

Implementation of the STAD Cooperative Learning Model to Improve Indonesian Language Learning Outcomes in Elementary School

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Abstract. Indonesian language learning at the elementary school level faces challenges in engaging students and improving learning outcomes. This study aims to enhance Indonesian language learning outcomes in fourth-grade students at SD Lafau Fadorozai through the implementation of the STAD (Student Teams-Achievement Divisions) cooperative learning model. The study adopts a Classroom Action Research (CAR) design involving a single class as the research subject. Data were collected through observations, learning outcome tests, and questionnaires on student response. The implementation of the STAD cooperative learning model was conducted two cycles, focusing on Indonesian language learning. The research results indicate a significant improvement in students' learning outcomes with average score after the application of the STAD model, as evidenced by an increase in The average post-test score (Mean = X) was significantly higher than the average pre-test score (Mean = Y), with a significant difference ($p < 0.05$) on learning outcome tests and positive student responses toward cooperative learning. The pre-test score was 63.47 and the post-test 66.53 the increase was 4.82%. These findings suggest that the STAD cooperative learning model is an effective strategy for improving Indonesian language learning outcomes at the elementary school level. This study underscores the importance of cooperative learning models in enhancing the quality of Indonesian language education at the elementary school level.

Keywords: STAD Cooperative Learning, Language Learning, Classroom Action Research

Introduction

Elementary education is crucial in shaping students' academic foundation, specially in language development. However, teachers at the elementary school level often face challenges in improving Indonesian language learning outcomes. These challenges include the wide range of student abilities, a lack of student engagement in the learning process, and the absence of effective strategies to address individual difficulties in understanding the material. "To address these challenges, the STAD (Student Teams-Achievement Divisions) Cooperative Learning Model offers a promising solution. STAD emphasizes small team cooperation to achieve common goals, allowing students to help and motivate each other in understanding the lesson material. Although STAD has been successfully applied in various educational contexts, specific research on its implementation in improving Indonesian language learning outcomes in the fourth grade at SD Lafau Fadorozai is still limited. Therefore, this study aims to fill this gap by exploring the effectiveness of STAD in enhancing students' achievements in Indonesian language learning.

One of the essential aspects of elementary education is the teaching of the Indonesian language, which serves as a daily communication medium and a primary tool in the learning process. Haryanto (2021) states in his book *Practical Guidelines for Implementing the STAD Cooperative Learning Model* states, "This book serves as a practical guide for the implementation of the STAD Cooperative Learning Model. The author provides clear implementation steps and practical suggestions for teachers to apply this learning model in their teaching contexts." According to Slavin (1995), using cooperative learning encourages students to become more active and cooperative during the learning process due to the formation of groups. The active participation of students within groups emerges because each group member has different roles. This had been conducted by Setiaji (2023) in his research on the same grade of Elementary school stated that using visual image can help students in learning comprehension

Research on adult learners has shown that STAD improves retention of lesson material, suggesting its broader applicability in different learning context. This study has been conducted by Ishtiaq, M. I., Ali, Z., & Salem (2017) examined the effect of STAD on adult EFL learners' vocabulary acquisition. The study found that the STAD approach improved vocabulary retention compared to traditional methods. Even though, this study implemented on adult learners' but it is still relevance with the use of cooperative learning STAD model. In the literature review of Chim (2015) the literature review is highly relevant to the suggested research interest for some of the theoretical and conceptual frameworks and methodologies are searched and based on the existing STAD practice and knowledge in these two decades.

Munawar (2019), Maelasari and Wahyudin (2017) Wahyuni (2019) Yudhanta et al. (2021) from the study they have already done show that STAD can be implemented in various lesson and level of the students and give significant result, so they recommend to use STAD in the learning process.

Piaget posits that the cognitive development of elementary school students is in the concrete operational stage Izzaty (2013) Concepts that were vague and unclear in <http://journal.upgris.ac.id/index.php/eternal/index>

early childhood now become more concrete. During this stage, children are capable of logical thinking about concrete objects. Play activities are essential for children's physical, psychological, and social development at this stage, providing them with valuable experiences. Education through play can make it easier for students to remember the learning material delivered by the teacher.

Cooperative learning is a teaching system that provides opportunities for students to work together with their peers on structured tasks Lie (2003). The "Make a Match" type of cooperative learning model can increase student engagement. This is supported by Huda (2011), who states that the advantage of the "Make a Match" cooperative learning model is its ability to enhance students' learning activities, both cognitively and physically. The element of play in this model makes learning more enjoyable. Even though, the research from Zhang and Zhou investigate how Cooperative Learning foster enjoyment in learning foreign language, the research focuses on the effects of positive goal interdependence and peer support in a CL environment, showing that these factors significantly enhance students' emotional engagement and success in language learning Zheng, S., & Zhou (2022).

Significant research efforts have been made to improve student learning outcomes at various educational levels including in elementary school. Güven, M., & Duman (2007), in their article published in *Journal of Language and Linguistic Studies*, highlighted the effectiveness of the STAD cooperative learning model in enhancing student achievement. This study demonstrates that collaboration among students within the STAD model context significantly improves their conceptual understanding and academic performance.

With a better understanding of how STAD can be implemented and its impact on Indonesian language learning outcomes at the elementary level, it is hoped that this approach will contribute positively to efforts to improve the quality of primary education in local schools and potentially in other regions as well. On the other hand, a study by Kilic (2008) published in the *Eurasian journal of Educational Research* explored the impact of cooperative learning models on student motivation across various school levels. Their findings indicate that cooperative learning models, such as STAD, can enhance students' intrinsic motivation by providing opportunities to learn from and with peers. While Academia (2021) on his review synthesizes studies on the impact of CL on improving English speaking skills, particularly in adult learners. It concludes that CL techniques, such as Jigsaw and Student Teams Achievement Division (STAD), significantly enhance learners' proficiency in speaking through interactive and collaborative tasks.

Based on the background described, This study aims to evaluate the effectiveness of the STAD cooperative learning model in improving students' reading, writing, listening, and speaking skills in Indonesian language learning. By formulating this problem, the researcher will be able to investigate in detail the contributions of the STAD Cooperative Learning Model to Indonesian language education at the elementary level. "The authors highlight the importance of this approach in creating interactive and student-centered learning, and they provide various strategies for

implementing it in teaching," as stated in *Active Learning Strategies with the STAD Cooperative Learning Model*.

The objectives of this research are to improve the students' achievements in reading, writing, listening, and speaking in the Indonesian language after the implementation of the STAD Cooperative Learning Model. According to findings by Firdaus (2017), the STAD cooperative learning model has proven effective in improving Indonesian language learning outcomes at the elementary level. The implementation of this model allows students to work together in small teams, help each other understand the material, and build their confidence through collective achievements. Additionally, Sumanti (2023) stated that the implementation of the STAD Cooperative Learning Model has had a positive impact on enhancing students' reading comprehension skills at the elementary level. Through teamwork and a focus on collective achievement, students can improve their understanding of the texts they read. Novita, R., & Sukenti (2023) further emphasized that "The implementation of the STAD Cooperative Learning Model has proven effective in improving students' speaking skills in the fourth grade of elementary school. Through group practice and peer support, students can enhance their confidence and communication skills."

The success of students in absorbing lesson material is influenced by several factors. One of these factors is the teacher's ability to effectively deliver the material, including the selection and application of teaching methods that align with the learning objectives and the content being taught. It is also important to engage students' interest and create a conducive learning environment.

Students' understanding of the material reflects the success of the teaching process, which can be measured by their learning outcomes. One alternative to improving student learning outcomes is to implement a cooperative learning model. This model involves students in small groups where they work together to achieve learning goals collectively, with a focus on social interaction and responsibility for the group's success.

In cooperative learning, students work together to understand the material being taught. They have the freedom to ask and answer questions in simple and understandable language among group members. Initial observations suggest that the STAD cooperative learning model is suitable for application in the fourth grade at SD Lafau Fadorozai. This model comprises five main components: class presentations, group activities, evaluation, individual assessment, and group rewards. Those statement supported by the research by (Academia 2021) This study examines the role of cooperative learning in deep language learning strategies. It emphasizes how group learning activities foster a supportive environment that enhances language acquisition and promotes deeper engagement with language.

Method

This study employs Classroom Action Research (CAR) with a participatory approach: CAR engages practitioners, particularly teachers, in all stages of the research process, including planning, implementation, and evaluation. Teachers are the primary agents who implement improvements in their own classroom

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environments. They are involved in formulating problems, designing interventions, executing actions, and evaluating outcomes. This participatory approach ensures that the generated solutions are contextually relevant and tailored to students' needs. According to Kemmis, S., & Wilkinson (2018), "The importance of a participatory and collaborative approach in CAR is emphasized. They highlight that involving various stakeholders, including teachers, students, and other school staff, can enhance the success and relevance of the research."

Research Site

This study was conducted at SDN 077284 Lafau Fadorozai on March 20, 2024, using the Classroom Action Research (CAR) method. Below is a brief overview of the research method,

Research Method: CAR was applied to implement the STAD (Student Teams-Achievement Divisions) Cooperative Learning Model to improve Indonesian language learning outcomes in the fourth grade at SD Lafau Fadorozai. The goal is to enhance student achievement in aspects such as reading, writing, listening, and speaking in Indonesian. **Research Design:** Classroom Action Research (CAR) was selected as the research design to engage the researcher actively in the fourth-grade learning process at SD Lafau Fadorozai, while systematically observing the effects of the intervention. **Research Subjects:** The subjects of the research are fourth-grade students at SD Lafau Fadorozai who will be involved in the learning intervention using the STAD Cooperative Learning Model. **Research Instruments:** The research instruments include pre-tests and post-tests to assess Indonesian language learning outcomes, and questionnaires to gather feedback from both teachers and students regarding the STAD model implementation.

Table 1. Research Procedure

Stage	Description
Preparation Stage	Meetings held with the Indonesian language teacher to discuss research objectives and procedures
Implementation Stage	The STAD Cooperative Learning Model was implemented in Indonesian language lessons over several sessions. Students were divided into heterogeneous learning groups.
Evaluation Stage	Post-tests administered after the intervention to evaluate changes in Indonesian language learning outcomes. Questionnaires distributed to teachers and students to assess perceptions of the learning model implementation.
Data Analysis	Test and questionnaire data analyzed using descriptive statistical techniques to evaluate the learning model's effectiveness and understand the subjects' perceptions
Ethical Considerations	Research ethics adhered to, including obtaining school permission and ensuring the security of research subjects' data.

Finding and Discussion

In conducting Classroom Action Research at SD Lafau Fadorozai, preliminary observations in the classroom were carried out as follows: Results of the Observations in the Classroom Action Research on the Implementation of the STAD Cooperative Learning Model at SD Lafau Fadorozai:

Table 2. Preliminary Observation

No	Observation Aspect	Observation Result
1.	Student Participation	More students passively participating
2.	Collaboration	Students were reluctant to collaborate to each other 40% students collaborate
3.	Student Engagement	Students passively in discussions
4.	Use of Learning Materials	Alignment of learning materials from textbook Quality of learning materials was low
5.	Learning Progress	No guidance to students during the learning process
6.	Teacher-Student Interaction	Minimum interaction

Based on the observation, the results indicate that a significant number of students demonstrated passive participation in class activities, particularly during discussions. Only about 40% of the students actively collaborated with one another, while the rest appeared reluctant to engage in group work. This led to minimal interaction and a lack of dynamic exchanges among the students. In addition, the alignment and quality of the learning materials used from the textbook were observed to be suboptimal. The resources provided lacked depth and relevance, which may have contributed to students' disengagement. Furthermore, there was a noticeable absence of guidance from the instructor during the learning process, resulting in limited student support and decreased motivation. Overall, these factors impacted the effectiveness of the learning environment, hindering active student involvement.

Table 3. Pre test and post test result

No.	Initial Name	pre test score	post test score	status
1.	AR	70	80	success
2.	BS	65	75	success
3.	CM	55	50	failed
4.	DN	60	60	failed
5.	EL	72	82	success
6.	FS	68	65	failed
7.	GM	50	55	success
8.	HD	77	85	success
9.	IR	60	58	failed
10.	JM	66	75	success
11.	KN	58	55	failed
12.	LP	64	70	success

13.	MQ	55	50	failed
14.	NR	70	78	success
15.	OT	62	60	failed
	Average score	63.47	66.53	

- n = total number of students
- \bar{X} = average post-test score
- \bar{Y} = average pre-test score
- p = p-value from the t-test
- α = significance level (usually) = 0.05

Results of Statistical Analysis

Based on the data, here are the results of the calculations:

- Average Pre-Test (\bar{Y}) = 63.47
- Average Post-Test (\bar{X}) = 66.53
- Standard Deviation of Pre-Test (\bar{Y}) = 7.33
- Standard Deviation of Post-Test (\bar{X}) = 12.02

Hypothesis Testing (One-tailed t-test)

- t-statistic = 1.98
- p-value = 0.034

At a significance level of $\alpha = 0.05$:

Since **p-value (0.034) < α (0.05)**, we reject H_0 . This indicates that there is statistically significant evidence that the average post-test score (\bar{X}) is greater than the average pre-test score (\bar{Y}). This shows that students' post-test scores improved compared to the pre-test.

Evaluation of the Effectiveness of the STAD Cooperative Learning Model Implementation

The data analysis shows a significant improvement in Indonesian language learning outcomes following the implementation of the STAD Cooperative Learning Model in the fourth grade at SD Lafau Fadorozai. The average post-test score (Mean = \bar{X}) was significantly higher than the average pre-test score (Mean = \bar{Y}), with a significant difference ($p < 0.05$) according to the t-test. For the implementation of the STAD Cooperative Learning Model.

The mathematical statement describing the data analysis results can be written as:

- $\bar{X} > \bar{Y}$
- $p < \alpha$

This means that the average post-test score **X** is significantly higher than the average pre-test score **Y**, with a significant difference based on the t-test with a significance level of 0.05. In other words, the analysis shows a significant improvement in Indonesian language learning outcomes following the implementation of the STAD Cooperative Learning Model in the fourth grade at SD Lafau Fadorozai.

Differences in Learning Outcomes Before and After the Intervention

Data analysis also reveals a significant difference between Indonesian language learning outcomes before and after the learning intervention using the STAD Cooperative Learning Model. There was an increase in the average test score by **Z points** after the intervention, indicating a positive impact of the model implementation.

Where:

- **X** = average test score after the intervention (post-implementation of the STAD Cooperative Learning Model)
- **Y** = average test score before the intervention

It is also stated that: $\Delta Z = \Delta$

This means that the increase in the average test score after the intervention **Z** is equal to the difference between the average test scores before and after the intervention Δ . In other words, if we have **Z** as the increase in the average test score after the intervention, then the difference in test scores between before and after the intervention can be expressed as **Z**.

Teacher and Student Perceptions of the Model Implementation

From the questionnaire results, the majority of teachers and students reported having a positive learning experience with the implementation of the STAD Cooperative Learning Model. They indicated that group cooperation and student interaction positively affected the learning process and motivated students to learn.

Supporting and Hindering Factors in Model Implementation

Supporting factors for the implementation of the STAD Cooperative Learning Model include full support from the school, adequate resources, and teacher commitment to applying the model. On the other hand, hindering factors include time and space constraints, resistance from some students to group work, and challenges in classroom management. Here are some alternative solution to the hindering factors: to optimize limited time, teachers can plan shorter, more focused cooperative activities that fit within the available lesson period. This could include breaking lessons into smaller segments, ensuring each group task has clear objectives, and using tools like timers to keep activities on track. In facing resistance from some students, the teacher can Introduce team-building exercises at the start of the term to help students become more comfortable collaborating. Highlight the benefits of cooperative learning, such as improved communication skills and shared responsibility. In classroom management, the teacher can circulate among groups to provide guidance, answer

questions, and ensure that students are engaged. Using formative assessments, such as quick quizzes or group reflections, can help monitor progress.

Implications and Recommendations

The results of this study have significant implications for the development of teaching practices at SD Lafau Fadorozai and other schools. Recommendations include expanding the use of the STAD Cooperative Learning Model in Indonesian language instruction, providing training for teachers on the model implementation held twice a year so that all teacher can apply it to their teaching practice, and further research to understand the supporting and hindering factors in the application of cooperative learning models. Overall, the findings offer a comprehensive view of the STAD Cooperative Learning Model's effectiveness in improving Indonesian language learning outcomes at SD Lafau Fadorozai, as well as practical implications and recommendations for further development.

Conclusion

This study aimed to improve Indonesian language learning outcomes in the fourth-grade student at SD Lafau Fadorozai through the implementation of the STAD Cooperative Learning Model. The research findings indicate that the application of the STAD Cooperative Learning Model had a significant impact on enhancing student learning outcomes. There was a notable increase in the average Indonesian language test scores following the learning intervention it stated that the pre test score was 63.47 and the post test 66.53 the increase was 4.82%, as well as positive perceptions from both teachers and students regarding the implementation of the model. Key supporting factors included strong school support, adequate resources, and teacher commitment." However, some hindering factors such as time and space constraints and student resistance to group work need to be addressed to enhance the model's effectiveness.

Based on these findings, several recommendations have been made, including teacher training and support, development of materials and learning resources, improvement of facilities and resources, development of students' social skills, and continuous evaluation and refinement. By implementing these recommendations, it is hoped that schools can enhance the effectiveness of Indonesian language instruction and provide a more meaningful learning experience for students.

Schools should organize training and support for Indonesian language teachers in the implementation of the STAD Cooperative Learning Model. This training can help teachers understand the concepts and strategies related to the model, as well as provide practical guidance on managing classroom instruction. **Development of Materials and Learning Resources:** There is a need to develop materials and learning resources that align with the cooperative approach to support the implementation of the STAD Cooperative Learning Model. These materials should be designed to facilitate collaboration among students in groups and encourage active interaction during the learning process. **Improvement of Facilities and Resources:** Schools need to ensure the availability of adequate facilities and resources to support the application of the STAD Cooperative Learning Model. This includes providing

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flexible learning spaces, sufficient educational equipment, and relevant reference materials to support student learning. **Development of Students' Social Skills:** It is important for schools to integrate the development of students' social skills into the curriculum and daily learning activities. The STAD Cooperative Learning Model can serve as an effective platform for training social skills such as cooperation, communication, and leadership. **Continuous Evaluation and Refinement:** Schools should conduct regular evaluations of the implementation of the STAD Cooperative Learning Model and make continuous refinements based on the evaluation results. This process allows schools to continuously improve the effectiveness of teaching and respond to changes in student needs and classroom dynamics.

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