

Project-based learning to enhance students' writing achievement

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How to cite:

Ningrum, N. H., Erlina, D. & Amalia, H. (2023). Project-based learning to enhance students' writing achievement. In *Proceedings of The International Conference on English Teaching and Learning Issues (3rd ICETLI 2023)* (pp.87-94). <http://dx.doi.org/10.21043/icetli.v2i1.761>

ABSTRACT

This study aimed to know whether there was any significant improvement on students after being taught by using Project Based Learning and whether there was a discernible difference between the students who received instruction by using Project Based Learning and those who were not on the eighth grades students. This study's quasi-experimental approach included a pre-test, post-test, nonequivalent control group. All of the eighth- grade students made up the study's population. Purposive sampling was used to choose the study's sample, which consisted of 60 students. In collecting the data, written test was used as instrument. This research was conducted for 12 meetings. The researcher taught experiment class using Project Based Learning, while in control class the researcher used teacher's method. Based on the paired sample t-test p-output was lower than 0.05 ($0.000 < 0.05$) with $df=29$ (3.550) and t- output was 27.169. It can be concluded that there was significant improvement on students' writing achievement after being taught by using Project Based Learning. Then, based on independent sample t-test, it was found that p-output was $0.000 < 0.05$ with $df=58$ and t-output 16.736. Therefore, it can be concluded that there was significant difference on students' writing achievement between students who were taught by using Project Based Learning and those who were not. In other words, Project Based Learning could help students to improve their writing achievement. It can be assumed that Project Based Learning can be one of learning methods because offered effective learning that focus on creative thinking and problem solving. It also can engage students' enthusiasm in learning process.

KEYWORDS:

Improvement;
Writing
achievement;
Project
based
learning

INTRODUCTION

Writing is one of indicators that can be used to assess students' English proficiency. This is in line with what the government has outlined in the syllabus model for English junior high school. Kemendikbud (2017) emphasized that teaching English focused on increasing students' competence to be able to use the language in achieving communication goals in

various contexts, both written and oral. This notion is also supported by Kingston et al., (2002) who claimed that students' proficiency in learning English was determined by their productive skills, especially how well they wrote. That means, writing is one of the essential components that must be learned.

However, most of students have difficulties in writing. Harmer (2007) mentioned that students' inability to master writing was impacted by their lack of understanding of the process, difficulties coming up with topics and ideas, lack of planning, lack of strategies for producing and organizing text, problems with the mechanics of writing, and title no revision. Kristiana et al., (2021) stated that difficulties in writing there were three aspects, namely linguistic, psychological, and cognitive. The finding of this research showed that there were 83.33% students had difficulties in writing. Duha (2022) in her research also mentioned that there were still many students have difficulties in writing and it suggested that writing should be learned and taught intensively. Amalia et al. (2021) mentioned that some of factor that caused students difficulties in writing such as lack of grammar and vocabulary mastery, incapable of developing ideas in writing, and less motivation in learning writing.

In addition, there were preliminary research found. Based on informal interview with the teacher for the eighth graders, it found that there were 90% students had writing difficulties which are in low writing achievement. Some of their difficulties are such as lack of grammar and vocabulary mastery as well as lack of motivation in learning writing skills. Consequently, when facing with the obstacles in writing the students do not attempt to string the sentences in English. They assume that writing will be difficult and takes a long time. Additionally, less media of learning is also one of the causes of the students' difficulties in writing.

Moreover, in teaching writing, it is important to make class interesting and less boring for the students. Asan and Haliloglu (2005) stated that project-based learning was an effective approach that focused on creative thinking, problem solving, and interaction between students and their peers to create new knowledge. It has the potential to stimulate students' excitement and require students to engage in comprehending life's realities at all levels from the concrete to the abstract. Alan and Stoller (2005) mentioned that the use of project-based learning had several benefits. They were as: increasing motivation, enhancing research capacity, expanding cooperation, and enhancing resource management abilities. In teaching using project-based learning, the researcher also used visual media to supported this learning process. Bryne (in Ratnasari, 2010) mentioned that visual media has a lot of potential as a teaching tool for writing skill development because it may offer contexts and stimulus for a range of activities.

Furthermore, there are some previous studies related to the students' improvement by using project-based learning method. First, the study was from Susanti et al., (2020). The result of this research pointed that there was significant difference and improvement on students writing skills between experimental and control group that project-based learning could improve students writing skills. Likewise, Harisma et al., (2019) in their research showed that there was significant effect after implementing project-based learning in writing activities. The last, study from Khulel (2022). In his research the result showed that project based learning could help students improve their writing achievement.

Therefore, there are gaps between this study and the previous studies. The gaps between this study and the previous studies are on the research design. This study used quasi-experimental with pre-test post-test control design, while the first previous study used quantitative research design which used one group pre-test post-test. The second previous study used random sampling to choose the sample, and the last previous study used classroom action research.

Finally, based on the gaps and the preliminary research above, the researcher carried out this research to determine if students who received project-based learning instruction significantly improved over those who did not, as well as whether there was a significant difference in learning outcomes between the two groups of students.

METHOD

For the purpose of this study, a quasi-experimental research design was used, using pre-test and post-test control group designs that were not equal. According to Creswell (2002), the nonequivalent pre-test post-test control group design is a semi-experimental design that utilizes both the experimental group and the control group. There was no random assignment of persons to groups that get the therapy in the quasi-experimental study that was conducted (Creswell, 2012). Instead, the participants were randomized to their respective groups. The purpose of this experimental design was to determine whether or not the use of project-based learning may result in an improvement in writing achievement. The project-based learning approach was used in the instruction of the experimental class. In contrast, the teacher's technique was used in the instruction of the control group.

RESULT

Pretest and posttest score in experiment class

Table 1. Summary descriptive statistic of pretest and posttest in experiment class

	N	Minimum	Maximum	Std. Deviation
Pretest experiment	30	25	50	6.600
Posttest experiment	30	55	80	7.092
Valid N (listwise)	30			

From the result of pre-test class, it was found that the minimum score was 25, the maximum score 50, the mean score 37.40, and standard deviation 6.600. Meanwhile, in the post-test class the minimum score was 55, the maximum score 80, the mean of score 70.10, with standard deviation 7.092.

Pretest posttest score in control class

Table 2. Summary descriptive statistic in the control class

	N	Minimum	Maximum	Std. Deviation
Pretest control	30	25	50	6.109
Posttest control	30	35	55	5.142
Valid N (listwise)	30			

From the result of pre-test control class, it was found that the minimum score was 25, the maximum score 50, the mean score 34.30, and standard deviation 6.109. meanwhile, in the post-test control class the minimum score was 35, the maximum score 55, the mean of score 43.33, with standard deviation 5.142.

Normality test in experiment and control class

In measuring normality test, 1 Sample Kolmogorov Smirnov was used. The normality test was used to see if the data in normal distribution.

Table 3. The result of normality test in experiment and control class

No	Students P	N	Levene Statistic	Sig	Result
1	Experiment	30	.147	.098	Normal
2	Control	30	.118	.200	Normal

The result of the normality test in pretest experiment class was 0.098. . Based on the result of normality test in pretest, it showed that $0.098 > 0.05$, it meant that the distribution data of pretest in experiment class was normal. While, the result of normality in pretest was 0.200 Since $0.200 > 0.05$, it meant that the distribution data of pretest control class was normal.

Homogeneity test in experiment and control class

Table 4. The result of homogeneity in pretest experiment and control class

No	Students P	N	Levene Statistic	Sig	Result
1	Experiment Control	30	.196	.660	Homogeneous
2		30			

In measuring homogeneity test, Levene Statistic was used. The homogeneity test is used to see if the data homogenous. Based on the result of homogeneity test, it found that the significant was $0.660 > 0.05$. it meant that students pretest' score in experiment and and control class was homogeneous.

Table 5. The result of homogeneity in posttest experiment and control class

No	Class	N	Levene Statistic	Sig	Result
1	Experiment	30	3.578	.064	Homogeneous
2	Control	30			

Based on the result of homogeneity test, it found that the significant was 0.064. Since the significance was higher than 0.05, it meant that students posttest score in experiment and control class was homogeneous.

Measuring significant improvement on students' writing achievement after using PBL

For the purpose of determining whether or not the eighth-grade students' writing skills had significantly improved as a result of being instructed utilizing the Project-Based Learning approach, a paired sample t-test was used. A paired sample t-test was used in order to compare the outcomes of the pre-test and post-test administered to the experiment class.

Table 6. Summary of paired sample t-test in experiment class

PBL	Paired Sample t-test			Ho	Ha
	t	df	Sig	Rejected	Accepted
	27.169	29	.000		

According to the examination of the table that was shown earlier, the results of the experiment class revealed that the p-output was 0.000 and the t-value was 27.169. Due to the fact that the p-output was lower than 0.05 ($0.000 < 0.05$) and the t-value was greater than the t-table with $df=29$ (3.550), it is possible to assert that there was a substantial improvement in the eighth grade pupils after they were taught utilizing Project Based Learning. Consequently, it is possible to draw the conclusion that the alternative hypothesis (H_a) was accepted, whereas the null hypothesis (H_o) was unsuccessful.

Measuring significant difference between students who were taught by using PBL

Independent sample t-test was used to measure the significant difference in writing achievement between the students who were taught by using Project Based Learning method and those who were not in the eighth grade students. Therefore, the result of posttest in experiment and control class was compared.

Table 7. Summary of independent sample t-test in experiment and control class

PBL	Independent Sample T-test		Ha t	df	Sig (2-tailed)
	Rejected	Accepted			
16.736	.000	58			

Based on the table above, it was found that p-output was $0.000 < 0.05$ with $df=58$ and t-value 16.736. It meant that the null hypothesis (H_o) was rejected and the alternative hypothesis (H_a) was accepted, since t-value was higher than t-table with $df=58$ (2.542). In other word, there was significant difference in writing achievement between the students who were taught by using Project Based Learning method (experiment class) and those who were not (control class) in the eighth grade students.

DISCUSSION

The finding of this study showed that there were two results in this research. First, based on paired sample t-test. After implemented Project Based Learning method in experiment class, it showed that the p-output was 0.000 and the t-value was 27.169. Therefore, it could be stated that there was significant improvement on the eighth grade students after being taught by using Project Based Learning since p-output was lower than 0.05 ($0.000 < 0.05$) and t-value was higher than t-table with $df=29$ (3.550). It meant that there was significant improvement on students writing achievement after being taught by using Project Based Learning. Second, based on the result of independent sample t-test, it was found that that p-output was $0.000 < 0.05$ with $df=58$ and t-value 16.736. Since t-value was higher than t-table with $df=58$ (2.542), in other word, there was significant difference in writing achievement between the students who are taught by using Project Based Learning method (experiment class) and those who are not (control class). Based on these two results, it could conclude that Project Based Learning could help students to improve their writing achievement.

Furthermore, since there was significant improvement in students after being taught by using Project Based Learning and there was significant difference between students who were taught by using Project Based Learning method, the finding proved theories could be accepted. Syahmadi (2014) mentioned that the use of project-based learning could help

students developed certain abilities such as writing, offered educational methods that could be very helpful for students, encouraged their enthusiasm and creativity, and improved their participation and discipline. Therefore, Damayanti et al (2014) also mentioned that project-based learning might be effectively used in the classroom because it focused on the actions that students took to develop the final product of the course.

Finally, it was concluded that the implementation of Project Based Learning showed significant improvement on students after being taught by using Project Based Learning and showed there was significant difference between students who were taught by using Project Based Learning and those who were not. Project Based Learning could encourage students' motivation and engaged students' enthusiasm in learning writing. Project Based Learning also could help students to improve students writing achievement. It could be assumed that Project Based Learning is one of effective method that could be used.

CONCLUSION

Based on data analysis in this research, on the paired sample t-test showed that there was significant improvement on students' achievement after using Project Based Learning since $p < 0.05$ and the t-value was higher than t-table with $df = 29$ (3.550). It could be stated that there was significant improvement on students' writing achievement after being taught using Project Based Learning. In addition, based on the independent sample t-test, the mean score in post-test experiment was 70.10, while the mean score in post-test control class was 43.33. From the result of post-test in experiment and control class, it could be concluded that there was significant difference on writing achievement between students who were taught by using Project Based Learning and those who were not. Finally, from all of each result, since there was significant improvement on students' achievement after being taught using Project Based Learning and there was significant difference on writing achievement between students who were taught by using Project Based Learning and those who were not, it could be said that the use of Project Based Learning could help students to improve their writing achievement and Project Based Learning could be one of method that can be used to improve writing achievement.

ACKNOWLEDGEMENT

This article is written by Nindi Hastia Ningrum of Faculty of Tarbiyah and Teaching Sciences, Universitas Islam Negeri Raden Fatah (FITK UINRF), prepared this journal article based on the report The Implementation of Project Based Learning to Improve Students' Writing Achievement. This work has been funded by FITK UINRF under the programme of Research, and Community Service Grants 2023. The opinions express here in are those of the authors and do not necessarily reflect the views of funding agency.

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