



The Effect of Cooperative Learning on Students' Writing Skills in Indonesian Language Learning for IV Grade Elementary School Students

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Abstract

Writing is a fundamental language skill that supports students' ability to communicate ideas, construct knowledge, and achieve academic success. However, many elementary school students continue to experience difficulties in generating ideas, organizing paragraphs, and expressing thoughts effectively in written form. This study aimed to examine the effect of the Think Talk Write (TTW) cooperative learning model on the writing skills of fourth-grade students at SDN 11 Sengkuang Bora, Melawi Regency, West Kalimantan. The study employed a quantitative approach using a pre-experimental one-group pretest-posttest design. The participants consisted of 22 fourth-grade students selected through total sampling. Data were collected through writing tests administered before and after the implementation of the TTW model. Students' writing performance was assessed based on content, organization, vocabulary, language use, and mechanics. The collected data were analyzed using descriptive statistics, the Shapiro-Wilk normality test, and a paired-sample t-test with the assistance of IBM SPSS Statistics Version 27. The results revealed that students' mean writing score increased from 62.77 in the pretest to 77.95 in the posttest, indicating an improvement of 15.18 points. The normality test confirmed that both datasets were normally distributed, with significance values greater than 0.05. Furthermore, the paired-sample t-test produced a significance value of 0.000, which was lower than the 0.05 significance level. These findings indicate that the Think Talk Write learning model had a significant positive effect on students' writing skills. The study concludes that TTW is an effective instructional strategy for enhancing elementary students' writing achievement by promoting active thinking, collaborative discussion, and structured writing practices.

Introduction

Writing is one of the fundamental language skills that plays a crucial role in students' academic development. Beyond functioning as a medium for communication, writing serves as a cognitive process through which learners organize ideas, construct knowledge, and express thoughts systematically. Through writing activities, students learn to transform abstract ideas into meaningful texts, enabling them to communicate information effectively and accurately. In educational settings, writing is not only an indicator of language proficiency but also a reflection of students' critical thinking, creativity, and ability to synthesize information (Graham et al., 2020; Dockrell et al., 2023). Therefore, developing writing skills from an early age is essential to support students' overall academic achievement and lifelong learning.

At the elementary school level, writing instruction occupies an important position because it provides the foundation for future literacy development. Students who acquire strong writing skills are generally better equipped to comprehend reading materials, communicate ideas, and participate in higher-order learning activities. According to Charles et al. (2018), writing enables learners to convey ideas, feelings, and experiences in a structured form that can be understood by readers. Similarly, Ariska et al. (2025) emphasize that writing competence is a fundamental skill that should be mastered by elementary school students because it contributes to their language development and academic success. As students progress through different educational levels, writing becomes increasingly important as a tool for learning across various subjects.

Despite its importance, many elementary school students continue to experience difficulties in writing. These difficulties often manifest in the inability to generate ideas, organize information logically, develop coherent paragraphs, and apply correct spelling and grammar. Such challenges limit students' ability to express themselves effectively and reduce the quality of their written work. Research conducted by Panggabean and Ikawati (2025) indicates that limited vocabulary, inadequate mastery of language structures, and insufficient writing practice contribute significantly to students' writing difficulties. Similarly, Nugraha et al. (2025) report that conventional teacher-centered instructional approaches often fail to engage students actively in the learning process, resulting in limited opportunities for meaningful writing practice.

The challenges associated with writing instruction are further compounded by students' low motivation and confidence in expressing ideas through written language. Many students perceive writing as a difficult task because it requires them to think critically, organize information systematically, and apply linguistic rules simultaneously. Consequently, students frequently depend on copying information from textbooks or other sources rather than generating original ideas. This tendency restricts the development of creativity and critical thinking skills. The National Assessment Report published by the Indonesian Ministry of Education, Culture, Research, and Technology revealed that a substantial proportion of elementary school students experience difficulties in expressing ideas through writing (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2022). These findings indicate that improving students' writing skills remains a significant educational challenge.

The need to enhance writing instruction has encouraged educators to explore innovative teaching approaches that actively engage students in the learning process. Among various instructional strategies, cooperative learning has gained considerable attention due to its emphasis on collaboration, communication, and active participation. Cooperative learning encourages students to work together in small groups to achieve shared learning objectives, thereby promoting both academic achievement and social interaction (Prilestari & Dinata, 2025; Saeed et al., 2026). Through collaborative activities, students can exchange ideas, provide feedback, and construct knowledge collectively, which may contribute positively to writing development.

One cooperative learning model that has been widely recognized for its potential to improve writing skills is the Think Talk Write (TTW) model. The TTW model was developed to integrate cognitive and social learning processes through three sequential stages: thinking, talking, and writing. During the think stage, students analyze information and formulate ideas individually. In the talk stage, they discuss their ideas with peers, allowing them to refine understanding and gain new perspectives. Finally, in the write stage, students transform the

outcomes of reflection and discussion into written texts. This structured sequence encourages learners to engage actively in knowledge construction before producing written work (Wijayanto et al., 2020; Hadrimus et al., 2022).

The effectiveness of the TTW model has been supported by numerous studies. Fatkasari and Subrata (2017) found that TTW significantly improved elementary school students' descriptive writing skills by encouraging them to elaborate ideas before writing. Similarly, Roisah et al. (2023) reported that TTW enhances critical thinking and learning achievement through collaborative discussion and reflective writing. More recent studies also demonstrate positive outcomes associated with TTW implementation. Nadifah and Prasetyo (2025) found that students who participated in TTW-based learning showed better writing performance than those who experienced conventional instruction. Setyoningsih et al. (2025) further revealed that TTW helps students improve literacy skills by connecting oral communication with written expression. In addition, Hafid et al. (2026) reported that TTW promotes creative thinking and supports students in developing more analytical written texts.

The positive impact of collaborative learning on writing development is also evident in broader educational research. De Smedt et al. (2022) concluded that writing instruction incorporating collaborative activities significantly improves writing achievement among elementary school students. Lee and Mak (2023) demonstrated that collaborative writing environments enhance both writing quality and learner engagement. Likewise, Bouwer & van der Veen (2024) found that dialogic writing interventions involving discussion and revision activities contribute positively to students' writing performance. These findings suggest that social interaction plays an important role in supporting the writing process by enabling students to clarify ideas and receive constructive feedback before composing texts.

Although previous studies provide substantial evidence regarding the effectiveness of TTW and collaborative learning approaches, most existing research has been conducted in urban schools or educational settings with relatively adequate facilities and resources. Studies by Nadifah & Prasetyo (2025), and Setyoningsih et al. (2025) primarily focus on schools located in environments where students have access to more supportive learning conditions. Consequently, the applicability of these findings to rural elementary schools remains uncertain. Rural schools often face unique challenges, including limited learning resources, lower student literacy exposure, and restricted access to educational support systems, all of which may influence the effectiveness of instructional interventions.

Furthermore, much of the existing literature emphasizes learning outcomes while providing limited attention to contextual factors that may affect instructional effectiveness. Factors such as student readiness, classroom interaction quality, teacher facilitation skills, and availability of learning resources can significantly influence the success of cooperative learning models. As noted by Troia et al. (2022), writing achievement is shaped not only by instructional methods but also by the broader educational environment in which learning occurs. Therefore, understanding how TTW functions within diverse educational contexts is essential for generating more comprehensive insights into its effectiveness.

At SDN 11 Sengkuang Bora, preliminary observations revealed that fourth-grade students frequently encounter difficulties in expressing ideas through writing. Many students struggle to develop original content and often rely on copying information from textbooks rather than constructing their own written responses. These observations indicate that students' writing skills have not yet developed optimally and require targeted instructional support. If such challenges persist, students may face greater difficulties in academic tasks that require written

communication in higher grades. Graham et al. (2020) emphasize that writing proficiency developed during elementary education serves as a strong predictor of future academic achievement and learning success.

Considering the importance of writing skills, the persistent challenges experienced by elementary school students, and the potential benefits of cooperative learning approaches, investigating the implementation of the Think Talk Write model in a rural elementary school context is both relevant and necessary. Such research can contribute to the growing body of knowledge on writing instruction while providing practical insights for teachers seeking effective strategies to improve students' writing abilities. Additionally, examining the effectiveness of TTW in a rural educational setting may help bridge existing gaps in the literature and support the development of more inclusive and context-sensitive approaches to literacy education.

Method

Research Design

This study employed a quantitative approach using a pre-experimental method to investigate the effect of the Think Talk Write (TTW) cooperative learning model on elementary school students' writing skills. Specifically, the study adopted a one-group pretest–posttest design, which allows researchers to evaluate changes in participants' performance before and after an instructional intervention (Creswell & Creswell, 2018; Sugiyono, 2019). In this design, students completed a pretest to assess their initial writing ability prior to the implementation of the TTW model. Following the intervention, a posttest was administered using the same assessment criteria to measure changes in students' writing performance. The difference between pretest and posttest scores served as the primary indicator of the effectiveness of the TTW learning model.

Research Setting and Participants

The research was conducted at SDN 11 Sengkuang Bora, a public elementary school located in Melawi Regency, West Kalimantan, Indonesia, during the 2025/2026 academic year. The school was selected based on preliminary observations indicating that many fourth-grade students experienced difficulties in developing ideas, organizing paragraphs, and expressing thoughts effectively in written form.

The population consisted of all fourth-grade students enrolled at the school. Given the relatively small number of students, a total sampling technique was employed, allowing all members of the population to participate in the study. Consequently, the sample comprised 22 fourth-grade students. The use of total sampling ensured comprehensive representation of the target population and minimized potential sampling bias (Etikan & Bala, 2017).

Data Collection Instruments and Procedures

Data were collected through writing tests, classroom observations, and documentation. The primary instrument was a narrative writing test administered both before and after the intervention. Students were instructed to compose narrative texts based on predetermined themes relevant to their learning level. Their writing products were evaluated using an analytic scoring rubric covering five dimensions: content development, organization, vocabulary, language use, and mechanics.

The pretest was conducted prior to the implementation of the TTW model to determine students' baseline writing ability. Subsequently, students participated in learning activities

based on the TTW model for several instructional sessions. After the intervention, a posttest was administered to assess improvements in students' writing skills.

Classroom observations were carried out throughout the implementation process to monitor students' participation, engagement, and interaction during learning activities. Observation sheets were used to record students' involvement during each stage of the TTW model, namely the think, talk, and write phases. In addition, documentation techniques were employed to collect supporting data, including attendance records, lesson plans, students' assignments, assessment results, and photographs of classroom activities.

The implementation of the TTW model followed three sequential stages. During the think stage, students individually analyzed learning materials and identified key ideas related to the writing topic. During the talk stage, students discussed their ideas in small groups, exchanged opinions, and refined their understanding through collaborative interaction. Finally, during the write stage, students transformed the outcomes of their individual reflections and group discussions into coherent written texts. This process was designed to facilitate critical thinking, collaborative learning, and effective written communication (Huinker & Laughlin, 1996).

Data Analysis

The collected data were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics were used to summarize students' writing performance, including the mean, minimum score, maximum score, and score distribution for both pretest and posttest results.

Prior to hypothesis testing, a normality test was conducted using the Shapiro–Wilk test because the sample size was fewer than 50 participants (Field, 2018). The normality test was performed to determine whether the data met the assumptions required for parametric statistical analysis. After confirming that the data were normally distributed, a paired-sample t-test was employed to examine whether a statistically significant difference existed between students' pretest and posttest scores. All statistical analyses were performed using IBM SPSS Statistics Version 27 with a significance level of 0.05.

Validity and Reliability

To ensure the quality of the research instruments, content validity was established through expert judgment involving Indonesian language education lecturers and experienced elementary school teachers. The writing assessment rubric was developed based on curriculum standards and indicators of writing competence appropriate for fourth-grade students.

Instrument reliability was strengthened using standardized scoring procedures and consistent assessment criteria for both the pretest and posttest. In addition, methodological triangulation was applied by integrating data obtained from writing tests, classroom observations, and documentation. This approach enhanced the credibility and trustworthiness of the findings by enabling cross-verification of data from multiple sources (Miles et al., 2014). Through these procedures, the study sought to ensure the validity, reliability, and overall rigor of the research outcomes.

Result and Discussion

This section presents the empirical findings of the study concerning the effect of the Think Talk Write (TTW) cooperative learning model on the writing skills of fourth-grade students at SDN 11 Sengkuang Bora. The presentation of results is organized into several stages, including descriptive statistics of students' writing achievement, normality testing, hypothesis testing,

and an overall interpretation of learning outcomes. The findings are based on data collected from 22 students through pretest and posttest writing assessments administered before and after the implementation of the TTW learning model. Statistical analyses were conducted using IBM SPSS Statistics Version 27.

Table 1. Descriptive Statistics of Students' Writing Achievement

Indicator	Pretest	Posttest
Number of Students	22	22
Mean Score	62.77	77.95
Highest Score	73	88
Lowest Score	53	69
Improvement in Mean Score	–	15.18

Source: Research Data Processed Using SPSS Version 27 (2026).

Table 1. Shows that students' writing achievement improved after the implementation of the Think Talk Write (TTW) learning model. The mean score increased from 62.77 in the pretest to 77.95 in the posttest, indicating an improvement of 15.18 points. In addition, the highest score rose from 73 to 88, while the lowest score increased from 53 to 69. These findings suggest that the TTW model positively influenced students' writing skills across different achievement levels. The improvement in average, maximum, and minimum scores indicates that students became more capable of developing ideas, organizing information, and expressing their thoughts in written form after participating in learning activities based on the TTW model. Overall, the descriptive results provide initial evidence that the TTW model contributed to enhancing the writing skills of fourth-grade students at SDN 11 Sengkung Bora.

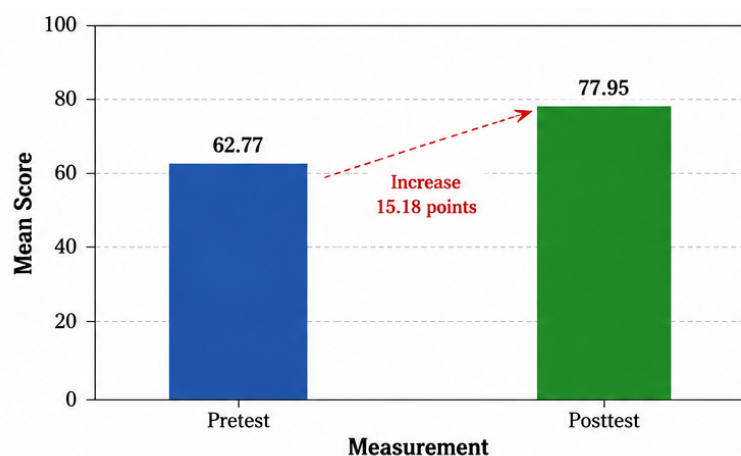


Figure 1. Comparison of Mean Pretest and Posttest Scores

Source: Research Data Processed by the Authors (2026).

Figure 1. Students' writing achievement after the implementation of the Think Talk Write (TTW) learning model. The mean score increased from 62.77 in the pretest to 77.95 in the posttest, representing a gain of 15.18 points. This substantial increase indicates that students demonstrated better writing performance following their participation in TTW-based learning activities. The upward trend shown in the figure suggests that the integration of thinking, discussion, and writing processes helped students generate ideas more effectively, organize their thoughts more systematically, and express their ideas more clearly in written form.

Overall, the graphical comparison provides visual evidence that the TTW model contributed positively to the enhancement of students' writing skills.

Table 2. Distribution of Student Achievement Scores

Measurement	Pretest	Posttest
Minimum Score	53	69
Maximum Score	73	88
Score Range	20	19

Source: Research Data Processed Using SPSS Version 27 (2026).

Table 2. Shows a positive shift in students' writing achievement following the implementation of the Think Talk Write (TTW) learning model. The minimum score increased from 53 in the pretest to 69 in the posttest, indicating that students with lower initial writing performance experienced substantial improvement. Similarly, the maximum score rose from 73 to 88, demonstrating that higher-achieving students also benefited from the intervention. The score range decreased slightly from 20 to 19, suggesting that while overall achievement improved, the variation in students' performance became slightly more balanced. These findings indicate that the TTW model contributed to improving writing skills across the entire class and supported learning gains among students with different levels of writing ability.

Table 3. Results of the Shapiro Wilk Normality Test

Variable	Statistic	df	Sig.
Pretest	0.962	22	0.538
Posttest	0.955	22	0.394

Source: SPSS Output, Processed Research Data (2026).

Table 3. The results indicate that the significance value for the pretest data was 0.538, while the significance value for the posttest data was 0.394. Since both significance values exceed the criterion level of 0.05, the data can be considered normally distributed. These findings indicate that the assumption of normality was satisfied for both datasets. Consequently, parametric statistical analysis using a paired-sample t-test was deemed appropriate for evaluating the effectiveness of the TTW learning model.

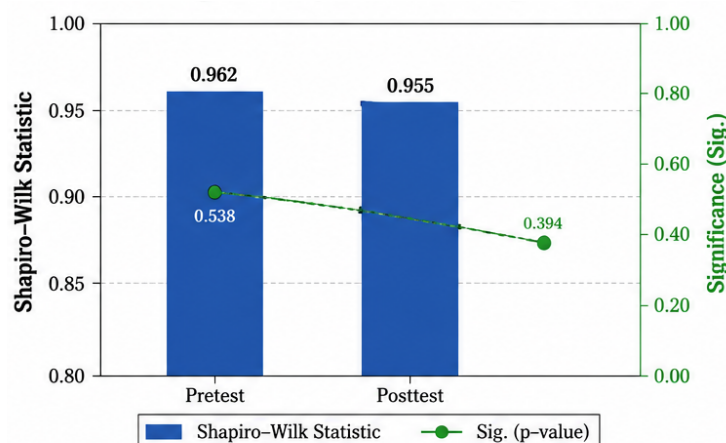


Figure 2. Shapiro Wilk Normality Test Results

Source: SPSS Output Processed by the Authors (2026).

Figure 2 presents the results of the Shapiro–Wilk normality test for both the pretest and posttest data. The pretest data produced a Shapiro–Wilk statistic of 0.962 with a significance value of 0.538, while the posttest data yielded a statistic of 0.955 with a significance value of 0.394. Since both significance values are greater than the 0.05 threshold, the pretest and posttest scores can be considered normally distributed. These results indicate that the assumption of normality was satisfied, allowing the use of parametric statistical analysis, specifically the paired-sample *t*-test, to examine the effect of the Think Talk Write (TTW) learning model on students’ writing skills. Overall, the figure confirms that the dataset met the statistical requirements for subsequent hypothesis testing.

Table 4. Results of the Paired-Sample *t*-Test

Variable Pair	Mean Difference	t-value	df	Sig. (2-tailed)
Pretest – Posttest	-15.182	-180.381	21	0.000

Source: SPSS Output, Processed Research Data (2026).

Table 4. The analysis produced a significance value of 0.000, which is below the significance threshold of 0.05. Therefore, the null hypothesis stating that no difference exists between pretest and posttest scores is rejected. The results indicate that the Think Talk Write learning model significantly influenced students’ writing skills. The mean difference of 15.182 points confirms that students achieved higher scores following the intervention. The statistical evidence demonstrates that the observed improvement was not due to random variation but rather reflected a measurable effect associated with the implementation of the TTW model.

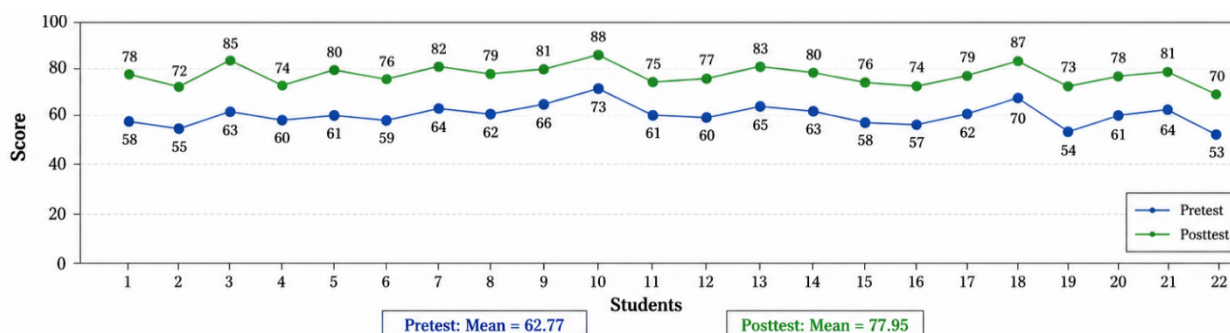


Figure 3. Comparison of Pretest and Posttest Achievement

Source: Research Data Processed by the Authors (2026).

Figure 3. The comparison of individual students’ pretest and posttest scores, showing a consistent improvement in writing achievement after the implementation of the Think Talk Write (TTW) learning model. All 22 students obtained higher scores on the posttest than on the pretest, indicating that the intervention positively affected students across different ability levels. The mean score increased from 62.77 in the pretest to 77.95 in the posttest, reflecting an average gain of 15.18 points. The figure also shows that the improvement was relatively consistent among students, as the posttest scores remained above the corresponding pretest scores for every participant. These findings suggest that the TTW model effectively supported students in developing their writing skills by helping them generate ideas, engage in meaningful discussions, and organize their thoughts more effectively in written form. Overall, the graphical trend provides strong descriptive evidence of the positive impact of the TTW learning model on students’ writing performance.

The Role of Think Talk Write in Enhancing Elementary Students' Writing Skills

The findings of this study indicate that the Think Talk Write (TTW) learning model significantly improved the writing skills of fourth-grade students at SDN 11 Sengkuang Bora. The increase in students' posttest scores demonstrates that the TTW model successfully facilitated the development of students' ability to generate ideas, organize information, and express thoughts in written form. These findings support the principles of social constructivist learning theory, which emphasizes that knowledge is constructed through individual reflection and social interaction.

The TTW model consists of three interconnected stages: think, talk, and write. During the think stage, students are encouraged to analyze information independently and identify key ideas. In the talk stage, students discuss their ideas with peers, allowing them to exchange perspectives, clarify understanding, and enrich the content of their writing. Finally, in the write stage, students transform the results of their thinking and discussions into structured written texts. This process enables students to prepare their ideas systematically before writing, resulting in more coherent and meaningful compositions.

The positive results obtained in this study are consistent with previous research on the effectiveness of the TTW model. Atika Isharifa & Sukma (2024) found that TTW significantly improved elementary students' narrative writing skills. Their study showed that the think stage helped students identify main ideas, the talk stage enriched ideas through discussion, and the write stage strengthened students' ability to organize paragraphs coherently. Similarly, Yudistira et al. (2025) reported that TTW improved descriptive writing skills because students were encouraged to develop ideas through oral communication before writing. The study highlighted that discussion activities contributed to better vocabulary use and sentence construction.

Furthermore, Hafid et al. (2026) revealed that the TTW model enhanced students' critical thinking and creativity in writing explanatory texts. Through gradual idea development, students were able to produce writing that was not only descriptive but also analytical. Likewise, Setyoningsih et al. (2025) found that TTW effectively improved literacy skills by providing opportunities for students to reflect on discussion outcomes before writing. This reflection process helps students connect spoken language with written language, making it easier to transform ideas into coherent texts. Nadifah & Prasetyo (2025) also reported that TTW positively influenced students' writing achievement and consistently increased posttest scores, emphasizing the importance of effective teacher facilitation during discussion and writing activities.

The findings of this study also align with broader research on cooperative learning and collaborative writing. Graham et al. (2020), Kim & Schatschneider (2021), Troia et al. (2022), and Dockrell et al. (2023) concluded that structured writing instruction improves students' ability to organize ideas and produce higher-quality written texts. Similarly, De Smedt et al. (2022) & Lee and Mak (2023) demonstrated that collaborative learning environments support writing development by allowing students to discuss ideas and receive feedback before composing their work. The TTW model integrates these collaborative and reflective processes into a single instructional framework, which may explain its effectiveness in improving students' writing skills.

One important contribution of this study is its focus on a rural elementary school context. Most previous studies on TTW were conducted in urban schools or schools with relatively adequate

educational facilities. In contrast, this study was conducted at SDN 11 Sengkuang Bora, a rural school with more limited resources. The results indicate that the effectiveness of the TTW model is not limited to well-resourced educational settings. Even in a rural context, the structured interaction and collaborative learning opportunities provided by TTW were able to support students' literacy development. This finding suggests that cooperative learning models can be adapted successfully across diverse educational environments.

From a theoretical perspective, the findings strengthen the application of social constructivist theory in language learning. The TTW model encourages students to construct knowledge through a combination of individual thinking, peer discussion, and reflective writing. The improvement in students' writing performance indicates that literacy development becomes more effective when cognitive activities are supported by social interaction and collaborative learning. Therefore, the study contributes to the growing body of evidence highlighting the close relationship between cognitive, social, and linguistic processes in learning.

From a practical perspective, the results offer valuable implications for teachers and schools. Teachers can use the TTW model as an alternative instructional strategy to help students overcome difficulties in generating ideas and organizing written texts. The model promotes active participation, encourages communication among students, and reduces reliance on memorization or copying from textbooks. In addition, school administrators may consider integrating cooperative writing strategies into classroom practices and teacher professional development programs to strengthen literacy instruction.

The findings also have implications for educational policy and curriculum development. Educational stakeholders should encourage learner-centered instructional approaches that incorporate collaboration, discussion, and reflective writing activities. Teacher training programs should provide practical guidance on implementing cooperative learning models effectively, particularly in language learning contexts. Moreover, literacy improvement programs in rural schools should prioritize interactive and participatory learning experiences rather than relying solely on traditional teacher-centered methods.

Despite its contributions, this study has several limitations. The research employed a one-group pretest–post-test design without a control group, which limits the ability to establish strong causal conclusions (Harerimana et al., 2023; Van et al., 2025; Krishnan, 2025). The sample size was relatively small and involved only one school, which may limit the generalizability of the findings. In addition, the study focused primarily on students' writing scores and did not explore qualitative aspects of writing development, such as creativity, writing strategies, or student perceptions of the learning process.

Future studies should involve larger samples and utilize more rigorous research designs, such as quasi-experimental or experimental approaches with control groups. Comparative studies between urban and rural schools would also provide deeper insights into the contextual factors influencing TTW effectiveness. Furthermore, future research could examine specific dimensions of writing performance, including content quality, organization, vocabulary development, creativity, and students' learning experiences during TTW implementation. Such investigations would provide a more comprehensive understanding of how cooperative learning models contribute to writing development in elementary education.

Conclusion

The findings of this study indicate that the Think Talk Write (TTW) cooperative learning model had a significant positive effect on the writing skills of fourth-grade students at SDN 11

Sengkuang Bora. This conclusion is supported by the results of the descriptive analysis, which showed an increase in the mean writing score from 62.77 on the pretest to 77.95 on the posttest, as well as by the paired-sample *t*-test results, which revealed a significance value of 0.000 (0.005). These findings demonstrate that the TTW model effectively improved students' ability to generate ideas, organize information, and express their thoughts in written form. The improvement can be attributed to the integration of individual thinking, collaborative discussion, and structured writing activities embedded within the TTW learning process. Furthermore, the study provides evidence that the TTW model can be successfully implemented in a rural elementary school context, contributing to the development of students' literacy skills despite limited educational resources. Therefore, TTW can be considered an effective instructional alternative for enhancing writing achievement in elementary education and promoting more active, reflective, and collaborative learning experiences.

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