



THE EFFECTIVENESS OF USING PROJECT-BASED LEARNING ON THE STUDENTS' WRITING DESCRIPTIVE TEXT ACHIEVEMENT

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ABSTRACT :

Writing proficiency remains one of the most challenging aspects of English learning due to the complexity of generating, organizing, and expressing ideas accurately. This study investigates the effect of Project-Based Learning (PjBL) on students' achievement in writing descriptive texts and examines its potential to reduce writing-related anxiety by promoting active and contextual learning. A quasi-experimental design with pre-test and post-test was applied to two groups of eighth-grade students at SMPN 1 Karangrejo, each consisting of 35 participants. Data were analyzed using SPSS 25.0 through normality tests, homogeneity tests, and independent sample t-tests. Results show that the experimental group obtained a higher post-test mean score ($M = 85.14$, $SD = 8.11$) compared to the control group ($M = 71.63$, $SD = 7.13$). The independent sample t-test confirmed a significant difference between the two groups ($t = 5.786$, $p = 0.000 < 0.05$), indicating that PjBL effectively enhances students' descriptive writing performance. Overall, the findings demonstrate that PjBL improves writing competence while fostering student engagement, collaboration, and confidence throughout the writing process.

Key words: *project based learning, writing achievement, descriptive text*

INTRODUCTION

The era of globalization has positioned English as an essential international language in communication, technology, and academia. Mastery of English is therefore a fundamental requirement for individuals who aim to participate actively in global interactions (Suharni et al. 2025). Among the four English language skills, writing is widely recognized as the most challenging because it involves complex cognitive processes, including generating ideas, organizing information, and expressing thoughts with accurate grammar and vocabulary. Writing also demands the ability to adjust content, style, and tone according to context, purpose, and target audience.

Writing is often considered the most difficult skill to master compared to the other three skills (Akramovna, Alimovn, and Djurakulovna 2020). This activity is not merely arranging words into written form, but involves a complex and structured thinking process. Writing skills require the ability to adapt content and style to the context, purpose, and intended audience (Givens 2020). Writers need to be able to develop ideas, organize them coherently, and use language that conforms to the rules of grammar and the appropriate writing style to produce meaningful texts.

Writing descriptive texts is one of the basic competencies that must be mastered by junior high school students (Marsono 2021), especially those in grade 8, as stated in the Deep Learning. This learning aims to enable students to describe people, animals, objects, or places clearly, in detail, and vividly, so that readers can imagine the objects being described as if they were seeing them directly. The skill of writing descriptive texts also plays an important role in training students' language sensitivity, observation skills, and creativity in composing effective and expressive sentences (Fitria 2024).

Based on the results of pre-research observations at SMPN 1 Karangrejo, a school known for its good academic reputation in Tulungagung Regency and considered a favorite school, there are significant obstacles in achieving descriptive text writing competence. Most students still have difficulty writing good descriptive texts. Their writing shows limitations in the use of varied vocabulary, sentence patterns that tend to be simple and repetitive, and ideas that are not organized coherently.¹ As a result, the resulting texts often feel flat, uninteresting, and even fail to provide a clear picture to the reader. Students need more effective and innovative learning strategies to be able to optimally develop their descriptive writing skills.

The conventional teaching methods applied at SMPN 1 Karangrejo are still oriented towards teacher-centered learning, where students tend to be passive recipients of information. The learning process is mostly characterized by lectures and mechanical exercises that focus on memorizing sentence structures and patterns. While this approach can help students understand the basics of language, it does not develop critical thinking, creativity, and independence in writing. As a result, many students find it difficult to express their ideas freely and imaginatively in their writing.

In response to this problem, educators and researchers have begun to explore various innovative learning models that place students at the center of the learning process (student-centered learning). One approach that is gaining attention is Project-Based Learning (PjBL). This model emphasizes the active involvement of students in learning activities through complex, authentic, and contextual projects over a period of time (Almulla 2020). According to Chiang and Lee, PjBL provides opportunities for students to build knowledge independently through direct experience, thereby increasing student motivation, creativity, and writing skills because the learning process focuses on exploration, reflection, and the creation of meaningful real-world work (Chiang and Lee 2016).

Unlike traditional learning methods that place teachers at the center of learning activities, Project-Based Learning (PjBL) places students as the main actors in the learning process (Nugraha,

¹ Results of preliminary observations in class 8 at SMPN 1 Karangrejo, on October 11, 2025

Supriadi, and Firmansyah 2023). Students are encouraged to actively engage in investigative activities, collaboration, and the creation of real products in the context of writing, which take the form of structured, interesting, and communicative descriptive texts. PjBL provides space for students to experience a more meaningful learning process, because they not only learn theory, but also apply it directly in contextual situations that resemble the real (Handrianto and Rahman 2018).

According to Bell in Brahmandika, the PjBL model has great potential in increasing student motivation, independence, and practical skills (Brahmandika and Utama 2024). Through challenging projects that are relevant to their lives, students are encouraged to think critically, solve problems, and develop the ability to work together in groups. This kind of learning experience helps students understand that writing is not just an academic task, but a communicative skill that has real value in everyday life.

Previous studies have provided strong evidence of the effectiveness of Project-Based Learning (PjBL) in English language learning. Alvi, Hendi and Priajana found that the implementation of PjBL contributed significantly to writing achievement of class X at Al Musyawirin Vocational School for the 2023/2024 academic year (Amali, Hidayat, and Priajana 2024). Similar results were also shown by Asrul, et al., study, which proved that this model was able to improve students' ability to write narrative texts (Asrul et al. 2021). These findings show that PjBL not only enriches students' learning experiences but also encourages them to be more active and creative in producing writing.

Most previous studies tended to focus on general writing skills or specific types of texts, such as narrative and procedural texts. This condition creates a research gap, particularly regarding the impact of Project-Based Learning on the ability to write descriptive texts among eighth-grade students. Furthermore, no prior research has examined the implementation of PjBL specifically at SMPN 1 Karangrejo, despite preliminary observations showing clear difficulties in students' descriptive writing. Therefore, a focused and contextual investigation is needed to determine whether PjBL can effectively address the persistent problems students face, including limited vocabulary, simple sentence structures, and weak idea organization.

Based on this gap, this study is placed within the theoretical framework of constructivist learning and student-centered pedagogy. The constructivist approach emphasizes that knowledge is actively constructed by students through experience and direct interaction with their learning environment. In line with this principle, Project-Based Learning (PjBL) is seen as a learning model that provides opportunities for students to build their own understanding through collaborative, exploratory, and reflective activities (Mones and Irawati 2023).

This study aims to examine the effect of Project-Based Learning on the descriptive writing skills of eighth-grade students at SMPN 1 Karangrejo. The hypothesis proposed is that the application of PjBL will have a significant positive effect on students' writing skills compared to conventional learning methods. This is based on the assumption that PjBL is able to provide a more interesting, contextual, and collaborative learning experience, thereby directly overcoming various weaknesses previously found in students' writing, such as limited vocabulary, simple sentence structure, and lack of organization of ideas.

Methods

This study used a quantitative approach with a quasi-experimental design involving pre-test and post-test administration. A quasi-experimental design is a type of experimental research in which the researcher provides treatment to the participants; however, the assignment of subjects into experimental and control groups is not conducted randomly (Creswell 2021). This design was selected because the researcher aimed to investigate the effectiveness of Project-Based Learning (PjBL) on students' descriptive text writing achievement. In this study, two groups of students were involved: a control group and an experimental group. By employing a two-group pretest–posttest design, the researcher was able to measure and compare students' achievement in writing descriptive texts before and after the treatment was applied to the experimental group.

The research was conducted at SMPN 1 Karangrejo Tulungagung, with the population consisting of eighth grade students in the 2024/2025 academic year. The sample consists of 35 students of eighth grade G and 35 students of eighth grade H from SMPN 1 Karangrejo Tulungagung. The instruments used for data collection were tests. The test of writing descriptive text achievement was the instrument utilized by the researcher in this study developed and validated by experts to ensure content and construct validity.

The reliability of the instrument was examined using Cronbach's Alpha to ensure the consistency and accuracy of the test items (Harley Agustian et al. 2024). The collected data were analyzed using SPSS 25.0 software. The analysis procedures included normality and homogeneity testing, followed by an independent samples t-test to determine whether significant differences existed between the two groups. Additionally, an N-Gain analysis was conducted to measure the extent of improvement in students' descriptive writing achievement after being taught through PjBL.

Result

The research data were collected through tests consisting of a Pre-test and a Post-test administered to two groups of students: an Experimental group and a Control group. Each group consisted of 35 eighth-grade students from SMPN 1 Karangrejo Tulungagung, making a total of 70 participants. The Experimental group was taught using PjBL, while the Control group received instruction through conventional methods without these strategies. Both groups were given the same Pre-test to measure their initial descriptive texts ability before treatment and the same Post-test after the treatment to evaluate their improvement. The test consisted of test of writing descriptif text achievement focusing on content and development, organization, grammar and

structure, vocabulary and style, and mechanics (spelling, punctuation and capitalization) in descriptif texts.

Table 1. The Pre-test and Post-test Scores of The Experimental Group

No	Experimental Group		
	Name	Pre-Test	Post-Test
1	AAF	66	88
2	AD	66	88
3	AARA	65	92
4	ABA	66	85
5	DHW	69	83
6	DL	64	80
7	DPC	60	80
8	FRA	62	90
9	FA	60	90
10	HTCP	65	85
11	IAAH	70	87
12	IMA	66	82
13	JFRD	72	88
14	KQW	60	83
15	KI	83	73
16	MGAA	69	88
17	MPN	65	90
18	MIS	75	95
19	MN	66	78
20	MFNIS	68	80
21	MFAY	70	85
22	MGES	67	80
23	NZA	65	83
24	NRT	67	92
25	NMZ	68	90
26	NZA	66	77
27	PAI	76	82
28	RPP	60	85
29	RF	65	85
30	SRZ	69	90
31	SSAA	66	85
32	TMAAF	60	78
33	YPS	63	80
34	ZJK	54	95
35	ZJP	76	88

Table 2. The Pre-test and Post-test Scores of The Control Group

No	Experimental Group		
	Name	Pre-Test	Post-Test
1	APR	63	71
2	ANK	67	70
3	ADI	59	70
4	AS	65	71
5	ALP	67	77
6	DCR	69	77
7	DCP	60	77
8	DSM	50	73
9	EAZS	51	72
10	FIAI	64	69
11	FHP	58	72
12	IAS	69	70
13	JRB	52	72
14	JNN	66	74
15	KBMP	58	79
16	KW	66	79
17	MAV	64	81
18	MNIS	59	64
19	MNFZ	45	60
20	MRN	56	79
21	MFPP	54	83
22	MHF	69	79
23	NAS	61	72
24	NSNSP	52	67
25	NRN	46	69
26	PMAW	59	65
27	RAA	57	79
28	RY	64	70
29	SRF	54	65
30	SEP	59	64
31	SIK	56	60
32	VDA	67	81
33	YA	55	65
34	YSA	44	66
35	ZCM	56	65

Descriptive Statistics of Pretest and Posttest

The descriptive analysis was conducted to determine the students' writing descriptive text achievement before and after the treatment. The results are presented in the following table.

Table 3. Descriptive Statistics of Pretest and Posttest

Group	N	Pretest Mean	Posttest Mean	Mean Gain	Std. Deviation (Posttest)	Min	Max	Range
Experimental	35	66.54	85.14	18.60	8.114	10	41	51
Control	35	58.89	71.63	12.74	7.130	1	29	28

The data in Table 3 show that the pretest mean scores of the two groups were different, with the experimental group at 66.54 and the control group at 58.89. After the treatment, the posttest mean score of the experimental group taught using Project-Based Learning (PjBL) rose to 85.14, while the control group taught using Non-PjBL reached 71.63. The mean gain difference of 5.86 points indicates a more substantial improvement among students who were taught using the PjBL method.

Normality Test

The normality test was conducted using the Kolmogorov-Smirnov and Shapiro-Wilk tests to determine whether the data were normally distributed.

Table 4. Descriptive Statistics of Pretest and Posttest

Variable	Class	Kolmogorov-Smirnov Sig.	Shapiro-Wilk Sig.	Interpretation
Pretest	Experimental	0.083	0.055	Normal
	Control	0.200	0.170	Normal
Posttest	Experimental	0.200	0.648	Normal
	Control	0.200	0.210	Normal

The results of the normality test indicate that the pretest and posttest data for both groups are normally distributed (Sig. > 0.05). Therefore, further analysis can proceed with the homogeneity test.

Homogeneity Test

The homogeneity of variances was tested using Levene's Test to ensure the groups were comparable.

Table 5. Test of Homogeneity of Variances

Variable	Levene Statistic	Sig.	Interpretation
Pretest	3.485	0.066	Homogeneous
Posttest	1.113	0.295	Homogeneous

The results show that for all variables, the Sig. values are greater than 0.05. This indicates that the data between the experimental and control groups are homogeneous, meeting the assumption of equal variances.

Independent Sample t-Test

An Independent Samples T-Test was primarily used to compare the means of the two groups. Before performing the independent t-test, the prerequisites must be met, namely that the data is normally distributed and the variance homogeneity can be considered fulfilled. After the test prerequisites are met, the next step is to test the research hypothesis through an analysis of two independent samples (independent sample t-test). This analysis aims to measure the effectiveness of PjBL in achieving the writing skills of descriptive texts of eighth-grade students at SMPN 1 Karangrejo.

Table 6. Independent Sample T-Test

Variable	Test Type	Sig. (2-tailed)	Interpretation
Posttest	Independent T-Test	0.000 (< 0.05)	Significant difference
Improvement	Independent T-Test	0.002 (< 0.05)	Significant difference

The results in Table 6 indicate a statistically significant difference in both the posttest scores ($p = 0.000$) and the improvement scores ($p = 0.002$) between the experimental and control groups. Since both p -values are less than 0.05, the null hypothesis is rejected. This confirms that the use of Project-Based Learning (PjBL) has a significant positive impact on improving students' achievement in writing descriptive text compared to Non-Project-Based Learning methods.

Discussion

Effectiveness Difference Between Project-Based Learning and Conventional Learning in Teaching Descriptive Text Writing

This study reveals a significant difference in students' descriptive text writing achievement between those taught using Project-Based Learning (PjBL) and those taught through conventional instruction. The experimental group demonstrated higher post-test scores and greater improvement, indicating that PjBL offers a more effective learning framework for enhancing writing competence. These findings are consistent with Rahmawati, who states that PjBL effectively develops students' descriptive writing skills by embedding learning within authentic and contextual experiences. Such experiences engage students actively in meaningful language use and real-world writing tasks (Rahmawati, Syafrizal, and Handayani 2025).

The results also support Alvi's findings, which highlight the significant effect of PjBL on students' descriptive writing performance, particularly in the content dimension (Amali, Hidayat, and Priajana 2024). Within a project-based environment, students make independent decisions, evaluate and refine their ideas, and express their personal perspectives more freely. This autonomy produces writing that is more original, detailed, and contextually rich. In addition, Nurmahyuni emphasizes that PjBL fosters essential 21st-century skills communication, collaboration, creativity, and critical thinking which are crucial competencies for effective writing in modern language classrooms (Asrul et al. 2021).

The integration of PjBL into writing pedagogy strengthens not only students' linguistic competence but also their higher-order thinking and learning autonomy. Through project-based activities, learners become active constructors of meaning rather than passive recipients of information. Exploration, collaboration, and reflection enable them to refine their ideas and improve writing accuracy. This aligns with the principles of social constructivist theory, particularly Vygotsky's assertion that meaningful learning occurs through active participation in authentic social interactions. In this study, PjBL facilitated students' progress from basic writing skills toward more advanced writing performance through collaborative engagement and teacher scaffolding (Gibbes and Carson 2014).

The advantages of PjBL can be further understood through its basis in social constructivist theory. Vygotsky stated that meaningful learning occurs when students are actively engaged in authentic social interactions that foster cognitive development (Vygotsky 1978; Imbar 2025). In this study, PjBL helps students progress from their current writing skills to higher levels of competence through collaborative engagement with peers and guided support from teachers. These interactions encourage joint learning and collaborative problem-solving, making the learning process more dynamic and student-centered. As a result, the experimental group showed greater improvement compared to the control group, which relied on traditional teacher-centered instructional approaches that limited opportunities for active engagement and independent exploration.

PjBL encourages students to build knowledge through engagement in meaningful and challenging projects that reflect real-world contexts (Williamson 2023). In the case of writing descriptive texts, students are not only required to compose the text but also to engage in various stages of inquiry, such as observation, data collection, and repeated drafting. By integrating these stages, students develop a deeper understanding of descriptive writing as an act of communication, rather than merely a linguistic exercise.

The Influence of Project-Based Learning on Descriptive Text Writing Achievement

The statistical analysis in this study confirms that Project-Based Learning (PjBL) has a significant effect on improving students' descriptive text writing skills. This finding corroborates previous research by Natalia, which concluded that the implementation of PjBL enhances both the process and the product quality of writing (Natalia 2016). The consistency between the present results and prior studies reinforces the argument that PjBL provides a more effective pedagogical framework for developing students' writing competence than traditional approaches that emphasize rote learning and teacher-centered instruction.

PjBL as a learning model encourages student-centered learning, collaboration, and reflection. In the context of teaching descriptive writing, these principles are operationalized through activities such as direct observation, group discussions, and repeated revisions. Students learn to describe objects or real-life experiences through observation and analysis, transforming abstract linguistic knowledge into concrete communication practice. This process emphasizes that writing is a repetitive activity involving planning, drafting, revising, and editing. Students not only improve linguistic accuracy and coherence but also develop metacognitive awareness of their writing process (Ratu et al. 2025).

Wulandari's study further supports this finding, indicating that the iterative nature of PjBL allows learners to continuously refine their writing based on feedback from both peers and teachers (Wulandari and Ahmad 2020). Teachers provide structured guidance and gradually reduce support as learners' competence increases. In this study, teachers initially guided the brainstorming and draft preparation process, but students gradually took full responsibility for revising and completing their descriptive texts.

Based on the results of this research and previous studies, it is confirmed that PjBL is not merely a temporary pedagogical trend but a transformational learning approach capable of changing students' writing experiences. As outlined by the Indonesian Ministry of Education and Culture within the Merdeka Curriculum framework, PjBL is recognized as an innovative strategy that fosters essential 21st-century competencies, particularly communication, collaboration, creativity, and critical thinking. These competencies are an integral part of effective descriptive text writing, where students must be able to convey information clearly, coherently, creatively and enjoyable learning activity.

Conclusion

This study concludes that Project-Based Learning (PjBL) is significantly more effective than conventional instruction in improving students' descriptive writing achievement, as evidenced by higher post-test scores and greater learning gains in the experimental group. The findings offer a cumulative and elaborative theoretical contribution by reinforcing and extending previous research on PjBL within the Indonesian EFL context, showing that authentic, collaborative project activities enhance linguistic accuracy, coherence, and learner autonomy. Practically, the study recommends that English teachers adopt PjBL as a primary strategy in writing instruction and that schools provide training to support its classroom implementation, while future studies may explore its impact on other text genres and learner affective factors.

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