Improving Writing a Descriptive Paragraph of Elementary School Students through Picture-Based Mind Mapping

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A B S T R A K

Keterampilan menulis paragraf deskripsi menjadi salah satu pembelajaran yang sulit dipahami siswa sekolah dasar. Penelitian ini bertujuan untuk menganalisis pengaruh mind mapping berbasis media gambar terhadap keterampilan menulis paragraf deskripsi siswa sekolah dasar. Penelitian ini menggunakan penelitian kuantitatif dengan metode quasi eksperimental design tipe Non-equivalent control group. Dalam penelitian ini terdapat dua kelompok yang tidak dipilih secara random. Kedua kelompok diberikan pretest untuk mengetahui keadaan awal. Kelompok eksperimen diberikan perlakukan dengan penerapan mind mapping berbasis media gambar sedangkan kelompok control diberikan perlakukan dengan penerapan mind mapping tidak berbantuan gambar. Teknik pengumpulan data menggunakan observasi dan lembar tes menulis paragraf deskripsi. Penilaian kualitas menulis paragraf deskripsi berdasarkan pada focus, development, unity, coherence, and correctness. Data yang terkumpul akan dianalisis melalui dua kali analisis yaitu analisis statistik deskriptif dan analisis statistik inferensial. Hasil penelitian menunjukkan bahwa mind mapping berbasis media gambar memiliki pengaruh signifikan untuk meningkatkan keterampilan menulis paragraf deskripsi siswa sekolah dasar. Mind mapping berbasis media gambar menjadi inspirasi bagi siswa untuk menulis karena dapat mengembangkan dan menggambarkan ide-ide yang ingin mereka tuliskan dengan lebih jelas dan terstruktur dengan baik.

A B S T R A C T

The skill of writing descriptive paragraphs is one of the lessons that are difficult for elementary school students to understand. This study aims to analyze the effect of media image-based mind mapping on the skills of writing descriptive paragraphs of elementary school students. This study used quantitative research with a quasi-experimental design method with a Non-equivalent control group type. In this study, two groups were not randomly selected. Both groups were given a pretest to determine the initial state. The experimental group was treated with image media-based mind mapping, while the control group was image-based. Data collection techniques using observation and test sheets writing descriptive paragraphs. Assessment of the quality of writing descriptive paragraphs is based on focus, development, unity, coherence, and correctness. The collected data will be analyzed through two analyzes, namely descriptive statistical analysis and inferential statistical analysis. The results of the study show that image media-based mind mapping has a significant effect on improving the skills of writing descriptive paragraphs in elementary school students. Image media-based mind mapping inspires students to write because it can develop and describe the ideas they want to write in a clearer and well-structured manner.

1. INTRODUCTION

In learning a language, four basic skills are important for students to master: listening, speaking, reading, and writing (Gilakjani et al., 2016; Khair, 2018). Writing skills are needed in various areas of life. Language skills are divided into two main parts, namely spoken language skills and written language skills (Costantino & Bonati, 2014; Hayon, 2007). Guided by the purpose of teaching Indonesian, Indonesian needs to be taught from the time a person enters elementary school to university. It is important to teach early writing in elementary schools so children are involved in reading and writing activities. This

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learning is the basis for writing that can determine elementary school students to continue writing in the next class (Gere et al., 2019; Williams & Beam, 2019). Children will have difficulty learning in the future without the ability to write from an early age. Writing is an active and productive activity that requires an organized way of thinking expressed in written language (Allen & Paesani, 2022; Galbraith & Baaijen, 2018). Writing is meant as a person's skill to express thoughts, ideas, knowledge, knowledge, and experience, so regular training and practice are needed to achieve writing skills. Writing is a language activity that uses writing as its medium. The development of writing skills needs serious attention since elementary education as an aspect of language skills (Chalkiadaki, 2018; Supriadi et al., 2020). Writing can be classified into five: narrative, description, exposition, argumentation, and persuasion (Riyanton et al., 2021; Santangelo, 2014).

Descriptive paragraphs are paragraphs that are used to describe something in detail. Descriptive paragraphs can describe people, places, things, situations or situations. Descriptive paragraphs usually consist of several sentences that describe the features or nature of what is being described (Lo et al., 2013; Sofyan et al., 2022). Descriptive paragraphs use words such as big, beautiful, or straight to give a clear and comprehensive picture of what is being described. Descriptive paragraphs can help readers imagine or feel what is being described (de Koning & van der Schoot, 2013; McGinley et al., 2020). For example, a descriptive paragraph about a tree might start by describing the height of the tree and then move on to describe the colour of its leaves, its texture, and the aroma it produces. Writing descriptive paragraphs is one of the essential skills to master because, through descriptive paragraphs, one can give an idea of an event or event. The skill of writing descriptive paragraphs is one's ability to describe something in detail and clearly by using appropriate and compelling words (Collins et al., 2018; Ramadhanti & Yanda, 2021; Selim Bayburtlu I Teacher, 2020). People with the skills to write descriptive paragraphs can use relevant information to provide an overall picture and visualize effectively for the reader (de Koning & van der Schoot, 2013; Graham et al., 2013; Schallert, 2017). Descriptive paragraph writing skills also include composing paragraphs with good grammar and choosing appropriate words so that the writing becomes more beautiful and easy to understand (Grünke & Leonard-Zabel, 2015; Santangelo, 2014). Writing descriptive paragraphs is one of the essential skills in writing, especially in writing stories, poetry, or scientific writing to provide a detailed description of the research object or phenomenon being studied. Writing descriptive paragraphs requires keen observation with all the senses, then writing them with the right words or using the correct comparisons (Aminatun et al., 2019; Graham et al., 2017).

Based on observations and interviews conducted by researchers in two schools in Pangkep Regency, researchers found the fact that learning Indonesian, especially writing descriptive paragraphs, became one of the lessons that were difficult for students to understand, the main reason being that students did not master familiar words and students could not find ideas. In writing and students' lack of attention to learning Indonesian, especially writing descriptive paragraphs, can be seen from the low student learning outcomes in Indonesian lessons that do not meet the minimum standards set by the school. One of the causes is that students cannot string words together (Pallotti, 2014; Qin & Uccelli, 2021). Writing learning, especially descriptive paragraph learning, is mostly presented in theory. The practice is minimal, and students are less motivated, often use the lecture method, and do not develop learning models, so students are less enthusiastic about writing descriptive paragraphs.

One of the barriers to student creativity is the use of conventional approaches so that students feel bored and sleepy even though the media is presented in images (Apriyanti et al., 2020; Lugmayr et al., 2014). This follows several students' statements that they are lazy to practice writing because they do not know what they want to write and where to start. Several other students stated that they already had an idea but did not know how to put it in a paragraph, so in the middle of writing a descriptive paragraph, the students ran out of ideas. The lack of student's knowledge in writing descriptive paragraphs makes students lazy to be creative and practice writing (Bijami et al., 2013; Perumal & Ajit, 2020). The students also admitted that they did not know how to arrange sentences into paragraphs. If this is allowed to drag on, then learning to write paragraphs will become a lesson that students are less interested in.

Based on these problems, a learning strategy is needed to improve students' writing quality in descriptive paragraphs by combining a learning strategy with media images to make learning more interesting and fun. Mind Mapping is the right strategy to overcome these problems. This strategy is an effective strategy for improving writing a paragraph descriptive. Mind mapping makes it easier for students to overcome their writing difficulties. Mind mapping is the easiest way to enter information from the brain to retrieve information from the brain (Buzan, 2012; Poldrack & Yarkoni, 2016; Roelfsema et al., 2018). This method is a creative way of taking notes. Mind mapping is an easy way to get information from inside and outside the brain, a new way to learn and practice precisely and effectively, and the best way to get new ideas and plans. In this way, it can be said that mind maps map thoughts (Buzan, 2012; Long & Carlson, 2011; Ritchhart et al., 2009). With this strategy, students are guided to make a plan before

writing a paragraph. The benefits of Mind Mapping for elementary school students are : (1) It helps to concentrate and is better at remembering; (2) Improves visual intelligence and observation skills; (3) Practicing critical thinking and communication skills; (4) Practicing initiative and curiosity; (5) Increase creativity and inventiveness; (6) Make good notes and lesson summaries; (7) Increasing the speed of thinking and being independent; (8) Helps with the brain's ability to concentrate; (9) Allows the essence of matter to become clear; (10) Visually, the order and information are relatively clearer (Aprinawati, 2018; Fu et al., 2019; Gagić et al., 2019; Hwang et al., 2011; Schroeder et al., 2018). Thus the theory is influenced by the theory of cognitivism learning, which emphasizes the learning process.

Research on writing ability using mind mapping has also been carried out by previous researchers, such as research (Azizah, 2013; Cahyono et al., 2022; Dahliana et al., 2019; Fu et al., 2019; Mingli, 2019; Putrayasa, 2015; Vejayan et al., 2022) which reveals that mind mapping can improve students' skills in writing. Previous research only focused on using mind-mapping techniques combined with brainstorming activities without using image media. Therefore, researchers are interested in analyzing the skills of writing descriptive paragraphs by applying image media-based mind-mapping learning strategies. Image media can provide benefits for elementary school students' writing skills, such as improving students' writing skills by being an inspiration for them to write, develop the ideas they want to write, describe the ideas they want to convey more clearly, write more creatively, and write with good structure (Marita et al., 2021; Sahiti & Stamp, 2022). In addition, media images can also help students visualize the concepts being taught, increase their interest in learning, expand their imagination, improve their memory skills, and improve their communication skills and synthesis analysis (Malekian et al., 2012; Millis, 2006). Based on this background, this study focused on analyzing the effect of image-based mind mapping on the skills of writing descriptive paragraphs of elementary school students.

2. METHOD

This study uses quantitative research with a quasi-experimental design method with the type of Non-equivalent control group. In this study, two groups were not selected randomly. Both groups were given a pretest to determine the initial state (Fraenkel et al., 2012). Furthermore, the experimental group was treated with image-based mind-mapping strategies, while the control group was treated with mind mapping not assisted by pictures. The design of this research can be seen in Figure 1.
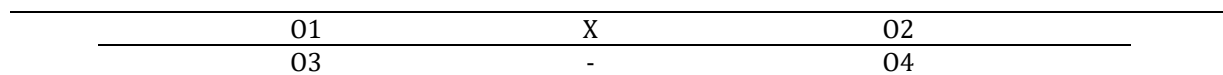
O1	X	O2
O3	-	O4

Figure 1. Research Design Non-Equivalent Control Group Design

Remarks:
O1 : The skill of writing descriptive paragraphs in the experimental class before being given treatment
O2 : The skill of writing descriptive paragraphs in the experimental class after learning using image-based mind mapping.
O3 : The skill of writing descriptive paragraphs in the control class before being given treatment
O4 : The skill of Writing descriptive paragraphs in the control class using mind mapping without being based on image media
X : The application of mind mapping based on image media in learning.

The population in this study were all fourth-grade students at public elementary school 36 Biring Ere totalling 30 students, and fourth-grade students at public elementary school 30 Panaikang totalling 30 students. Sampling uses the saturated sampling technique by making all population members a sample. The data collection technique used observation and test sheets to write descriptive paragraphs. The forming test is carried out by presenting the topic as an image, and then students describe it in the structure of a paragraph. Before being used, the test instrument was validated by experts. The test assessment of writing descriptive paragraphs is based on a lattice instrument that includes focus, development, unity, coherence, and correctness (Murray & Rockowitz, 2019). More details can be seen in Table 1.

Tabel 1. Lattice instrument skills writing descriptive paragraphs

No	Aspect	Criteria
1	Focus	The main idea is clear, interesting, and essential and describes the object to be defined.

No	Aspect	Criteria
2	Development	Each paragraph supports or develops the main idea.
3	Unity	Each paragraph relates to the main idea.
4	Coherence	Paragraphs are well and logically arranged and give the impression that the reader can feel what is being described for himself.
5	Correctness	The words used are well-chosen and memorable.
		The use of capital letters and punctuation marks follows the General Guidelines for Indonesian Spelling.

The collected data will be analyzed through two analyzes. The first analysis, namely descriptive statistical analysis, describes the skills of writing descriptive paragraphs of students in the experimental and control groups. The data is presented by describing the percentage obtained by students, the average student score, the standard deviation, and the student's highest and lowest scores. The second analysis is to test the hypothesis using inferential statistics, namely analyzing the data by processing the data using Statistical Product Service Solution (SPSS) version 25. However, tests for normality and homogeneity are first performed before testing the hypothesis.

3. RESULT AND DISCUSSION

Result

Table 2. The Results of the Students' Descriptive Paragraph Writing Skills Test

Statistic	Control Group		Experiment Group	
	Pretest	**Posttest**	**Pretest**	**Posttest**
N	30	30	30	30
Mean	60.10	82.33	64.40	90.27
Median	70.00	88.00	70.00	93.50
Modus	70	91	70	94
Minimum	27	56	35	74
Maximum	72	94	71	98
Range Statistic	45	38	36	24
Std Deviation	14.838	10.902	9.551	6.518

Table 2 shows a significant increase in the skills of writing descriptive paragraphs for students in the experimental group after being given the application of image media-based mind mapping compared to the control group. The increased minimum and maximum values evidence this after being given the image media-based Mind Mapping application. The control group obtained a minimum score of 27 and a maximum score of 72 in the pretest, which increased in the posttest to 56 for the minimum score and 94 for the maximum score. In comparison, the experimental group obtained a minimum score of 35 and a maximum score of 71 on the pretest and experienced an increase in the posttest of 74 for the minimum score and 98 for the maximum score. The results of the qualitative descriptive analysis can be seen in Table 3.

Table 3 The results of the Qualitative Descriptive Analysis of the Students' Description Writing Skills

Group	Frequency					Category
	Very Good	**Good**	**Average**	**Poor**	**Very Bad**	
Pretest Control	-	-	19	-	11	Poor
	-	-	63.33%	-	36.67%	
Posttest Control	14	5	8	3	2	Good
	46.67%	16.67%	26.67%	6.66%	3.33%	
Pretest Experiment	-	-	20	2	8	Poor
	-	-	66.67%	6.67%	26.66%	
Posttest Experiment	21	6	3	-	-	Very Good
	70%	20%	10%	-	-	

Based on Table 3, the skills of writing paragraph descriptions of students before applying image media-based mind mapping in the experimental group and the application of mind mapping without image-based media in the control group were in the poor category. In the post-test, the experimental

group got better scores in the very good category compared to the control class, which only got a good category. After the data is obtained from the descriptive statistical analysis results, the data will be tested for its hypothesis through normality, homogeneity, and independent sample tests. The normality test results can be seen in Table 4.

Table 4. Normality Test Results of the Pretest Data for the Experimental Group and the Control Group

	Grup	Kolmogrov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Descriptive paragraph writing skills	Experiment	.166	30	.064	.954	30	.214
	Control	.141	30	.132	.940	30	.091

Table 4 shows the significant value of the descriptive writing skill score of the experimental group students through the Kolmogorov-Smirnov test obtained a value of 0.166 and the Shapiro-Wilk test of 0.214. So that sig = 0.166 > 0.05 and sig = 0.214 > 0.05 means that the students' skill score data in writing descriptive paragraphs after being given the application of mind mapping based on image media is normally distributed. While the significant value of the control group score was 0.141 on the Kolmogorov-Smirnov test and 0.091 on the Shapiro-Wilk test, so sig = 0.141 > 0.05 and sig = 0.091 > 0.05, which means that the data on students' writing skill scores after being given mind mapping without image media is normally distributed. Based on the normality analysis, the students' description writing skills after being given the application of image media-based mind mapping in the experimental class and without image media in the control class were all normally distributed. In addition, the homogeneity test results showed sig = 0.546 > 0.05. Hence, the data on the descriptive paragraph writing skills of the experimental group and the control group on the pretest came from populations that met the homogeneity requirements.

The descriptive statistical analysis shows that the skills of writing descriptive paragraphs after being given mind mapping treatment based on media images and mind mapping without media images are relatively different. The average score of students' skills in writing descriptive paragraphs after being given mind mapping treatment based on media images was 90.27, and the skill score for writing descriptive paragraphs after being given mind mapping without media images was 82.33. This proves that the skill scores for writing descriptive paragraphs after being treated with image media-based mind mapping are better than those for writing descriptive paragraph skills for students who use mind mapping without media images. However, this difference must be tested statistically to determine whether it is significantly different. The results of the t-test analysis of the skills of writing descriptive paragraphs can be seen in Table 5.

Table 5. Independent Samples T-Test of the Two Groups

		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Descriptive paragraph writing skills	Equal variances assumed	0.545	0.456	5.492	58	0.000	10.20	1.85	6.48	13.91
	Equal variances not assumed			5.492	57.56	0.081	10.20	1.85	6.27	15.82

Based on Table 5, the calculated t value is 5,492 and a significance value of 0,000, so sig = 0,000 <0.05 means Ho is rejected, and H1 is accepted. This shows that there is a significant difference in the score of writing description paragraph skills between the group that was given the application of image media-based mind mapping and the group that was given the application of mind mapping without the help of media images, so that image media-based mind mapping had a significant effect on students' description writing skills.

Discussion

This study tested a hypothesis about the effect of image-assisted mind mapping on students' descriptive paragraph writing skills. This study will measure students' writing skills based on focus, development, unity, coherence, and correctness (Gawain, 2016; Murray & Rockowitz, 2019). From the results of the study, it was concluded that image-assisted mind mapping had a significant effect on students' descriptive paragraph writing skills, as evidenced by the increase in the score of descriptive paragraph writing skills of the experimental group students, which was higher than the control group's score on the posttest. Several previous studies also supported the positive effect of image-assisted mind mapping, which revealed that image media-based mind mapping could train students to develop their imagination according to the theme, then write down word choices related to the theme to create the mapped words into a framework writing (Dahliana et al., 2019; Saharah & Indihadi, 2019).

The most challenging part is knowing what to write about, the theme, and how to start. Through mind mapping, a theme is translated into branches of other themes so that it becomes the development of ideas in writing. Mind mapping is a strategy for creative note-taking by making mind maps to make them easier to understand (Conceição et al., 2017; Erdem, 2017). Mind mapping based on image media can make it easier for someone to express new ideas, reopen existing recordings in the brain, clear thoughts, improve one's thinking power which has been classed, and save time when mapping thoughts and letting your ideas and thoughts spread. entire page (Gómez Betancur & King, 2014; Grégoire et al., 2015). Image-based mind mapping is very suitable as a central idea for writing descriptive paragraphs. This is because a picture is worth a thousand words and helps the brain use imagination. A central image is more interesting, keeps the brain focused, supports the brain's concentration, and activates the brain.

The combination of mind mapping and image media can reduce students' boredom with learning to write descriptive paragraphs because with mind mapping, students can find new ideas about what to write, and pictures stimulate students to find ideas for what they will write. This follows the opinion of Davies and Schaafsma, who argued that mind mapping is a visualization technique used to present information in a structured manner and help understand related ideas. By using mind mapping, one can group related ideas into a more systematic structure, making it easier to understand and remember the information. Mind mapping can also help someone develop new ideas by connecting existing ideas. So, mind mapping is a magical tool to open your mind and increase creativity (Davies, 2011; Schaafsma et al., 2015). The use of image-assisted mind mapping in learning to write descriptive paragraphs has a positive impact because it makes it easier for students to find ideas or ideas about what to write to motivate students to continue practicing writing and ultimately have an effect on better learning outcomes. This is an excellent way to generate and organize ideas before writing. This follows the explanation of previous study which reveals that writing is sometimes easy and sometimes tricky. It's easy when you've done it and difficult if you're not used to it (Vera & Satriani, 2019).

The implications of this research can provide benefits in improving the descriptive writing skills of elementary school students. By using image-based mind mapping, students can develop spatial thinking skills and the ability to organize ideas in a more structured way. The use of image-based mind mapping shows the use of technology in an educational context. The implication is that teachers and students can adopt this technology as an effective tool in improving students' writing skills. However, this study was limited to elementary school students, so the results may not be directly applicable to higher age groups or developmental levels. Additional research is needed to test the effectiveness of this method in a wider group. Besides that the researcher suggests several things. Namely, teachers are expected to be able to use image-assisted mind mapping as an alternative to learning Indonesian, significantly improving the skills of writing descriptive paragraphs of elementary school students. This research still has many technical and time limitations. It is suggested that further researchers develop this research by developing mind mapping based on image media to improve students' other skills.

4. CONCLUSION

This study showed that the experimental class received a moderate category on the aspects of focus and a high category on the aspects of development, unity, coherence, and correctness. While the control group received a high category only in one aspect, namely development and the others received a medium category. Based on the analysis results, the use of image media-based mind mapping in learning can help students find new ideas about what to write and stimulate them to find ideas for what they will write. This shows that there is a significant difference in the skills of writing descriptive paragraphs between the group that was given the application of image media-based mind mapping and the group that was given the application of mind mapping without the aid of image media, so that image media-based mind mapping had a significant effect on the description writing skills of elementary school students.

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