

The Use of Mind Mapping Technique to Improve the Students Active Participation and their Writing Achievement

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Abstract

This research aimed to improve the students' writing achievement and their active participation at one of the Islamic senior high schools in Mojoagung. The participants of this research were the tenth grade students of Social 1. There were 18 students as the research participants. The design of this research was classroom action research. The data collection methods were writing tests, observation checklists, and interviews. This research was carried out for 2 cycles, which consisted of two meetings for the treatment and one meeting for the writing test in each cycle to meet the standard research criteria. The students' writing achievement improved from 33.3% in cycle 1 and 77.7% in cycle 2. On the other hand, there was an improvement in the students' participation from 50% in cycle 1 to 86% in cycle 2. From the results of this research can be concluded that mind mapping technique could improve the students' active participation and their writing achievement of descriptive text.

Keywords: Mind Mapping Technique; Writing Achievement; Descriptive Text

Introduction

English has four language skills that the students must know: listening, reading, writing, and speaking. Meanwhile, writing is one of the essential aspects of English language acquisition (Ariyanti, 2016). Many students struggled to master writing skills because they had to produce words and ideas to make writing easily understood by the readers. In addition, they also had to consider things such as punctuation, capitalization, grammar, etc.

According to Harris et al. (2002), most people find writing difficult and categorized as time-consuming. Writing is considered time-consuming because several aspects must be considered during the writing production. Some aspects of writing regarding vocabulary, grammar, content, organization, and even mechanics should be considered. Most EFL students found it challenging

to find the ideas and thoughts when required to write a text. In line with writing a text, the text used in this research is descriptive. Based on Knapp & Watkins (2005), descriptive text is a type of text used by writers to describe specific objects, people, animals, places, or events for the readers. A technique can help solve the students' writing difficulty. This research used the mind mapping technique to help overcome those difficulties, especially in the students' pre-writing activity.

Mind mapping is a technique that teachers can use as a pre-writing activity to help students find ideas and thoughts. Buzan & Buzan (1993) stated that a mind map expresses natural human thinking in graphical form. According to Dewi (2020), a mind map is a technique that includes lines, colours, keywords, and interconnected images.

The preliminary study was done before the research was conducted. It was taken at one of the Islamic senior high schools in Mojoagung to find the students' problems in teaching and learning English. It was found that the tenth grade students of social-1 had some problems regarding writing scores, their active participation in learning English, and they lacked finding ideas while writing a text. From the findings, these problems affect students' writing achievement. The average of the students' writing achievement was only 63. The researcher found that the school still used the K-13 curriculum. As listed in the syllabus, the tenth grade students should be able to produce a simple text, especially descriptive text. The English teacher used the conventional task and did not give any technique in teaching writing.

Previously, teachers did not use pre-writing techniques that confused students and made producing texts difficult. They had difficulty finding ideas and were sometimes confused with the grammatical structure used in a text. This affected students' had less participation because they did not enjoy the learning process, especially the writing skills. Therefore, this classroom action research is aimed to help overcome writing problems in the tenth grade of social-1 students and students participants. This classroom action research was carried out over two cycles with four stages in each cycle, including 1) Planning an action, 2) Action to implement the planning, 3) Observation, and 4) Reflection (Kemmis & Mc. Taggart, 2014).

Some previous studies related to mind mapping techniques in teaching writing. The first previous research conducted by Sasongko (2017) was classroom action research to improve 8th-grade students' writing skills using

mind mapping. This research used the primary data from the students' writing test. The data was analyzed by using an analytical scoring rubric. This research showed that mind mapping technique positively impacted the teaching-learning process of writing. It proved by the students' ability and improved their learning outcomes. Another research was done by (Masrurroh, 2021).

Classroom action research was conducted in this research to investigate mind mapping techniques on the 7th grade students. The data obtained was analyzed by using an analytical scoring rubric. The research showed that the mind mapping technique could help students be more active and develop their writing achievement. The following previous study was done by (Yunus and Chien, 2016). This research reported that most participants had a good perception of the mind mapping technique because it helped them plan their writing and adapt to a deeper understanding of the topic.

Hence, the gap between the previous research and this research is the level of the participants in the research. The previous research used eleventh-grade students as the research participants. Moreover, the second previous researcher was a first-year of undergraduate student. In contrast, this research was carried out in the tenth grade of Islamic high school by using classroom action research.

Method

This study aimed to improve senior high school students' descriptive text writing through mind mapping techniques. This research used classroom action research as the research design. McNiff & Whitehead (2002) said that Classroom action research reflects a teacher's ability to improve or correct weaknesses in the learning process, the results of which can be used to enhance teaching skills. Moreover, action research has a spiral cycle containing planning, acting, observing, and reflecting. It can be said that classroom action research is a research approach to improve teaching skills. The activities consist of planning, action observation, and reflection that can enhance the weaknesses of the teaching-learning process. It is done until it leads to a more successful cycle repetitively.

Research Participants

The purposive method was selected to determine the research

participants. The research subject involved the tenth-grade social-1 in one of Islamic Senior High Schools in Mojoagung in the academic year 2022/2023. Based on the interview with the English teacher, the writing achievement of 10th-grade students indicated low results, with an average score of 63.

Research Context

This study was conducted in one of Islamic Senior High Schools in Mojoagung. It was chosen by using the purposive method. This school used the 2013 curriculum for learning activities. There were several reasons why this school was chosen as the research setting. First, the principal of one of the Islamic Senior High Schools in Mojoagung has permitted the researcher to conduct research at the school. Second, the tenth grade social-1 students at one of the Islamic Senior High Schools in Mojoagung had writing problems. The last, the mind mapping technique, had never been applied by the English teacher in teaching learning writing, especially writing descriptive text.

Data Collection method

In this research, the researcher used three kinds of data collection methods. These are writing tests, observation, and interviews. The researcher carried out writing test after the action finished. The test items are constructed based on the materials during the teaching-learning process of writing. It was done to make the test valid, and it has content validity here. Furthermore, to establish the reliability of the test, the researcher used Heaton's analytical scoring rubric because it can identify the weaknesses and strengths of students' writing skills. The scoring rubric includes five elements: content, organization, vocabulary, language use, and mechanics.

In this current research, the researcher interviewed the English teacher of the tenth-grade students at one of the Islamic Senior High Schools in Mojoagung to gain information. Those are about students' writing problems during the learning process of writing, the curriculum used in the school, and the teacher's technique while teaching writing.

The second method to collect the data was observation. In this research was used to collect the data dealing with students' participation in the teaching-learning process of writing descriptive text using mind mapping technique. The English teacher acted as an observer. The English teacher carried out and observed the students along the teaching-learning process. Students were considered active in the learning process if at least they got four or more.

Otherwise, if students get a score less than 4, they are categorized as passive students.

The collected data were the results of students' writing achievement tests and the results of observations related with students' active participation during the teaching learning process of descriptive writing by using the mind mapping technique.

a. The Students' Active Participation

The formula was used to calculate the percentage of students' active participation.

$$E = \frac{n}{N} \times 100\%$$

Description:

- E : The percentage of the students participating actively in the classroom
- n : The number of students actively participating in the classroom.
- N : The total number of students as the research participants.

b. The Students' Writing Test

This formula was used to find the percentage of students who got scores ≥ 7

$$E = \frac{n}{N} \times 100\%$$

Descriptions:

- E : The percentage of students that achieve a score ≥ 75
- n : The total students who got score ≥ 75
- N : The total number of students as a participants and doing the test

Findings

This chapter presents the findings of the actions in each cycle. Consisting of the students' writing test results in cycle I and cycle II, the results of observation, and the results of reflection.

Findings of Cycle 1

The first meeting of cycle 1 was held on May 16th, 2023. The English teacher acted as the observer while the researcher was teaching writing by using the mind mapping technique. The topic to be used in this action was related to tourism places based on the K13 curriculum at the senior high school level.

In the opening learning activity, the researcher and students prayed to start the lesson, followed by checking the students' attendance, giving some leading questions related to the materials, and stating the learning objectives. The researcher then explained descriptive text and continued explaining the mind map to the students. The researcher showed the mind map outline entitled "Komodo Island" and asked them to observe it in pairs. After they observed the outline of the mind map given, the next step was experimenting. The students began making mind maps according to the steps explained as the following.

1. Choosing a topic. The students were given two topics about Borobudur and Monas's tourism places. They had to choose one of them.
2. Organizing the mind map. The students were required to organize the mind map according to the chosen topic. They should determine the identification and description section using keywords of the topic.
3. Writing. The students wrote a description text for about 8-15 sentences. Some students had difficulty finding ideas for writing, and others wrote less than eight sentences.
4. Communicating. Two students with different topics were invited to come forward to present their work in front of the class.

The last part was the closure. A question and answer session related to the material learned was conducted here. Next, the researcher guided the students to conclude the day's learning materials and ended the lesson. The second meeting was held on May 17th 2023 based on the second lesson plan attached in Appendix C. The topic provided to students was local tourism places located in east java, namely "Selecta and Museum Angkut". During the learning process, especially in the experimenting stage, the students showed more conducive performance than in the first meeting because they knew much information about the topics provided. However, some students still did not write a good descriptive text because they had difficulty in organizing their mind maps.

There were six indicators listed in the observation checklist for measuring the students' participation, as the following: (1) students determined the topic based on the topics given, (2) students made a list of ideas on the identification branch, (3) students made a list of ideas on the description branch, (4) students made sentences based on ideas on the mind map, (5) students make descriptive text for about 8-15 sentences, (6) the students asked questions and

responded to the teacher's questions. The students were categorized as active students if they fulfilled at least four indicators and passive students if they fulfilled under four indicators. The results of students' participation could be seen in the table 4.1.

Table 4.1 The Analysis Results of the Students' Participation in Cycle 1

	Meeting 1	Meeting 2	Average
Active	44%	56%	50%
Passive	56%	44%	50%

From the table above, it can be said that in the first meeting there were about 44% active students and 56% of students were still classified as passive. However, there was a slight improvement in the second meeting, where 56% of students were categorized as active and 44% as passive. This research still did not reach the standard criteria because the average of students' activeness was under 75%. Only 50% of the students actively participated in the teaching learning process. Therefore, it is necessary to improve further in the second cycle.

On the other hand, the test was given in the third meeting. It was on May 23, 2023. The test time allocation used was 2x40 minutes. The topic of the test was tourism places. The students were instructed to make a mind map and write a descriptive text in about 8-15 sentences, and they did the test individually. Two scorers scored the test: the researcher as the first and the English teacher as the second scorer. The aspect scores were content, organization, vocabulary, language use, and mechanics. Based on the students' writing test results, it was found that 6 or 33.3% of the students achieved the minimum score target and 12 students got less than 75. The mean score of students on the first writing test was 64.5.

It could be concluded that the success criteria were not achieved. The researcher and the English teacher planned to conduct the second cycle to improve the students' participation and their writing achievement using the mind mapping technique.

Findings of Cycle 2

The action in cycle 2 was the same as in cycle 1, which was carried out for 3 meetings with a writing test at the end of the cycle. In this cycle, the roles of the English teacher are as the observer and the researcher is the teacher of the action. The topic used was the same about tourism places. However, the

researcher focused more on tourism places commonly visited by them. At the end of the first writing test in the cycle 1, the researcher asked the students about common tourism places. The implementation of the action can be seen in the lesson plan attached in Appendix E and F.

The first meeting was conducted with set induction. To clarify the students' understanding they were asked some leading questions related to the topic given. Next was the main activity, the researcher gave an example of a tourism place "Malioboro" and told the students to observe the text individually. After observing the text, students were given an outline of the mind map of the text entitled "Malioboro." They were instructed to discuss the text and the mind map by themselves.

Then, the teacher explained more about descriptive text and focuses in the language feature that is simple present tense. This was because the students lacked understanding about the tenses. After that, the teacher led them and explained how to make mind mapping techniques. As the result of the cycle 1, some students did not list their ideas in one of the branches of their mind mapping.

The second meeting of the second cycle was held on May 30th, 2023. Activities were carried out based on the lesson plan attached in Appendix F. However, the topic was about local tourism places: Jombang City Square and MINHA Jombang. For the example, the researcher presented "Padusan Swimming Pool". Students were more conducive performance during the teaching and learning process of writing using mind mapping techniques in this meeting because they felt they understood more than in the previous meeting.

The following is an analysis of students' participation in cycle 2 that is categorized as active as follows:

Table 4.5 The Analysis of the Students' Participation in Cycle 2

	Meeting 1	Meeting 2	Average
Active	83%	89%	86%
Passive	17%	11%	14%

These results indicate that students' participation in the learning process of writing using mind mapping techniques in cycle 2 has reached more than 75% of this research target success.

Based on the students' writing test, the percentage of students who scored ≥ 75 was analyzed as follows.

$$E = \frac{14}{18} \times 100\% = 77,7\%$$

Descriptions:

- E : The percentage of students that achieve a score ≥ 75
n : The total students who got score ≥ 75
N : The total students as participants

From the writing test results above, 18 students did the writing test of descriptive text using the mind mapping technique. The results showed that 14 students or 77.7% of 18 students reached the minimum targeted score while the 4 students had not reached 75. The average score of students in cycle 2 is 78. Therefore, the research was said to have successfully achieved the minimum targeted score expected in this study. Therefore, the students' writing achievement by using mind mapping technique was achieved, so cycle 2 was stopped.

Discussion

Based on the result that there was the improvement of 36% from 50% in cycle 1 and 86% in cycle 2 for the students' participation in the teaching and learning process of writing descriptive text by using mind mapping technique. In addition, there was improvement of 44,4% from 33,3% in cycle 1 and 77,7% in cycle 2 for the students' descriptive writing achievement. It can be understood that mind mapping technique can improve the students' participation and their descriptive writing achievement.

Based on the data obtained in this study, mind mapping technique contributes to improving students' writing, especially in vocabulary, content, and organization. The reason for the improvement in some of these aspects is that students find a lot of vocabulary related to the topic. Then, they could create a text related to the topic from some information they wrote on the mind map. On the other hand, they can also easily organize the text they make. Moreover, the mind mapping technique contributes less to the writing aspect, which is language use or grammar and mechanics. According to the data, the students must understand more about the tenses used in descriptive text and they were less aware of the mechanics while creating a text.

The findings of this study were relevant to the theory suggested by Sasongko (2017) that using mind mapping techniques can improve students'

writing achievement and mind maps provide a positive impact during the learning process. This is proved by the students' ability and improved learning outcomes. On the other hand, classroom action research conducted by Masuroh (2021) is also relevant with the findings of this study. The findings showed that the students' scores increased after the action was taken. It can be said that mind mapping techniques could gain the students' participation and their writing achievement during the teaching and learning process.

Conclusion

Based on the findings and the data analysis of this research, these are the following points that can be concluded: Using the mind mapping technique as a pre-writing activity in teaching the learning process of descriptive writing could improve the students' active participation at one of the Islamic senior high schools in Mojoagung. The finding of this study revealed that the students' active participation improved by 36% from 50% in cycle 1 to 86% in cycle 2. Mind mapping techniques could improve the students' descriptive text writing achievement at one of the Islamic senior high schools in Mojoagung. The students' writing achievement increased by 44.4% from 33.3% in cycle 1 to 77.7% in cycle 2.

From that conclusion above, this research is expected to be useful for the teacher. Through the use of mind mapping technique as a pre-writing activity in the English teaching and learning process it can improve the students' active participation and their achievement of descriptive text writing. Therefore, the researcher suggests that the English teacher try to apply it to other English skills and another text genre. For the future researchers, they can use mind mapping technique with the same or different design, for example, research about the effectiveness of mind mapping technique on the students' recount text writing achievement.

References

- Ariyanti. (2016). The Teaching of EFL Writing in Indonesia. *Dinamika Ilmu*, 16(2), 263–277.
- Buzan, T., & Buzan, B. (1993). *The Mind Map Book : How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential*. Penguin Group. London
- Dewi, S. R. (2020). Improving Writing Ability By Using Mind Mapping Technique for First Year University. *Wiralodra English Journal*, 4(1), 33–49.
- Harris, K. R., Graham, S., Mason, L. H., & Saddler, B. (2002). *Developing Self-Regulated Writers*. 41(2), 110–115

- Kemmis, S., & McTaggart, R. (1988). *The Action Research Planner. Doing critical participatory Action Research*. Singapore: Springer. Retrieved from <https://books.google.co.id/books?id=GB3IBAAAQBAJ&printsec=frontcover&hl=id#v=onepage&q&f=false>
- Knapp, P., & Watkins, M. (2005). *Genre, Text, Grammar Technologies for Teaching and Assessing Writing*. University of South Wales Press.
- Masruroh, B. (2021). *Improving Descriptive Writing Skill Through Mind Mapping Technique of Grade Seven Students at MTs Tahfizh Al Madinah Malang*. (Thesis Postgraduate Program, Islamic University of Malang). Retrieved from <http://repository.unisma.ac.id/handle/123456789/2832>
- McNiff, J., & Whitehead, J. (2002). *Action research: principles and practice*. In *Taylor & Francis e-Library* (2nd Editio). RoutledgeFalmer.
- Sasongko, F. K. (2017). Improving The 8th Graders' Writing Skill Using Mind-Mapping At Smp Negeri 2 Geneng. *International Seminar on Language, Education, and Culture, October*, 47–55.
- Yunus, M. M., & Chien, C. H. (2016). The Use of Mind Mapping Strategy in Malaysian University English Test (MUET) Writing. *Creative Education*, 07(04), 619–626.