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THE EFFECTIVENESS OF MIND MAPPING TECHNIQUE FOR TEACHING WRITING

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The aims of this study are describe the implementation and analyze the effectiveness of mind mapping technique in teaching writing recount text. This study utilized a quasi-experimental research design. The population of this study was the tenth grade students of one Senior High School in Purwokerto, West Java which consists of 67 students. Two classes which comprise Class XA as the experimental group which received mind mapping technique and Class XC as the control group which was not provided with specific treatment. The data were collected through classroom observation and test. The data reveal that the experimental group's mean score increases from 61 to 71 after the treatment. Additionally, the t-test analysis shows that the result was 2.957, which exceeds the t-table value of 2.037 at a significance level of 0.05. This shows that the use of mind mapping technique significantly affect students' ability in writing a recount text. Based on classroom observation data, all points are checked which confirm the effectiveness of mind mapping in supporting students' writing.

Keywords: EFL Teaching; Recount Text; Mind Mapping; Writing

1. INTRODUCTION

Writing is an essential component of human communication, serving as an important medium for expressing ideas and information (Harmer, 2004). In the context of English as a Foreign Language (EFL), writing needs various elements such as vocabulary, content, organization, grammar, and mechanics (Brown, 2007). Proficiency in English extends not only oral fluency, but also writing skills, which are important for effective communication. Study indicates that writing is a fundamental language component, and when senior high school students write, they combine their thoughts and knowledge to create unique meanings (Cole & Feng, 2015). Futhermore, studies have shown that writing is a skill that most senior high school students are least proficient in (Berman & Cheng, 2010). Noted by Waluyo (2017) there are some obstacles made in their writing. There are a lot of causes that impact the students' obstacles in composing such as grammar, vocabulary, punctuation, and limited time to practice. Furthermore, according to Harefa, et.al (2023) students had some obstacles related to organize the content. The students organize writing slowly and hard to find out some ideas. As a result, students produce incoherent paragraphs. Moreover, studied conducted by Rahmadani (2021) students can not express their ideas in limited time in English class. Sometimes, students are bored because of their teachers do not facilitate them to write without any technique in learning writing.

Technique is an important tool in teaching writing, especially a recount text. One of the techniques that addresses the problems is mind mapping. As stated by Novak and Canas (2006) a mind map is a framework utilized to express words, ideas, tasks, or other concepts connected and arranged around a central concept. It visually organizes information, often implemented to brainstorming and problem solving. On the other hand, Buzan (2006) mind mapping is a visual thinking tool that represents how humans thinking works, enablings students to capture information, ideas, and concepts in a nonlinear way. In contrast, Buzan (2006) highlights mind mapping as a tool that mirrors the human thinking process, allowing for the capture of information and ideas in a way that improves understanding and retention. While Novak and Cañas (2006) focus on its structural and problem-solving applications, Buzan (2006) emphasizes the cognitive and creative aspects of mind mapping. In conclusion,

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both definitions underscore the value of mind mapping in organizing and expressing ideas, making it a crucial tool for teaching writing, specifically in supporting students brainstorm and structure recount texts effectively.

Moreover, there are some advantages when teachers use a mind mapping technique in teaching writing. A study conducted by Rismawati (2018) mind mapping can encourage students to be more active in the classroom. Futhermore, as stated by Wahid (2023) Mind mapping is an effective way to be implemented in teaching writing in the classroom, it underscores students' creativity and critical thinking to organize their ideas into real sentences. Mind mapping is a tool to support students to address their problems such as nervousness and not being confident to enhance their writing skills, it also help students to systematically organize their ideas and build easy meaning to comprehend. It also supported by Risdayanti (2023) mind mapping builds the writing process more enjoyable and interactive for students. The visual aspect of mind maps can get learners' attention, building them more encouraging to involve in writing activities.

Most research tends to emphasize on particular genres of writing, such as narrative or descriptive texts, without considering a broader range of writing types. This creates a gap in understanding how mind mapping can be applied across different writing contexts and genres, limiting its perceived versatility in educational fields. This research focused on how mind mapping can be implemented in recount text. Additionally, this research not only focused on the effect, but also the implementation of mind mapping in teaching writing. That is why, the researcher formulated two research questions, as follow:

1. How is the mind mapping technique applied in teaching writing recount text?
2. How effective is the use of mind mapping in teaching writing recount text?

2. RESEARCH METHOD

This research utilized an experimental research design, which according to Bell (2009) the ways of carrying out thje study is objective and in a controlled fashion. This helps the precision be maximized and particular conclusions can be drawn. In implementing mind mapping technique, the researcher has to determine the tentative answer to the research questions by making the hypotheses. In addition, as stated by Cresswell (2012), the use intact groups is recommended in classroom research that is experimental in nature.

The setting of this research was in a one Private Senior High School in Purwokerto, Central Java. The reason why the researchers used this as a setting of the research because the researcher found the similarity of weaknesses in teaching and learning writing skill. The researcher selected tenth graders as the population. The samples were from two classes, in which one of them was the experimental group and the other was the control group.

Purposive Sampling was utilized in this research. Purposive sampling was based on prior knowledge of a population and the certain purpose of the research, researcher used personal judgment to choose a sample. Investigator does not simply study whoever is available but rather use their judgment to choose a sample that they believe, based on previous information, will provide the data they want. (Fraenkel, Wallen & Hyun, 2007). Data collection methods included pre-tests and post-tests, along with classroom observations. The validity and reliability of the test were measured using statistical formulas, ensuring the accuracy of the instruments. Research procedures involved subject selection, try-out tests, treatment implementation, and data analysis using t-tests. The findings were analyzed through data reduction, display, and verification, leading to the conclusion regarding the effectiveness of the applied techniques in improving students' writing skills.

The data were analyzed using SPSS 2022, incorporating mean scores, percentages, and t-tests to capture students' responses regarding their writing skills through the implementation of the mind mapping technique. Quantitative data, including students' writing scores, were examined using descriptive statistics, while t-test analysis was conducted to determine significant differences in the impact of the mind mapping technique on students' writing skills. Writing proficiency was evaluated based on scales provided by English teachers and peers, emphasizing on key aspects such as content, organization, grammar, vocabulary, and mechanics. All relevant data were then categorized into different levels,

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including excellent, good, fair, poor, and very poor.

3. FINDINGS AND DISCUSSION

Before conducting the main research, the researcher carried out a try-out test to make sure the validity and reliability of the research instruments. The try-out test was conducted with students from a different class, and the results were analyzed using criterion and content validity. The reliability of the test was measured using the Spearman formula in Microsoft Excel, and the findings confirmed that the test was both valid and reliable. The main study involved pre-tests and post-tests aimed to both the experimental and control classes. The students' writing skills were examined based on five key aspects: content, organization, grammar, vocabulary, and mechanics.

Table 1. Category

Category	Score
Very Poor	0-13
Poor	14-42
Fair	43-70
Good	71-99
Excellent	99-100

The following is the results of the categorization of students according to the results of the try out activity.

Table 2. Numbers of Category

Category	Numbers of Students
Very Poor	0
Poor	11
Fair	4
Good	9
Excellent	0

Table 2 shows that most students perform poorly prior the treatment. 15 students out of 24 students were in the category of fair and poor. The data reveals the need for an action to support students' writing ability. The systematic literature review suggests the use of 'mind mapping'. The following is the calculation of the validity and reliability degrees of the instrument used to determined the readiness for the experiment to be conducted.

Table 3. Validity Test

	Validity				
r value	0.972	0.970	0.903	0.964	0.903
r table	0.396	0.396	0.396	0.396	0.396
Status	V	V	V	V	V

Table 4. Reliability Test

Reliability	
r value	0.99
spearman	0.993
r table	0.396
Status	Reliable

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The results of the pre-test showed that both the experimental and control groups had similar difficulties in writing recount texts, specifically in constructing coherent paragraphs, using appropriate vocabulary, and applying correct grammar. The mean score of the experimental class before receiving the treatment was 66, categorized as fair, while the control class had a lower mean score of 51, also falling within the fair category. After the implementation of brainstorming and mind mapping techniques in the experimental class, the post-test results indicated a notable improvement. The mean score of the experimental class increased to 71, while the control class also showed some improvement, reaching a mean score of 56. However, the increase in the experimental class was more significant, demonstrating the positive impact of the treatment.

Table 5. Result of Pre-Test and Post-Test

1.	The mean score of pre-test in the experimental class (before receiving the treatment).	Mean score: 66
2.	The mean score of post-test in the experimental class (after receiving the treatment).	Mean score: 71
3.	The mean score of pre-test in control class.	Mean score: 51
4.	The mean score of post-test in control class.	Mean score: 56

The statistical analysis was conducted using SPSS-22, which included descriptive statistics such as mean scores, percentages, and t-tests to determine the significance of the differences between the pre-test and post-test results. The normality and homogeneity tests confirmed that the data were normally distributed and homogeneous, meeting the requirements for further statistical analysis. The t-test results revealed that the t-value (2.957) was higher than the t-table value (2.037), this indicates that there is a significant effect of mind mapping technique on students' writing skills. Therefore, the alternative hypothesis (H1) was accepted, confirming that these techniques contributed to enhanced writing performance.

Table 6. Table of Descriptive Statistics

Group Statistics					
	X	N	Mean	Std. Deviation	Std. Error Mean
Result of the Test	Post Test Ex	25	70.92	18.023	3.605
	Post Test Control	24	55.33	18.876	3.853

Classroom observations gave additional insights into the learning process. The researcher conducted three sessions: the first meeting included the pre-test and the introduction of brainstorming and mind mapping techniques, the second meeting focused on the implementation of these techniques, and the third meeting involved the post-test. During the treatment meeting, students were guided to brainstorm ideas, organize their thoughts using mind maps, and build structured paragraphs. Observations showed that students actively participated in the learning process, displayed greater enthusiasm, and demonstrated improved critical thinking and creativity. The students also showed progress in structuring their writing and using suitable vocabulary.

The findings of this study is in line with previous research highlighting the advantages of mind mapping in teaching writing. For instance, a study by Sinulingga (2012) showed there is a significant difference in students' achievement in writing recount texts through the use of mind mapping techniques. Similarly, research by Panlaysia (2015) found significant differences in writing performance between students received a specific treatment with mind mapping technique and those who were not, with the former group achieving higher scores.

Previous studies have highlighted the effect of the mind mapping technique in improving students' writing skills. Buchori (2017) found that implementing mind mapping significantly improved students' ability to write simple essays in German. Before using this technique, students' average score was 51.85, which increased to 85.86 after its application.

This finding suggests that mind mapping helps students organize their ideas and improve the overall quality of their writing. Similarly, Al-Jarf (2011) reported that mind mapping facilitates brainstorming, enabling students to structure and generate ideas more efficiently, leading to better writing outcomes.

Moreover, research by Zakiyah et al. (2018) demonstrated a positive effect of mind mapping on students' narrative writing skills. Their study reported a t-value of 42.27, significantly exceeding the critical t-table value of 2.064, indicating a substantial improvement after implementing mind mapping. This technique allows students to express, develop, and arrange their ideas systematically, enhancing cohesion and coherence in their writing (Zakiyah et al., 2018). Furthermore, Buzan (2006) emphasized that mind mapping promotes cognitive engagement, aiding memory retention and idea expansion, which are important in developing students' writing skills.

Additional evidence from Resti and Atmazaki (2023) supports previous findings, indicating that mind mapping serves as an effective alternative in writing instruction. Their study revealed that students in grade XI at SMA Negeri 1 X Koto Tanah Datar showed a significant improvement in writing explanatory texts after using this technique. This means that mind mapping aids students in organizing and expanding their ideas systematically (Resti & Atmazaki, 2023). Overall, these findings establish mind mapping as an important tool in writing pedagogy, fostering structured thinking and creativity.

4. CONCLUSION AND SUGGESTIONS

The classroom observation results show that mind mapping technique was effectively implemented in teaching writing. The researcher carefully prepared the lesson, provided clear instructions, and motivated students to think critically and creatively. Students responded positively by paying attention, engaging with the lesson, and showing motivation. In the pre-test and post-test results, the experimental class had a mean score of 71, while the control class scored 65, with statistical analysis this mean the mind mapping technique is effective. Based on these findings, English teachers are motivated to implement mind mapping to build an engaging learning environment and improve students' writing skills. Students should also develop awareness of content, organization, grammar, mechanics, and vocabulary to enhance their writing. Future researchers are encouraged to investigate this technique with other language skills, both receptive and productive.

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