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Exploring student curiosity as a moderator in reward-based STAD for Pancasila education

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Abstract: This qualitative case study investigates the moderating role of student curiosity in enhancing Pancasila learning outcomes through a Reward Management-Based Student Teams Achievement Division (STAD) Cooperative Learning Model in second grade. The research addresses the persistent challenge of low learning outcomes in the subject due to conventional teaching methods that limit student engagement. Aligned with the Merdeka Curriculum's emphasis on deep learning and holistic development , the study employed a qualitative methodology with data collected through in-depth interviews, participant observation, and document analysis. Findings reveal that the STAD model's structured implementation effectively transformed the learning environment, with both teachers and students reporting overwhelmingly positive experiences. Crucially, the reward management system was found to be a significant moderator that leveraged the students' psychological need for recognition to foster a dynamic learning process. The study concludes that this synergy between the model, rewards, and curiosity is essential for achieving deeper, more meaningful learning in line with curriculum goals.
Keywords: STAD Cooperative Learning Model; Reward Management; Student Curiosity; Pancasila Education

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INTRODUCTION

In Indonesia, Pancasila Education is a vital subject within the primary school curriculum. It serves as a cornerstone for instilling nationalism and fostering the noble values of the nation from a young age (Suastra, 2010). The subject is not merely about rote memorization of concepts but is intended to shape students' character, moral reasoning, and civic responsibility. The ultimate goal is to cultivate citizens who embody the principles of Pancasila in their daily lives. Therefore, the effectiveness of teaching this subject is of paramount importance for the future of the nation.

However, the implementation of Pancasila Education in practice still faces significant challenges. Based on observations and interviews conducted at elementary schools in Kuta, Bali, Indonesia, it was found that the cognitive learning outcomes of second-grade students in this subject remain consistently low. Summative data from the last two years indicate that the average student scores have not met the established minimum mastery criteria of 70-75. This is primarily attributed to the continued use of monotonous, conventional teaching models that position the teacher as the sole source of knowledge, limiting student engagement and creating a passive learning environment.

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To address these issues, an innovative learning model is urgently needed to make the educational process more dynamic and interactive. The Student Teams Achievement Division (STAD) cooperative learning model, recommended by the Merdeka Curriculum, offers a promising solution. This model structures the classroom into small, heterogeneous groups where students of varying academic abilities collaborate to achieve a common learning goal. STAD is considered the simplest and most direct form of cooperative learning, and its implementation can enhance students' critical thinking, creativity, and teamwork skills (Trianto, 2007).

To further amplify the effectiveness of the STAD model, this research integrates a Reward Management system. This system is designed to provide tangible and intangible incentives to motivate students and maintain their engagement throughout the learning process. The strategic use of rewards can significantly boost student morale, self-confidence, and a positive attitude towards learning. By recognizing and appreciating student effort and achievement, the reward system encourages productive behavior and fosters a more vibrant, enthusiastic classroom atmosphere that complements the cooperative nature of the STAD model (Asrial et al., 2023)

Beyond instructional methods, an internal psychological factor that profoundly impacts learning is student curiosity. Curiosity is an intrinsic human trait that drives individuals to explore, question, and seek new knowledge (Herwin & Nurhayati, 2021). A high level of curiosity motivates students to actively engage with learning materials and explore various resources to satisfy their innate desire to know. It is a powerful catalyst for academic growth, as curious students are more likely to persist in the face of challenges and pursue deeper understanding, making it a crucial variable to consider in any educational study.

While previous studies have successfully demonstrated the positive effects of the STAD model on learning outcomes and the general importance of curiosity in education, there remains a significant research gap. Existing literature has not extensively explored the dynamic interplay between these variables, particularly from a qualitative perspective. The specific mechanism through which student curiosity might moderate or influence the relationship between the STAD model and learning outcomes in Pancasila Education has yet to be deeply understood. This qualitative investigation aims to fill that gap by providing a nuanced view of this complex interaction.

Given the complexity of student interactions, motivation, and the psychological role of curiosity, a quantitative approach focused solely on numbers would be insufficient to capture the full picture. A qualitative research methodology is therefore chosen for this study. This approach allows for an in-depth exploration of the "how" and "why" behind the phenomena, moving beyond simple statistical correlation (Jannah et al., 2021). By utilizing methods such as in-depth interviews, classroom observations, and detailed case studies, this study can uncover the lived experiences, perceptions, and behavioural patterns of both students and teachers. This will provide a richer, more holistic understanding of the learning process.

The shift from a quantitative to a qualitative research approach is critically aligned with the transformative goals of the Merdeka Curriculum. This new framework moves beyond standardized testing and rote memorization, emphasizing a more holistic development of students. Therefore, a qualitative study is essential to understand the lived experiences and nuanced perceptions of students and teachers during the learning process. By focusing on how and why the STAD model and curiosity interact, this research will provide a deeper understanding of the learning dynamics. This is directly relevant to the Merdeka Curriculum's objective of creating a student-centered learning environment that nurtures creativity,

collaboration, and critical thinking, all of which are key to developing the eight dimensions of the student graduation profile.

This qualitative research aims to move beyond superficial learning outcomes and delve into the dynamics of deep learning. By focusing on the interplay between the STAD model, reward management, and student curiosity, this study can uncover how students make meaningful connections between new information and their existing knowledge. This is particularly important for Pancasila and Civic Education, where abstract values must be internalized and applied in real-world contexts. Through in-depth interviews and observation, this research will shed light on how curiosity acts as a catalyst, encouraging students to actively inquire, discuss, and reflect, thus fostering a deeper understanding of the subject matter rather than simply memorizing facts for a test.

The findings of this research will provide valuable insights into the development of several key dimensions of the student graduation profile, which are the core objectives of the Merdeka Curriculum. The cooperative nature of the STAD model directly contributes to the dimensions of mutual cooperation and global diversity, as it requires students to collaborate respectfully with peers from different backgrounds. Furthermore, by exploring how curiosity is fostered, this study contributes to the dimensions of critical reasoning, creativity, and noble character. The qualitative data will illuminate how students' intrinsic desire to learn, when nurtured by an effective teaching model, can lead to a more profound engagement with Pancasila's moral and ethical values, ultimately shaping them into well-rounded, compassionate, and responsible citizens.

METHODS

This study employs a qualitative research approach to deeply explore and understand the dynamic interplay between a Reward Management-Based STAD Cooperative Learning Model and student curiosity in enhancing Pancasila learning outcomes. Unlike a quantitative study, which measures variables to test a hypothesis, this qualitative design aims to uncover the rich, lived experiences and perceptions of the participants. The focus is on gaining a holistic understanding of how and why specific behaviors and interactions occur within the classroom setting. This method is particularly suitable for this research because it allows for a nuanced investigation into complex social and educational phenomena, providing insights that quantitative data alone cannot capture.

The research will be conducted as a case study at a single elementary school to provide an in-depth, contextual understanding of the phenomenon. The participants will be a group of second-grade students and their teacher. The selection of participants will be based on a purposive sampling method, ensuring that they can provide rich, relevant information about the research topic. This includes selecting students who represent varying levels of curiosity and academic ability, as well as a teacher with experience in implementing innovative learning models.

The data collection process for this qualitative study is strategically designed to ensure triangulation and enhance the credibility and trustworthiness of the research findings. Data will be gathered using a multi-method approach to provide a comprehensive and nuanced understanding of the phenomena under investigation. Data will be collected primarily through in-depth, semi-structured interviews and participant observation. In-depth interviews will be conducted with the teacher and a select group of students to explore their unique experiences, perceptions, and motivations. This method allows the researcher to delve deeply into their perspectives on the STAD model, the reward system, and how curiosity influences their

classroom interactions. Concurrently, participant observation will be employed to directly document the implementation of the STAD model and the reward system in the classroom. This approach provides a rich, contextual understanding of how student curiosity manifests through tangible actions, such as asking questions, collaborating with peers, and actively seeking additional information, all of which will be recorded in detailed field notes.

To further ensure the robustness of the data, document analysis of student work, lesson plans, and classroom materials will be used as a supplementary data source. This provides a more complete picture of the learning environment and student progress over time. The collected data from all three sources will then be systematically analyzed using a thematic analysis approach, following the guidelines by Braun and Clarke (2006). This process involves identifying, coding, and interpreting recurring themes and patterns to construct a coherent and well-supported narrative of the research findings, thereby ensuring the scientific validity and credibility of the study.

RESULTS AND DISCUSSION

Results

The Implementation Process of the STAD Cooperative Learning Model

The findings revealed that the implementation of the Reward Management-Based STAD model within the Pancasila Education classroom was a phased process that required significant teacher guidance. The initial phase focused on orienting students to the new group-based learning structure, including explaining the roles within each team and the concept of peer teaching. The teacher started by assigning heterogeneous groups to ensure a balance of skills and personality types, which was crucial for fostering effective collaboration. This setup, while initially confusing for some students, quickly became the norm, as they adapted to the collaborative tasks and the shift away from a traditional, teacher-centered approach (Olovsson, 2021).

The teacher's role was central to the success of the model's implementation. Rather than lecturing, the teacher acted as a facilitator and guide, moving between groups to monitor progress, provide assistance, and ensure every student was participating. The teacher's active presence and immediate feedback were essential in managing the classroom, particularly in navigating early challenges related to unequal participation within teams. For example, the teacher frequently intervened to encourage quieter students to contribute and to remind more assertive students to listen to their teammates' ideas, thereby upholding the cooperative spirit of the STAD model.

The implementation of the STAD model with a reward management system in Pancasila Education classes was a structured process with a clear syntax directly integrated into the lesson material. This syntax ensured that every stage of the lesson was systematic, from content delivery to evaluation. This is supported by prior research, such as that by Slavin (1996), which found that the STAD model's syntax provides an effective framework for improving learning outcomes and social interaction. In this study, the STAD model's syntax was applied concretely in the lessons, as shown in Table 1.

Table 1. The STAD Model's Syntax Implementation

No.	Syntax Stage	Teacher & Student Activities	Concrete Application in Pancasila Learning
1	Class Presentation	The teacher presents the lesson, explains learning objectives, and motivates students.	The teacher explains the topic of "Rights and Responsibilities in the Family and School Environment" using visual media and interactive stories to engage students.
2	Team Formation	The teacher forms small, heterogeneous groups (4-5 students).	The teacher groups students based on their initial scores and curiosity levels to ensure each team has members with diverse abilities.
3	Team Discussion	Students discuss in their groups, helping each other and ensuring every member understands the material.	Students in the team discuss examples of their rights and responsibilities at home and school, giving each other feedback, and collaboratively seeking the correct answers.
4	Quiz	The teacher gives an individual quiz to measure each student's understanding. This score becomes the team's score.	Each student works on a 10-question quiz about rights and responsibilities. The quiz scores are then accumulated as the team score.
5	Team Recognition	The teacher gives rewards or recognition to teams that meet certain criteria.	Teams with the highest scores or those showing significant improvement are given a reward such as stickers, verbal praise, or extra points, which motivates them further.
6	Reward	The teacher gives rewards to individual students who improve their personal scores.	Students who successfully improve their quiz scores from the previous quiz receive an individual reward, which further motivates them to learn better.

This application ensures that learning is effective and provides strong empirical reinforcement that this model can be specifically adapted for Civic Education, promoting collaboration and deeper understanding, in line with the demands of a modern curriculum. The reward management system was a key component of the implementation process. It was found to be a simple but highly effective tool for motivating students. Rewards were given for both individual and group achievements, such as correct answers, excellent teamwork, and overall effort. These rewards, often in the form of small stickers, public praise, or team points, created a positive and competitive atmosphere. The data showed that the students were highly responsive to these rewards, and their excitement visibly increased whenever a team or an individual was recognized.

The data analysis also uncovered several implementation challenges. Managing noise levels and ensuring every group remained on task were constant issues that required the teacher's attention. Another challenge was maintaining the novelty of the reward system over time, as students could potentially become desensitized to the incentives. However, the teacher's flexibility in varying the type and timing of rewards helped to mitigate this. Overall, the implementation was a continuous process of adjustment, with the teacher adapting the model to fit the specific needs and dynamics of the class.

Experiences and Perceptions of Teachers and Students

From the teacher’s perspective, the transformation of students during the implementation of the Reward Management-Based STAD model was clearly observable in daily classroom practices. Before the intervention, only about half of the class actively participated, while the rest tended to remain silent or disengaged. After the model was introduced, the teacher reported a noticeable increase in student interaction, with group discussions becoming more lively and participation levels rising to nearly all members of each team. The teacher specifically

highlighted that previously quiet students began contributing more frequently after being motivated by peer support and the reward system. In addition, classroom observations showed that students collaborated not only to complete tasks but also to explain concepts to each other, which reduced the teacher's need to dominate instruction. These empirical shifts convinced the teacher that the model successfully reshaped the learning environment into one that was more dynamic, equitable, and student-centered. The teacher expressed that the model revitalized the classroom environment, stating, "*Before, I did all the talking. Now, the students are the ones actively discussing and helping each other. It's much more dynamic.*" The teacher appreciated how the model fostered a sense of community and mutual support among students, which was previously lacking in the traditional setting.

Students' experiences were also overwhelmingly positive. Many students noted that the group work made learning Pancasila "more fun" and "less boring." One student explained, "*I like it because my friends help me when I don't understand, and I can also help them. It feels good when we solve a problem together.*" This highlights the value students placed on peer collaboration and mutual assistance, suggesting that the model successfully transformed the learning experience from a solitary task into a shared, enjoyable activity.

However, some challenges were also noted in the students' experiences. A few students, particularly those who were naturally more introverted, initially felt uncomfortable with the constant collaboration. One student expressed a preference for working alone, saying, "*Sometimes I just want to think by myself. But in the team, you always have to talk.*" This finding suggests that while the model works for most, individual differences in learning styles should be taken into consideration.

The reward system received strong positive feedback from the students. They perceived the rewards not just as material incentives but as a form of recognition for their hard work and effort. The students were motivated to earn team points, which strengthened their sense of belonging and collective achievement. The public praise and acknowledgment of their success were seen as significant morale boosters.

To better illustrate the effectiveness of the Reward Management-Based STAD Cooperative Learning Model, a comparative analysis was conducted on key learning indicators before and after its implementation. The indicators assessed include student engagement, understanding of subject matter, teamwork, and curiosity. As shown in the graphic below, there is a clear improvement across all dimensions, with notable increases in student participation and collaborative learning. This comparison highlights the model's positive impact in transforming the learning process from a teacher-centered approach into a more dynamic, student-centered environment.

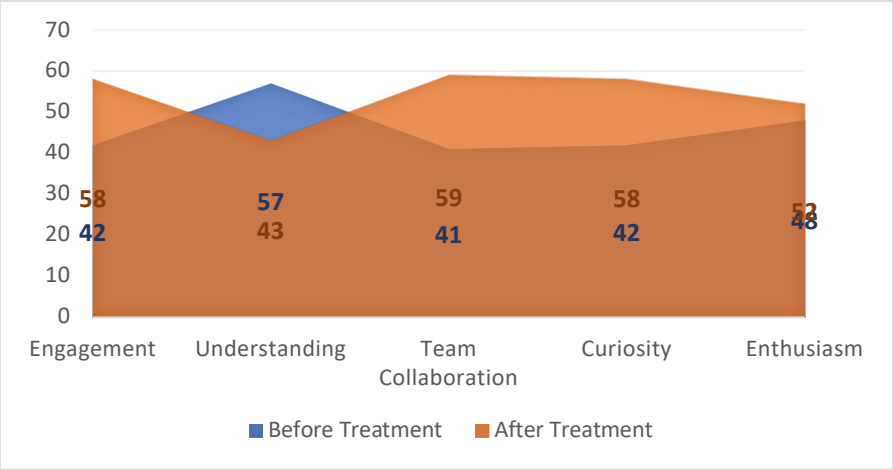

FIgure 1. Comparison of average indicators before and after the Implementation of STAD and reward management

The Manifestation and Development of Student Curiosity

The qualitative data revealed that student curiosity was not a static trait but a dynamic and fluctuating state that was directly influenced by the STAD model and its reward system. At the start of the study, curiosity was observed as a general interest in the new teaching method. However, as the students began to engage in collaborative tasks, their curiosity became more focused and purposeful. For example, when a group faced a difficult question, their shared curiosity motivated them to actively seek out answers from their group members, the teacher, or even a textbook, rather than simply giving up.

The STAD model was found to be an effective tool for stimulating curiosity. The collaborative format encouraged students to ask questions of their peers, thereby sparking new lines of inquiry that may not have arisen in a traditional lecture. The findings showed that students were more willing to ask "why" and "how" questions within the safety of their small teams. One student stated, "*In the group, I'm not afraid to ask if I don't know something, because my friends are there to help.*" This suggests that the peer-supported environment fostered a sense of psychological safety that encouraged students to voice their curiosity.

The reward system also played a significant role in developing curiosity. In the implementation of the STAD learning model in elementary school, particularly in lower grades, it is crucial to add a supplementary element: rewarding the students. The characteristic of second-grade elementary students, who are highly receptive to praise from teachers and peers, serves as the fundamental reason why reward management is an excellent combination for the STAD model. Based on the research findings, it was discovered that the reward system not only motivates students to collaborate but also directly moderates or influences the development of their curiosity.

This finding aligns with Djamarah's (2008) theory, which divides rewards into four main categories. The first is Praise, which includes verbal or nonverbal validation from the teacher. In this study, praise acted as direct reinforcement for students' explorative behavior. When a student demonstrated curiosity by asking a thoughtful question, the teacher's praise solidified this behavior and encouraged them to continue questioning. This validation made students feel that their inquisitiveness was valued and worthy of recognition.

The second category is Honor, such as being named "best team" or "discussion leader." This form of social recognition motivated other students to emulate the positive behavior, including proactive curiosity. The third is Gifts, which are tangible items like stickers or stationery. These

physical rewards served as an external incentive that could, over time, foster intrinsic motivation for students to delve deeper into the subject matter. The final category, Symbolic Rewards, such as team points or certificates, created a visible accountability system. This system made students feel that every effort, including their attempts to satisfy their curiosity, was recognized and had a tangible value (Deveci & Ture, 2022).

The possibility of earning a reward for solving a problem served as an external motivator that prompted students to dig deeper into the subject matter (Asiyah, 2014). For instance, teams would actively brainstorm and explore multiple approaches to a problem in hopes of finding the correct answer and securing a reward. This link between curiosity-driven behavior and tangible reward reinforced the habit of inquiry and exploration. In essence, the findings indicate that the STAD model and its reward system utilize existing curiosity and actively nurture its growth. The cooperative structure transformed curiosity from a solitary, internal state into a shared, externalized, and action-oriented behavior that was central to the learning process (Kashdan et al., 2025). The role of curiosity as a moderator was found to transform and strengthen the relationship between the STAD model and learning outcomes. Here is Table 2 summarizing the empirical manifestations of this process.

Table 2. The qualitative empirical data of student curiosity as a moderating variable

Theme	Aspect of Curiosity	Key Quotes & Descriptions
Curiosity as an Interaction Trigger	Students ask questions to their teammates. Students spontaneously seek additional information.	Observation: "A typically quiet student suddenly asked, 'Why must rights be balanced with responsibilities, ma'am?' This question triggered an intense discussion within her group, going far beyond the initial material."
	Taking risks to answer or try new things.	Student Interview: "I became brave enough to answer, because if I'm wrong, my teammates can help correct me. So I'm not afraid of making mistakes."
Curiosity Moderated by Rewards	Motivation to get rewards encourages students to ask deeper questions.	Observation: "When the teacher announced extra points for the best answer, students started competing to find out more. They asked the teacher and even tried looking in other books."
	Rewards validate the exploration process.	Teacher Interview: "I saw it myself, the reward wasn't just a gift. It was a recognition that their curiosity was good and deserved to be appreciated."
Curiosity as a Bridge for Collaboration	Highly curious students help other students.	Observation: "Student 'A', who appeared very curious, became the driving force of the group. He encouraged his friends to find the most accurate answer, even when his friends were content with just one answer."
	Group discussions become deeper and more substantive.	Student Interview: "If a friend is curious, we become curious too. So, we don't just copy answers, but we really discuss why

Discussion

This study's findings affirm that the effectiveness of an instructional model is determined by its procedural structure and its successful integration with a pedagogical approach that is

sensitive to the psychological development of the students. For second-grade students, who are in the concrete operational stage, a child's cognitive development is highly responsive to external stimuli such as praise, symbolic rewards, and social recognition. This highlights a crucial developmental characteristic: they are highly sensitive to external reinforcement from teachers and peers. A properly designed reward system can, therefore, serve as a vital bridge between a child's psychological need for validation and the pedagogical goal of fostering curiosity and academic motivation (Arifin et al., 2017).

The research demonstrates a high degree of congruence between the pedagogical approach used and the students' developmental stage. The inclusion of reward management within the cooperative STAD model served as a significant moderating factor, specifically tailoring the learning strategy to the developmental needs of the children. This is where the study makes its most compelling contribution: it moves beyond the mere implementation of a model to show how a specific, psychologically-grounded component can amplify the model's effectiveness (Kaczmarek et al., 2024). The findings provide strong empirical support for the argument that for this age group, an instructional model must be adaptable and psychologically resonant (Abakpa et al., 2018).

According to Djamarah (2008), rewards can be categorized into four types: praise, honor, tangible gifts, and symbolic rewards. All four categories were found to be highly relevant within the research context. The teacher's praise, for instance, stimulated students' confidence to ask questions, while forms of honor, such as being named "best team," fostered healthy competition. Tangible gifts provided external motivation, and symbolic rewards (points or certificates) served as a visible and tangible accountability for students' efforts. The integration of these rewards into the STAD model was not a superficial addition but a conceptual validation of students' proactive behavior.

The management of rewards in this study reinforces Sari & Indahwati (2016) findings that the combination of a cooperative model and a reward system can significantly boost learning motivation. The rewards acted as a bridge between intrinsic and extrinsic motivation: students' natural curiosity was supported by external incentives that validated the value of their learning behavior. This dual-pronged approach successfully encouraged student engagement and cultivated a sustained habit of inquiry and exploration, thereby creating a self-reinforcing cycle of motivation.

Furthermore, this study empirically confirms the crucial role of curiosity as a key moderating variable, aligning with research by Solehuzain (2017) and Raharja et al. (2018). While curiosity is an inherent human trait that drives exploration, its active manifestation is not guaranteed. The reward system facilitated the transition of curiosity from a latent internal potential into concrete, observable behaviors such as asking questions, engaging in discussions, and trying various problem-solving strategies (Junça & Silva, 2021). The structured environment of the STAD model, combined with the motivational feedback of the rewards, provided the perfect medium for students to act on their curiosity.

The STAD model provided the collaborative structure where student interaction was intense, allowing curiosity to become a catalyst for deep exploration of the subject matter. Rewards, in turn, served as a powerful reinforcer that ensured the sustainability of this interactive and exploratory process. This cyclical relationship has a profound conceptual implication: successful learning, evidenced by the formation of crucial social skills like cooperation, communication, and responsibility, is a product of this synergy (Nurhayati, 2021). This is fully consistent with the deep learning principles of the Merdeka Curriculum.

The success of Pancasila and Civic Education is defined by students' ability to internalize the subject's core values. Through the STAD model, students engaged in tangible discussions about abstract concepts like rights and responsibilities, grounding these ideas in their daily lives. The reward system validated their critical thinking and curiosity, making them feel valued for their intellectual efforts (Anatasya & Dewi, 2021). This is highly relevant to the learning objectives for second-grade students, which prioritize character development, moral reasoning, and the formation of social habits consistent with the values of Pancasila.

CONCLUSION

The study concludes that the STAD cooperative learning model, when enriched with reward management, is a highly effective and relevant approach for enhancing Pancasila learning outcomes in second-grade students. This effectiveness stems from the synergy of four key elements: the STAD model provides a systematic collaborative structure; reward management serves as a crucial moderator that leverages students' psychological need for recognition to foster motivation; curiosity acts as a catalyst that drives deeper engagement and exploration; and this collective interaction ultimately leads to the achievement of deep learning, aligning with the principles of the Merdeka Curriculum. The findings affirm that learning success is not just measured by cognitive scores but also by the students' ability to internalize values, build character, and develop social skills, making education a more meaningful and satisfying experience.

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