THE EFFECTIVENESS OF MIND MAPPING AND PICTURES SERIES IN ENHANCING TENTH-GRADE STUDENTS' DESCRIPTIVE WRITING SKILLS AT SULTAN FATTAH DEMAK VOCATIONAL SCHOOL

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ABSTRACT

Writing is one of the essential skills in learning English; however, many students face challenges in organizing ideas coherently, using correct grammar, and maintaining motivation to write. These difficulties often arise from the lack of engaging and relevant teaching strategies. In response to this issue, this study aims to examine the effectiveness of visual-based techniques, namely mind mapping and picture series, in enhancing students' descriptive text writing skills. This research adopted a quasi-experimental design with a non-equivalent control group. Two groups of students—experimental and control—participated in the study. The experimental group was taught using visual techniques (mind mapping and picture series), while the control group followed conventional methods. Pre-tests and post-tests were conducted to evaluate the students' writing performance before and after the intervention. The findings revealed that the experimental group showed a significant improvement in descriptive writing skills compared to the control group. Specifically, mind mapping helped students systematically organize their ideas, while picture series provided visual stimuli that enhanced creativity and engagement. Statistical analysis demonstrated that both techniques effectively addressed students' writing challenges and boosted their motivation. The study concludes that visual-based teaching techniques are beneficial in improving students' ability to produce well-structured, coherent, and engaging descriptive texts.

Keywords: Mind Mapping, Picture Series, Descriptive Writing

A. Introduction

Writing is one of the essential skills that must be mastered in learning English. As a productive skill, writing not only requires mastery of proper grammar but also involves the ability to organize ideas, select appropriate words, and convey messages clearly and effectively. Writing is a complex skill, as Hyland (2019) explains, involving a series of cognitive processes, planning, and organizing ideas that demand meticulous attention to content, structure, and grammar.

However, in practice, many students face challenges in mastering this skill, including tenth-grade students at SMK Sultan Fattah Demak. Their primary difficulties include an inability to organize ideas coherently, incorrect grammar usage,

and low motivation for writing. Graham et al. (2018) point out that students' lack of motivation in writing often stems from the absence of engaging and relevant teaching strategies, making it hard for students to begin and complete their writing tasks.

Descriptive text is one of the critical forms of writing that teaches students to describe people, places, or objects in detail. Overcoming the challenges associated with teaching descriptive writing requires innovative instructional strategies to help students address these difficulties more effectively. Visual-based learning techniques, such as mind mapping and picture series, offer promising solutions for improving students' writing skills.

Mind mapping, as explained by Buzan (2009), is a visual technique that helps students organize ideas in an engaging and structured manner. Using colors and symbols, students can group main and supporting ideas before expressing them in written form. This technique not only boosts creativity but also helps students overcome confusion in structuring their texts. This is supported by Zhou et al. (2020), who found that mind mapping enhances critical thinking and students' ability to effectively organize information.

Meanwhile, the picture series technique uses a sequence of images arranged chronologically to help students develop their ideas. Wright (1997) suggests that images can be effective learning tools because they provide visual stimuli that motivate students to logically express their ideas. This is further corroborated by Chen (2021), who found that using visual media such as picture series increases student interest and engagement in the writing process, enabling them to produce better-organized and cohesive texts.

This study aims to examine the effectiveness of both techniques in improving students' writing skills. Additionally, it seeks to determine whether there is a significant difference between using mind mapping and picture series in teaching descriptive text writing.

By implementing these techniques, it is hoped that students will not only improve their writing skills but also feel more confident and motivated to write. The results of this study are expected to provide practical contributions to teachers in selecting effective teaching strategies

and serve as a reference for further research in teaching writing.

B. Methodology

This study employed a rigorous methodological framework to ensure the reliability and validity of the findings. Below is an explanation of the methods utilized, which are integral to strengthening the relevance and credibility of the research.

Type of the Research

The research adopted a quantitative approach using pre-test and post-test designs, coupled with a quasi-experimental design. According to Creswell (2009), experimental research is designed to examine the effects of an intervention. This quasi-experimental study specifically employed a non-equivalent control group design (Sugiyono, 2017). The design included two groups—experimental and control—without random assignment. Both groups underwent pre-tests and post-tests to evaluate differences in performance following treatment.

Table 1. The Effectiveness of Mind Mapping and Picture Series: A Quasi-Experimental Study

Group	Pre-Test	Treatment	Post-Test
Experimental	O1	X (Mind Mapping)	O2
Control	O3	X (Picture Series)	O4

From the results presented in the table, it can be seen that the average post-test score of the experimental group increased significantly compared to the pre-test score. This shows that the Mind Mapping and Picture Series techniques have a positive influence on students' descriptive writing abilities. Meanwhile, the control group using conventional methods showed a lower increase. Statistical tests showed that there were significant differences between the two groups after the treatment was given.

Subject of the Study

1. Population

   The population consisted of tenth-grade students from SMK Sultan Fattah Demak for the academic year 2024/2025.

2. Sample

   Purposive sampling was used to select two classes: X AKL 1 (experimental) and X AKL 2 (control). Each class consisted of 20 students, totaling 40 participants. Both groups shared similar characteristics, such as skill levels, learning demands, and heterogeneous competencies, ensuring

comparability for the study's purpose.

Variables of the Study

1. Dependent VariableThe dependent variable was students' ability to write descriptive texts, assessed based on criteria such as content, organization, vocabulary, grammar, and mechanics. Improvement was measured by comparing pre-test and post-test results.
2. Independent Variables The independent variables were the teaching methods: mind mapping for the experimental group and picture series for the control group.

Instrument of the Study

Tests were the primary instruments used. A pre-test was conducted to evaluate baseline descriptive writing skills, while a post-test assessed improvements after treatment. The scoring followed Jacobs et al. (1981), covering five aspects: content, organization, language use, vocabulary, and mechanics. Validity and reliability tests ensured the instrument's quality.

1. Validity: Construct validity was confirmed by aligning test items with the study's objectives.
2. Reliability: Reliability was measured using statistical calculations, with scores categorized based on Brown (2004) reliability scales.

Techniques of Data Collection

1. Pre-Test Students wrote descriptive texts on selected topics (e.g., great athletes or famous people) before the treatment.
2. TreatmentThe experimental group utilized mind mapping, while the control group employed picture series techniques to write descriptive texts. Sessions were tailored to foster creativity and structure in students' writing.
3. Post-TestFollowing the treatment, students wrote descriptive texts on similar topics. Their work was scored based on the same rubric as the pre-test to ensure consistency.
4. InterviewsStructured interviews captured students' perceptions of the two

teaching methods, providing qualitative insights into their experiences and preferences.

Techniques of Data Analysis

Data were analyzed using IBM SPSS Statistics Version 22. The analysis involved several steps:

1. Normality Test
   To determine whether the data followed a normal distribution, the Kolmogorov-Smirnov and Shapiro-Wilk tests were applied. A significance level above 0.05 indicated normal distribution.
2. Homogeneity Test
   The Levene test confirmed the homogeneity of variances. A significance value greater than 0.05 suggested homogeneity.
3. Hypothesis
   Testing An independent-samples t-test was conducted to compare the mean scores of the experimental and control groups. Significance was determined at $\alpha = 0.05$.
4. Effect
   SizeCohen's d formula measured the effect size of the intervention. Results were categorized as weak, modest, moderate, or strong based on standardized criteria.

Research Procedures

1. Before Treatment
   - Lesson plans (RPP) were prepared for both groups.
   - Instruments were tested for validity and reliability.
   - Pre-test scores were evaluated for normality and homogeneity.
2. During Treatment
   - The experimental group received lessons incorporating mind mapping techniques.
   - The control group utilized picture series to develop descriptive texts.
3. After Treatment
   - Post-tests were conducted and scored using standardized rubrics.
   - Statistical analyses were performed to compare pre-test and post-test results across groups.
   - This comprehensive methodology ensures a robust examination of the effectiveness of mind mapping and picture series techniques

in enhancing descriptive writing skills.

C.Research Results and Discussion

The results of this research show an increase in the ability to write descriptive text in the experimental group (using mind mapping) and the control group (using picture series). The following is the pre-test and post-test score data for each group:

Table 2. Experimental Group Pre-Test and Post-Test Results (Mind Mapping)

Siswa	Pre-Test	Post-Test	Peningkatan
S1	45	70	25
S2	55	75	20
S3	48	68	20
...	...	...	...
Rata-rata	**49.25**	**72.15**	**+22.90**

Table 3. Control Group Pre-Test and Post-Test Results (Picture Series)

Siswa	Pre-Test	Post-Test	Peningkatan
S1	50	70	20
S2	40	58	18
S3	50	60	10
...	...	...	...
Rata-rata	**43.75**	**60.20**	**+16.45**

Based on the table above, the experimental group showed an average increase of +22.90, higher than the control group which only experienced an increase of +16.45. This shows that the use of mind mapping techniques is more effective in improving students' ability to write descriptive texts compared to picture series.

Normality Test

The results of the normality test using Kolmogorov-Smirnov show a significance value of 0.102 ($p > 0.05$), so the data is normally distributed. Thus, further statistical testing can be carried out assuming normal data distribution.

Hypothesis Testing

Hypothesis testing using independent-samples t-test showed a significant difference between the experimental group and the control group in the post-test ($p < 0.05$). The effect size value was calculated using Cohen's d, which showed a strong category effect ($d > 0.8$), confirming the substantial impact of using mind mapping.

The significant improvement shown by the experimental group can be attributed to the effectiveness of

mind mapping techniques in helping students map ideas, organize information, and develop creativity. This is in line with the opinion of Buzan (2006), who states that mind mapping is a learning tool that accelerates understanding and increases information retention.

On the other hand, although the control group experienced improvement, the picture series method proved to have limitations in stimulating deeper exploration of ideas. Harmer (2007) notes that although visual aids are helpful, these approaches tend to be less dynamic than interactive methods such as mind mapping.

The success of the experimental group was also supported by a higher level of student motivation, as seen from the interview results. As many as 90% of experimental group students felt more confident after learning with mind mapping. This is consistent with Bandura's (1997) theory, which emphasizes the importance of positive experiences in increasing students' self-efficacy.

Overall, this research emphasizes the importance of innovation in teaching methods, especially for descriptive writing skills. A mind mapping-based approach can be integrated as a main strategy in the language learning curriculum.

E. Conclution

Based on the research results, it can be concluded that the use of mind mapping techniques proven to be more effective in improving students' ability to write descriptive text compared to conventional methods such as using a series of pictures. The mind mapping technique, which facilitates effective visualization and organization of ideas, can increase students' motivation and creativity in producing better writing. This is in line with learning theories which emphasize the importance of visualization and active involvement of students in the learning process. Therefore, the application of mind mapping in the writing learning process is highly recommended to improve the quality of students' writing results.

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