



Project-Based Learning Assisted with Mind Mapping on Description Essay Writing Skills : A Study in Elementary School

Nanda Anisa Faturohmah^{1*}, Apri Irianto², Reza Rachmadtullah³

Universitas PGRI Adi Buana Surabaya ^{1,2,3}

Correspondence e-mail : nandaanisaaf@gmail.com

Abstract: Writing essays with a descriptive structure is one of the basic competencies. A descriptive essay is a true depiction of objects or events so that the reader feels what the writer feels in the story. However, the level of students' ability to write descriptive essays is still low given the lack of understanding in writing descriptions so it is difficult to find ideas to translate into written form, and the choice of vocabulary is not quite right in constructing sentences. Therefore, this study aims to determine whether there is an influence of the project-based learning model assisted by mind mapping on students' descriptive essay writing skills. The method of this research is Quasi Experiment with a pretest-posttest control group design. Quasi experiment was conducted to determine the effect of a treatment on the subject under study. The research subjects were 50 students of class fourth-grade at Dukuh Menanggal I/424 Public Elementary School, Surabaya. Data analysis techniques using normality test, homogeneity test, and hypothesis testing. The results showed that there was an influence of the Mind Mapping-assisted Project Based Learning learning model on literacy skills in writing essay descriptions of grade IV students. In addition, with the help of Mind Mapping, can students learn motivation in writing descriptive essays because it helps focus students' minds in composing sentences into paragraphs.

Keyword : Project Based Learning, Mind Mapping, Description

Article info: Submitted: 2023-06-24 | Accepted : 2023-08-28 | Published : 2023-08-31

Copyright © 2023, Authors.

This is an open-access article under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)



How to Cite :

Introduction

The skill of writing descriptions contained in Indonesian language subjects is an important issue to study because Indonesian is one of the subjects that must be studied since students are in elementary school. This subject exists at every level of formal education and plays an important role in other subjects. The four language skills that are directed at Indonesian subjects are speaking, listening, reading, and writing skills. Writing skill is one of the four language skills that have an important role in human life.

In elementary schools, learning advanced writing, writing with the help of pictures, writing paragraphs, writing simple essays, writing letters, writing speeches, writing lectures, writing news, and writing forms must be learned by students (Zulela et al., 2021). One of the basic competencies that must be achieved by fourth-grade students is writing an essay on a topic using a descriptive structure.

However, learning to write is often a lesson that students don't like, because it is considered to be the most complicated skill among the other three language skills. This is based on the fact that writing skills contain conveying ideas by the author to readers who are required to know and understand vocabulary, and experience which are presented systematically (Inggriyani & Pebrianti, 2021). Then, in line with this opinion, Nurhuda (2018) revealed that writing activities do not necessarily convey ideas and thoughts, besides that, it also builds ideas and knowledge in written language. With this, students' writing skills need to be honed and carried out repeatedly. In line with Bramantyo (2020) states that there are not few students who write without being guided by the flow of writing so that the results of students' essays seem random, the development of plots that are not systematic, and the choice of words that are not precise make the essay difficult for readers to understand.

To help students understand the subject matter, the teacher can adjust the appropriate learning strategy. As with the selection of learning models for learning media that suit the needs of students. The use of learning media will greatly help the effectiveness of the learning process and convey messages from lesson content (Wahid, 2018). The diversity of media with different characteristics needs to be adjusted and selected carefully so that they can be used effectively.

Several researchers have studied the descriptive writing skills of elementary school students. Ivan (2022) found that the skill of writing descriptive essays for high school students is still low, this is due to the continuity of learning in the classroom that still applies conventional learning models. One way to overcome these problems is by using a contextual learning model. Then, Inggriyani & Anisa Pebrianti (2021) found that not a few students were recorded as having not been able to write a complete description, the obstacles experienced by students were difficulties in putting ideas into writing and limitations in the use of spelling and punctuation. It can be seen that it still takes quite a long time for students to write. Not only that, Sholeh (2021) found that students' low description writing skills were low because the teacher was not suitable in choosing and using instructional media that attracted students' attention. The solution that must be applied by the teacher is to match the learning model with interesting learning media and learning media can increase student motivation in learning such as pictures and picture.

However, the skill of writing descriptions using mind-mapping media has not yet been studied. Mind mapping is important to study because it has many uses. One of them is to assist in developing ideas through a series of maps because mind mapping can hone creative ideas and be active in the learning process.

This study examines mind mapping learning media on students' description writing skills. This panel also uses a project-based learning model by taking into account several considerations as an alternative in supporting the use of mind mapping. Mind mapping here is media created by students in classroom learning

which is useful as an alternative in implementing project-based learning, the benefits of this media enable students to hone their creative thinking power or depth of understanding of the material received (Refarmzanah, 2021). This study shows that the use of the project-based learning model assisted by mind mapping can provide convenience for students in composing descriptive essays and that it has an impact on improving students' skills.

Methodology

1. Research Model

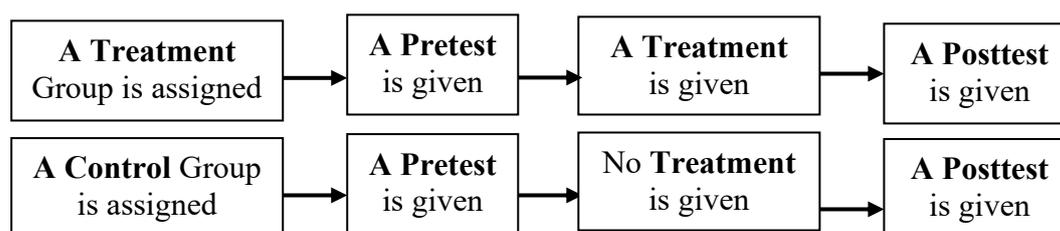


Figure 1. The nonequivalent pretest-posttest group design

This study aims to determine whether there is an influence of the mind mapping-assisted project-based learning (PjBL) learning model on students' descriptive essay writing skills. This study used a quasi-experimental research type with the nonequivalent pretest-posttest group design. Experiments are quantitative designs that can be used to determine causal possibilities (Clara, 2018). Quasi-experiments were used because of the limited population and samples to be used in the study, as well as considerations of the time and effort required. Obtaining data by using a performance test through pretest and posttest which was carried out to determine the descriptive essay writing skills of students in the experimental group and the control group.

2. Participant

The participants in this study involved fifty fourth-grade students at SD Negeri Dukuh Menanggal I/424 Surabaya for the 2022/2023 academic year. The selection of participants consisted of 2 classes, namely class IV A as the experimental group and class IV B as the control group. The sampling technique used in this study is the purposive sampling technique. Purposive sampling is a sampling technique with certain considerations (Indrawan, 2016).

3. Data Collection Tools

In this study data collection using test techniques. The researcher used the performance test results as an objective test to measure students' description writing skills. The test instrument consists of one question item writing a descriptive essay according to the theme. In this case, the ability of students to write descriptive essays will be measured by the suitability of their

understanding and mastery of each indicator. Obtaining the test data is writing descriptive essays from the pretest and post-test results. The pretest is used to measure students' initial abilities, while the posttest is used to measure students' final abilities after being given treatment.

4. Data Collection Process

In data analysis, there is a data processing process that has been obtained by researchers during field research to produce information. Obtaining data in the field and analyzing data is very important in determining the final results of a study. Obtaining data in this study was taken from the pretest and post-test results. The data analysis technique used is the prerequisite test which consists of the normality test, homogeneity test, and hypothesis testing. Researchers conducted data analysis and concluded with the help of SPSS version 25 software with a 95% confidence level.

Result and Discussion

1. Finding

The results of this study describe the findings in the field based on the research focus. The normality test is carried out to know whether the independent and dependent variables are normally distributed or not (Kadir, 2019). The normality test results are as follows:

Table 1. Normality Test Results

		Unstandardized Residual
N		50
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	8,20543318
	Most Extreme Absolute Differences	,057
	Positive	,057
	Negative	-,051
Test Statistic		,057
Asymp. Sig. (2-tailed)		,200 ^{c,d}

Source: Data processing with SPSS 25

Table 1. It is known that the significance value of Asymp.Sig (2-tailed) is 0.200. This is by the criteria for testing normally distributed sample data, namely $\text{sig} > 0.05$. So it can be concluded that the results of the normality test of the ability to write descriptive essays of $0.200 > 0.05$ are normally distributed, seen from the basis of the decision-making of the Kolmogrov-Smirnov normality test. Then the variance of the data is considered to have fulfilled the requirements in parametric statistical testing, especially the independent

sample t-test. Therefore, in testing the hypothesis the researcher used the independent sample t-test.

Then, the homogeneity test in this study was used to find out whether the two sample groups had the same variance or not (Kadir, 2019). The following is a table of homogeneity test results:

Table 2. Homogeneity Test Results

	Levene Statistic	df1	df2	Sig.
Based on Mean	,493	1	48	,486
Based on Median	,569	1	48	,454
Based on Median and with adjusted df	,569	1	47.621	,454
Based on trimmed mean	,483	1	48	,491

Source: Data processing with SPSS 25

Based on Table 2. it is known that the significance value (Sig) Based on Mean is $0.486 > 0.05$. The basis for decision-making in the homogeneity test that the researchers have described above, namely if the significance value or Sig. > 0.05 , then it is said that the variances of the two data samples are the same (homogeneous).

After carrying out normality and homogeneity tests. Then do the hypothesis test with the test formula T-test. Hypothesis testing is intended to answer the hypothesis that has been proposed. The data analysis technique used in this study is a statistical analysis technique using a two-sample t-test analysis, namely the Independent Sample t-test. Hypothesis testing was carried out by using the Independent Sample t-test because it uses the t distribution for the significance of the difference in certain average values of the two groups that are not related to the similarity test of the two averages carried out to find out whether there is a significant difference in average between the post results. -test two research samples. The following is a hypothesis test table:

Table 3. Hypothesis Test Results

	N	Mean	Std. Deviation	Std. Error Mean
Eksperimen	25	79,28	6,542	1,308
Kontrol	25	73,20	7,077	1,415
Independent Sample t-test				
			Equal variances assumed	Equal Variances not assumed
	F		0,493	

Levene's Test for Equality of Variances	Sig		0,486	
t-test for Equality of Means	T		3,154	3,154
	Df		48	47,706
	Sig. (2-tailed)		0,003	0,003
	Mean Difference		6,080	6,080
	Std. Error Difference		1,927	1,927
	95% Confidence Interval of the Difference	Lower	2,205	2,204
		Upper	9,955	9,956

Source: Data processing with SPSS 25

Based on Table 3. above, from the number of respondents in the experimental class and control class of 25 students, it can be seen that the average value of students' abilities for the experimental group was 79.28 while for the control group was 73.20. Thus descriptive statistics can be concluded that there are differences in the average student learning outcomes between the experimental group and the control group. This is because learning using the help of mind mapping has an important role in increasing students' learning motivation.

Then it is known the value of Sig. (2-tailed) on the independent sample t-test of $0.003 < 0.05$ then as a basis for decision making it can be concluded that it is rejected and accepted. Thus it can be said that there are differences in the results of descriptive essay writing skills between the experimental class and the control class. So that the formulation of the research problem can be answered, namely "There is an influence of the Project Based Learning (PjBL) learning model assisted by mind mapping on students' essay writing skills".

2. Discussion

From the results of the analysis of the research data hypothesis testing, it is known that there is a significant effect of the application of the Project Based Learning (PjBL) learning model assisted by mind mapping on students' writing essay skills. Based on the results of the pretest and posttest, the initial abilities of the experimental class and control class students were relatively the same. Then, it can be seen that there is an average difference between the students in the experimental class and the control class. This is in line with several studies which suggest that improving learning outcomes can hone knowledge, attitudes and skills, and be able to find solutions to their own problems

(Fauziyyah, 2018; Nahdiah, 2021). In addition, it can also increase effectiveness and activity from class student learning outcomes (Hening et al., 2019; Kristin et al., 2018; Nahdiah, 2021).

The project-based learning (PjBL) learning model assisted by mind mapping can be used by teachers to create innovative learning so as to provide meaningful learning experiences for students to develop and hone in terms of existing knowledge and skills (Nurhadiyati et al., 2020). Mind mapping or mind maps are believed to be a technique to make it easier for someone to make notes that can be used in certain conditions and situations to facilitate brain creativity for visual recognition in getting the best results (Hening, 2019; Luh & Widyaningsih, 2019). This learning model positions educators as facilitators only, while students are the center, this learning prioritizes contextual activities that are directly related to the environment around students (Restiani, 2022). So that mind mapping can be used as an intermediary between teachers and students in interesting learning activities (Ellyawati, 2021).

Buzan (Kristin, 2018) mind mapping is a learning medium that involves how the brain works in creative and effective notes to make it easier to achieve learning goals. Napitupulu (2020) in his research explained that student learning outcomes by applying mind mapping media when online learning in the experimental class obtained higher results than learning outcomes in control class students. The learning outcomes of students using the project-based learning model assisted by mind mapping make students more communicatively and concisely, clear and easier to understand, and systematic in mapping ideas from the information obtained (Farokhah et al., 2019).

Thus, mind mapping as a learning medium can provide benefits in improving learning in teaching so that it has an impact on increasing student learning outcomes. Project-based learning (PjBL) assisted by mind mapping effectively involves active students in the process of achieving learning objectives in preparing real products with the help of mind mapping media as creative triggers for ideas, recording important things that need to be studied in depth as well as planning new projects.

Conclusion

Based on the data collected, the results of data processing and analysis as well as the presentation of hypotheses. So it can be concluded that there is an effect of applying the mind mapping-assisted project-based learning (PjBL) learning model on literacy skills in writing descriptive essays for class IV students at SD Negeri Dukuh Menanggal I/424 Surabaya. The use of the project-based learning (PjBL) learning model assisted by mind mapping can improve the skills of writing descriptive essays for grade IV students, this is because students are more active in the learning process

in class and find it easier to express ideas in written form. Then the results of the t-test conducted from the post-test results of the experimental group and the control group proved that the average value of the post-test writing essays on class descriptions that were given treatment was higher than the class that was not given the treatment of project-based learning (PjBL) model assisted mind mapping.

References

- Bramantyo, R. B. (2020). Efektivitas Metode Field Trip untuk Meningkatkan Keterampilan Menulis Karangan Deskripsi. Skripsi. Universitas Muhammadiyah Magelang.
- Clara, F. A. B. (2018). Pengaruh Penerapan Model Pembelajaran Kooperati Tipe Jigsaw Ii Terhadap Kemampuan Mengevaluasi Dan Mencipta Siswa Kelas V SD Kanisius Sorowajan Yogyakarta. Skripsi, 206.
- Ellyawati Noor, Reza, Masyanah R. (2021). Pengembangan Media Pembelajaran Berbasis Mind Mapping Dengan Powerpoint di SMA Islam Terpadu Granada Samarinda. *Jurnal Pendidikan Ekonomi UM Metro*, 2(1), 503–511.
- Farokhah, L., Herman, T., & Jupri, A. (2019). Perbedaan Kemampuan Komunikasi Matematis Siswa Sekolah Dasar Menggunakan Model Project Based Learning dan Model Project Based Learning Dengan Teknik Mind Map. *ALGORITMA: Journal of Mathematics Education*, 1(1), 1–13.
- Fauziyyah. (2018). Pengaruh Model Project Based Learning Terhadap Hasil Belajar Mata Pelajaran IPA Materi Pokok Klasifikasi Makhluk Hidup pada Kelas VII di SMP Negeri 2 Taman Sidoarjo. *Jurnal Mahasiswa Teknologi Pendidikan (JMTP)*, 9(2), 1–7.
- Hening, B. M., Saptaningrum, E., & Kiswoyo, K. (2019). Efektivitas Model Project Based Learning Berbantu Mind Map Terhadap Hasil Belajar Siswa Kelas IV. *Janacitta*, 1(2).
- Indrawan. R, Y. P. (2016). *Metodologi Penelitian*. Bandung: PT Refika Aditama.
- Inggriyani, F., & Anisa Pebrianti, N. (2021). Analisis Kesulitan Keterampilan Menulis Karangan Deskripsi Peserta Didik di Sekolah Dasar. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 7(01), 1–22.
- Ivan, A. Mugara, R. Puspita, R. (2022). Keterampilan Menulis Deskripsi Sekolah Dasar Kelas Tinggi Menggunakan Model Pembelajaran Kontekstual. *Journal of Elementary Education*, 5, 409–413.
- Kadir. (2019). *Statistik Terapan*. Depok: Rajagrafindo Persada.
- Kristin, F., Dewi, P. C., & Anugraheni, I. (2018). Penerapan Model Pembelajaran Project Based Learning (PjBL) Berbantuan Media Mind Map Untuk Meningkatkan Keaktifan dan Hasil Belajar Siswa Kelas IV SD. *Jurnal Guru Kita (JGK)*, 2(3), 116–125.
- Luh, N., & Widyaningsih, G. (2019). Penerapan Mind Mapping Berbantuan Media
- Journal of Education and Teacher Training Innovation*, 2023, 1(1), 44-52

Gambar. 9(1), 7-15.

- MS, Z., Rachmadtullah, R., & Iasha, V. (2021). Effectiveness of the use of synthetic analytical structural methods against the ability to begin writing skills in elementary school students. *Jurnal Prima Edukasia*, 9(1), 16-22.
- Nahdiah, A., & Handayani, S. L. (2021). Pengaruh Model Project Based Learning Berbantuan Google Meet terhadap Kemampuan Berpikir Kreatif Siswa. *Jurnal Basicedu*, 5(4), 2377-2383.
- Napitupulu Marolop. (2020). Pengaruh Belajar Daring Berbantu Mind Map Terhadap Hasil Belajar Biologi Siswa Di Kelas XI IPA SMA Negeri 1 Todano. *Jurnal SAINS Pendidikan Biologi*, 1(2), 30-37.
- Nurhadiyati, A., Rusdinal, R., & Fitria, Y. (2020). Pengaruh Model Project Based Learning (PjBL) terhadap Hasil Belajar Siswa di Sekolah Dasar. *Jurnal Basicedu*, 5(1), 327-333.
- Nurhuda, A. (2018). Pengaruh Model Pembelajaran Kooperatif Tipe Think Talk Write Dengan Menggunakan Media Gambar Terhadap Keterampilan Menulis Karangan Deskripsi di Sekolah Dasar. Universitas Pendidikan Indonesia.
- Refarmzanah, A. (2021). Perbandingan Model Pembelajaran Project Based Learning (PjBL) Berbasis Mind Mapping dan Diorama dengan Model Student Teams Achievement Devisions (STAD) Terhadap Hasil Belajar IPS Materi Mobilitas Sosial Siswa SMP Sains Tebuireng Jombang. Universitas Islam Negeri Maulana Malik Ibrahim Malang.
- Restiani. (2022). Pengaruh Model Pembelajaran Project Based Learning (PjBL) Berbantuan Concept Map terhadap Kemampuan Literasi Matematis dan Self Afficacy. *Paper Knowledge . Toward a Media History of Documents*.
- Sholeh, A. V. D. (2021). Meningkatkan Keterampilan Menulis Deskripsi dengan Model Picture and Picture di SDN 3 Bangkleyan Kabupaten Blor. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 8, 454-459.
- Wahid, A. (2018). Pentingnya Media Pembelajaran Dalam Meningkatkan Prestasi Belajar. *Pendidikan dan Pemikiran Islam*, 5.