready to engage in critical thinking tasks, and teachers were familiar with integrating innovative teaching approaches.

The purposive sampling method ensured that the selected participants provided rich, meaningful insights into how thinking classroom strategies influenced engagement, participation, and learning. Additionally, the teachers involved had shown interest in reflective practice and were open to experimenting with pedagogical changes, which was crucial for action research.

3.5 Data collection methods

The study employed observations, interviews, focus group discussions, and document analysis to comprehensively examine the implementation and impact of Thinking Classroom strategies. Observations captured real-time classroom dynamics and student engagement (addressing research questions 1 and 3), while interviews and focus groups elicited in-depth perspectives from teachers and students on the development of critical thinking and associated challenges (questions 2 and 3). Document analysis provided contextual evidence of pedagogical shifts over time. Semi structured interviews, designed using validated rubrics and piloted for reliability, qualitatively assessed changes in students' critical thinking and engagement levels. Data triangulation across methods enhanced credibility, and observer bias was minimized through standardized training, inter-rater reliability checks, and role rotation, ensuring the validity and trustworthiness of findings.

3.6 Data analysis procedure

Thematic analysis was used to identify patterns and themes related to engagement and thinking behaviors. Thematic analysis allowed for rich interpretation of qualitative data by examining both explicit and implicit meanings within the dataset (Creswell & Creswell, 2018). The process enabled careful transcription and repeated reading of interview, focus group discussions, and observation data to ensure familiarity and context. Initial codes were generated by identifying meaningful segments of text that relate to the research focus, using a combination of inductive (data-driven) and deductive (theory-informed) approaches. These codes were then systematically organized into broader categories and refined into overarching themes that captured the essence of participants' experiences and perspectives. Coding was carried out manually and supported by qualitative data analysis software such as NVivo or Atlas.ti to ensure consistency, manage large volumes of data, and facilitate theme development. A coding manual was maintained throughout to ensure clarity and replicability. To validate the findings, member checking was conducted by sharing preliminary themes with selected participants to confirm the accuracy and authenticity of interpretations. Additionally, peer debriefing sessions with research colleagues was used to critically review the coding and thematic development, helping to identify potential researcher bias and enhance the credibility and trustworthiness of the analysis.

3.7 Validity and reliability

- **Thematic Analysis:** Thematic analysis will be used to analyze the interview transcripts and document data. The researcher will identify recurring themes, patterns, and key insights related to principals'

instructional leadership practices.

- **Triangulation:** Data from the various qualitative and quantitative sources will be cross-referenced to ensure consistency and robustness of findings.

Reliability and Validity of Research Tools

Ensuring the reliability and validity of research tools is critical to the credibility and accuracy of this study's findings. As the study adopts a mixed-methods approach, both the quantitative and qualitative instruments will be designed and tested to meet rigorous standards.

3.7.1 Reliability

Reliability refers to the consistency and stability of the measurement tools used in the study. Several strategies will be employed to ensure that the tools yield reliable results:

Standardization of Procedures: Data collection procedures, including questionnaire distribution and interview conduct, will follow standardized protocols to reduce variability caused by researcher behavior or environmental conditions.

3.7.2 Validity

Validity refers to the extent to which the research tools measure what they are intended to measure. Both content and construct validity will be addressed.

Content Validity: The development of questionnaire items and interview questions will be guided by existing literature on instructional leadership (e.g., frameworks by Hallinger, Leithwood, and others). Tools will be reviewed by a panel of experts in educational leadership and research methodology to ensure comprehensive coverage of relevant domains.

Construct Validity: The constructs measured (such as school climate, instructional time management, and professional development effectiveness) will be clearly defined and aligned with the research questions. Factor analysis may be used to verify that questionnaire items group logically under intended constructs.

Face Validity: Before data collection, the tools will be reviewed by selected principals and teachers (not included in the study sample) to assess whether the instruments appear to effectively measure the intended constructs from the respondents' perspective.

Triangulation: The use of multiple tools (questionnaires and interviews,) across different stakeholder groups enhances **methodological triangulation**, supporting the **validity of findings** through cross-verification of data from different sources.

3.8 Ethical Considerations:

- Informed consent was obtained from all participating students' parents.
- Student anonymity and confidentiality were maintained.
- Confidentiality was maintained through coding and data anonymization.
- Thromde official approval was sought from the Chief Thromde Education Officer (TEO) prior to implementation.

Chapter IV – Findings and Discussion

4.1 Student Engagement

- Classroom observations indicated that students demonstrated higher confidence in expressing ideas, collaboration, and inclusiveness.
- Group and pair work, open-ended questions, and visual aids enhanced participation.
- Science, Mathematics, and English lessons all reflected active thinking and deep engagement.

4.2 Critical Thinking Development

- Students' analytical and problem-solving abilities increased as they engaged in group discussions and brainstorming.
- Thinking Walls displayed students' thought processes and highlighted improved creativity and reasoning.
- Teachers noted that previously introverted or weaker students became more active contributors.

4.3 Teacher Experiences

- Teachers found that implementing Thinking Classroom strategies promoted professional growth and lesson innovation.
- Teachers reported challenges with lesson preparation time, but acknowledged the pedagogical benefits.

4.4 Student Perceptions

- Students expressed enjoyment and deeper understanding through peer-supported activities.
- Some students preferred teacher explanations for rule-based tasks, while most favored collaborative thinking activities.

4.5 Document Analysis

- Lesson plans, self-assessment reports, and journals confirmed consistent application of Thinking Classroom strategies.
- Students' problem-solving and communication skills showed measurable improvement.

Chapter V- Conclusion and Recommendations

5.1 Opportunities in Implementing Thinking Classroom Strategies for RKPS

The implementation of thinking classroom strategies had presented several opportunities for Rinchen Kuenphen Primary School. One of the most significant benefits was the increased student engagement, as learners had more opportunities to share their ideas, ask meaningful questions, and actively participate in the learning process. The strategies had also encouraged critical and creative thinking, enabling students to move beyond rote memorization and develop stronger problem-solving skills. Collaborative group activities had created valuable opportunities for peer learning and teamwork, while at the same time fostering communication skills and inclusive participation, particularly among students who were previously reluctant to speak in larger settings.

Another important opportunity was the deeper understanding of subject matter, as students were able to connect classroom concepts to real-life contexts, making learning more meaningful and long-lasting. For teachers, the strategies had provided opportunities for professional growth, allowing them to experiment with innovative approaches and reflect critically on their instructional practices. At the classroom level, these methods had contributed to a more interactive and positive learning environment, characterized by creativity, curiosity, and active involvement.

At a broader level, adopting such strategies had enhanced the school's reputation as an institution committed to progressive teaching and learning practices. Moreover, the emphasis on higher-order thinking had laid a strong foundation for future skills, preparing students not only for higher classes but also for the challenges of real-world problem solving. Overall, the use of thinking classroom strategies had opened opportunities to enrich the teaching-learning process, benefiting both students and teachers while strengthening the school's vision for quality education.

5.2 Challenges of implementing thinking strategies

1. Some students had remained shy and reluctant to share, while others had dominated group work.
2. Many students had struggled to adjust, being more used to rote learning.
3. Teachers had found it difficult to manage time, as activities had taken longer than expected.
4. Group work had been noisy and harder to control in larger classes.
5. Pressure to complete the syllabus had limited time for open-ended activities.

5.3 Conclusion

The implementation of Thinking Classroom strategies at RKPS successfully enhanced student engagement and critical thinking skills. Active, student-cantered pedagogies fostered collaboration, confidence, and creativity, aligning with national educational priorities and the school's strategic goals.

5.4 Recommendations

- Continue professional development for teachers on Thinking Classroom approaches.
- Integrate Thinking Classroom activities across all subjects and grade levels.
- Encourage the use of digital tools and interactive methods to sustain engagement.
- Monitor and support weaker and introverted students to ensure inclusive learning.

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