



Enhancing Descriptive Writing through Semantic Mapping and STAD: A Quasi-Experimental Study in Indonesian EFL

Adinda Putri Anasta¹, Harpain², Yanuarius Yanu Dharmawan³
{adindaanasta@gmail.com¹, harpain@ubl.ac.id², yanuarius@ubl.ac.id³}

English Education Study Program, Universitas Bandar Lampung, Indonesia¹²³

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Abstract. Writing remains a foundational component of English language learning, particularly in academic contexts where students are expected to produce organized and coherent texts. Among various challenges faced by EFL learners, descriptive writing often proves difficult due to limited vocabulary, weak idea development, and a lack of structure. This study explores the use of Semantic Mapping in combination with Students Team Achievement Division (STAD) to improve students' descriptive writing abilities. Conducted at SMAN 1 Sumberejo, Lampung, the study involved 60 eleventh-grade students divided into an experimental group (treated with the integrated method) and a control group (taught conventionally). A quasi-experimental design was employed, incorporating pre- and post-tests to measure improvement. Statistical analysis revealed that the experimental group made significant gains ($p < .001$), while the control group's progress was minimal and not statistically meaningful ($p = .172$). Survey data further indicated that students responded positively to the treatment, citing better organization of ideas, increased vocabulary use, and a greater sense of collaboration. The findings highlight that blending visual learning with cooperative strategies can offer substantial benefits in writing classrooms. As such, the Semantic Mapping-STAD model may serve as a practical approach for teachers seeking to enhance student writing outcomes.

Keywords: Descriptive writing, Semantic Mapping, Cooperative Learning, EFL Writing Instruction, STAD strategy

1. INTRODUCTION

Writing has become an increasingly vital skill in English as a Foreign Language (EFL) instruction, especially as students are expected to master a range of written genres such as descriptive, narrative, and argumentative texts [1]-[4]. Among the four essential language skills—listening, speaking, reading, and writing—writing is widely considered the most cognitively demanding, as it requires the integration of grammar, vocabulary, organization, and coherence. In the Indonesian EFL context, writing is a core component of the national curriculum, particularly at the secondary school level, where students are expected to produce structured and meaningful texts to meet academic standards [5]. However, this expectation often clashes with reality, as students face ongoing challenges in articulating their ideas clearly and organizing them effectively due to limited vocabulary, insufficient practice, and a lack of scaffolding in writing instruction [1], [6].

Descriptive writing, in particular, demands precision in language use, vivid imagery, and coherent structure. Vocabulary mastery plays a central role in helping students convey detail and clarity. Nation in Ebedy [7] emphasized that a rich vocabulary repertoire enables learners to express specific meanings and create more engaging texts. Similarly, Afzal [8], Ayana et al. [9], and Chung & Wan [10] confirm that vocabulary knowledge is positively correlated with overall writing quality, especially when learners are required to describe people, objects, or events. Students with limited vocabulary tend to produce oversimplified and repetitive descriptions, which hinders their ability to meet expected learning outcomes.

Despite curriculum guidelines advocating balanced language instruction, many Indonesian classrooms still emphasize speaking over writing [11], [12]. This imbalance restricts students' opportunities to develop writing fluency and structural awareness. Writing, unlike speaking, is not only a productive skill but also a metacognitive one, requiring planning, drafting, revising, and editing. Researchers such as Wang et al. [13], Kim & Kim [14], and Sterling et al. [2] stress the importance of writing proficiency as a tool for academic

and professional success in a globalized world. Limited emphasis on writing in daily instruction results in students struggling to organize thoughts, apply appropriate vocabulary, and construct grammatically accurate sentences [3], [6].

Previous studies have reported common problems faced by EFL learners in their writing. Taye & Mengesha [6] and Elfiyanto & Fukuzawa [12] found that Indonesian students frequently encounter issues with sentence structure, grammar, cohesion, coherence, and spelling. More recent international research confirms these findings across other EFL contexts, where students similarly struggle with expressing ideas logically, using accurate verb forms, and constructing well-organized paragraphs [3], [9]. These widespread challenges suggest that writing instruction requires targeted interventions that address both linguistic competence and structural knowledge.

One promising instructional strategy is cooperative learning, particularly the Students Team Achievement Division (STAD) model developed by Slavin in Jamaludin & Mokhtar [15]. STAD encourages learners to work collaboratively in small groups, fostering a supportive environment for peer-to-peer instruction. Research has shown that STAD promotes greater engagement, social interaction, and academic achievement in various educational settings [16], [17], [18]. In EFL writing contexts, STAD allows students to exchange feedback, brainstorm ideas, and build confidence in writing tasks [19], [20], [21].

To further enhance writing instruction, this study also incorporates Semantic Mapping, a cognitive strategy that helps learners visually organize vocabulary and concepts related to a central theme. Semantic Mapping supports vocabulary development, idea generation, and content organization. Al-Khasawneh & AlHawamdeh [22] and Verde et al. [23] emphasize that visual mapping improves students' lexical awareness and ability to form coherent and cohesive texts. When combined with cooperative structures such as STAD, semantic mapping also becomes a collaborative tool, encouraging discussion and mutual learning [24], [25].

While prior studies have explored the benefits of Semantic Mapping and STAD separately, few have investigated their combined effect in EFL writing classrooms. Recent international studies have begun to address this gap. For instance, Cipriano et al. [16] examined the use of visual-collaborative techniques in group-based writing instruction, while Gal & Ryder [18] analyzed the role of structured peer interaction in improving writing coherence. However, the intersection of these two strategies remains underexplored, particularly in Southeast Asian contexts. This study seeks to contribute to the research gap by examining both the effectiveness and student perceptions of using Semantic Mapping through STAD to improve descriptive writing among Indonesian senior high school students [26], [27], [28].

Conducted at SMAN 1 Sumberejo, this study involved eleventh-grade EFL students and applied a quasi-experimental design to evaluate the learning outcomes of the integrated strategy. Specifically, it aims to determine whether the combination of Semantic Mapping and STAD significantly improves students' descriptive writing ability and how students perceive its implementation. By incorporating both quantitative performance measures and qualitative perception data, the study offers practical insights into learner-centered, collaborative writing instruction in EFL settings.

2. METHOD

This study employed a mixed-methods approach to address the research questions comprehensively by combining both quantitative and qualitative data. The use of mixed methods allowed for the integration of statistical evidence with students' personal perceptions, ensuring a richer understanding of the instructional intervention [1], [29], [30]. Specifically, the research followed a quasi-experimental design using a pre-test–post-test format with non-equivalent control groups [31], [32], [33], [34]. This design was chosen due to the practical limitation of not being able to randomly assign students to different classes. In contrast to true experimental designs, quasi-experiments are widely used in educational research where intact classes must be retained [35], [36]. Pre-tests were administered to both experimental and control groups before the treatment, and post-tests were conducted after the instructional intervention to determine the impact of the Semantic Mapping strategy integrated with STAD on students' descriptive writing performance.

Participants

The participants in this research were eleventh-grade students enrolled at SMAN 1 Sumberejo, who were studying under the Merdeka curriculum framework. The eleventh grade at the school consisted of eight classes, totaling approximately 240 students. From this population, 60 students were selected using cluster random sampling, which involved selecting intact classes rather than individual students. Two classes, XI F4 and XI F8, were randomly chosen and designated as the experimental and control groups, respectively. This approach was suitable for maintaining the natural classroom setting and reflected the

practical limitations of student reallocation. Importantly, all students had already been introduced to descriptive text materials prior to the study, making them appropriately prepared for the intervention.

Instruments

To collect relevant data, this study employed multiple instruments: a descriptive writing test and a student perception questionnaire. The writing test was administered twice, once before and once after the treatment period. Both the pre-test and post-test consisted of a single descriptive writing task centered on a consistent theme. Students were given 60 minutes to complete the task. Their performance was assessed using a standardized scoring rubric adapted from Brown in Wang et al. [37], which measured five key components: content (30%), organization (20%), vocabulary (15%), grammar (20%), and mechanics (15%), total in 100% [14], [38]. In addition to the writing test, a structured questionnaire was distributed to students in the experimental group following the intervention. The questionnaire was designed to capture students' attitudes, motivation, and perceived benefits of the Semantic Mapping and STAD strategies. The qualitative insights gained from this instrument helped contextualize the numerical test results and provided a fuller picture of the intervention's reception.

Data Analysis Procedure

Both quantitative and qualitative data analysis techniques were employed in this research. The quantitative data, derived from pre-test and post-test scores, were analyzed using paired samples t-tests to evaluate the improvement within and between the experimental and control groups. Descriptive statistics, including means and standard deviations, were used to summarize performance outcomes, while inferential statistics determined whether changes were statistically significant [14], [39]. For the qualitative portion, responses from the student questionnaire were examined through thematic analysis to identify common patterns and categories reflecting student engagement, learning motivation, and opinions on the teaching methods [40], [41]. This triangulated method of combining statistical results with thematic interpretation allowed for a well-rounded evaluation of both learning outcomes and students' experiences, in line with the principles of mixed-method research [24].

3. FINDINGS

This section describes the findings of a study that explored how Semantic Mapping, when combined with the Students Team Achievement Division (STAD), influences students' ability to write descriptive texts. The research was carried out using two groups of students: an experimental group that received the treatment and a control group that followed regular classroom instruction. Both groups were assessed using pre-tests and post-tests to measure their writing performance before and after the intervention.

The goal was to determine whether the use of Semantic Mapping and STAD led to meaningful improvements in students' writing skills. To do this, the study used a combination of statistical tests and descriptive data analysis. The approach allowed for a comparison of progress within each group and between the two groups.

In the first part of the analysis, the performance of each group was examined individually. For both the control and experimental groups, pre-test and post-test scores were compared using paired samples t-tests. This method helped determine whether students made any significant progress over time, regardless of the teaching method they received.

The second part of the analysis focused on comparing the two groups with each other. An independent samples t-test was used to evaluate differences in post-test scores between the experimental and control groups. This was a crucial step in identifying whether the instructional treatment had a significant impact when compared to traditional instruction.

Finally, descriptive statistics were used to support the interpretation of the results. These included measures such as the mean, standard deviation, and score range. The use of tables helped to organize the data clearly and made it easier to compare student performance across both groups. The following subsections outline the results in more detail. They begin with a breakdown of the control group's performance, followed by the outcomes observed in the experimental group, and conclude with a direct comparison of the two. This structure provides a clear picture of how the treatment affected students' descriptive writing abilities.

Control Group Results

The control group in this study consisted of 31 students who continued with their usual classroom instruction throughout the research period. They were not exposed to any specific strategies such as Semantic Mapping or the Students Team Achievement Division (STAD). This group served as a reference point to evaluate how much students could improve their descriptive writing skills through conventional teaching methods alone, without the influence of any special intervention.

To evaluate their progress, students in the control group were given two assessments: a pre-test before the instructional period began and a post-test after the teaching period concluded. The pre-test results showed an average score of 5.70 with a standard deviation of 1.28, indicating a moderate level of writing ability among the students at the start. After the instructional period, the post-test scores showed a slightly higher mean of 6.06 with a standard deviation of 1.20.

Table 1. Descriptive Statistics of the Control Group

No	Test Type	Mean	Std. Deviation	N
1	Pre-test	5.70	1.28	31
2	Post-test	6.06	1.20	31

Although there was a small increase in the average score from the pre-test to the post-test, the difference was not substantial. The mean difference of just 0.36 points suggests that students may have gained a limited understanding or familiarity with descriptive writing tasks simply through repeated exposure. This kind of improvement is not uncommon when students practice a skill over time, even if the teaching method remains unchanged.

To investigate whether this increase in scores was statistically significant or simply the result of natural variation, a paired samples t-test was conducted using SPSS software. The test produced a significance value (Sig. 2-tailed) of 0.172, which is notably higher than the commonly accepted threshold of 0.05. A significance level above 0.05 indicates that the observed improvement in scores is not statistically significant and could have occurred by chance.

In practical terms, this means that the conventional teaching methods used in the control group did not produce a measurable or meaningful impact on students' descriptive writing ability. While there may have been minor gains, these were not consistent or strong enough to confirm real improvement. The lack of significant progress underscores the need for more engaging and structured strategies to support students in developing their writing skills.

Overall, the performance of the control group provides a valuable contrast to that of the experimental group. It shows that traditional instruction alone, without targeted intervention, is insufficient for producing significant improvement in students' writing. These results highlight the importance of innovative teaching techniques, especially when addressing specific areas of difficulty such as descriptive writing.

Experimental Group Results

The experimental group was composed of 28 students who received a targeted instructional treatment that combined Semantic Mapping with the Students Team Achievement Division (STAD) approach. This integrated strategy was designed not only to improve writing outcomes but also to foster active learning through structured group collaboration. By using visual tools to organize ideas and encouraging peer discussion, the treatment aimed to strengthen both the conceptual understanding and practical application of descriptive writing skills.

Prior to the intervention, all students in the experimental group completed a pre-test to determine their baseline writing performance. The average pre-test score was 5.37, with a standard deviation of 1.42, placing the group within what would generally be considered an inadequate or below-average performance level. This initial result confirmed that students in this group faced real challenges in descriptive writing, particularly in organizing their ideas, using appropriate vocabulary, and developing content with coherence and detail.

Following the treatment, students were given a post-test to assess how their writing skills had developed over the course of the instructional period. The average post-test score rose markedly to 7.79, while the standard deviation decreased to 0.92. This increase of over 2.4 points represents a significant upward shift in performance, moving the class into the "good" proficiency category according to the grading scale used in the study. The reduction in score variability also suggests that students performed more consistently as a group after the intervention.

Table 2. Descriptive Statistics of the Experimental Group

No	Test Type	Mean	Std. Deviation	N
1	Pre-test	5.37	1.42	28
2	Post-test	7.791	0.92	28

These results clearly demonstrate the potential effectiveness of using Semantic Mapping combined with STAD to improve students' descriptive writing skills. The visual mapping helped students organize their thoughts before writing, while the cooperative learning structure encouraged peer support and accountability. Together, these elements likely contributed to the noticeable improvement in both individual scores and group consistency.

To confirm whether the increase in scores was statistically significant, a paired samples t-test was conducted comparing the pre-test and post-test scores of the experimental group. The result of this analysis produced a significance value (Sig. 2-tailed) of 0.000. Because this value is well below the threshold of 0.05, it indicates a highly significant improvement in performance that is unlikely to have occurred by chance.

The statistical findings provide robust evidence that the combined use of Semantic Mapping and STAD had a real and measurable impact on students' writing development. Not only did the students achieve higher average scores, but the tighter distribution of results in the post-test also reflects more balanced and effective learning across the class. These outcomes suggest that the instructional strategy used in the experimental group successfully addressed the common challenges students face in descriptive writing and helped foster stronger overall performance.

Comparison Between Experimental and Control Groups

To determine whether the instructional intervention produced a meaningful difference in student performance, a statistical comparison was made between the post-test scores of the experimental and control groups. An independent samples t-test was used for this purpose, as it allows for a comparison of the means of two separate groups to assess whether any observed difference is statistically significant. This step was crucial in evaluating whether the gains observed in the experimental group could be attributed to the treatment, rather than to chance or natural variation in learning.

The results of the t-test revealed a clear and measurable distinction between the two groups. The control group, which received no special instructional treatment, had an average post-test score of 6.06 with a standard deviation of 1.20. In contrast, the experimental group achieved a considerably higher average score of 7.79, with a standard deviation of 0.92. The difference in group means was 1.73 points in favour of the experimental group.

Table 3. Post-test Comparison Between Groups

No	Group	Mean	Std. Deviation	Sig. (2-tailed)
1	Control	6.06	1.20	28
2	Experiment	7.79	0.92	0.000

The significance value associated with this comparison was 0.000, which falls well below the conventional threshold of 0.05. This indicates that the difference between the two groups is highly statistically significant and unlikely to have occurred by chance. In other words, there is strong statistical evidence that the instructional method used in the experimental group had a substantial impact on students' descriptive writing performance.

This result reinforces the earlier findings observed within the experimental group. While the control group showed only a modest and statistically insignificant increase in writing ability, the experimental group demonstrated both a large improvement and a consistent pattern of performance across the class. The data strongly support the conclusion that the use of Semantic Mapping in combination with STAD not only enhanced students' understanding of the writing process but also led to real academic gains.

Taken together, these findings confirm that the instructional strategy implemented in the experimental class was both effective and reliable in improving students' ability to write descriptive texts. The clear advantage held by the experimental group over the control group underscores the importance of using structured, student-centered learning methods to address specific academic challenges.

Summary of Key Findings

The results of this study provide clear and compelling evidence regarding the impact of the instructional treatment. Each group was examined independently, and then a comparative analysis was conducted to determine whether the observed outcomes were statistically meaningful. The findings are summarized

below to highlight the core results of the study and to clarify how the data support the effectiveness of Semantic Mapping combined with STAD as an instructional strategy. First, the control group, which continued with standard classroom instruction without any intervention, showed only a slight increase in average scores from pre-test to post-test. The mean score rose from 5.70 to 6.06, indicating a marginal improvement. However, statistical analysis through a paired samples t-test revealed a p-value of 0.172, which exceeds the conventional threshold of 0.05. This suggests that the observed improvement was not statistically significant and may have occurred due to random factors or the effects of routine learning activities.

In contrast, the experimental group, which received the combined treatment of Semantic Mapping and STAD, demonstrated a substantial increase in writing performance. The average score rose from 5.37 in the pre-test to 7.79 in the post-test, marking an improvement of more than two full points. This increase was confirmed to be statistically significant, with a p-value of 0.000 ($p < .001$), strongly indicating that the instructional strategy had a real and positive effect on students' descriptive writing skills. The reduced standard deviation in the post-test also suggests more consistent performance among students in this group.

When comparing the two groups directly, the experimental group clearly outperformed the control group on the post-test. The difference in group means was 1.73 points in favor of the experimental class. The independent samples t-test confirmed that this difference was statistically significant, with a p-value of 0.000. This final analysis validates the overall effectiveness of the instructional treatment and supports the conclusion that the integration of Semantic Mapping and STAD contributed meaningfully to student learning outcomes.

Overall, these key findings demonstrate that while traditional instruction may lead to minor improvements, a structured and collaborative teaching strategy, like the one implemented in this study, produces far more significant and consistent gains. The evidence strongly supports the use of Semantic Mapping with STAD as an effective approach to enhancing students' descriptive writing ability.

4. DISCUSSION

The findings from the quantitative analysis revealed that the implementation of Semantic Mapping integrated with Students Team Achievement Division (STAD) produced a meaningful and statistically significant improvement in students' descriptive writing performance. This improvement was evident in the post-test results of the experimental group, where students demonstrated notable gains in organization, vocabulary, content, grammar, and mechanics compared to their pre-test scores. In contrast, the control group, which received conventional instruction, showed only marginal progress that lacked statistical significance. These results directly respond to the first research question and provide strong evidence that a writing instruction model that is both visually supported and collaboratively structured can produce more favorable learning outcomes in English as a Foreign Language (EFL) settings.

This enhancement in writing performance corresponds with the assertions of several recent scholars who emphasize the importance of explicit vocabulary instruction and structured pre-writing activities in supporting language learners. Al-Khasawneh and AlHawamdeh [22], for instance, note that when students are given tools to visually represent and cluster vocabulary, their ability to express ideas in writing becomes clearer and more coherent. Verde et al. [23] further explain that semantic-based strategies help students make connections between known and new language, promoting deeper learning and retention. In the case of descriptive writing, which inherently demands precision and imagery, these strategies are especially valuable. In this study, Semantic Mapping allowed students to systematically generate and arrange relevant vocabulary before drafting their texts, making it easier for them to structure their writing logically and with appropriate lexical choices.

Beyond vocabulary development, the collaborative nature of STAD contributed significantly to student progress. By working in small, heterogeneous groups, students were able to engage in mutual learning processes such as sharing ideas, offering feedback, and collectively solving writing challenges. This kind of cooperative engagement led to improved peer accountability and fostered a more supportive learning environment. Slavin in [15], who developed the STAD model, argued that cooperative learning increases student motivation and achievement by assigning shared responsibility for group outcomes. In line with this, Cipriano et al. [16] and Gal and Ryder [18] observed that structured group work not only enhances academic performance but also encourages students to take greater ownership of their learning.

In this research context, students in the experimental group appeared to benefit from both the cognitive advantages of visual mapping and the social support provided through group collaboration. The relatively narrow spread in their post-test scores also suggests that the strategy helped bridge performance gaps among students of varying abilities. High-performing students were able to extend their skills further, while lower-

achieving students gained confidence and improved their foundational writing competencies. This inclusive outcome highlights the potential of combining visual and cooperative strategies to address diverse learner needs in the EFL classroom. Overall, the integration of Semantic Mapping with STAD not only enhanced students' descriptive writing abilities but also demonstrated how pedagogical innovation can address common instructional challenges in secondary education.

Students' Perceptions and Engagement

The second research question examined students' perceptions and emotional responses to the use of Semantic Mapping, which was integrated with STAD in descriptive writing instruction. Analysis of the data collected through the perception questionnaire revealed that the majority of students responded positively to the combined strategy. Many participants expressed that the approach not only helped them organize their ideas more effectively but also boosted their confidence during the writing process. These reflections highlight the importance of instructional strategies that support both cognitive development and emotional well-being in language learning environments.

Students frequently commented on the clarity and ease provided by the semantic maps when generating and categorizing vocabulary before writing. This pre-writing activity allowed them to approach the task with a better understanding of what to write and how to structure their ideas. In addition, the collaborative structure of STAD was cited as a motivating factor. Being part of a supportive group helped learners feel more accountable, encouraged peer learning, and created a sense of shared responsibility for success. These social interactions promoted deeper engagement, which is consistent with findings from Wahab and Astri [42], who reported that visual tools combined with cooperative learning improve learner autonomy and classroom interaction.

Similar observations were made by Tang and Huth [25], who noted that students involved in cooperative visual learning frameworks tend to show greater classroom participation and ownership of the learning process. In this study, students particularly valued the opportunity to exchange ideas in a peer setting, clarify their misunderstandings through group discussions, and revise their writing based on real-time feedback from their teammates. Such activities not only enhanced their understanding of descriptive writing conventions but also strengthened their collaborative and interpersonal skills.

Furthermore, the strategy appeared to benefit students who were typically reluctant to participate in writing tasks. Several students who were initially quiet or disengaged began contributing more actively when they were placed in groups and given specific roles within the STAD structure. This transformation aligns with the work of Zieher et al. [28] who argue that writing instruction is most effective when it is framed as both a social and affective process. In emotionally supportive environments, students are more likely to take intellectual risks, experiment with language, and build self-confidence through collaboration.

In summary, the qualitative data support the notion that integrating Semantic Mapping with STAD not only enhances writing performance but also creates a learning environment in which students feel empowered, engaged, and motivated. These outcomes suggest that writing instruction should consider the emotional and social needs of learners in addition to the cognitive demands of the task.

Comparison with Existing Research

The findings of this study are consistent with a broad range of both national and international literature on writing instruction and language learning strategies. In the Indonesian educational context, researchers such as Ariyanti and Fitriana [43] and Hasan and Marzuki [44] have long highlighted persistent difficulties among EFL students in areas such as vocabulary usage, idea organization, grammar accuracy, and overall writing fluency. These challenges have been particularly evident in classrooms that rely on traditional, teacher-centered instruction, where students receive limited support in pre-writing planning and collaborative development. This study reinforces those observations by demonstrating that students in the control group, who experienced conventional instruction, made only marginal improvements in their descriptive writing abilities. The data suggest that existing approaches may not be sufficient to meet the diverse linguistic and cognitive needs of learners in EFL classrooms.

Internationally, recent scholarship has increasingly pointed toward the value of instructional strategies that combine visual, cognitive, and cooperative learning methods. Cipriano et al. [16] emphasize the benefits of using structured peer collaboration to improve writing performance, while Bäck et al. [24] advocate for integrating visual scaffolds, like concept mapping, to enhance vocabulary acquisition and conceptual clarity. The current study extends this body of research by confirming the practical impact of combining Semantic Mapping with STAD, particularly in the Southeast Asian context. Despite the proven success of both strategies independently, few empirical studies have tested their combined effect within Indonesian or similar EFL environments. This study, therefore, fills a notable gap, offering evidence that

multimodal instruction not only enhances learning outcomes but also fosters student engagement and confidence.

Furthermore, the research aligns with insights from Rincón-Flores et al. [26] and Troussas et al. [27], who have explored the use of integrated pedagogical models in multilingual classrooms. Their findings highlight the necessity of blending individual and group-centered strategies to promote deeper learning and higher student motivation. In this study, the integration of visual mapping with cooperative group work proved particularly effective in addressing the unique challenges faced by Indonesian senior high school students. The positive outcomes observed here suggest that EFL educators should consider broader, interdisciplinary approaches to writing instruction that incorporate both cognitive tools and collaborative methods. Such approaches not only improve academic performance but also contribute to building a more inclusive and interactive learning environment.

Pedagogical and Practical Implications

The findings of this study have several important implications for teaching English as a Foreign Language, particularly in relation to writing instruction in secondary school contexts. The results demonstrate that combining Semantic Mapping with Students Team Achievement Division (STAD) provides a structured yet flexible model for improving students' writing abilities. Specifically, this integration helps address persistent challenges in vocabulary use, organization of ideas, and student engagement—areas commonly reported as weak in EFL classrooms. By employing Semantic Mapping as a consistent pre-writing strategy, teachers can guide students in visually organizing their thoughts and connecting new vocabulary to prior knowledge, which enhances lexical access and coherence in their written work.

Furthermore, embedding these visual strategies within cooperative learning models such as STAD promotes active collaboration and shared responsibility. Students benefit from working with peers to generate content, give and receive feedback, and revise their texts. This process not only supports lower-performing learners through peer scaffolding but also creates a more interactive and emotionally supportive classroom environment. The peer accountability fostered by STAD has the added benefit of increasing motivation and reducing writing-related anxiety, allowing students to become more confident and self-directed in their learning. These social and emotional dimensions are essential for holistic language development and align with research emphasizing the importance of affective engagement in writing instruction.

From a practical standpoint, this instructional approach is well-suited to EFL contexts where writing has traditionally received less emphasis compared to speaking or reading skills. The strategy is adaptable across diverse classroom settings and does not require costly materials or technology, making it accessible to a wide range of schools. Moreover, the combined use of Semantic Mapping and STAD aligns with the principles of the Merdeka curriculum, which encourages student-centered learning, collaboration, and autonomy. By implementing this method, educators can foster an inclusive learning environment that supports all students in developing stronger writing competencies while also nurturing their interpersonal and critical thinking skills.

Overall, this research provides a replicable instructional model that can inform future classroom practices and curriculum planning. It encourages educators to adopt innovative, research-based strategies that integrate both cognitive and social learning dimensions, thus offering a balanced and effective approach to improving descriptive writing in EFL classrooms.

5. CONCLUSION

This study examined the impact of integrating Semantic Mapping with Students Team Achievement Division (STAD) on improving descriptive writing among EFL students in an Indonesian secondary school. The findings showed that the combined strategy led to significant improvements in students' writing performance, supported by both statistical evidence and positive student perceptions. By incorporating structured vocabulary planning with cooperative group learning, the approach effectively addressed common writing challenges such as limited vocabulary, weak idea organization, and low learner engagement. These results suggest that writing instruction should not rely solely on individual practice but benefit from methods that integrate visual aids and peer collaboration to support both the cognitive and emotional aspects of learning. From a pedagogical perspective, this research contributes to the current understanding of how pre-writing strategies and cooperative models can be effectively combined to promote meaningful learning in EFL contexts. It aligns with the broader shift toward learner-centered

education as promoted in the Merdeka curriculum and offers practical solutions for enhancing writing instruction with minimal resource requirements. The study advances the field by presenting a replicable instructional model that can be adapted for other genres of writing and diverse educational contexts. Future research should explore its implementation across different grade levels, text types, and longer instructional periods to assess the sustainability and scalability of its impact. Ongoing investigations are also encouraged to examine how these strategies influence other aspects of language learning, such as reading comprehension and critical thinking development.

Although this study was conducted in a regular classroom setting, ethical procedures were carefully observed to ensure the protection of participants. Prior to the implementation of the research, formal permission was obtained from the school authorities at SMAN 1 Sumberejo. Informed consent was also secured from the students involved, who were briefed on the objectives of the study, the voluntary nature of their participation, and the confidentiality of their responses. All data collected was anonymized to preserve student privacy and used solely for research purposes. No personal identifiers were recorded or reported, and students were assured that their academic standing would not be affected by their participation or performance.

While the findings of this study suggest that the integration of Semantic Mapping and STAD can significantly enhance students' descriptive writing ability, certain limitations must be acknowledged. The study was conducted in a single public high school in Lampung with a relatively short treatment period of four sessions, which limits the generalizability of the results. Furthermore, the use of a quasi-experimental design with non-random assignment may have introduced selection bias, even though initial group differences were statistically controlled. Future research could address these limitations by extending the duration of the treatment to observe long-term effects, including follow-up assessments to measure retention. Comparative studies across different regions, school types, or grade levels would provide broader insights into the applicability of the integrated strategy. In addition, exploring the effectiveness of Semantic Mapping and STAD in other writing genres, such as narrative, argumentative, or expository texts, may further expand understanding of their pedagogical value.

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