



**THE EFFECT OF APPLYING MINDOMO APPLICATION TOWARD
STUDENTS' WRITING SKILL ON DESCRIPTIVE TEXT AT TENTH
GRADE**

(A Quasi-Experimental Research at SMA Al-Irsyad Tegal in Academic Year
2023/2024)

RESEARCH PROJECT

**Submitted as Partial Fulfilment of the Requirements for the Degree of
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By

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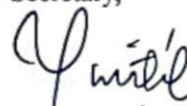
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STATEMENT OF ORIGINALITY

I state that my research project entitled "The Effect of Applying Mindomo Application Toward Students' Writing Skill on Descriptive Text at Tenth Grade (A Quasi-Experimental Research at SMA Al-Irsyad Tegal in Academic Year 2023/2024) is definitely my own work.

In writing this Research Project, I do not make plagiarism or citation which is inconsistent with scientific ethics prevalent in the scientific community.

I am completely responsible for the originality of the content of this Research Project. Other opinions or findings included in this Research Project are quoted or cited adjusted to the ethical standard.

Tegal, 31 July 2024

The Writer



Tarisna Dwi Rahmasari

MOTTO AND DEDICATION

MOTTO

- “Instead of blaming yourself for not being a genius, it's better to believe in your limitless strength. Continue on the path you've chosen, even though it will be difficult and painful” (Oikawa Tohru)
- "Allah does not say that this life is easy. However, Allah promises that indeed, with hardship comes ease.” (QS. Al-Insyirah:5-6)

DEDICATION

I dedicated this research project for:

- Allah SWT always gives e blessing, love oportunity, health, and mercy to complete ths research.
- My beloved parents Mr. Sutrisno and Mrs. Sutarilah and my sistes Ulfa Azizah Putri who always gives me everything I need in my life, especially always give me support and pray in every single day.
- My honourable advisors, Yulia Nur Ekawati, S.Pd, M.Pd and H.Sumartono, M.Pd who always help and enlighten me from the beginning until the completion of this research.
- My dearest friends Lutfiatul Maulidah and Leallatul Sa'diyah who always cheer me up and help me completing this research.
- All people who support me in all my condition.

PREFACE

In the name of Allah SWT, The Most Gracious and Merciful, Praised and gratitude to Allah SWT who has given the mercies and blessing so the research project which discusses about "*The Effect of Applying Mindomo Application Toward Students' Writing Skills on Descriptive Text at Tenth Grade*" can be finished.

This research project is presented as partial fulfillment of the requirements for the degree of Sarjana Pendidikan (S1) in English Department of the Faculty of Teacher Training and Education, Pancasakti University Tegal.

The researcher consider that this research project can be finished because of advice and guidance from several parties. Therefore, the researcher would like express her appreciation and sincere thanks to:

1. Dr. Taufiqullah, M.Hum as the the Rector of Pancasakti University Tegal
2. Dr. Yoga Prihartin, M.Pd as the Dean of the Teacher Training and Education Faculty, Pancasakti University Tegal.
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6. Dicky Adhi Prabowo, S.Pd, as a English teacher of SMA Al-Irsyad Kota Tegal who help and guide me to do my research.
7. All teacher and staff of SMA Al-Irsyad Kota Tegal who have been helpful and friendly during my research.
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9. Last but not least, I want to thank myself. I want to thank myself for believing in me, for doing all this hard work, for having no days off, for never quitting, for trying to do more right than wrong, and for being me at all times.

The writer recognizes that this research is still not perfect. Therefore, feedback and suggestions are required to improve this research project. The writer expects that this research project will contribute to the development of English language teaching. The writer apologizes sincerely for all the flaws, shortcomings, and limits in this research project, and I pray that Allah Subhanahu Wa Ta'ala will bless the lecturers in the English Education Program at the University of Pancasakati Tegal for their generosity.

ABSTRACT

Rahmasari, Dwi Tarisna. 2024. 1620600041: “*The Effect of Applying Mindomo Application toward Students’ Writing Skills on Descriptive Text at Tenth Grade*”. Research Project. Strata I Program, Faculty of Teacher Training and Education, Pancasakti University Tegal. The First Advisor is Yulia Nur Ekawati, S.Pd, M.Pd and the second advisor is H. Sumartono, M.Pd.

Keywords: *Mindomo Application, Writing, Descriptive Text*

The study aims to find out the effect of the Mindomo application on students' writing skills in writing descriptive texts, and to find out students' responses to the use of the Mindomo application in writing descriptive texts.

This study used a quasi-experimental research design. The instrument used is tests and questionnaire. The population consisted of 128 tenth-grade students from Al-Irsyad High School. The researcher employed purposive sampling with a two-group design (experimental group and control group). The sample was 64 students, with 32 students in the experimental group and 32 students in the control group. The experimental group was taught using the Mindomo application, while the control group was taught without it. After administering a pre-test and teaching for eight sessions, the researcher conducted a post-test for both the experimental and control groups.

The results of the Paired Sample T-Test show a significance value (2-tailed) of 0.000, which is less than 0.05, indicating the effect of using the Mindomo application in the experimental class. This demonstrates that the Mindomo application positively influences students' ability to write descriptive texts. Additionally, 78% of students indicated greater interest in using the Mindomo app to improve their writing skills, according to their responses to the questionnaire. Based on these findings, the researcher suggests that English teachers use the Mindomo app as a learning tool to enhance students' writing skills, as it has shown a positive effect.

ABSTRAK

Rahmasari, Dwi Tarisna. 2024. 1620600041: “*Pengaruh Penerapan Aplikasi Mindomo terhadap Keterampilan Menulis Teks Deskriptif Siswa Kelas Sepuluh*”. Proyek Penelitian. Program Strata 1, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Pancasakti Tegal. Pembimbing pertama adalah Yulia Nur Ekawati, S.Pd, M.Pd, dan pembimbing kedua adalah H. Sumartono, M.Pd.

Kata kunci: *Mindomo Application, Writing, Descriptive Text*

Penelitian ini bertujuan untuk mengetahui pengaruh aplikasi Mindomo terhadap kemampuan menulis siswa dalam menulis teks deskriptif dan untuk mengetahui respons siswa terhadap penggunaan aplikasi Mindomo dalam menulis teks deskriptif.

Penelitian ini menggunakan desain penelitian kuasi-eksperimental dengan pendekatan tes. Populasi terdiri dari 128 siswa kelas sepuluh dari SMA Al-Irsyad. Peneliti menggunakan purposive sampling dengan desain dua kelompok (kelompok eksperimen dan kelompok kontrol). Ukuran sampel adalah 64 siswa, dengan 32 siswa dalam kelompok eksperimen dan 32 siswa dalam kelompok kontrol. Kelompok eksperimen diajarkan menggunakan aplikasi Mindomo, sedangkan kelompok kontrol diajarkan tanpa menggunakan aplikasi tersebut. Setelah memberikan pre-test dan mengajar selama delapan sesi, peneliti melakukan post-test untuk kedua kelompok eksperimen dan kontrol.

Hasil uji Paired Sample T-Test menunjukkan nilai signifikansi (2-tailed) sebesar 0,000, yang lebih kecil dari 0,05, menunjukkan pengaruh penggunaan aplikasi Mindomo di kelas eksperimen. Ini menunjukkan bahwa aplikasi Mindomo memiliki pengaruh positif terhadap kemampuan siswa dalam menulis teks deskriptif. Selain itu, 78% siswa menunjukkan minat yang lebih besar dalam menggunakan aplikasi Mindomo untuk meningkatkan keterampilan menulis mereka, menurut respons mereka terhadap kuesioner. Berdasarkan temuan ini, peneliti menyarankan agar guru bahasa Inggris menggunakan aplikasi Mindomo sebagai alat pembelajaran untuk meningkatkan keterampilan menulis siswa, karena telah terbukti memberikan efek positif.

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CHAPTER I

INTRODUCTION

This chapter presents and discusses the fundamental aspects of the research, such as the background of the problems, the identification of the problem, the limitation of the study, statement of the problems, objectives of the research, and significances of the study.

1.1 Background of the problems

In Indonesia, there are still many people who use local languages as a language of communication to communicate with each other rather than using English. However, in the era of globalization, the use of English is very important in daily life. The role of English in the world as an international language is very important in various areas. One of them is in the educational field. Children have been starting English lessons since elementary school (Emancipated Curriculum). The decision changed during the 2013 curriculum, with students starting English lessons in Junior High School. English is the first language of communication in the world. English is a very important language in the world for someone who is lacking in learning. This is because learning English takes a variety of exercises ranging from the use of vocabulary and grammar to mastering English well. Learning a new language takes time and effort. For the use of English as a foreign language (EFL), English is usually used as a teaching tool or just a means of communication for non-native English speakers. English teaching in this model is design to help non-native speakers acquire skills and knowledge of English

comprehension. Nordquist (2020), argues that English as a second language refers to a particular approach to language teaching designed for people whose first language is not English. In other words, EFL refers to the teaching of English language skills to people who live in non-English speaking environments.

Non-English speaker face one of the difficult challenges in their writing. Writing is one of the four skills in English. Writing is an activity of pouring an idea, feeling in the form of writing. According to Mayusandra (2023), writing is a skill that enables the indirect, productive, and expressive communication of ideas and thoughts. Writing skills is difficult skill because need to pay attention to various components such as grammar and vocabulary. Differences in language structure, ways of expressing thoughts, writing styles, and other different cultural factors greatly affect foreign language writing (Benson & Heidish in Ahmed, 2016). The difficulties in writing make students sometimes feel confused in composing their writing, so the message conveyed cannot be acceptable to the reader. In writing, students are presented with various writing components such as grammar, vocabulary, and punctuation to make good writing (Aminatun & Oktaviani, 2019) Writing is not an easy activities to do. Students need to know some appropriate steps or methods so that students are more capable of mastering writing, especially in English.

Based on the researcher's observations at SMA Al-Irsyad, particularly in the tenth grade, students find writing to be a challenging skill. According to Mayusandra (2023), students consider writing a difficult subject because they need to focus on various aspects such as ideas, concepts, vocabulary, and grammar. Many

students do not understand grammar and vocabulary well. The researcher observed that students have ideas for writing but do not know how to start. Teachers' techniques are also not engaging, making it difficult for students to express their ideas before writing a text. As a result, many students struggle to articulate their ideas in writing, which shows that their writing skills are still low. Teachers usually direct students to write long texts, which makes it hard for them to identify the points they want to write about. Students often write just to convey their thoughts without paying attention to grammatical structure and vocabulary, which makes it difficult for readers to understand their writing. According to Pertiwi, et al. (2018), students struggle because they are confused about focusing on the topic to be developed. Therefore, teachers need to be aware of how they can help students improve their writing skills in English.

Mindomo application is an application with the concept of mind mapping. Mind mapping is a technique that is used by writing the important points in it first, then elaborating it into broader points. With the advancement of technology, mind mapping techniques are no more used manually or using paper. Nowadays, mind mapping techniques are more often used using mind mapping applications. Students can utilize Mindomo as one of the electronic mind mapping software during the learning process. According to Mayusandra (2023), Mindomo is an android application that allows you to create mind maps to visually express ideas. The advantage of this application is its ability to provide a large number of features that can be used for free by users to create mind maps. This makes it an attractive

alternative option as it gives its users wide access to developing mind mapping. This is considered more effective than mind mapping manually.

The concept of Mindomo application is very appropriate to use, considering that students are easier to remember and organize a text and reading if the reading is written in an interesting way. Mindomo application has benefits for students to better understand and have an interest in writing. According to Buzan (2010), the Mindomo application can help students by promoting creative thinking and bridging important ideas in focused areas. The method of use which is easy to understand also becomes one of the reasons the researcher choose to use the Mindomo application.

In this study, the researcher chose descriptive text and Mindomo application to increase students' writing ability. Descriptive text is a text that includes a broad description of an object that is being observed. Descriptive text makes students become more creative in describe something they observe and put it in writing. According to Nurfidoh and Kaeviati (2021), descriptive text is a type of writing used to describe something, such s a specific place, person, or object based on the physical condition. It means that, descriptive text aims to provide a detailed description to help readers easily understand the subject. The purpose of this study is to find out whether the positive effect of the Mindomo application on students' writing skills on writing descriptive text.

1.2 Identification of the problems

Based on the background, some problems that can be identified are:

1. Writing is a difficult skill in English and requires a technique or method to help make it easier.
2. Student commonly struggle with comprehending grammar.
3. Students who are not interested in writing.

1.3 Limitation of this study

Some of the problems mentioned in the statement above can help the researcher to limit the problems. The researcher provides limitations and focuses on the effect of using Mindomo application on students' writing ability in writing descriptive text. The researcher choose grade X students of Al-Irsyad Tegal High School in the academic year 2023/2024.

1.4 Statement of the problems

Based on the explanation above, the researcher presents the problem, namely:

1. How is the effect of applying the Mindomo application towards students' writing skill on descriptive text?
2. How do students respond to the use of the Mindomo application in writing descriptive text?

1.5 Objectives of the research

Based on the explanation above the research, the research objectives is:

1. To find out the effect of using the Mindomo application on students' writing skills on writing descriptive text.
2. To find out students' responses to the use of the Mindomo application in writing descriptive text.

1.6 Significance of the research

This research is expected to give both theoretical and practical benefits as follows:

1.6.1 Theoretical Significances

The results of this study are expected to provide benefits and can develop the teaching and learning process in improving students' descriptive text writing skills by using the Mindomo Application.

1.6.2 Practical Significances

The results of this study are expect to contribute:

a. For teachers

For teachers, Mindomo application can be one of the strategies to improve students' writing skills. By using mind mapping, students are able to understand the task and work on it in an organized manner. This approach can contribute to a more engaging and effective learning experience.

b. For students

Mindomo application can be a great tool to improve students' writing skills to make it more comprehensible and organized. It also allows students to be more creative in their writing.

c. For researcher

Researcher have knowledge and experience on how to improve students' writing skills by applying Mindomo application. Researcher can develop various methods and techniques to carry out teaching and learning activities to improve students' writing skills.

CHAPTER II

REVIEW OF RELATED THEORIES, THEORITICAL FRAMEWORK, AND HYPOTHESIS

This chapter presents previous studies, related theoretical review, theoretical framework, and hypotheses. Several researchers who have conducted relevant research review of related to writing difficulties.

2.1 Previous Studies

Several researchers have conducted studies related to the use of the Mindomo application in learning.

The study titled "The Use of Mindomo Software to Improve the Logical Development of EFL Learners' Writing" by Bitu Naghmeh (2019) demonstrates that the Mindomo application enhances students' writing skills and is effective in improving students' writing abilities. This study aimed to determine the effect of using Mindomo software on the logical development of writing skills in Iranian EFL learners. Thirty intermediate female English learners from the Shokuh Institute in Tabas were selected and divided into two groups: a control group and an experimental group. Each group took an initial test and a final test, and the results were compared to measure the impact.

The study titled, "Students' Response Toward the Implementation of Mindomo in Writing Descriptive Text at the Seventh Grade in Cimahi" by Annisa Novianti (2021), investigates how seventh-grade students in Cimahi respond to using Mindomo for writing descriptive texts. With a sample of 33 students and employing descriptive qualitative methods, this research found that 81.80% of students responded positively, reflecting their enthusiasm throughout the learning process.

The aspect of attention achieved the highest score, indicating a heightened interest in Mindomo. However, the low scores in confidence and satisfaction point to persistent issues with self-esteem and writing anxiety. Meanwhile, the next study titled "Digital Mind Mapping as a Technique in Teaching Writing: The Use and Response" by Tazkiyatunnafs Elhawwa (2022). This study investigated the use of digital mind mapping in teaching writing and found that Mindomo facilitated the simplification of complex ideas and enhanced students' creativity. Collectively, these studies provide a comprehensive view of the advantages and challenges associated with using Mindomo in writing education.

The study titled "Application of Digital Mind Mapping (Mindomo) in Improving Weak Students' Narrative Writing Performance" by Lavanya Vejanya (2022), This study investigates the improvement in students' narrative writing skills using the mind map technique. Sixteen students were selected through purposive sampling. The research tools included pre-test scores, post-test scores, and semi-structured interviews. Descriptive and statistical analyses using SPSS showed a significant improvement in scores from pre-test ($M = 8.19$, $SD = 2.562$) to post-test ($M = 13.81$, $SD = 3.124$), with $t(15) = -9.893$, $p = 0.005$. This indicates that the mind map technique effectively enhanced the students' writing skills.

The study titled "Mindomo: Digital Mind Mapping in Elementary Level ESL Reading Skills," authored by Denish Sevakumaran, Melor Md. Yunus, and Jamaludin Badushah (2023), highlights the effectiveness of the Mindomo app in enhancing student learning. The research found that students favored using Mindomo during their lessons, as it helped them better understand reading texts.

The researchers strongly endorse the use of Mindomo, noting that it not only makes learning more enjoyable and interactive but also fosters student creativity. Specifically, 18 students (60%) agreed that the tool allowed them to express themselves more innovatively during reading lessons. The study concludes that Mindomo is highly effective in promoting learning.

The study titled “Perceptions of Language Learners toward the Use of Traditional vs. Digital Mind Mapping Techniques in English Writing Classes” by Azizeh Chalak and Vahideh Rastgoo collected data through questionnaires and interviews to gauge how students perceive mind mapping. The results show that participants had a positive view of mind mapping, particularly the digital version. The study found that mind mapping helps students organize their writing and improve their writing skills, making it a useful tool for English learners who want to better understand and plan their writing topics. These findings offer valuable insights for both teachers and students on using mind mapping in writing instruction.

The research from Agintayani (2022) "Project Based Learning Assisted by Mind mapping Method in Improving English Text Writing Skills." The use of Project Based Learning combined with mind mapping to enhance students' descriptive writing skills in English is currently underutilized. To improve this, a learning model that actively engages students is needed. Teachers play a crucial role in selecting effective models. Project Based Learning with Mindmapping is well-suited for teaching students how to create products, as it aligns with Constructivist theory, allowing students freedom to experiment and revise their work. This

approach has proven to boost students' writing skills by 50%, compared to 30% before the intervention. Thus, using Project Based Learning with Mindmapping significantly improves students' descriptive writing abilities.

Based on Yen Duong's research, titled "The Effects of Online Mind Mapping on the Cognitive Outcomes of Students and Their Perceptions in the Collaborative Pre-writing Stage". The study integrated mind mapping into the course for the treatment group, with data collected through a pre-survey, questionnaire, post-test, class assignment, course work inventory, and final writing exam grades. The result showed a significant relationship between understanding digital mind mapping and improved brainstorming and organization. While there were no significant differences in idea elaboration and organization between the treatment and control groups, the treatment group had slightly higher mean useful, with 80% of interviewed students expressing positive attitudes toward online mind mapping and a desire to continue using it.

The study titled "The Implementation of Digital Mind Mapping in Writing Descriptive Text" by Amala Naifah (2023), The purpose of this study was to explore students' perceptions of using the Mindomo application. The researcher investigated the application of digital mind mapping techniques in teaching descriptive qualitative research. This research focuses on implementing digital mind mapping techniques in junior high schools in Karawang using a qualitative descriptive method. The results indicate that mind mapping is an effective learning tool for helping students understand material concepts by simplifying and streamlining the processes of recording, summarizing, and organizing ideas. This

aligns with Tony Buzan's theory, and nearly all participants believed that digital mind mapping should be used as one of the strategies in writing classes.

The study titled “The Influence of Digital Mind Mapping Technique to Increase Students' Writing Skills” by Pera Kartikasari (2024), The research aimed to assess if digital mind mapping improved students' descriptive writing skills and identify which aspect saw the most improvement. Conducted with 28 first-year students at SMA Tri Sukses Natar, the study used a one-group pre-test and post-test design and analyzed the results with a paired sample t-test. Findings revealed a significant increase in writing skills, with pre-test scores rising from 67.39 to 77.07 and a notable gain of 9.68 points. The largest improvement was in content, which saw a gain of 4.8. The study concludes that digital mind mapping effectively enhances descriptive writing skills and suggests using a projector to better explain the technique in class.

The study titled “The Effectiveness of Using Mindomo as a Pre-Writing Tool in Improving Writing Scores Among ESL Students” by Nurhuda Mohamad Nazri, Melor Md Yunus, and Diyanatul Mardhiah Abdul Shukor (2023), Most research on mind mapping focuses on traditional pen-and-paper methods, with limited studies on digital mind maps' benefits for ESL students' writing skills. This study investigates the effectiveness of Mindomo, an online mind-mapping tool, in improving the writing scores of 60 ESL students in a Competency English Course at a private university in Selangor. Using a pre-test and post-test design with a paired t-test, the study found a significant increase in writing scores, with a t-value

of -2.315 and a p-value of 0.037 ($p < 0.05$). The results indicate that Mindomo effectively enhances students' writing performance.

Several researchers have conducted research in writing skills.

Cariesa Tirta Kencana's research (2021), titled "The Use of Instagram To Improve Students' Writing Skills in Explanation Text for Eleventh Grade Students," found that Instagram effectively enhances writing skills. Using a pre-experimental quantitative method, 32 students from a senior high school in Gresik showed significant improvement in their post-test scores (79.56) compared to their pre-test scores (67.97), as indicated by a T-test score of -9.991. Similarly, Evyta Tri Handayani's (2020) study, "Students' Point of View on the Use of Whatsapp Group to Evaluate Writing Ability," used a descriptive qualitative method with 37 English Education students and found that WhatsApp groups positively impact writing skills. Both studies demonstrate the effectiveness of social media platforms like Instagram and WhatsApp in improving students' writing abilities, suggesting that integrating these tools into education can be beneficial.

The study titled "Improving Students' Writing Skills in Recount Text Using Teaching Media Pictures and Learning Interest" by Laela Komala Susilawati (2021) examines how teaching media and learning interest impact students' writing skills in recount texts. With a sample of 30 respondents, the data was collected through tests and analyzed using a two-way ANOVA. The results show that teaching media significantly improves writing skills, with a significance value of 0.000 (less than 0.05) and an F-value of 87.444. Similarly, learning interest also significantly affects writing skills, with a significance value of 0.000 and an F-value

of 46.751. However, there is no significant interaction between teaching media and learning interest affecting writing skills, as shown by a significance value of 0.380 (greater than 0.05) and an F-value of 0.778.

The study entitled “ The Effect of Mind Mapping Technique on Students Writing Skills” by Jusmin HJ Wahid (2023), show that mind mapping technique is an effectively help students overcome problems like nervousness and lack of confidence, improving their writing ability. It also helps students organize their ideas systematically, making them easier to understand. The result show a significant difference in the T-test scores and mean values between the experimental and control classes. In the experimental class, the T-test score was 3.0, with a mean of 28.25. in the control class, the T-test score was 3.0, but the mean was 25.00.

Based on the research entitled “The Use of Dropbox to Improve Students’ Writing Skill on Recount Text in SMAN 10 Kendari” dropbox can improve students writing skill. The data was analyzed using paired sample T-test on SPSS 23 to find out whether H1 is accepted or rejected. The results of this study showed that there was a significant increase between the pre-test and post-test scores from 69.72 to 79.6. based on the pre-test and post-test scores, students experienced an increase, in addition, the results of the paired sample T-test showed that H1 was accepted . This can be seen from the significant value of $a. \rho (0.000) < 0.05$ which means H1 is accepted and H0 is rejected.

The difference between previous research and in this research in several key aspects. Most of the previous studies using the Mindomo application focused on

different types of texts, such as explanation texts and recount texts, or even other subject areas like physics and mathematics. For instance, Muhammad Aldi Bagustha Utama's (2023) research utilized explanation texts, while Laela Komala Susilawati's (2021) study focused on recount texts. This study identifies a gap in exploring the use of the Mindomo application specifically for descriptive texts. Previous research was conducted in various contexts, including high schools in Iran, Slovakia, and Malaysia, each with different geographical and demographic backgrounds. This study, however, focuses on tenth-grade students in secondary schools in Indonesia, potentially presenting a different educational and cultural background compared to previous research participants.

2.2 Review of Related Theories

2.2.1 Definition of Writing

Writing is a skill that must be learned as part of language in order for learners to produce written language and connect with others in an effective way. Writing is giving information or ideas through writing or appropriate symbols. Writing requires a medium such as paper or in the current era, digital media is needed. Writing is used to express one's ideas or ideas through paper or text. According to Suriamaharja as cited in Maulina Azmi (2018), argues that writing is putting graphic symbols that describe a language that is understood by someone, then can be read by others who understand the language and its graphic symbols someone, then it can be read by other people who understand the language and its graphic symbols. According to Wahid and Sudirman (2023), Writing involves conveying messages and ideas through text, providing information to the readers. Writing can

also be said to be expressing our feelings, because by writing, a person will be open and honest in expressing his heart (Setyowati as cited in Titin Kustini, 2023).

Writing skills are different from other skills. Writing skills are not acquired "naturally", but must be learned and practiced seriously (Budinuryanta et al, 1997: 12.1). Writing is a special skill because not many people are interested in writing. Writing skills become unpopular skills because it requires concentration and good understanding to convey the content in the text. According to Abbas (2006), writing skills are the ability to express ideas, opinions, and feelings to other parties through written language. In writing, it is not just expressing ideas, but it must also follow other elements such as reviewing the vocabulary used, grammar, and proper sentence structure. This is also confirmed by a statement from Zemach and Rumisek (2005) who say that writing is more than stringing together words. In writing, it is necessary to attend to several important things. The use of incorrect grammar will make writing incomprehensible and can make it sound unfamiliar with the content being discussed. Based on the statements of the researchers, it can be concluded that writing is an activity in which it aims to convey something by paying attention to the grammatical arrangement in the writing.

The conclusion of the text is that writing is an essential language skill that enables individuals to convey ideas, information, or emotions through written text. It requires a medium, such as paper or digital media, and involves the use of graphic symbols that others can understand. Writing is a specialized skill that is not acquired naturally but must be learned and practiced diligently. It involves not only expressing ideas but also attending to other elements such as vocabulary, grammar,

and proper sentence structure. Therefore, writing is an activity aimed at communicating something while paying careful attention to grammatical accuracy and structure to ensure the message is clearly understood.

2.2.2 Steps of Writing

In writing, a good writer is a writer who is able to convey his writing to readers. In writing, it is also necessary to attend to each stage so that the writing can be made properly. According to Dalman as cited in Tantri Febriana (2023), the stages of writing are divided into three parts, namely: pre-writing, writing, and post-writing.

a. Pre-writing

At this steps, the focus is on finding a topic that will be discussed. In this prewriting process, the writer is expected to be able to prepare things that will later be written such as; finding information and formulating problems. At this point, the writer also needs to pay attention to the writing that will be used so that the writing can be easily understood by the reader. According to Jacobs as cited in Pera Kartikasari (2024), in writing there are five elements that must exist to make good writing, namely content, organization, vocabulary, language use, mechanic. After these elements have been obtained, the writing will enter the next stage, the writing stage.

b. Writing

At the writing step, a topic, purpose, and subject matter have been determined, and then the writer is able to write. At the writing step, it is necessary to develop the points that have been determined at the beginning

and then elaborate them to become a paragraph. It should be noted that each type of text has a different structure.

c. **Post-writing**

At this point, the writing is finished but still needs improvement such as checking for wrong words, sentences, or spelling. It is important to remember to make revisions in advance if there is anything that needs to be corrected.

Based on the explanation above, Good writing involves three key stages: pre-writing, writing, and post-writing. In the pre-writing stage, the writer chooses a topic, gathers information, and considers the purpose, audience, clarity, unity, and coherence. During the writing stage, these ideas are developed into structured paragraphs according to the text type. Finally, in the post-writing stage, the writer reviews and corrects any errors. This process ensures that the writing is clear, organized, and easy to understand.

2.2.3 Descriptive Text

a. Definition of Descriptive Text

Descriptive text is one type of text. Descriptive text is presented to students during their junior high school years. Descriptive text is text that describes a place, object, or person in detail. According to Kosasih as cited in Ariyana (2020), argues that descriptive text involves the writer's attempt to furnish specific details about the subject matter under discussion in writing. In descriptive text, the writer must be able to describe something being described so the reader feels just seeing the object being described even though they have never known it before. Mahsun as

cited in Mustawa Siregar (2023), argues that, descriptive text is a text that has a social purpose to describe an object or object individually based on its physical characteristics. According to Pera (2024), Descriptive text serves the social purpose of providing detailed descriptions of various places, people, or objects, explaining their characteristics and qualities. A good description accurately reflects the object being observed. Descriptive text contains an explanation or description of something that is being observed.

Based on the explanation above, descriptive text is text that aims to explain and describe an object. A good descriptive text is a text that can make the reader feel what the author writes.

b. Generic Structure of Descriptive Text

According to Troyka as cited in Yunia (2023), explains that writing is divided into four types, namely (1) exposition, (2) description, (3) narration, and (4) argumentation. Each text is organized based on the appropriate structure. In each type of text, the main structure has a different type of structure. According to Kosasih and Endang (2018), the structure of description text is arranged in 2 parts, namely identification and description parts.

The following is the main structure of descriptive text:

1. Identification

In this structure, it explains the object to be described.

2. Description

This section contains a description of the explanation given by the identification structure. In the description section, writers are expected to be able to make clear

descriptions so that readers know the purpose of the text that is being written and delivered.

The conclusion from the explanation above is that descriptive text only has two main structures. This can be verified by previous research which said that there are two descriptive text structures, namely identification and description.

c. Language Features of Descriptive Text

In writing a reading text, it is necessary to pay attention to several of the language features. Each language features in the reading text is different. The language features according to Endang and Kosasih (2018), are as follows:

- a. Using a pronoun that refers to the name of the object.
- b. Using a copula word.
- c. Using material verbs or verbs that show the action of an object, animal, person, or event.
- d. Using emotive adjectives.

Based on the explanation above it is crucial to consider various language features, as each type of text has unique characteristics. According to Endang and Kosasih (2018), these language features include using pronouns that refer to objects, using copula words, employing material verbs to depict actions of objects, animals, people, or events, and incorporating emotive adjectives. These elements help in constructing clear, descriptive, and emotionally engaging texts.

2.2.4 Mindomo Application

a. Concept of Mindomo Application

In the 21st century, educators increasingly use digital-based media over manual media. They apply mind mapping to enhance students' writing skills and frequently incorporate it into their teaching and learning processes. Tony Buzan introduced mind mapping in the 1970s, basing it on cognitive psychology and educational theory. Buzan's method emphasizes visual structuring, which matches how the brain processes and retains information. By using images, colors, and key terms, mind maps organize data effectively and improve understanding and memory. The shift from traditional to digital mind mapping represents a significant advancement in educational tools, as technology boosts their effectiveness. Mindomo, an application that embodies the concept of mind mapping, illustrates this advancement.

Mindomo is a digital application that uses the concept of mind mapping. This technology-based tool enhances traditional mind mapping techniques with features like real-time collaboration, multimedia integration, and an intuitive design. Expert Software According to Nurhuda Mohamad (2019) Mindomo is a Web 2.0 mind mapping tool and service that offers the perfect platform to develop ideas and brainstorm interactively. Mindomo was developed in 2007 and re-built in 2016 (Expert Software Applications, 2019). Applications developed Mindomo to provide efficient tools for brainstorming, project planning, note-taking, and knowledge management. Users create interactive and

collaborative digital mind maps, which they can access on mobile phones and laptops.

M. Sabaorin (2020) highlights that students effectively use Mindomo to demonstrate their understanding of concepts and information by creating digital mind maps. The application helps students organize their thoughts and present their knowledge in a visually appealing way. In the educational context, Mindomo provides numerous benefits. The application supports student collaboration through sharing and group work features, allowing students to work together on a single mind map in real-time.

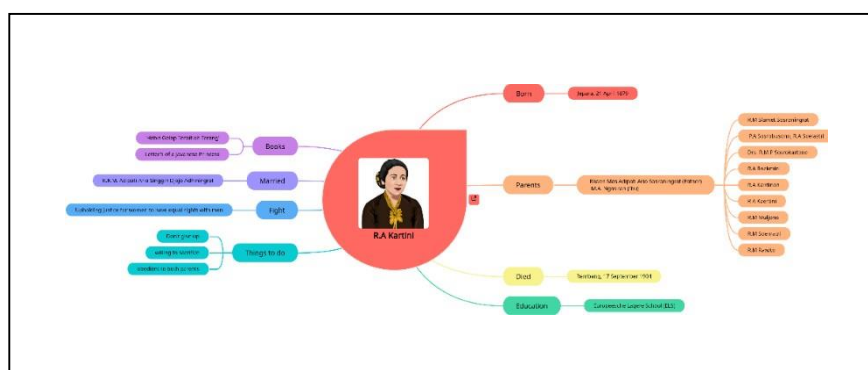


Figure 2. 1 Sample of Mindomo Application

The use of the Mindomo application in the picture is not complicated. The picture shows an example of using the Mindomo application. The researcher make an example of descriptive text with the theme of describing an Indonesian National Hero name is R.A Kartini. The picture describes Kartini's birth date, education, written works, and information about her death. Multimedia features such as images, videos, and web links enrich the mind maps, making them more interactive and engaging. Additionally, the intuitive design helps users, including those unfamiliar with mind mapping techniques, to use the tool effectively. All

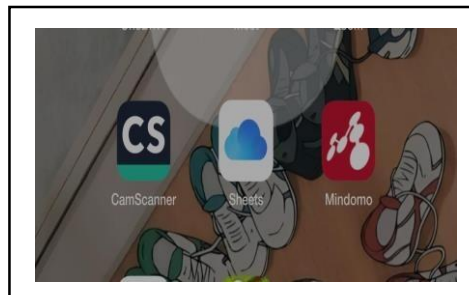
of that is written with different colors in each bubble. This was used by researchers to make it easier for students to categorize words and sentences. Mindomo application is one of the mind mapping applications that can be downloaded on PlayStore and it is easy to use both for Android, IOS, and Windows.

The procedures of using Mindomo Application are as follows:



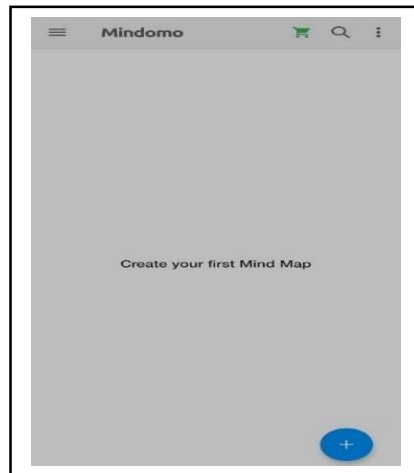
Pictures 2. 2 Download Mindomo Application iniPlaystore/Appstore

1. Download Mindomo application at Playstore/Applestore.



Pictures 2. 3 Mindomo Application in Smartphone

2. Open the Mindomo application. The Mindomo application does not require login permissions such as google account, facebook, etc.



Pictures 2. 4 Mindomo Application First Display

3. Click “+” button to start mind mapping. Users will be shown several options.

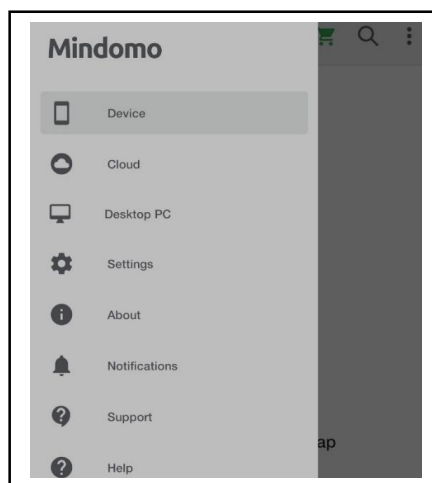


Figure 2. 5 Mindomo Application Setting Menu

4. Students can either choose to use the online version of the application or download the desktop version.

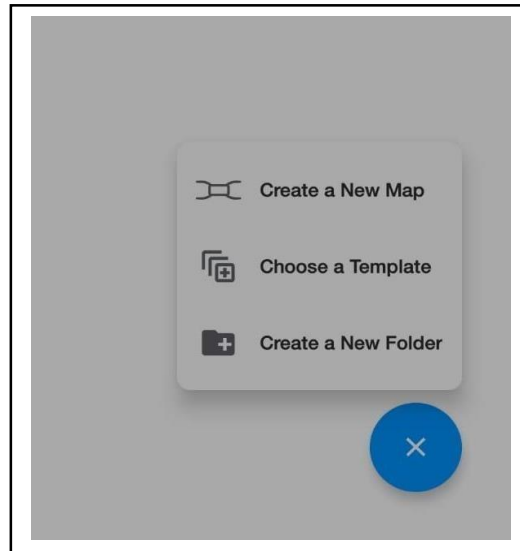


Figure 2. 6 First Steps to Using Mindomo Application

5. Once you have logged in to the application, you can start creating your mind map. To begin, click on the “*Create a new map*” button.



Figure 2. 7 Various icons in the Mindomo Application

6. Start adding your ideas to the mind map. You can use the toolbar on the left hand side of the screen to add new topics, subtopics, and other elements to your mind map.

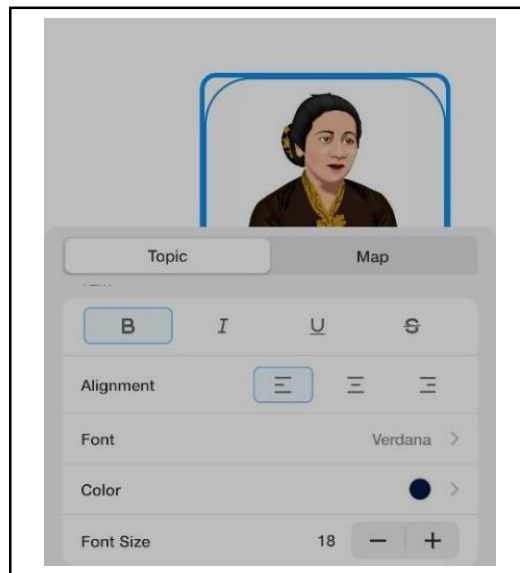


Figure 2. 8 Display Edit Mind Map to Make it Interesting

7. Students can customize the appearance of your mind map by changing the font, color, and style of the text. You can also add images, videos, and hyperlinks to your mind map.

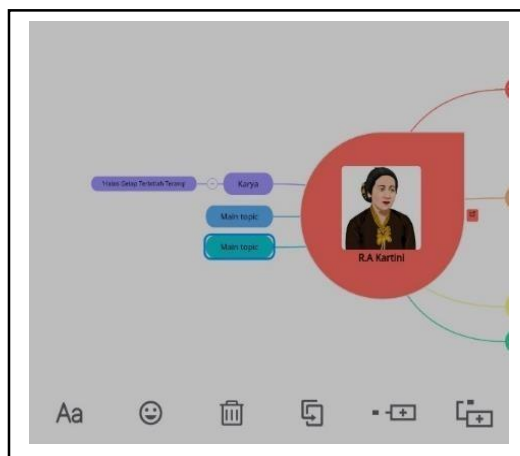


Figure 2. 9 How to a Add Another Topics or Subtopics

8. After determining the topic to be discussed, students can insert another topic by clicking the button at the bottom right corner.

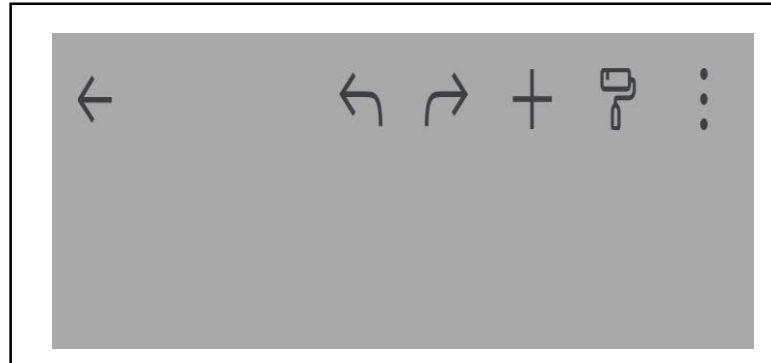


Figure 2. 10 How To Save Your Work

9. Finally, once you have created the appropriate mind mapping. Save the file by pressing the three dots button on the top right corner. There will be various forms such as pdf, word, etc.

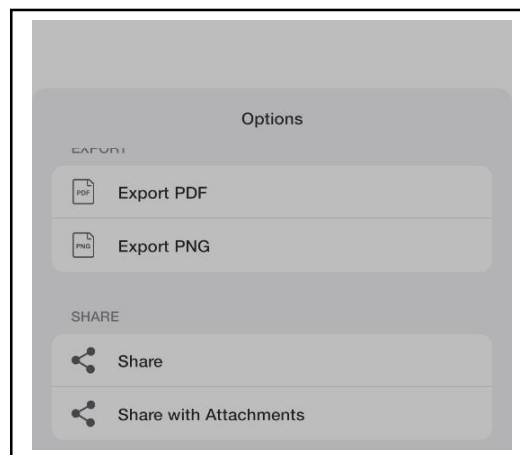


Figure 2. 11 How to Downloaded the Finished File

10. Finish. Once you have created your mind map, you can save it and share it with others. You can also export your mind map as an image, PDF, or other formats.

Based on the explanation above, In the 21st century, educators increasingly favor digital media over traditional manual methods and regularly use mind mapping to enhance students' writing skills. Tony Buzan developed mind mapping in the 1970s, focusing on visual organization that aligns with how the brain processes information. The introduction of digital tools like Mindomo, which offers real-time collaboration and multimedia features, marks a significant advancement. Mindomo builds on traditional mind mapping by allowing users to create interactive and collaborative mind maps across various devices, making it an effective tool for brainstorming, project planning, and note-taking.

2.3 Theoretical Framework

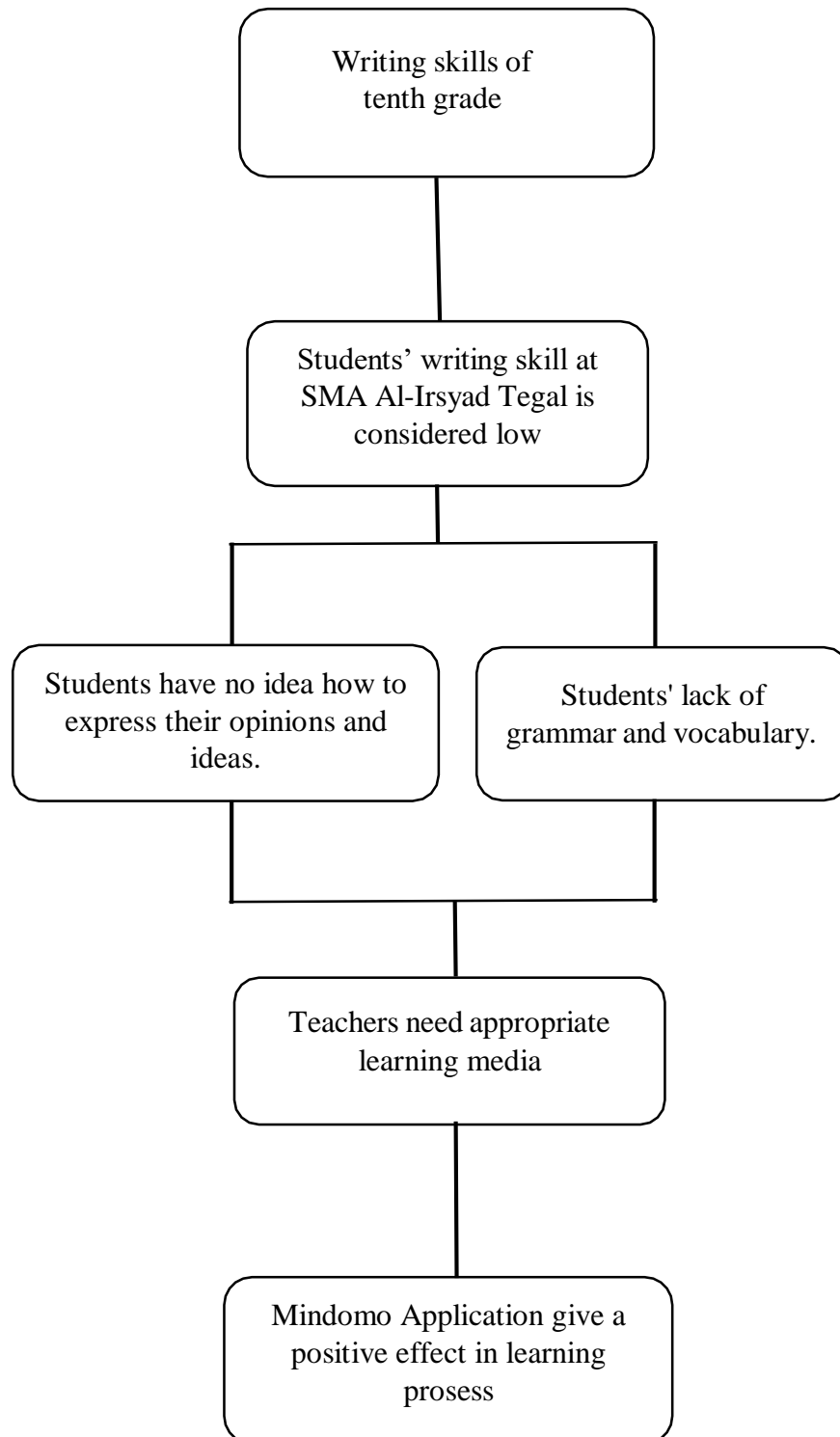
In this research, the researcher focused on teaching the writing of descriptive text using the Mindomo application. According to Brown et al. (2019), learning is most effective when it occurs in authentic, real-world contexts that are similar to the situations in which the knowledge and skills will be applied. There are four skills in English, one of which is writing. Writing is a skill used to express one's ideas in the form of writing on paper. Writing is an activity that requires good concentration to determine the prior of students' writing ability before conducting the treatment. Problems often faced by students in writing in addition to structuring vocabulary and grammar. Students are also often confused about what to write and how to convey it well so that readers can understand what is written.

Based on the conceptual framework, this research used quasi-experimental methods. First, the researcher prepared teaching materials in the form of a writing test to determine the students' initial writing ability before the treatment. Second,

the researcher employed the Mindomo application in the experimental class and used the manual method in the control class. After conducting the pre-test and giving the treatment using Mindomo, the research assessed whether the Mindomo application affected students' writing skills. Finally, the researcher distributed questionnaires to students after they completed the post-test to know the effect applying Mindomo application during learning process.

The theoretical framework of this study is illustrated as follows:

Figure 2. 12 Theoretical Framework



2.4 Hypotesis

As an alternative answer of the research question, the following hypotheses are:

1. Alternative hypotesis (H_a): There is a positive effect of using the Mindomo application on students' descriptive text writing skills.
2. Null hypothesis (H_0): There is no a positive effect of using the Mindomo application on students' descriptive text writing skills.

CHAPTER III RESEARCH METHODOLOGY

This chapter discussed the research approach and design, the data type, method that used to collect data, research instrument, and data analysis rocedures.

3.1 Approach, Type, and Design of the Research

3.1.1 Research Approach

In this study, the researcher used quantitative research. Quantitative methods were methods that have met scientific rules that were concrete and systematic. Quantitative research is a type of research that is structured from the beginning to the end of the research because the data analysed uses numbers. Creswell (2014), argues that quantitative research is an approach to testing objective theories by examining the relationship between variables examining the relationship between variables. The researcher conducted the the data collection process using research instruments and then proceeded with precise data analysis.

3.1.2 Research Type

The researcher used quasi-experimental research methods, utulizing a quasi-experimental reasearch design comparising two groups: experimental group and control group. The experimental group received treatment through the use of the Mindomo application during the learning process, while the control group did not receive any treatment. A comparison of results conducted to assess the impact of the treatment. The control group monitored the experimental group. Additionally, this study aimed to determine the effect by examining the significant difference

between students using the Mindomo application and those not using the Mindomo application.

3.1.3 Research Design

In this study, understanding the purpose of the research design is very important before starting the research. This study used quasi-experimental to evaluate the effect of a given treatment by comparing the result with a control group that did not receive treatment.

Before receiving treatment, the researcher provided the same pre-test to both the experimental and control groups. Then, the researcher administered treatment to the experimental group using the Mindomo application, while teaching the control group using conventional teaching methods. After conducting the post-test, the researcher administered a questionnaire regarding the effects of using the Mindomo application during the treatment of the experimental group.

Table 3. 1 Research Design

| Group | Pre-test | Treatment | Post-test |
|-------|----------------|-----------|----------------|
| EC | O ₁ | X | O ₂ |
| CC | O ₃ | - | O ₄ |

Notes:

EC: Experimental Class

CC: Control Class

X: Treatment

O₁: Pre-test (Experimental Class)

O₂: Post-test (Experimental Class)

O₃: Pre-test (Control Class)

O₄: Post-test (Control Class)

3.2 Population, Sample and Technique of Sampling

3.2.1 Population

According to Sugiyono (2022), the researcher determine a population of objects or subjects with certain numbers and characteristics to study and analyse in order to draw conclusion. This implies that the population includes all students in a school. The population in this study is four classes from the tenth grade students registered at Al-Irsyad Tegal High School during the 2023/2024 school year. There will be a total of 128 students.

Table 3. 2 Population of This Study

| No | Class | Population |
|-------|-------|------------|
| 1 | X1 | 32 |
| 2 | X2 | 32 |
| 3 | X3 | 32 |
| 4 | X4 | 32 |
| TOTAL | | 128 |

3.2.2 Sample

Sampling is made from the population, meaning that everyone has the same opportunity in the population to become a sample in this study. According Sugiyono (2022), the sample represents a part of the number and characteristics

of the population of. In this research, the researcher used class X3 as the control group and X4 as the experimental group

3.2.3 Technique of Sampling

Sampling technique is a method used to determine the number and characteristics of a population in a study. The researcher use this technique to select a sample that will serve as the subject of the research, aiming to obtain a sample that is truly appropriate and representative of the population. In this study, purposive sampling was used, where the researcher selected samples based on specific criteria and purposes relevant to the research objectives. According to Sugiyono (2022), purposive sampling involves the researcher choosing samples selectively based on certain considerations that are relevant to the research goals.

This research employed purposive sampling based on criteria aligned with the research objectives and recommendations from the English teacher at SMA Al-Irsyad Tegal. The criteria included selecting students from the 10th grade at SMA Al-Irsyad Tegal who demonstrated good English language skills. The focus on this group was based on the expectation that these students would have a deeper understanding of the material being taught, which is crucial to the research topic. The selection of a sample with these specific characteristics aimed to obtain more accurate and relevant data, providing clearer insights into the research topic.

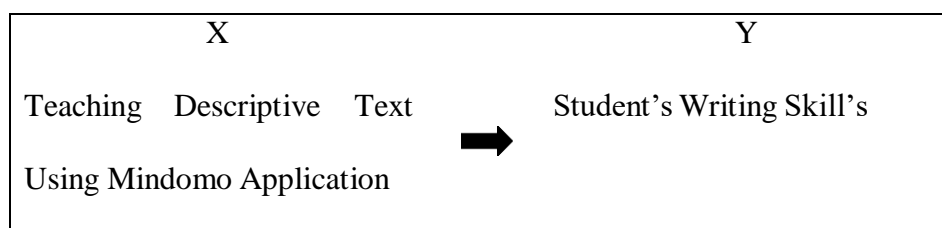
The researcher then selected the 10th-grade classes X3 and X4 as the sample, with each class consisting of 32 students. Class X3 was designated as the control class and did not receive any special treatment, while class X4 was

assigned as the experimental class and received treatment through the use of the Mindomo application to support the learning process.

3.3 Research Variables

Variables are qualities or characteristics of individuals or groups that can be measured, observed, and differ among the subjects under study. Measurement is the process by which researchers obtain data from subjects by having them answer questions. According to Creswell (2012), when variables change, scores have diverse meanings depending on the type of variable being measured. In this study, two variables were included, namely the dependent variable and the independent variable. According to Sugiyono (2022), independent variables (free) are variables that affect or cause changes or the emergence of dependent variables (bound). In this research, the independent variable is the Mindomo Application. Meanwhile, according to Sugiyono (2022), the dependent variable is the variable that is influenced or the result, due to the independent variable. In this research, the independent variable is the students' writing skills.

Table 3. 3 Data Variables



X: Independent Variable

Y: Dependent Variable

3.4 Data Collecting Technique

An important aspect of research includes collecting data and information to ensure the accuracy of the results. Brown (2019), states that tests act as a tool to assess an individual's skills or knowledge in a particular field. The researcher used tests and questionnaires to obtain data and information on the impact of using the Mindomo application on students' writing skills. Therefore, tests measured the extent of student achievement improvement and the researcher used questionnaire to find out students' responses to the use of the Mindomo application. In this study, the researcher used writing tests and questionnaires to collect the data. The following are some of the techniques used for data collection.

a. Tests

According to Brown (2019), a test assesses a person's skills, knowledge, or performance in a particular subject. Specifically, the researcher conducted a pre-test and post-test to measure students' progress in this study. The researcher collected data using tests as the main instrument. The study involved two types of tests:

1. Pre-test

Before starting the treatment in both the experimental and control classes, a pre-test needs to be conducted to assess the students' initial writing skills. The researcher used pre-test to assess the students' writing skills before the treatment, which allowed students to measure how much students had learned. In a pre-test aimed at assessing writing skills, the teacher asked students to write a descriptive text about an 'Indonesian Hero' in 15-20 sentences. The teacher gave students 40 minutes to make a descriptive text with clearly. This test aimed to evaluate the

students' ability to convey descriptive details and their knowledge of Indonesian heroes

2. Post-test

The researcher conducted a post-test to evaluate students' learning outcomes after the treatment. The experimental class used the post-test to determine the effect of using the Mindomo application in improving students' writing skills. The experimental class created a text outline used Mindomo application for 15 minutes, while the control class created the text as usual. The researcher conducted the post-test to observe the students' learning outcomes during treatment. In a post-test aimed at assessing writing skills, the teacher asked students to write a descriptive text about an 'Indonesian Hero' in 15-20 sentences. The teacher gave students 30 minutes for experimental class and 40 minutes for control class to make a descriptive text with clearly.

b. Questionnaires

The researcher used the questionnaires as one of the techniques to collect data in the form of written questions aimed at eliciting answer and responses from participant. Sugiyono (2022), argues that a questionnaires is a method of collecting data by giving several questions or statements to respondents in writing to answer. The questionnaires provided to respondents served as a research instrument to determine students' responses to the Mindomo application regarding their writing skills.

In this research, the researcher used a likert scale. According to Sugiyono (2022), the Likert scale is used to measure attitudes, opinions, and perceptions of a person regarding social phenomena.

Table 3. 4 Likert Scale in Four Categories

| Statement | Score |
|-------------------|-------|
| Strongly Agree | 4 |
| Agree | 3 |
| Disagree | 2 |
| Strongly Disagree | 1 |

In this research, the likert scale was modified into four categories, namely: Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS). Hadi as cited in Ratu (2022), explained that the modification of the Likert scale aims to eliminate the weakness inheret in the five-level scale for the following reasons:

1. The “Undecided” category has multiple meanings, often indicating that repondents cannot choose an answer.
2. The presence of a middle option frequently leads respondents to select it by default.

3.5 Research Instrument

The researcher used research instruments to measure the value of the variables studied, so the number of instruments they used depended on the variables studied. According to Sugiyono (2022), instruments are tools used to collect data, so that researcher is easier to do because the data is detailed and organized. The researcher had to consider validity and reliability when assessing a research

instrument. The researcher obtained valid data the researcher used the right instrument. Preferably, the researcher designed in advance which instruments were valid and reliable, as this helped the researcher find valid data and achieve the best reliability. The researcher used tests and questionnaires to collecting the data. The instrument used in the tests and questionnaires must be valid and reliable to ensure that accurate results are obtained and that the research results can be trusted.

1. Validity

Validity in research states the accuracy of the research measuring instrument to the content to be measured. According to Sugiyono (2022), validity relates to a variable measuring what should be measured. The researcher used a type of content validity and construct validity. Construct validity of the aspects to be measured based on theory and consulted with experts Sugiyono (2022). Meanwhile, content validity is the degree to which a test or assessment instrument evaluates all aspects of the topic, construct, or behavior it is designed to measure. According to Sugiyono (2022), content validity can be done by comparing the contents of the instrument with the lessons that have been taught. A text will be valid if the text has been tested for validity.

2. Reliability

Reliability refers to how consistent or stable the measured values are when obtained repeatedly under the same condition using the same measuring instrument (Surucu & Maslakci, 2020). If validity measures how accurate the measuring instrument is will use, reliability is used to measure how consistent the measuring instrument is to be used. Therefore, in this study, a standardized procedure is needed

to evaluate students' writing tests. To assess students' writing ability, the researcher used a writing assessment rubric adapted from Jacob, et al (1981), that measures various components.

Table 3. 5 Rubric of Scoring Writing Text

| Score | Level | Description |
|---------------------|--------------|--|
| Content | 30-27 | EXCELLENT TO VERY GOOD: Excellent and relevant to the topic, creative ideas/content. |
| | 26-22 | GOOD TO AVERAGE: Good topic, limited development of ideas /content, still relevant to the topic and still creative in writing. |
| | 21-17 | FAIR TO POOR: The subject is not good enough, the ideas/content mostly still relevant to the topic, no intention on creativity. |
| | 16-13 | VERY POOR: not relevant to the topic. |
| Organization | 20-18 | EXCELLENT TO VERY GOOD: Fluency expression, clarity of ideas, simplicity, and structured sentence. |
| | 17-14 | GOOD TO AVERAGE: Good expression, loosely organized but the ideas stand out, correct sentence structured. |
| | 13-10 | FAIR TO POOR: Not-fluent ideas/expression, confused or |

| | | |
|---------------------|-------|--|
| | | disconnected, lacks logical, and few errors in sentence structured. |
| | 9-7 | VERY POOR: does not communicate, no organization, not enough to evaluate |
| Vocabulary | 20-18 | EXCELLENT TO VERY GOOD: Extensive vocabulary, good word selection and usage, mastery of word forms, and suitable register. |
| | 17-14 | GOOD TO AVERAGE: There are minor errors in word form selection, and usage, but the message is not distorted. |
| | 13-10 | FAIR TO POOR: Constrained range, frequent errors in form/idiom form, usage, choice, meaning confused or obscured. |
| | 9-7 | VERY POOR: Limited understanding of English vocabulary. |
| Language Use | 25-22 | EXCELLENT TO VERY GOOD: Complex sentence structures that are effective with minimal errors in agreement, tense, number, and word order. |
| | 21-18 | GOOD TO AVERAGE: Efficient sentence structures with some errors in more complex constructions. There are several |

| | | |
|-----------------|-------|--|
| | | errors in agreement , tense, number, word order, as well as in function words, articles, pronouns, and prepositions. |
| | 17-11 | FAIR TO POOR: Significant difficulties in both simple and complex sentence structures with frequent errors in agreement, tense, number, word order, function words, articles, proouns, and preposition. |
| | 10-5 | VERY POOR: There is an inability to follow sentence construction rules due to errors. Communication is either absent or insufficient for assessment. |
| Mechanic | 5 | EXCELLENT TO VERY GOOD: Show a high level of proficiency in following conventions with few errors in spelling, punctuation, capitalization, and paragraph structure. |
| | 4 | GOOD TO AVERAGE: There are mistakes in spelling, punctuaiton, capitalization, and paragraph structure, but these errors do not obscure the intended meaning. |
| | 3 | FAIR TO POOR: There are frequent mistakes in spelling, |

| | | |
|--|---|---|
| | | punctuation, capitalization, and paragraph structure, compounded by poor handwriting, often resulting in confusion or obscuring of the intended meaning. |
| | 2 | VERY POOR: There is a lack of proficiency in adhering to conventions as errors in spelling, punctuation, capitalization, and paragraph structure prevail. Handwriting is either illegible or insufficient for assesment. |

Adapted from Jacob, et al cited in Brown 2019

From the explanation above, the researcher will conclude that the maximum total score is 100, which described in following table:

Table 3. 6 Total Score Maximum

| No | Components | Score |
|-------|---------------|-------|
| 1 | Content | 30 |
| 2 | Organization | 20 |
| 3 | Vocabulary | 20 |
| 4 | Languange use | 25 |
| 5 | Mechanic | 5 |
| Total | | 100 |

3.6 Technique of Analyzing Data

Data analysis involves examining the information gathered during research. Upon collecting all necessary data in written form for this study, the researcher investigated whether there was a significant difference in students' writing skills after using the Mindomo Application. During the assessment, the researcher evaluated the students' writing skills. Statistical analysis, which involves interpreting quantitative data numerically, was conducted using SPSS version 26 in this study to compare students' test results before and after integrating the Mindomo application into the teaching of descriptive text.

Table 3. 7 Analyzing Data

| No | Objectives | Instrument | Analysis |
|----|--|------------|--|
| 1. | To find out whether the positive effect of the Mindomo application on students' writing skills on writing descriptive text | Test | T-test using SPSS 2026 version. The researcher used SPSS to process T-test data. Before calculating the paired sample test, the researcher needed to find the average results in each class. The researcher also needed to check for normality and homogeneity in the data. Data is considered normal and homogeneous if the |

| | | | |
|----|--|---------------|---|
| | | | <p>Sig.value is greater than 0,05.</p> <p>If the results of the paired sample test are less than 0,000, then H₀ is rejected and H_a is accepted.</p> |
| 2. | To find out students' responses to the use of the Mindomo application in writing descriptive text. | Questionnaire | <p>The questionnaire was conducted after the post-test.</p> <p>The questionnaire consist 9 questions with a total of four likert scale. The researcher calculated the questionnaire using SPSS.</p> |

1. Descriptive Statistic

Descriptive statistics are employed to summarize or provide an overview of the subject of study using sample or population data (Sugiyono, 2022). This field of mathematics focuses on presenting a concise and clear summary of data. In quantitative research, following data collection, it is crucial to describe key statistics such as the mean, median, and average within a study.

2. Calculating Normality

In statistics, the normality test is used to determine whether the collected data follows a normal distribution. Several statistical procedures necessitate data to be normal or approximately normal. Researchers employ tools like SPSS to analyze

data. Data is deemed normally distributed when the significance value exceeds 0.05.

3. Calculating Homogeneity

The homogeneity test aimed to test the null hypothesis that different populations shared the same proportion of certain characteristics. In contrast to the independence test, which usually deals with two populations, this test involved multiple populations from which data was gathered. Homogeneity was assessed using the pre-test and post-test scores of the sample groups, analyzed using the SPSS program. The sample is considered homogeneous if the Levene statistic is greater than 0.05.

4. Calculating Paired Sample T-test

The researcher used SPSS software to conduct a paired sample t-test, examining changes in students' writing abilities by comparing pre-test and post-test scores after applying the treatment in the experimental group. The researcher utilized SPSS to analyze the data with the goal of accepting H_1 and rejecting H_0 . Accepting H_1 would indicate that t_0 exceeds the t-Table value.

