

Education Quarterly Reviews

Silalahi, E. B. R. (2025). Improving Students' Ability in Reading Descriptive Paragraphs Through Mind Mapping Technique. *Education Quarterly Reviews*, 8(2), 48-55.

ISSN 2621-5799

DOI: 10.31014/aior.1993.08.02.578

The online version of this article can be found at: https://www.asianinstituteofresearch.org/

Published by: The Asian Institute of Research

The *Education Quarterly Reviews* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.



ASIAN INSTITUTE OF RESEARCH



The Asian Institute of Research Education Quarterly Reviews Vol.8, No.2, 2025: 48-55 ISSN 2621-5799 Copyright © The Author(s). All Rights Reserved DOI: 10.31014/aior.1993.08.02.578

Improving Students' Ability in Reading Descriptive Paragraphs Through Mind Mapping Technique

Elfrida BR. Silalahi¹

¹ English Diploma Department, Faculty of Social and Political, Merdeka University of Malang, Malang City, East Java 65146, Indonesia, email: elfrida.silalahi@unmer.ac.id. ORCID: https://orcid.org/0009-0005-0004-1149

Abstract

This study explores the effectiveness of the Mind Mapping technique in improving students' ability to read and comprehend descriptive paragraphs. Conducted in a classroom setting at SMP HKBP Padang Bulan Medan, Indonesia, the research used a mixed-methods approach, incorporating both quantitative and qualitative data collection techniques. The study revealed that Mind Mapping not only enhanced students' ability to understand the content of descriptive paragraphs but also increased their engagement and active participation in reading activities. The results provide compelling evidence of the benefits of Mind Mapping as an instructional tool to improve students' reading skills. This study suggests that visual representation of information using Mind Mapping techniques can aid enhance cognitive processing, making it an effective tool for English as a Foreign Language teachers who aim to improve their students' comprehension abilities.

Keywords: Descriptive Paragraphs, EFL Students, Mind Mapping, Reading Comprehension, Visual Learning Techniques

1. Introduction

1.1 Introduce the Problem

Reading is a crucial skill in learning any language, particularly in English, where students are required to comprehend a variety of texts for academic and personal purposes (Ali et al., 2022; Smith et al., 2021; Wilson, 2016). In Indonesia, many students face challenges when trying to read and understand descriptive paragraphs. Descriptive writing presents a unique set of difficulties, as it demands that readers visualize and retain intricate details about a subject (Abbas, 2021; Ningrum et al., 2023; Subandowo & Sárdi, 2023). For English as a Foreign Language (EFL) students, the need to comprehend these details while also understanding their relationship to one another can often be overwhelming. Without the proper strategy to manage this process, students frequently struggle to organize and recall key information effectively, making the comprehension of descriptive texts a challenge (Le et al., 2024; Mhlongo et al., 2023).

With the continuous expansion of education, new pedagogical methods with the potential of enhancing learners' reading comprehension play a vital role in supporting them to achieve educational success. They include the use of the Mind Mapping technique used to improve writing and cognitive ability but not frequently used to facilitate reading comprehension, particularly for description paragraphs. This research aims to explore the ability of Mind Mapping in improving the reading and comprehension ability of students in descriptive texts. There is a need to close this literature gap and study how visual aids like Mind Mapping can aid in the comprehension process by helping students better organize their knowledge and recall things.

Mind Mapping, originally developed by Tony Buzan in the 1970s, has been widely recognized for its potential in various educational settings, particularly in improving cognitive skills such as memory, creativity, and critical thinking (Buzan, 2006). Numerous studies have demonstrated the effectiveness of Mind Mapping in improving students' writing and organizational skills, as well as in fostering creativity in academic tasks (Karminah et al., 2017; Laila et al., 2023; Mustika et al., 2025). However, there is limited research on the application of Mind Mapping in improving reading comprehension, particularly about descriptive paragraphs.

Studies like those conducted by Yusrah and Fitria (2024) have shown that Mind Mapping aids in organizing ideas and improving creative thinking, yet most studies focus on writing skills or content creation rather than reading comprehension. This gap in the literature provides an opportunity to explore how Mind Mapping can be adapted as a reading strategy, particularly for EFL students who struggle with processing descriptive content. This research will investigate whether Mind Mapping can be used effectively to improve students' ability to read and understand descriptive paragraphs, addressing the existing gap in the literature.

1.2 Research Problem

The problem that this research aims to address revolves around the reading difficulties faced by EFL students, particularly in understanding descriptive paragraphs. This problem is critical to address now because as the educational landscape grows increasingly digital and information-heavy, students must develop stronger reading skills to navigate a variety of academic texts. The challenges of reading comprehension have become even more pronounced as students are exposed to larger volumes of information in a variety of formats (Jensen et al., 2024; Smith et al., 2021).

There are several reasons why this research is necessary. The need to improve students' reading comprehension has become more urgent as they are increasingly required to engage with complex academic materials that often include descriptive and detailed information (Alghonaim, 2020). Additionally, the rapid advancement of technology in education necessitates innovative teaching strategies that can help students process and retain information effectively (du Plooy et al., 2024; Haleem et al., 2022).

By improving students' ability to comprehend descriptive texts, this research has the potential to enhance their academic performance, leading to better educational outcomes. Additionally, Al Roomy (2022) state that stronger reading skills will benefit students in their professional lives, as the ability to process and understand detailed information is essential in a wide range of fields.

This study contributes to reading comprehension strategy literature, by examining the lesser-explored area of Mind Mapping and its impact on reading comprehension of descriptive paragraphs. The findings would have pedagogical implications and provide new insight into the use of visual aids to facilitate comprehension in the EFL classroom.

While many studies have been conducted on the efficacy of Mind Mapping in writing and brainstorming, there are few studies conducted on how it can be utilized in reading comprehension, especially in descriptive text. This study bridges this gap by investigating the utilization of Mind Mapping to help EFL learners improve their reading proficiency through descriptive paragraphs.

The study will provide valuable insights into how Mind Mapping can facilitate reading comprehension by visually organizing information, which may lead to new approaches to teaching EFL students. Additionally, the research will explore the specific benefits of Mind Mapping in understanding detailed and descriptive information, offering a fresh perspective on reading instruction strategies.

1.3 Research Focus

This research focuses on the effectiveness of the Mind Mapping technique in improving the reading comprehension of descriptive paragraphs among EFL students. The study will examine how Mind Mapping can help students identify key details, understand the relationships between them, and synthesize the information in a coherent manner. The focus is specifically on descriptive texts, which present unique challenges due to their detail-oriented nature.

1.4 Research Aim and Research Questions

The primary aim of this research is to assess whether the Mind Mapping technique can significantly improve students' ability to read and comprehend descriptive paragraphs. By integrating Mind Mapping into the reading process, the research seeks to determine if students can better organize and retain the information in descriptive texts.

The research questions that guide this study are: (1) How does the use of Mind Mapping impact students' ability to identify key details in descriptive paragraphs? (2) To what extent does Mind Mapping help students organize and synthesize the information presented in descriptive texts? (3) What are students' perceptions of Mind Mapping as a tool for improving their reading comprehension skills? (4) How does the improvement in reading comprehension through Mind Mapping affect students' overall academic performance?

1.5 Contribution to the Field

This study contributes to the field of language education by extending the use of Mind Mapping beyond writing and brainstorming to include reading comprehension. The results will provide valuable insights for EFL teachers seeking to improve students' reading skills, especially in the context of descriptive texts. By examining the potential of Mind Mapping to improve students' reading comprehension, this study highlights a novel approach to teaching reading that can be integrated into English language curricula.

2. Method

2.1 Research Design

The research was designed as a Classroom Action Research (CAR), a participatory and reflective approach that allows teachers to evaluate and improve their own teaching methods. CAR consists of iterative cycles of planning, action, observation, and reflection, which enable teachers to make adjustments based on the results of each cycle (Gogus, 2012). This method is particularly effective in educational research because it allows for continuous improvement and fine-tuning of instructional strategies based on real-time feedback.

2.2 Population and Sampling

The study was conducted with 20 eighth-grade students at SMP HKBP PADANG BULAN Medan, North Sumatera, Indonesia. These students were selected based on their challenges with reading comprehension, particularly with descriptive paragraphs. The small class size enabled the researcher to provide more personalized attention to students and conduct in-depth observations throughout the study.

2.3 Data Collection Instruments

Data for this study was collected through quantitative and qualitative measures. Quantitative data was collected through pre- and post-tests on the reading comprehension ability of students. The tests were designed to assess students' ability to pick out key details from descriptive paragraphs and organize the information in a coherent format. The qualitative data was collected through observation sheets, questionnaires, and diary entries. The observation sheets allowed the researcher to track students' performance and participation during the lessons, while the questionnaires captured students' attitudes towards the Mind Mapping approach. With the diary notes, the researcher commented on the teaching process and implemented adjustments as needed.

2.4 Data Analysis

The data collected in this study, both quantitative and qualitative, were analyzed using a descriptive technique. The quantitative data were derived from the pre-test and post-test scores of the students, while the qualitative data were obtained from observation sheets, questionnaires, and diary notes.

3. Results

3.1 Quantitative Data Analysis

The quantitative results collected from the pre-test and post-tests indicate a clear improvement in students' reading comprehension skills after the implementation of the Mind Mapping technique. The pre-test scores (Test I) provided baseline data, while the post-test scores from both Cycle I (Test II) and Cycle II (Test III) highlighted measurable growth in students' reading abilities (see Table 1).

Student's Initial	Tost I (Dro Tost)	Test II (Post-Test	Tost III (Post Tost Cycle II)
Student's Initial	Test I (Fre-Test)	Cycle I)	Test III (Post-Test Cycle II)
YS	50	55	63
HS	53	58	66
TT	55	62	69
NG	60	67	75
AA	64	69	77
KS	66	71	79
DH	66	71	81
DS	67	72	82
W	68	78	83
LB	68	78	83
AS	72	80	83
JD	75	80	83
CS	76	81	86
TS	79	84	89
BM	82	85	90
RH	82	85	90
JS	85	88	90
WM	88	91	93

Table 1: Displays the students' scores across all three tests.

As seen in the table, the students' scores improved progressively after each cycle. The average score of the class in the pre-test (Test I) was 69.65. After the Mind Mapping technique was introduced and applied in Cycle I, the class average increased to 74.95. The final post-test (Test III), conducted at the end of Cycle II, showed an even greater improvement, with an average score of 80.55. These improvements reflect a significant enhancement in students' reading comprehension of descriptive paragraphs.

In addition to individual score improvements, the percentage of students meeting the minimum mastery score (KKM) of 75 increased from 40% (8 students) in the pre-test to 55% (11 students) in the first post-test (Cycle I) and reached 80% (16 students) in the final post-test (Cycle II).

3.1 Qualitative Data Analysis

Qualitative data were gathered through observation sheets, questionnaires, and diary notes. These data provided valuable insights into students' engagement, perceptions, and attitudes toward the Mind Mapping technique.

The observation sheet revealed that students were more active and engaged in the reading process when Mind Mapping was applied. In the initial phase of the study, many students appeared passive and hesitant to contribute during reading activities. However, after being introduced to the Mind Mapping technique, students showed increased enthusiasm. They actively participated in group discussions and were more confident in expressing their thoughts and ideas about the descriptive paragraphs they read.

The researcher's diary entries captured the same finding. Initially, students could not understand the form of descriptive paragraphs. But while practicing to create Mind Maps further, they could arrange their ideas better. They also felt more in control of the information and more capable of linking ideas. Some of the students reported that the Mind Mapping technique helped them visualize and organize the descriptive details, hence easier to understand the content of the paragraphs.

The survey administered at the end of Cycle II reflected overwhelmingly positive responses from the students. When questioned if they had found Mind Mapping helpful in improving their reading comprehension, 75% of the students agreed, and 56% strongly agreed. Most of the students reported that the method helped them identify key ideas and organize the information in a logical sequence, which helped them better understand the descriptive texts.

4. Discussion

The results of this study confirm that Mind Mapping is an effective technique for improving students' reading comprehension of descriptive paragraphs. The significant improvement in both quantitative scores and qualitative feedback suggests that Mind Mapping not only enhances students' ability to identify key details in a text but also encourages them to organize and synthesize this information more effectively.

One of the most significant findings of this study is the positive effect of visual learning on reading comprehension, particularly through the use of Mind Mapping. Visual learning, as supported by dual-coding theory (Paivio, 2006), suggests that information presented in both verbal and visual formats enhances learning by engaging different cognitive pathways. Mind Mapping, as a visual tool, helps students break down complex information into more manageable chunks. It allows learners to visually organize and structure information, which aids in memory retention and comprehension by facilitating better encoding of information. By creating a diagram that connects key ideas and details, students are better able to understand how different pieces of information are related to one another. This concept aligns with cognitive load theory (Barbieri & and Rodrigues, 2025; Chen et al., 2023), which posits that cognitive load is minimized when information is organized and chunked in a way that reduces unnecessary cognitive strain.

Furthermore, the application of Mind Mapping is particularly beneficial in understanding descriptive texts, where the details often need to be remembered and connected in a logical sequence. Descriptive texts require readers to grasp not only individual pieces of information but also how these details interrelate to form a cohesive understanding. By visualizing these connections, students can more easily recall and relate the specific details of the text. Additionally, Vygotsky's social constructivist theor supports this idea, emphasizing that learning is facilitated when students can interact with information in meaningful ways, such as through visual representation, which allows for more active engagement and deeper cognitive processing (Yaseen et al., 2025). Therefore, the

use of Mind Mapping enhances students' ability to comprehend, organize, and recall information, particularly in tasks that require connecting multiple details within a larger context.

As cognitive learning theories suggest, organizing information visually helps learners process and retain the material more effectively (AlShaikh et al., 2024; Castro-Alonso et al., 2021). In this study, Mind Mapping acted as a cognitive scaffold that allowed students to visually structure the information they were reading, making it easier for them to identify relationships between details and improve their recall of the material.

Another key finding is the increase in student engagement and motivation. In the initial stages of the study, many students appeared disengaged during reading activities. However, after incorporating Mind Mapping into the reading process, students became more actively involved in discussions and were more enthusiastic about reading. This aligns with Buzan, (2006), who argues that Mind Mapping not only enhances cognitive skills but also increases students' motivation by providing a creative and interactive way to engage with the material.

The use of Mind Mapping also encouraged students to think critically about the text. Instead of passively reading the material, students were encouraged to actively engage with it by identifying key ideas and organizing them in a meaningful way. This active engagement is crucial for developing strong reading comprehension skills, as it helps students build a deeper understanding of the content (Archila et al., 2024; Sagita & Sagita, 2024).

The collaborative nature of Mind Mapping further contributed to students' success in reading comprehension. During group activities, students were able to share their ideas and perspectives, which helped them gain a broader understanding of the text. Collaborative learning has been shown to enhance comprehension by allowing students to exchange ideas and clarify their understanding of the material (Mafarja et al., 2023, 2024). In this study, group work was particularly beneficial because it allowed students to work together to create a collective Mind Map, which reinforced their understanding of the descriptive paragraphs.

Author Contributions: Conceptualization, E. B. S.; Methodology, E. B. S..; Software, E. B. S..; Validation, E. B. S; Formal Analysis, E. B. S..; Investigation, E. B. S..; Resources, E. B. S..; Data Curation, E. B. S..; Writing – Original Draft Preparation, E. B. S..; Writing – Review & Editing, E. B. S..; Visualization, E. B. S..; Supervision, E. B. S..; Project Administration, E. B. S..; Funding Acquisition, E. B. S."

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Informed Consent Statement/Ethics approval: Not applicable.

References

- Abbas, K.-D. A. (2021). Factors Influencing Students Reading Comprehension Difficulties Amidst The Use Of Modular Distance Learning Approach In Mindanao State University Sulu – Senior High School. Open Access Indonesia Journal of Social Sciences, 4(6), 581–602.
- Al Roomy, M. A. (2022). Investigating the Effects of Critical Reading Skills on Students' Reading Comprehension. *Arab World English Journal*, 13(1), 366–381. https://doi.org/10.24093/awej/vol13no1.24
- Alghonaim, A. S. (2020). Impact of Related Activities on Reading Comprehension of EFL Students. *English Language Teaching*, 13(4), 15. https://doi.org/10.5539/elt.v13n4p15
- Ali, Z., Palpanadan, S. T., Asad, M. M., Churi, P., & Namaziandost, E. (2022). Reading approaches practiced in EFL classrooms: a narrative review and research agenda. *Asian-Pacific Journal of Second and Foreign Language Education*, 7(1), 28. https://doi.org/10.1186/s40862-022-00155-4
- AlShaikh, R., Al-Malki, N., & Almasre, M. (2024). The implementation of the cognitive theory of multimedia learning in the design and evaluation of an AI educational video assistant utilizing large language models. *Heliyon*, 10(3), e25361. https://doi.org/10.1016/j.heliyon.2024.e25361
- Archila, P. A., Ortiz, B. T., & Truscott de Mejía, A.-M. (2024). Beyond the Passive Absorption of

Information: Engaging Students in the Critical Reading of Scientific Articles. *Science & Education*. https://doi.org/10.1007/s11191-024-00507-1

Barbieri, C. A., & and Rodrigues, J. (2025). Leveraging cognitive load theory to support students with mathematics difficulty. *Educational Psychologist*, 2025, 1–25. https://doi.org/10.1080/00461520.2025.2486138

Buzan, T. (2006). *Mind Mapping*. BBC Active. http://www.tonybuzan.com/about/mind-mapping/

Castro-Alonso, J. C., de Koning, B. B., Fiorella, L., & Paas, F. (2021). Five Strategies for Optimizing Instructional Materials: Instructor- and Learner-Managed Cognitive Load. *Educational Psychology Review*, 33(4), 1379–1407. https://doi.org/10.1007/s10648-021-09606-9

Chen, O., Paas, F., & Sweller, J. (2023). A Cognitive Load Theory Approach to Defining and Measuring Task Complexity Through Element Interactivity. *Educational Psychology Review*, *35*(2), 63. https://doi.org/10.1007/s10648-023-09782-w

du Plooy, E., Casteleijn, D., & Franzsen, D. (2024). Personalized adaptive learning in higher education: A scoping review of key characteristics and impact on academic performance and engagement. *Heliyon*, 10(21), e39630. https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e39630

Gogus, A. (2012). Action Research on Learning. In N. M. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 69–72). Springer US. https://doi.org/10.1007/978-1-4419-1428-6_488

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. Sustainable Operations and Computers, 3(1), 275–285. https://doi.org/https://doi.org/10.1016/j.susoc.2022.05.004

Jensen, R. E., Roe, A., & Blikstad-Balas, M. (2024). The smell of paper or the shine of a screen? Students' reading comprehension, text processing, and attitudes when reading on paper and screen. *Computers & Education*, 219, 105107. https://doi.org/https://doi.org/10.1016/j.compedu.2024.105107

- Karminah, S., Nurkamto, J., & Martono, M. (2017). Enhancing Students' Writing Skill by Using Mind Mapping. English Education Journal, 5(2), 172–178.
- Laila, I., Sulistyo, T., & Apriliani, I. L. (2023). Enhancing Students 'Writing Skill's using Mind Mapping Strategy. Jurnal Pembelajaran, Bimbingan, Dan Pengelolaan Pendidikan, 3(7), 630–636. https://doi.org/10.17977/um065v3i72023p630-636
- Le, H. Van, Thi Ai Duyen, N., Dinh Hieu Ngan, L., Phuong Uyen, N., & and Nguyen, T. T. A. (2024). Unveiling critical reading strategies and challenges: a mixed-methods study among English major students in a Vietnamese higher education institution. *Cogent Education*, 11(1), 2326732. https://doi.org/10.1080/2331186X.2024.2326732
- Mafarja, N., Mohamad, M. M., & Zulnaidi, H. (2024). Effect of Cooperative Learning With Internet Reciprocal Teaching Strategy on Attitude Toward Learning STEM Literacy. SAGE Open, 14(3), 21582440241280900. https://doi.org/10.1177/21582440241280899
- Mafarja, N., Mohamad, M. M., Zulnaidi, H., & Fadzil, H. M. (2023). Using of reciprocal teaching to enhance academic achievement: A systematic literature review. *Heliyon*, 9(7), e18269. https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e18269
- Mhlongo, S., Mbatha, K., Ramatsetse, B., & Dlamini, R. (2023). Challenges, opportunities, and prospects of adopting and using smart digital technologies in learning environments: An iterative review. *Heliyon*, 9(6), e16348. https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e16348
- Mustika, M., Yeh, C. Y. C., Cheng, H. N. H., Liao, C. C. Y., & Chan, T.-W. (2025). The Effect of Mind Map as a Prewriting Activity in Third Grade Elementary Students' Descriptive Narrative Creative Writing With a Writing E-Portfolio. *Journal of Computer Assisted Learning*, 41(2), e70006. https://doi.org/https://doi.org/10.1111/jcal.70006

Ningrum, R. W., Hamamah, H., Sahiruddin, S., & Rohmah, Z. (2023). Academic Writing Difficulties for Indonesian Students in Pursuing Postgraduate Studies Abroad. *Premise: Journal of English Education*, 12(1), 93. https://doi.org/10.24127/pj.v12i1.5271

Sagita, M., & Sagita, E. S. (2024). Enhancing English Language Learning through Digital Mind Mapping : A Comprehensive Approach for Reading Comprehension. *KIRANA : Social Science Journal*, 1(3), 142–151.

Smith, R., Snow, P., Serry, T., & Hammond, L. (2021). The Role of Background Knowledge in Reading Comprehension: A Critical Review. *Reading Psychology*, 42(3), 214–240. https://doi.org/10.1080/02702711.2021.1888348

Subandowo, D., & Sárdi, C. (2023). Academic essay writing in an English medium instruction environment: Indonesian graduate students' experiences at Hungarian universities. *Ampersand*, *11*, 100158. https://doi.org/https://doi.org/10.1016/j.amper.2023.100158

Wilson, K. (2016). Critical reading, critical thinking: Delicate scaffolding in English for Academic Purposes (EAP). *Thinking Skills and Creativity*, 22, 256–265.

https://doi.org/https://doi.org/10.1016/j.tsc.2016.10.002

Yaseen, H., Mohammad, A. S., Ashal, N., Abusaimeh, H., Ali, A., & Sharabati, A.-A. A. (2025). The Impact of Adaptive Learning Technologies, Personalized Feedback, and Interactive AI Tools on Student

Engagement: The Moderating Role of Digital Literacy. *Sustainability*, *17*(3). https://doi.org/10.3390/su17031133 reb. V. & Eitria, V. P. (2024). Using Mind Manning in Improving Students' Writing Skills of F.

Yusrah, Y., & Fitria, Y. P. (2024). Using Mind-Mapping in Improving Students' Writing Skills of Eleventh Grade at MAS Yaspen Nurul Huda Serapuh. *Journal of Applied Linguistics*, 4(1), 123–129. https://doi.org/10.52622/joal.v4i1.244