



Procedural Text Writing Skills Through the Student Teams-Achievement Divisions (Stad) Learning Model Among Tenth-Grade Students at Senior High School

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Article Info	Abstract
Received: 2026-04-07 Revised: 2026-05-19 Accepted: 2026-08-09 Keywords: procedural text writing; cooperative learning; Student Teams- Achievement Divisions; classroom action research; secondary education DOI: 10.24256/ideas.v14i1.11964 Corresponding Author: Ahyar ahyarr43@gmail.com English Education Studi Program, Indonesian Language and Literature Education Study	<i>Limited classroom-based evidence has examined how Student Teams-Achievement Divisions (STAD) can support procedural text writing in Indonesian senior high schools, particularly through an iterative classroom-action process. This study investigated the improvement of procedural text writing skills among 28 students in Class X-B 3 at Senior High School through STAD cooperative learning. STAD was selected because its combination of heterogeneous teamwork, shared goals, individual accountability, and peer support can provide structured opportunities for students to discuss text organization and language use. The study employed Classroom Action Research conducted in two cycles comprising planning, action, observation, and reflection. Data were obtained from writing tests, classroom observations, and documentation and analyzed descriptively. Reported classical mastery increased from 35.7% in Cycle I to 85.7% in Cycle II, an increase of 50 percentage points, exceeding the predetermined success criterion of 75% of students achieving the Minimum Mastery Criterion of 75. Classroom observations also indicated more active group participation, clearer allocation of responsibilities, and more focused teacher guidance in Cycle II. The study contributes genre-specific classroom evidence on the use of STAD for procedural text writing and suggests that structured peer interaction can be integrated with explicit writing guidance in Indonesian language instruction.</i>

1. Introduction

Writing is a productive language skill through which students transform ideas, knowledge, and experience into organized written discourse. In school-based language education, writing is not only a means of communication but also a cognitive activity that requires learners to plan content, select appropriate language, organize information for a reader, and revise a text for clarity. These demands make writing one of the more complex language skills to teach because successful performance depends on the integration of conceptual, linguistic, and rhetorical knowledge. In Indonesian language instruction at the senior high school level, students are expected to produce different text genres, each with its own communicative purpose, structural organization, and linguistic features. Consequently, writing instruction needs to provide both explicit genre guidance and opportunities for students to discuss, practice, and refine their texts.

Procedural text is a particularly relevant genre because it requires writers to present an ordered sequence of actions so that a reader can complete a task or understand a process. Effective procedural writing depends on logical sequencing, clarity of instructions, appropriate vocabulary, and consistent use of linguistic features that signal order and action. When these elements are weak, a text may contain the required information but remain difficult to follow. The preliminary classroom evidence in this study showed that procedural text writing was challenging for students in Class X-B 3 at Senior High School. Of 28 students, only 10 (35.7%) were reported to have reached the Minimum Mastery Criterion (MMC) of 75. The initial classroom observations and teacher interview further indicated problems in generating and organizing ideas systematically, limited engagement with instructional materials, and uneven participation during group activities. These conditions suggested that students needed a learning structure that combined explicit writing support with more accountable peer interaction.

Cooperative learning offers one possible response to this instructional problem. In cooperative learning, students work in small groups toward shared academic goals while remaining responsible for their own learning. Slavin (2015) emphasizes that effective cooperative learning is not simply group work; it depends on carefully designed group goals and individual accountability that encourage students to explain ideas, support peers, and contribute to collective success. These principles are especially relevant to writing instruction because writing involves decisions that can be discussed and made visible through peer explanation, comparison, and feedback. Research on collaborative writing likewise shows that peer interaction can create opportunities for learners to co-construct knowledge, notice language-related problems, and negotiate how ideas should be expressed (Cheung, 2022; Hsu, 2024; Li & Zhang, 2023). Dialogic interaction

around texts can also support revision and improve the quality of students' written products when classroom talk is deliberately structured (Bouwer & van der Veen, 2024).

Student Teams-Achievement Divisions (STAD) is a cooperative learning model that operationalizes these principles through heterogeneous teams, shared group objectives, individual performance, and recognition of team achievement. STAD was selected in this study instead of less structured forms of group work because the classroom problem involved passive participation and overreliance on higher-achieving peers. The model is designed to distribute responsibility more evenly: students study material in teams, help one another understand the task, and are expected to demonstrate individual learning. This combination of peer support and accountability is potentially useful in procedural text writing because students can discuss the organization of a procedure, compare alternative expressions, clarify the sequence of steps, and receive assistance before completing an individual writing task.

Recent studies provide growing support for the use of STAD in writing instruction, although the genres and educational settings vary. Kurniasari et al. (2022) reported improvement in narrative writing through STAD in a classroom action research context and noted gains across content, organization, vocabulary, language use, and mechanics. Wahab et al. (2023) similarly reported improved exposition writing across action cycles. Puspitasari and Mayza (2024) found that STAD could support writing performance in a vocational high school context when compared with another cooperative technique, while Karnedi (2025) reported positive writing outcomes when STAD was integrated with group-work projects. These studies indicate that cooperative structures can support writing, but they do not eliminate the need to investigate how the model functions with different genres and classroom problems.

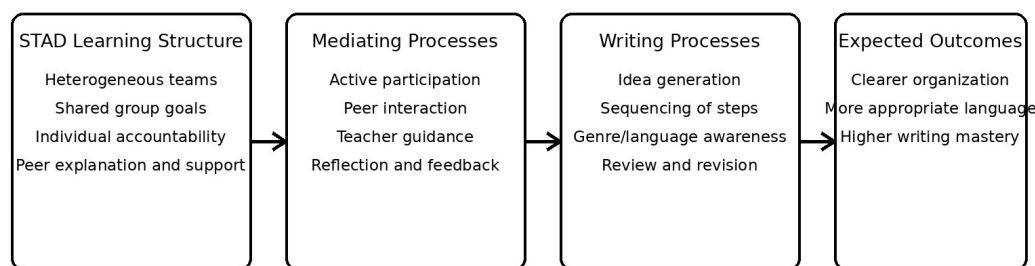
The research gap addressed here is therefore genre- and context-specific. Existing STAD writing studies have largely examined narrative, descriptive, exposition, or other writing tasks, whereas classroom-based evidence concerning procedural text writing in Indonesian senior high school settings remains limited. Procedural writing places particular emphasis on sequence, clarity, and functional organization; therefore, findings from other genres cannot simply be assumed to transfer directly. In addition, classroom action research can illuminate how instructional implementation changes from one cycle to the next, including how teacher guidance, group roles, and student participation are adjusted after reflection. The novelty of the present study lies not in proposing STAD as a new model, but in applying and reflecting on its use for a specific writing problem and genre in a local secondary-school context.

Conceptually, this study assumes that the structured interaction provided by STAD can support writing through several mediating processes. Heterogeneous teamwork and individual accountability are expected to encourage active

participation; peer explanation can help students verbalize and reorganize ideas; and teacher guidance can focus group attention on weaknesses identified during reflection. These processes may then support idea generation, sequencing, language awareness, and revision, which are directly relevant to producing a clearer procedural text. Figure 1 summarizes this conceptual relationship. The framework is used to interpret the classroom process and does not imply that each pathway was independently tested as a causal mechanism.

Based on the classroom problem and the research gap, this study aimed to describe the improvement of tenth-grade students' procedural text writing skills through the implementation of the STAD cooperative learning model at Senior High School. More specifically, it examined changes in classical learning mastery across two action cycles and interpreted the classroom processes that accompanied those changes.

Conceptual Framework for STAD-Supported Procedural Text Writing



The framework represents the proposed pedagogical mechanism, not a causal model tested independently in this study.

Figure 1. Conceptual framework of STAD-supported procedural text writing

2. Method

This study employed Classroom Action Research (CAR) using the cyclical model of planning, action, observation, and reflection associated with Kemmis and McTaggart. CAR was appropriate because the study was designed to address an identified classroom problem through planned instructional action, observation of the learning process, and revision of teaching practice based on reflection. The intervention was implemented over two cycles, with the results of Cycle I used to determine adjustments for Cycle II.

The study was conducted at Senior High School. The participants were 28 tenth-grade students from Class X-B 3. They constituted the intact classroom in which the writing problem had been identified through preliminary observation and an interview with the Indonesian language teacher. The source manuscript did not provide further demographic information such as age distribution, gender composition, or a standardized measure of prior language proficiency; these details should be added from the original study records if they were collected.

The instructional intervention used the Student Teams-Achievement Divisions (STAD) cooperative learning model. In each cycle, the teacher introduced the target

writing material, organized students into learning teams, facilitated group study and discussion, guided students who experienced difficulty, and evaluated learning through an individual procedural text writing task. Reflection after Cycle I indicated that group participation, role allocation, and teacher guidance needed to be strengthened. Cycle II therefore emphasized clearer responsibilities for group members, more active participation in discussion, more systematic presentation of material, and more focused guidance and reinforcement from the teacher.

Three sources of data were reported in the original study: writing tests, classroom observations, and documentation. The writing test was administered at the end of each cycle to determine whether students met the Minimum Mastery Criterion. The classroom observations were used to monitor teacher and student activities during implementation and to inform reflection between cycles. The cycle records specifically refer to students' participation in discussion, dependence on higher-achieving peers, allocation of group roles, teacher motivation, and teacher guidance. Documentation functioned as supporting evidence for the implementation and learning outcomes. The original manuscript did not include the full observation instrument or information about the number of observers and inter-observer agreement; these items should be reported if available.

Students' writing performance was evaluated against an MMC score of 75. The available manuscript identifies structure, linguistic features, and systematic organization as important areas of difficulty in students' procedural writing, but it does not provide the complete analytic scoring rubric, weighting of criteria, validation procedure, or inter-rater reliability information. For methodological transparency, the final publication version should append or summarize the original rubric and state who scored the texts. No new scoring criteria have been invented in this revision because such information must come from the original research records.

Quantitative data were analyzed descriptively by comparing the number and percentage of students who achieved the MMC in each cycle, together with the reported highest and lowest scores. Qualitative observation information was used to describe changes in participation, collaboration, and instructional implementation and to support the reflection process. The study was considered successful when at least 75% of the students achieved an individual score of 75 or higher. Because the individual score charts in the source manuscript are not fully consistent with the reported mastery counts, cycle means and standard deviations should be calculated only after the raw scoring sheet has been verified. The present revision therefore reports only descriptive statistics that are consistently stated in the manuscript narrative.

The source manuscript does not report the procedures used to obtain school permission, participant assent/consent, or parental consent where applicable. These ethical procedures should be stated explicitly in the final manuscript on the basis of the documentation used in the original study. Student identities should

remain anonymized in all published tables, figures, and examples.

3. Result

3.1 Cycle I

The Cycle I writing test showed that the predetermined success indicator had not yet been achieved. According to the manuscript narrative, 10 of the 28 students (35.7%) obtained scores at or above the MMC of 75, while 18 students (64.3%) remained below the criterion. The highest reported score was 88 and the lowest was 50. Classroom records indicated that students continued to experience difficulty with the structure, linguistic features, and systematic organization of procedural texts.

Observation and reflection data also showed that the cooperative learning process was not yet functioning optimally. Students were still adapting to the STAD structure, participation in group discussion was uneven, and several students relied heavily on peers perceived as academically stronger. The teacher's implementation likewise required improvement, particularly in motivating all members, assigning clearer group responsibilities, and providing more focused guidance during discussion. These observations informed the instructional adjustments made for Cycle II.

3.2 Instructional Adjustments for Cycle II

The reflection stage led to four practical adjustments. First, the teacher presented the procedural text material more systematically. Second, tasks and responsibilities were assigned more explicitly so that participation was not concentrated among a small number of students. Third, the teacher provided more intensive guidance and reinforcement during group work. Fourth, students were encouraged to exchange ideas and help one another understand the writing task before completing the individual assessment. These changes were intended to improve the quality of the STAD implementation rather than merely repeat the same instructional procedure in the second cycle.

3.3 Cycle II

The reported Cycle II results showed a substantial increase in classical learning mastery. Twenty-four of the 28 students (85.7%) achieved scores of 75 or above, whereas four students (14.3%) remained below the MMC. The highest reported score was 93 and the lowest was 68. Thus, the class exceeded the predetermined success criterion of 75% mastery. Compared with Cycle I, the reported mastery rate increased by 50 percentage points.

The observation narrative for Cycle II indicated more active exchange of ideas, stronger peer assistance, clearer responsibility within groups, and more focused teacher guidance. Students were described as more confident in expressing ideas during team work and more willing to help peers understand the material. These process changes accompanied the increase in mastery, although the CAR design

does not allow the contribution of each individual factor to be isolated statistically.

3.4 Cross-Cycle Comparison

Cycle	N	Mastery, n (%)	Not mastered, n (%)	Highest score	Lowest score
Cycle I	28	10 (35.7%)	18 (64.3%)	88	50
Cycle II	28	24 (85.7%)	4 (14.3%)	93	68

Table 1. Reported comparison of learning mastery across cycles

The comparison in Table 1 shows that the main quantitative change was the rise in the proportion of students who met the mastery criterion. Mean scores and standard deviations are not presented because the individual score figures in the source manuscript do not fully reconcile with the stated mastery counts. These statistics should be added after verification against the original scoring sheet. This limitation is reported explicitly to avoid generating unsupported numerical results.

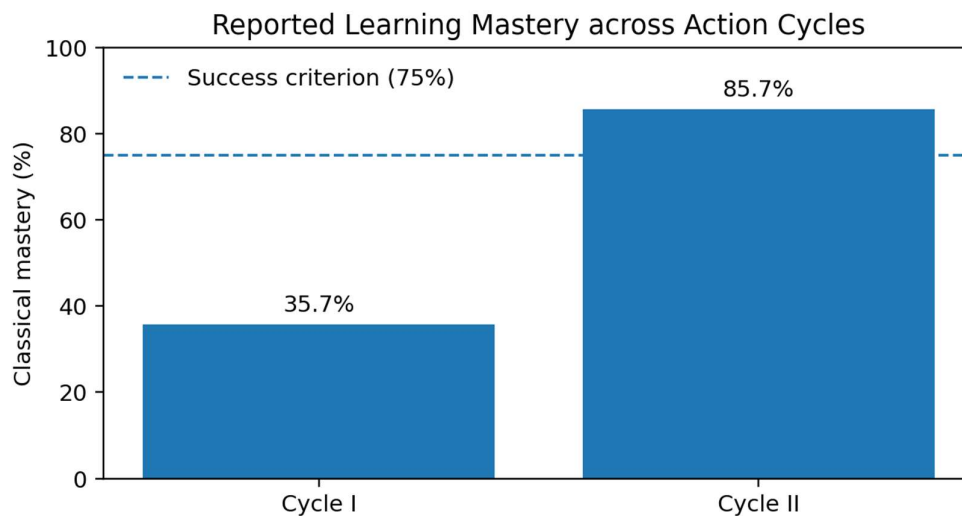


Figure 2. Reported classical mastery in Cycle I and Cycle II

4. Discussion

The central finding of this classroom action research is the increase in reported learning mastery from 35.7% in Cycle I to 85.7% in Cycle II. Because the study used an iterative CAR design rather than a controlled experiment, this result is best interpreted as evidence of successful classroom improvement within the studied class rather than as a general causal estimate of STAD effectiveness. Nevertheless, the cross-cycle pattern is educationally meaningful because the second cycle was deliberately modified in response to problems observed during the first cycle, and the mastery criterion established for the classroom was subsequently exceeded.

The result can be interpreted through the core principles of cooperative learning. Slavin (2015) argues that cooperative learning is most productive when group goals are combined with individual accountability. This distinction is

important in the present study. The initial problem was not the absence of group work itself but uneven participation, passive group members, and reliance on higher-achieving peers. The Cycle II adjustments therefore strengthened role clarity, participation, and teacher monitoring. These changes made the cooperative structure more consistent with the logic of STAD: students were expected to support one another while remaining individually responsible for the writing task. The improvement in mastery is therefore consistent with the theoretical expectation that structured cooperation can increase opportunities for explanation, rehearsal, and engagement.

Peer interaction is particularly relevant to writing because many writing decisions become easier to examine when students verbalize them. Collaborative-writing research has shown that learners can use interaction to generate ideas, identify language problems, negotiate alternatives, and co-construct knowledge (Cheung, 2022; Hsu, 2024; Li & Zhang, 2023). Lázaro-Ibarrola and Hidalgo (2024) likewise found that young collaborative writers devoted substantial interaction to idea generation and language-related discussion, while Bouwer and van der Veen (2024) demonstrated that structured dialogic talk around writing can support stronger text production and revision. Although the present study involved Indonesian procedural writing rather than EFL collaborative composition, the underlying pedagogical mechanism is comparable: purposeful talk can make text organization and language choices more explicit before students produce an individual written product.

This mechanism is particularly plausible for procedural texts, where the reader depends on a clear and logical sequence. Group discussion can help students test whether steps are complete and ordered, whether instructions are understandable, and whether the language used is appropriate for the intended procedure. In Cycle I, students were reported to have difficulties with structure, linguistic features, and systematic organization. In Cycle II, more intensive discussion and teacher guidance created additional opportunities to address these issues during learning. However, because the study did not report rubric-level sub-scores for organization, vocabulary, grammar, mechanics, or other writing dimensions, it is not possible to determine quantitatively which specific components improved the most. Future reporting should include criterion-level scores and representative anonymized excerpts from student texts.

The findings also align with recent STAD-based writing studies. Kurniasari et al. (2022) reported improvement in narrative writing across two CAR cycles and observed development in several writing components. Wahab et al. (2023) found a similar upward pattern in exposition writing, while Puspitasari and Mayza (2024) reported favorable writing outcomes for STAD in a vocational-school comparison. Karnedi (2025) also found positive results when STAD was integrated with group-work projects for writing instruction. The present study extends this line of work to procedural text writing in an Indonesian senior high school. This extension matters because writing genres place different demands on learners; improvement

in narrative or descriptive writing does not automatically establish effectiveness for procedural texts. The current evidence therefore adds a genre-specific classroom case to the broader STAD literature.

Teacher guidance appears to have been an important part of the classroom change. Cooperative learning is sometimes interpreted as reducing teacher involvement, but the Cycle II reflection suggests the opposite: the teacher became more deliberate in presenting material, allocating responsibilities, monitoring discussion, and reinforcing learning. This is consistent with a social-constructivist view in which learning is supported through interaction and scaffolding rather than left entirely to students. Peer support can broaden access to explanations, but teacher mediation remains important for maintaining task focus and ensuring that inaccurate language or text organization is not simply reproduced within the group.

For classroom practice, the findings suggest that STAD should be implemented as a structured writing routine rather than as generic group work. Teachers can organize heterogeneous teams, clarify individual responsibilities, provide a focused writing task, and ask students to discuss the sequence and language of the procedure before individual writing. Peer interaction should be directed toward concrete writing questions, such as whether the sequence is complete, whether each step is understandable, and whether the wording is precise. The teacher can then use observation and reflection to identify where groups require additional modeling or language support. This integration of cooperative structure and explicit writing guidance is likely to be more useful than relying on peer interaction alone.

Several limitations must be acknowledged. First, the study involved only one class of 28 students at one school, which limits generalizability. Second, CAR is designed for local instructional improvement and did not include a control group; therefore, alternative explanations for the cross-cycle improvement cannot be excluded. Third, the source manuscript does not provide the full writing rubric, validation evidence, scorer information, or inter-rater reliability. Fourth, the available individual score charts do not fully reconcile with the narrative mastery counts, so means and standard deviations should not be published until the raw scoring sheet is checked. Fifth, the study does not provide anonymized student text samples or criterion-level scores that would allow qualitative examination of how procedural writing changed. These limitations should be addressed in future research through validated analytic rubrics, multiple raters, component-level analysis, and transparent reporting of raw or aggregated score data.

Future studies can build on this classroom evidence in several ways. Quasi-experimental or controlled designs could compare STAD with other cooperative or teacher-led approaches, while mixed-method studies could combine writing scores with interaction analysis to show how peer talk relates to particular revisions in students' texts. Research could also examine whether STAD produces similar benefits across genres such as explanation, exposition, narrative, and

argumentation. Finally, longitudinal work would help determine whether the improvements observed during action cycles are sustained when students write independently in later units.

5. Conclusion

This classroom action research examined the use of the Student Teams-Achievement Divisions (STAD) cooperative learning model to improve procedural text writing among 28 tenth-grade students in Class X-B 3 at Senior High School. The manuscript reports an increase in classical mastery from 35.7% in Cycle I to 85.7% in Cycle II, exceeding the predetermined success criterion of 75%. The improvement was accompanied by instructional changes that included clearer group responsibilities, more active peer discussion, more systematic presentation of material, and more focused teacher guidance. These findings indicate that a structured STAD routine can be a useful classroom approach for supporting procedural text writing when cooperative interaction is combined with explicit teacher guidance and individual accountability. The contribution of the study is primarily practical and context-specific: it extends classroom-based STAD writing evidence to procedural text instruction in an Indonesian senior high school. The findings should not be generalized beyond the study context without further research, and the final publication should verify the raw score data and provide fuller information on the writing rubric, scorer reliability, participant characteristics, and ethical procedures.

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