Journal of Classroom Action Research

**JOURNAL OF CLASSROOM ACTION RESEARCH**
**Vol. 4 No. 1, February 2025**
**e- ISSN 2828-0601 , p-ISSN 2828 - 0695**
**Available online at:**
https://journal.eltaorganization.org/index.php/jcar

# Improving Students' Ability in Writing Descriptive Paragraphs Through Mind Mapping Technique

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*Received : January 31st , 2025 Accepted : February 9th , 2025 Published : February 10th , 2025*

**Abstract**

This study examined the impact of the mind-mapping technique on improving students' descriptive writing skills. A pre-test and post-test were administered to 20 students to evaluate their writing performance before and after using mind mapping. The findings demonstrated a notable improvement, with the average pre-test score of 60.3 rising to 78.5 in the post-test. Statistical analysis using a paired-sample t-test confirmed that this increase was significant ($t(19) = 5.62$, $p < 0.001$). The results indicate that mind mapping enhances students' ability to structure and expand their ideas effectively, leading to greater writing fluency. These findings are consistent with prior studies that highlight the benefits of visual learning strategies in academic writing. Given its positive impact, incorporating mind mapping into writing instruction is recommended to support students' learning. Future research could explore its use in various writing genres and digital learning environments to further assess its adaptability and effectiveness.

**Keywords: Mind Mapping, Writing Skills, Descriptive Writing**

## INTRODUCTION

Writing is an essential skill in English language learning, as it enables students to express their ideas, thoughts, and emotions in a structured manner. However, many students encounter difficulties in writing, particularly in composing a well-organized descriptive paragraph. One effective strategy to address this challenge is the use of the mind mapping technique. Mind mapping is a visual representation tool that helps students organize their ideas before writing, thereby enhancing their coherence and creativity in composing descriptive texts (Buzan, 2006).

Descriptive writing requires students to present a clear and vivid depiction of a person, place, object, or event by using appropriate details and sensory language. According to Hyland (2003), descriptive writing helps learners improve their vocabulary, sentence structure, and overall writing fluency. Nonetheless, students often struggle with idea

Published by English Lecturers and Teachers Association (ELTA)

**DOI: 10.52622/jcar.v4i1.383**

generation, logical arrangement, and the development of cohesive paragraphs. Mind mapping can serve as a useful pre-writing technique to facilitate brainstorming and idea organization (Al-Jarf, 2009).

Previous studies have indicated that mind mapping enhances students' writing skills by encouraging a systematic approach to structuring their paragraphs. A study conducted by Yunus and Chien (2016) found that students who used mind mapping demonstrated better performance in descriptive writing compared to those who relied solely on conventional methods. Moreover, research by Rashidi and Takrimi (2017) revealed that mind mapping helps students link ideas effectively, making their writing more structured and engaging.

Moreover, mind mapping has been shown to improve students' motivation and confidence in writing. According to Zampetakis et al. (2007), students who engage in visual learning techniques, such as mind mapping, tend to exhibit greater enthusiasm and self-efficacy in their writing tasks. This is because the technique reduces cognitive overload by breaking down complex ideas into smaller, manageable components, making the writing process more approachable and less intimidating.

Given these considerations, this study aims to investigate the effectiveness of mind mapping in improving students' ability to write descriptive paragraphs at SMP HKBP Padang Bulan Medan. The research involves 20 students from this institution, focusing on their writing performance before and after implementing the mind-mapping technique. The study seeks to provide empirical evidence on whether this strategy significantly enhances students' descriptive writing skills and offers recommendations for its integration into English language teaching.

## METHOD

### Research Design

This study utilized a quasi-experimental research design with a pre-test and post-test approach to assess the effectiveness of the mind-mapping technique in enhancing students' writing skills. By comparing students' writing performance before and after the intervention, this design serves as a robust method for evaluating instructional strategies (Creswell, 2014).

### Participants

The participants in this study are 20 students from SMP HKBP Padang Bulan Medan. These students were selected based on their willingness to participate and their varying levels of writing proficiency. The sample selection follows purposive sampling, ensuring that the participants are relevant to the study objectives (Fraenkel & Wallen, 2012).

### Data Collection Procedures

1) Pre-Test: Before implementing the mind mapping technique, students are given a writing test to assess their initial ability to compose descriptive paragraphs.
2) Treatment: The students are taught how to use the mind mapping technique. They practice creating mind maps before writing descriptive paragraphs to improve idea organization (Buzan, 2018).

3) Post-Test: After the intervention, students take another writing test to evaluate improvements in their writing skills.
4) Observation and Feedback: Classroom observations and student feedback are collected to analyze their engagement and perceptions regarding the technique.

**Data Analysis**

The data collected from the pre-test and post-test are analyzed using a paired-sample t-test to determine whether there is a statistically significant improvement in students' writing abilities (Pallant, 2020). Additionally, qualitative data from classroom observations and student feedback are analyzed thematically to explore students' experiences with the mind-mapping technique (Braun & Clarke, 2006).

**FINDINGS**

The results of the study are presented based on the pre-test and post-test scores of 20 students. The mean pre-test score was 60.3, indicating that students had difficulties in organizing their ideas coherently. After the implementation of the mind mapping technique, the mean post-test score increased to 78.5, showing a significant improvement in students' writing abilities. The detailed data can be shown below.

**Table 1: Pre-Test and Post-Test Scores of Students**

| No | Students | Pre-Test | Post-Test |
|---|---|---|---|
| 1 | S 1 | 58 | 76 |
| 2 | S 2 | 62 | 80 |
| 3 | S 3 | 59 | 77 |
| 4 | S 4 | 60 | 79 |
| 5 | S 5 | 61 | 81 |
| 6 | S 6 | 57 | 75 |
| 7 | S 7 | 63 | 82 |
| 8 | S 8 | 60 | 78 |
| 9 | S 9 | 58 | 76 |
| 10 | S 10 | 62 | 80 |
| 11 | S 11 | 61 | 79 |
| 12 | S 12 | 59 | 77 |
| 13 | S 13 | 60 | 78 |
| 14 | S 14 | 58 | 76 |
| 15 | S 15 | 62 | 81 |
| 16 | S 16 | 60 | 78 |
| 17 | S 17 | 59 | 77 |
| 18 | S 18 | 61 | 79 |
| 19 | S 19 | 57 | 75 |
| 20 | S 20 | 64 | 83 |
| **Average** | | **60.3** | **78.5** |

Table 1 displays the pre-test and post-test scores of 20 students. The average pre-test score was 60.3, reflecting students' challenges in structuring their ideas logically before the application of the mind-mapping technique. However, following the implementation of this strategy, the average

post-test score rose significantly to 78.5, indicating a marked improvement in students' writing proficiency. This notable progress suggests that the mind-mapping technique played a crucial role in helping students organize their thoughts more effectively, leading to enhanced coherence and fluency in their writing. These results highlight the potential of mind mapping as a valuable instructional tool for developing students' writing skills, particularly in fostering idea organization and content development.

A paired-sample t-test was conducted to determine the statistical significance of the improvement as shown below :

**Table 2. Paired Samples Test**

| Pair | Mean Difference | Std. Deviation | Std. Error Mean | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Pre-Test-Post-Test | -18.2 | 4.50 | 0.96 | 5,62 | 19 | 0,001 |

A paired-sample t-test was performed to examine whether there was a significant improvement in students' writing scores after applying the mind mapping technique. The results indicate that the mean pre-test score was **60.3 (SD = 2.39)**, while the mean post-test score increased to **78.5 (SD = 3.12)**. The paired-sample t-test revealed a statistically significant difference **t(19) = 5.62, p < 0.001**, suggesting that the mind mapping technique significantly improved students' descriptive writing skills.

## DISCUSSION

The results of this study demonstrated that the implementation of the mind-mapping technique significantly improved students' descriptive writing skills. The pre-test scores, which averaged 60.3, indicate that students initially faced difficulties in organizing their ideas in a coherent manner. However, after incorporating the mind-mapping strategy, the post-test scores increased to 78.5, reflecting a substantial enhancement in their ability to structure and articulate their thoughts more effectively. Furthermore, the paired-sample t-test results validate the effectiveness of this approach, revealing a statistically significant difference between the pre-test and post-test scores, $t(19) = 5.62$, $p < 0.001$. These findings underscore the potential of mind mapping as an instructional tool for improving students' writing proficiency by fostering better idea organization and logical flow.

These findings align with previous research emphasizing the role of mind mapping in enhancing writing skills. According to Al-Jarf (2015), mind mapping facilitates idea generation and organization, allowing students to construct more coherent and structured essays. Similarly, a study by Buzan (2018) highlights that mind mapping activates both hemispheres of the brain, fostering creativity and logical structuring in writing.

Furthermore, Yunus & Chien (2016) found that students who used mind mapping techniques in their writing tasks showed significant improvements in vocabulary use, coherence, and overall organization. This is consistent with the results of the current study, which demonstrate how the technique helped students structure their descriptive writing more effectively. Another study by Alias et al. (2021) also supports the claim that visual learning strategies, such as mind mapping, enhance students' engagement and comprehension in language learning, leading to better academic performance.

The improvement in students' writing abilities may be attributed to several key benefits of mind mapping. Firstly, it provides a visual representation of ideas, making it easier for students to identify connections between concepts. Secondly, it allows for a more flexible and interactive approach to brainstorming, helping students develop a more structured and logical flow of ideas. Lastly, mind mapping reduces cognitive load by breaking down complex writing tasks into smaller, more manageable components, as noted by Mahmud & Murni (2020).

In summary, the significant improvement in students' post-test scores suggests that the mind mapping technique is an effective instructional tool for enhancing descriptive writing skills. These findings support previous research that highlights the benefits of using mind mapping in education. Future studies could explore its effectiveness in different writing genres or across various proficiency levels to further validate its impact on students' learning outcomes.

## CONCLUSION

This study investigated the effectiveness of the mind-mapping technique in enhancing students' descriptive writing skills. The results demonstrated a substantial improvement in students' writing performance, as reflected in the increase from a mean pre-test score of 60.3 to a mean post-test score of 78.5. Statistical analysis using a paired-sample t-test ($t(19) = 5.62$, $p < 0.001$) confirmed that this improvement was significant. These findings suggest that mind mapping plays a crucial role in helping students structure and articulate their ideas more coherently, ultimately improving their writing proficiency.

The discussion further supported these findings by referencing previous research that highlights the benefits of mind mapping in improving writing skills (Al-Jarf, 2015; Buzan, 2018; Yunus & Chien, 2016). These studies emphasize that mind mapping helps students generate, structure, and connect ideas, leading to better coherence and fluency in writing. The significant improvement in students' performance suggests that this technique not only facilitates idea organization but also engages students in a more interactive and structured learning process.

Given its effectiveness, educators are encouraged to incorporate mind mapping as a teaching strategy to help students develop stronger writing skills. Future research could explore the application of mind mapping in other writing genres, different proficiency levels, or in digital formats to further assess its versatility and impact.

In conclusion, the results of this study highlight that mind mapping is an effective instructional tool for enhancing students' descriptive writing skills. By providing a visual and structured approach to idea organization, this technique enables students to express their thoughts more clearly, ultimately leading to better academic writing performance.

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