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PROJECT-BASED LEARNING AND LEARNING STYLE TO PROMOTE STUDENTS' WRITING ABILITY OF DESCRIPTIVE TEXT

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Abstract: Mastering writing is one of the essential skills that students of junior high school should have since it becomes the national aims mentioned in the 2013 curriculum as the regulation used by many schools including SMP Islam Ruhama, Ciputat Timur, Banten. However in the real condition most of the students still struggle to master a writing skill, it is due to writing requires them to center on punctuation, grammar, and spelling and those rules do not exist in their first language. Hence, it is essential to find appropriate method for students to learn writing skill. Moreover, this research was aimed to prove empirically how project-based learning method and learning style promote students' writing skill in English. This quantitative research was done by applying quasi-experimental design that used both pre and post-test. The seventh grade students of SMP Islam Ruhama became the population with 50 students as the sample. Those students were divided into two group experimental and controlled group. Writing test and learning style instrument were used as the tool for gathering the data. Furthermore, the research result revealed that project-based learning and students' learning style gave a positive effect on students' writing skill especially seventh grade students at SMP Islam Ruhama and visual learners tend to have higher score in writhing rather than auditory learners. Furthermore, both project-based learning and students' learning style have no interaction each other in terms of students' writing ability of descriptive text.

Keywords**:** Writing Skill; Project-based learning; Learning Style

INTRODUCTION

Writing is an essential skill in English language learning since it enables students to communicate their ideas in written form. However, writing in a foreign language can be challenging for junior high school students, particularly when they have limited vocabulary, difficulty in developing ideas, and problems in organizing sentences into coherent paragraphs. These challenges are also relevant to descriptive text writing, which requires students to describe a person, place, or object using appropriate details and language. Without sufficient opportunities to practice and develop their writing, students may struggle to produce clear and well-organized descriptive texts (Mayekti *et al*, 2022).

These difficulties were reflected in the initial writing performance of seventh-grade students at SMP Islam Ruhama. The results of preliminary study showed that the mean writing score of two seventh grade classes were 50,5 and 53,75 respectively both below the school's minimum passing criterion (KKM) of 75. The relatively low mean scores indicated that students in both classes needed further support in developing their descriptive writing ability. This situation highlights the need for an instructional approach that provides students with

meaningful and structured opportunities to develop ideas, organize information, and improve their written work.

In line with that Project-Based Learning (PjBL) offers a potential approach to address these needs. PjBL enables the students actively involved during the learning process than relying primarily on teacher explanations, PjBL engages students in developing a project through activities such as planning, gathering information, drafting, receiving feedback, and evaluating the final product (Fitri, Amran & Fachry, 2024). Additionally, in writing instruction, these activities can help students move beyond learning about text structures and language features toward applying them in an actual writing task. Students can explore a topic, organize relevant information, develop a draft, and revise their work based on feedback (Artini &Nitiasih, 2017). These opportunities make PjBL a relevant approach to investigate in descriptive writing instruction. However, its effectiveness compared with conventional instruction needs to be established through empirical evidence.

In addition to teaching methods, students' individual characteristics may also be related to their writing performance. (Sun and De Bot, 2016) distinguish between external and internal factors that influence language learning. In this study, teaching method represents the instructional factor, while learning style represents an individual learner characteristic. Learning style is commonly discussed in terms of visual, auditory, and kinesthetic preferences (Rogowsky, 2015). Visual learners tend to prefer written materials and visual representations, whereas auditory learners tend to prefer listening to explanations and participating in discussions (DePorter & Hernacki, as cited in Untoro, 2016). These two learning styles are relevant to writing instruction because students may engage with written examples and visual information, as well as verbal explanations and discussions, when developing and expressing ideas. Therefore, this study focuses on visual and auditory learning styles to examine whether writing performance differs between students classified within these two categories.

Furthermore, Examining teaching method and learning style seems to be essential since students with different learning preference may give different respond to instructional learning approach. PjBL provides opportunities for planning, collaboration, drafting, and revision, while students may differ in how they engage with written materials, visual information, and verbal interaction. Investigating these variables together makes it possible to examine not only whether PjBL and conventional instruction produce different writing outcomes, but also whether writing performance differs between visual and auditory learners and whether the effect of teaching method varies according to learning style. These relationships, however, should be tested rather than assumed.

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Previous studies have demonstrated the potential of project-based learning to improve writing performance across different contexts and genres. Sadeghi et al. (2016) reported improved comparison-and-contrast paragraph writing among Iranian EFL learners, while Praba et al. (2018) found significant improvement in students' report writing. Hasani et al. (2018) further explored its application in academic article writing, and Syarifah et al. (2019) mentioned students' improvement on their narrative writing and develop their creativity Meanwhile, Untoro (2016) found that students' writing performance differed by learning style and that instructional model interacted significantly with learning style. However, the combined effects of project-based learning, visual and auditory learning styles on junior high school students' descriptive writing remain underexplored. These findings suggest that examining instructional approaches alongside learner characteristics may provide a more comprehensive understanding of students' writing performance (Untoro, 2016)

Despite the contributions of previous studies, further investigation is needed to understand how different instructional approaches and learning styles affect students' writing performance across educational contexts and text genres. Previous research has demonstrated the potential of project-based learning to improve writing performance in different contexts, including paragraph writing, school-level writing, and academic article production (Sadeghi et al., 2016; Praba et al., 2018; Hasani et al., 2018). Meanwhile, (Untoro, 2016) examined the effects of the Group Investigation model and learning style on students' analytical exposition writing, including the interaction between these variables. However, the combined effects of project-based learning and visual and auditory learning styles on junior high school students' descriptive writing ability warrant further examination. In particular, it remains important to determine whether project-based learning and conventional teaching differ in their effects on descriptive writing performance, whether writing performance differs between visual and auditory learners, and whether the effect of teaching method varies according to learning style.

Therefore, this study aimed to investigate the effects of Project-Based Learning and learning style on students' writing ability of descriptive text of seventh-grade students at SMP Islam Ruhama. Specifically, it examined (1) whether students taught through PjBL differed in writing performance from those taught through conventional instruction, (2) whether visual and auditory learners differed in their descriptive writing performance, and (3) whether an interaction existed between teaching method and learning style in relation to students' descriptive writing ability.

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METHOD

Research Design

This research employed a quasi-experimental design involving three variables such as project-based learning as an independent variable, learning style as an attribute variable specifically visual and auditory learning style, and writing ability as dependent variable. Moreover, this research implemented pre-test and post-test design with both experimental and control group; students in experimental group were treated by applying project-based learning in producing writing descriptive product meanwhile control group taught conventionally by implementing lecturing method which means the teacher explain the material dominantly then ask the students to produce a writing descriptive text as a product of the learning process.

Research Participant

The population of this research was the first year students of SMP Islam Ruhama in Academic Year (2019/2020). There were four classes in this grade which consist of 25 students for class (VII-2 & VII-3) and 27, 28 students for class (VII-1 &VII-4) so there were 105 students altogether. Purposive sampling technique applied to pick the sample of this research considering some specific information for example students' score, capability, and characteristic. Additionally, this sampling technique used under the reason that the English teacher know well students' capability and characteristic as mentioned by (Fraenkel, 2012) that purposive sampling technique is one of ways of selecting sample by using personal judgment. Thus class (VII-2 & VII-3) which consist of 50 students selected as experimental and control group of this research.

Research Instrument

In this research, there were two instruments used to collect the data. The first instrument was questionnaire to administrate the data of students' learning style. And the second instrument was writing test to get the data of students' writing ability. The learning style questionnaire was developed based on the learning style theory proposed by Deporter and Hernacki, as cited in (Untoro, 2026). The questionnaire initially consisted of 40 items designed to identify students' learning style particularly visual and auditory leaning style. Following validity and reliability testing, 25 items were retained to use in this research with 0.0885 Cronbach's alpha coefficient. The researcher applied *r-Pearson Product Moment* to know the validity of the learning style instrument. It was done by comparing *r table* and *r value*. It was found 25 items got the *r value* was higher than *r table* which mean 25 items valid as the questionnaire of learning style. Meanwhile a writing instrument was a writing test in which students were instructed to write a descriptive text within 60 minutes. Before being administrated to students, the instrument was examined for validity and reliability. Content validity was used to determine whether the test

instructions were appropriate for assessing students' descriptive writing ability whereas the reliability of students' writing performance was assessed based on five indicators adapted from (Brown, 2007) such as content, organization, grammar, vocabulary, and mechanics.

Data Collection and Analysis

The research was conducted over ten meetings. In the first meeting, students in both the experimental and control classes completed the learning-style questionnaire and the writing pre-test. The learning-style questionnaire consisted of 25 valid items, each offering two response options (A and B) representing visual and auditory learning preferences, respectively. Students' learning styles were determined by counting their responses to the 25 items. Students who selected more visual-oriented responses were classified as visual learners, whereas those who selected more auditory-oriented responses were classified as auditory learners. After their learning styles had been identified, students completed the writing pre-test, which required them to write a descriptive text on one of two topics: their favorite idol or a family member. Students were given 60 minutes to complete the task.

From the second to the ninth meeting, the experimental class received instruction through Project-Based Learning (PjBL), while the control class was taught using the conventional lecturing method. In the experimental class, students worked collaboratively on a descriptive writing project. The project-based activities involved selecting a topic, responding to guiding questions, planning the project, developing the written product, monitoring progress, completing the final product, and evaluating the work through feedback and reflection.

In the tenth meeting, students in both classes completed the writing post-test. They were instructed to write a descriptive text on one of two topics: their favorite thing or their favorite place. The allotted time was 60 minutes, and students' writing was assessed using the same five criteria: content, organization, grammar, vocabulary, and mechanics.

The data were analyzed using descriptive statistics, followed by assumption testing for normality (Kolmogorov–Smirnov) and homogeneity of variance (Levene's test). Two-way ANOVA was then conducted at a significance level of .05 to examine the main effects of teaching method and learning style, as well as their interaction, on students' descriptive writing scores. Two-way ANOVA was employed to examine the main effects of teaching method and learning style, as well as the interaction between these variables, on students' descriptive writing ability. The hypotheses were evaluated using a significance level of .05; null hypotheses were rejected when the p-value was below .05.

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FINDING AND DISCUSSION

The findings of this study are split into three sections. The first section explores about how project based learning effects students' writing ability of descriptive text. Second, it concerns on the different of writing performance between students with visual and auditory learning style, and the third examines the interaction between the teaching method and learning style.

How project-based learning effects students' writing ability

The effect of Project-Based Learning (PjBL) on students' descriptive writing ability was examined by comparing the pre-test and post-test scores of the experimental and control classes. The experimental class received PjBL instruction, while the control class received conventional instruction. The results are presented in Table 1.

Table 1. The Mean Scores of Students' Descriptive Text Writing Ability

Group	Pre-test Mean	Post-test Mean	Improvement
Experimental	41.12	70.92	29.80
Control	44.12	54.24	10.12

As shown in Table 1, the experimental group's mean score increased from 41.12 to 70.92, while the control group's score increased from 44.12 to 54.24. The greater improvement in the experimental group suggests that PjBL was more effective in improving descriptive writing performance. To determine whether the difference in students' writing ability was statistically significant, the two-way analysis of variance (ANOVA) results of teaching method are presented in Table 2 below.

Table 2. The Result of Two-Way ANOVA for Teaching Method

Sources	Df	F	Sig. *(p)*	Partial $\acute{\eta}^2$
Teaching Method	1	20.583	<.001	.309
Error	46	-	-	-

** $\alpha = 0.05$, partial $\acute{\eta}^2$ indicates the effect size*

The two-way ANOVA results in Table 2 showed a significant effect of teaching method on students' descriptive writing ability, $F(1, 46) = 20.583$, $p < .001$, partial $\eta^2 = .309$. Therefore, the null hypothesis was rejected, indicating that students taught through PjBL performed significantly better than those receiving conventional instruction. The effect size also indicated a substantial effect of teaching method.

This finding is consistent with Argawati et al. (2020) and Andargie et al. (2025), who reported improvements in writing performance through project-based learning. The present

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results further suggest that PjBL can be an alternative approach for teaching descriptive writing to junior high school students

The Difference between Auditory and Visual Learners in Their Writing Ability of Descriptive Text

Students with a visual learning style obtained higher mean post-test scores than auditory learners in both the experimental class (78.85 vs. 62.33) and the control class (56.86 vs. 40.64). To determine whether the difference was statistically significant, two-way analysis of variance (ANOVA) result presented in the Table 3.

Table 3. The Result of Two-Way ANOVA for Learning Style

Sources	Df	F	Sig. *(p)*	Partial $\acute{\eta}^2$
Learning Style	1	9.549	.003	.172
Error	46	-	-	-

** $\alpha = 0.05$, partial $\acute{\eta}^2$ indicates the effect size*

Table 3 shows a significant difference in descriptive writing ability between visual and auditory learners, $F(1, 46) = 9.549$, $p = .003$, partial $\eta^2 = .172$. Thus, the null hypothesis was rejected, and learning style had a substantial effect in this sample.

This finding is consistent with Untoro (2016), who reported higher writing scores among visual than auditory learners. However, this result should not be interpreted as meaning that visual learners will always perform better, as writing performance may also be influenced by learning experiences and classroom activities (Yang et al., 2021).

The Interaction between Project-based Learning and Learning Style on Students' Writing of Descriptive Text

This study also investigated whether there was an interaction between teaching method and students' learning style on students writing ability of descriptive text. The data were analyzed by using two-way analysis of variance (ANOVA) the results are presented in the Tbale 4 below.

Table 4. The Result of Two-Way ANOVA for the Interaction between Teaching Method and Learning Style

Sources	Df	F	Sig. *(p)*	Partial $\acute{\eta}^2$
Teaching Method × Learning Style	1	1.929	.172	.40
Error	46	-	-	-

** $\alpha = 0.05$, partial $\acute{\eta}^2$ indicates the effect size*

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Based on the results presented in Table 4, the significance value of the interaction between teaching method and learning style was .172, with $F(1, 46) = 1.929$ and partial $\eta^2 = .040$. Since the significance value was higher than the significance level of .05, the interaction was not statistically significant. Therefore, the results did not provide sufficient evidence of an interaction between teaching method and learning style on students' descriptive text writing ability.

Although students in the experimental class obtained higher post-test mean scores than students in the control class for both visual and auditory learning styles, the interaction test showed that the difference in writing performance across teaching methods was not significantly different between the two learning-style groups. In other words, the results did not show that the effectiveness of a teaching method depended significantly on whether students had a visual or auditory learning style. This result indicates that the higher performance associated with Project-Based Learning was relatively consistent across the two learning-style groups rather than being concentrated in one particular group. Thus, although teaching method and learning style had significant main effects on students' writing ability of descriptive text, their interaction was not statistically significant.

This finding differs from (Untoro, 2016), who found a significant interaction between teaching method and learning style in students' analytical exposition writing. In the present study, the interaction between teaching method and learning style was not statistically significant. This difference indicates that the relationship between teaching method and learning style was not the same across the two studies. However, further research is needed to determine whether differences in the teaching methods, writing tasks, or research contexts may explain these findings.

One limitation of the present study was that no students were classified as having a kinesthetic learning style. Therefore, the findings only describe the results for students classified as visual or auditory learners and cannot be generalized to students with a kinesthetic learning style. In addition, the study involved 50 students from one school, which limits the extent to which the findings can be generalized to other student populations and learning contexts.

Based on these findings, teaching method and learning style showed significant main effects on students' descriptive text writing ability, but their interaction was not statistically significant. Thus, the findings support the conclusion that the effect of project-based learning and learning style should be interpreted separately in this research. Further research involving more participants, different schools, and additional learning style categories is needed to examine whether the interaction between teaching method and learning style can be identified in other contexts.

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CONCLUSION

According to the result of the research there are several points to be highlighted. First there was significant different on students writing achievement of descriptive text between those who were taught by applying project based learning and those taught conventionally applying lecturing method. In other words, it was proved that project-based learning effect students writing ability of descriptive text in the seventh grade students of SMP Islam Ruhama. It was supported by the result of data analysis in which sig value was 0.000 and it was lower than sig *alpha 0.05.*

The second, there was significant different between visual and auditory students on their writing ability of descriptive text. The researcher found that students who have visual learning style tend to perform better than students who have preference as auditory learners. Regarded to the hypothesis testing and the data of research finding, it was clearly proved that students' learning style gave an effect on students' writing achievement in term of descriptive text. Visual learner whether in the controlled class or experimental class got higher score rather than auditory learner and it was also proved by the hypothesis testing in which the sig value was 0.003. It means that sig value less than sig *alpha* 0.05, and the alternative hypothesis automatically accepted.

The third conclusion was about the interaction between project-based learning and students' learning style in term of their writing achievement descriptive text. Based on the data, it was found that there was no interaction between project-based learning and students' learning style on their writing of descriptive text. Thus, it implied that there is no guarantee if students with visual and auditory learning style who taught by using project-based learning could an improvement on their writing ability. Moreover, some factors could be the reason why there were no always interaction effects between the project-based learning and students' learning style on their descriptive writing capability.

In conclusion, PjBL can be an alternative an alternative approach to teach descriptive writing, and visual learners performed better than auditory learners. However, there is no significant interaction between the teaching method and learning style.

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