The Effect of Problem Based Learning on Students' Writing Skills for the First Grade Student on Vocational High School

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Article Info

ABSTRACT (10 PT)

The purpose of this research is to finding out the effect of PBL on students' writing skills for the first-grade students of SMKN 1 Wonoasri. This research method is quantitative and quasi-experimental design. The population in this research were first grade students at SMKN 1 Wonoasri, especially grades X-TE 1 and X-TE 2. Data collection in this study used an analytical exposition text writing test. Researchers used SPSS version 23 and Independent Sample T-test to analyze student scores. The results show that the use of the Problem Based Learning has an effect on students' writing skills. The writing score of the experimental class was proven to be higher, as evidenced by the mean score of 75.75 in the experimental class and 60.31 in the control class. The result that there is a significant difference in the writing skills of students who are treated with the Problem Based Learning and those who are treated with conventional teaching. Based on the explanation above, the use of the Problem Based Learning has an effective influence in teaching writing.

1. INTRODUCTION (10 PT)

There are four skills that we learn language, namely listening, reading, speaking and writing. Writing is referred to as the final language skill that must be acquired for students of the language learning. According to Heasly (2006), proficient writing is usually seen as the final language skill to be mastered by both native speakers of the target language and students of foreign or second languages. Not only in formal contexts, but also in informal contexts, writing plays a significant role. Sometimes people find it difficult to orally convey their thoughts, feelings, or opinions, but they can do it in writing.

Teaching writing is not as easy as we think. Good knowledge and a broad understanding of the written language are required. Husna (2017) states that writing is usually considered the most difficult skill to master, not only because it requires mastering many English skills. This is due to the difference between the rules of the learner's native language and those of the language being studied, such as reading, speaking, vocabulary, and grammar. Other than that, it takes extra effort to teach students to write their ideas. Because when they write, they not only organize the structure but also express their opinions. Each student Vocational High School can face different challenges when learning to write. Every student is unique and special in their way. There are difficulties in some ways that restrict students from writing.

Students struggle to perfect their writing skills since they have a limited vocabulary (Misbah et al.). The fundamental building component of the fundamental sentence structure of good writing abilities is vocabulary. Students almost always use spoken and written language to express their ideas, convictions, and feelings to people around them. Secondly, some students struggle with grammar. Writing requires a strong understanding of grammar. Grammar gives details that enable readers to comprehend its meaning. Because they have a very poor understanding of syntax, students are scared to create sentences using proper language. Students make errors in subject-verb agreement, pronouns, tenses, articles, prepositions, and fundamental sentence structure, stated Fareed et al. (2016).

Third, students' bad spelling is another difficulty they run against when writing. According to Nyang'au (2014), bad spelling is another factor contributing to students' anxiety when learning to write. Writing skills are actively learned when one has good spelling. Spelling issues prevent students from moving forward. Students have a habit of spelling according to how they pronounce words, according to Afrin (2016), which results in misspellings. Last but not least, Lack of motivation is yet another difficulty that students face. Students that lack motivation might not be interested in finishing their education. Motivation, according to Gbollie & Keamu (2017), is crucial for enhancing student learning outcomes. Teachers can inspire students by complimenting them with positive affirmations like "Good job!" and "Good luck!" or "Keep trying!" and "You're doing a great job!". Students continue to advance in their learning when they get encouraging rewards. From the explanation, there are several challenges faced by students when writing and this results in errors and mistakes in their writing. Obviously, every student will make mistakes in both cases writing organization and grammar that can cause miscommunication because of meaning the writer cannot be conveyed accurately.

Based on the problems above, there are so many methods that can be used to solve those problems. In this case, the researcher proposes using Problem-Based Learning (PBL) in the teaching and learning methods to help students solve writing challenges. PBL is one teaching strategy that is expected to boost students' enthusiasm for learning English, particularly in writing paragraphs. Students are motivated to learn through involvement in actual problems in PBL. Discuss the issue in a small group to find a solution, etc. Arends (1991) states that problem-based learning strives to help students become independent and self-directed learning. Reportedly, guided by teachers who ask questions and encourage and reward them to seek out solutions to real problems on their own, students learn to perform these tasks independently later in life. PBL is student-centered and related to providing appropriate opportunities for students. There will be a fundamental shift from a teaching focus to a learning focus. According to Program et al., (2014) the PBL process aims to harness the power of true problem-solving to engage students and improve their learning and motivation.

There are several previous studies that state the PBL method significantly affects students' ability in writing skills. The previous study by Affandi & Sukyadi (2016) examine project-based learning and problem-based learning. The result showed that problem-based learning could foster the students' ability to learn and use vocabulary in context and PBL was perceived by the students as engaging them in the learning process and helping them to think more critically. Besides, Sidauruk & Silalahi (2020) find that the students taught by the PBL teaching method significantly affect students' ability in writing recount text. The students could improve when they were expressing their ideas in writing in using past tense correctly. Then, another previous study from Hairuddin et al., (2018) whose research results state that the application of the PBL method contributed to improving student's writing skills and the success of the research results. The findings supported the hypothesis that using the PBL method helped students' writing abilities. The five writing-related elements of content, organization, vocabulary, grammar, and mechanics were the focus of the improvement.

To solve the problem in writing, the researcher agreed to apply the Problem Based Learning on teaching writing. The researcher believes that the use of the PBL can improve students' writing skills. Beside that, the aim of this study is to determine the effect of the PBL method on the writing skills of first-grade students in Vocational High School.

2. RESEARCH METHOD

In this study the researcher used a quantitative research design. According to Bloomfield & Fisher (2019) quantitative research is a researcher using objective measurement to gather numeric data that are used to answer question or test predetermined hypothesis. Quantitative research itself is an approach to test objective theories by examining the relationship between variables. The research is conducted by using quasi-experimental research. Istyastono et al., (2017) states that quasi-experimental is a method that used for two group of subjects that are still compared between experimental and control group. According to Creswell (2014) experimental control is the best quantitative design to be used in determining cause and effect. The design of this study included two groups, where one experimental group was treated in the Problem based Learning Method, and the other was a control group which was treated with a conventional method.

This research took place at SMKN 1 Wonoasri. The school is located on Jl. Panglima Sudirman No.1, Maron, Purwosari, Kec. Wonoasri, Kab. Madiun. The reason why the researcher chooses the place because the interest of the students in writing skill is low. The students get difficulties in writing so they have to get their ideas into a good sentence. The students also get some problems when they start to write. It makes the researcher wants to apply this researcher in SMKN 1 Wonoasri.

In this study, researcher chooses probability sampling, that is sample random sampling. According to Sugiyono (2013) random sampling technique is the taking of random samples from the population without regard to the strata present in the population. The selection in this study used random sampling so all of the class of population had chance to be sample. The researcher took 2 classes as samples in this study. Researcher uses classes

that have been approved by the school to participate, namely X-TE 1 with 36 students and X-TE 2 with 36 students. The sample of this study were all students of class X-TE 1 and X-TE 2 with a total number of 72 students.

Table 1. Research Design

Experimental Class	Pre-Test	Problem Based Learning	Post-Test
Control Class	Pre-Test	Conventional Teaching	Post-Test

The researcher used an instrument in this study that included a writing test in class. The researcher chose an analytical exposition text as an instrument for writing test. This test was conducted to determine the effect of problem-based learning on students' writing skill. The writing test used by the researcher was adapted to the English material for first-grade student. To determine the effectiveness of students' writing skills, the researcher gave a pre-test and post-test. Pre-test itself is given to students before getting treatment. Meanwhile, the purpose of the post-test is to determine the outcomes of student's achievement after treatment in the teaching and learning process.

The data collected from the research findings are the outcomes of student tests that are quantitatively analyzed. The experimental and control classes at SMKN 1 Wonoasri provided the data for this study. The results from the pre-test and post-test were analyzed using statistical calculations from the T-test (SPSS). The researcher conducted a statistical analysis of the data after completing the pretest, treatment, and post-test procedures. The researcher calculated the data using the Independent T-test to determine the average difference between the control and experimental classes in this study. A statistical test called a T-test is used to find differences between two truly significant samples. This means determining whether or not the experimental class and control class received the same score on the same test. To ascertain the relevance of the outcome, data are analyzed using SPSS. There are test prerequisites that must be completed before the independent sample t-test may be used to test the hypothesis, namely normality, and homogeneity.

3. RESULTS AND ANALYSIS

In this section, the researcher explains the results obtained through the pre-test and post-test data. The researcher provides the result from the experimental and control class. Data were obtained from class X-TE 1 as the control class, and class X-TE 2 as the experimental class. The results of the pre-test showed the students' basic ability in writing.

A homogeneity test was conducted to determine the similarities of varience between the two groups, namely the experimental class and the control class. Homogeneity in this research is to use Lavene's t-test. The results are as follows:

Table 2. The Result of Homogeneity Testing

Group Statistics					
	Class	N	Mean	Std. Deviation	Std. Error Mean
Pre-Test Score	Experimental	36	61,28	7,273	1,212
	Control	36	58,06	7,135	1,189

Table 2. shows that there is a significant difference in students' writing ability between the pre-test experimental class and the control class. The table shows that the sample of the experimental and control classes is 36 students. Then, the mean scores for the two classes differed significantly. The mean of the experimental class is 61.28 and the mean of the control class is 58.06. The mean score of the experimental class is higher than the mean score of the control class.

In addition, to ensure that the data is homogeneity, the researcher used an independent sample t-test to calculate the data. By using this test, the researcher found out the significant difference between the two classes. The results of the independent sample t-test are as follows:

Table 3. The Results of Independent Sample T-Test

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

		,093	,762	1,898	70	,062	3,222	1,698	-,164	6,609
Pre-Test Score	Equal variances assumed									
	Equal variances not assumed			1,898	69,975	,062	3,222	1,698	-,164	6,609

The table above shows the independent sample test from the pre-test data of the experimental class and the control class which shows that both classes are significant as seen by Levene's test for Equality of Variances. From the column of the score of Equal variances assumed, the significance is 0.762. Then, it can be concluded that the data is homogeneous because the significance is higher than the alpha level (0.762 > (α = 0.05)).

Table 4. Tests of Normality
Test of Normality

	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pre-Test Score	Experimental	,129	36	,134	,970	36	,434
	Control	,088	36	,200[*]	,966	36	,337

According to the table above, the significance of the experimental class is 0.434 and the significance of the control class is 0.337. When the control class's significance value was larger than 0.05 (0.337 > 0.05) and the experimental class's significance value was larger than 0.05 (0.434 > 0.05), the data was deemed to be normally distributed. As a result, the results for both classes are normally distributed.

Hypothesis testing is the final calculation. This section is to compare the pre-test and post-test scores of the two classes, namely the experimental class and the control class. In this case, it aims to find out whether there is a difference in the average pre-test and post-test scores of the two classes. To find out whether there is a difference in students' prior knowledge in the experimental class and the control class, hypothesis testing is carried out, as follows:

Table 5. Descriptive Statistic Post-Test Data
Descriptive Statistics

	Class	N	Minimum	Maximum	Mean	Std. Deviation
Score Post-Test	Experimental	36	62	87	75,75	7,185
	Control	36	52	75	60,31	6,342

In the two classes the mean score is different. The mean score in the experimental class is 75.75, while the mean score in the control class is 60.31. The data above show that the mean post-test score in the experimental class is higher than the control class. There is significant difference (Sig) in the mean score of students in the two classes. However, the researcher cannot conclude the successfulness of the treatment in this research directly through this table, especially in the experimental class. Thus, the researcher needed an independent sample t-test to determine whether the treatment was successful or not and to determine the significance of the two classes.

Table 6. The Results of Independent Sample T-test

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

Post-Test Score	Equal variances assumed	1,259	,266	9,670	70	,000	15,444	1,597	12,259	18,630
	Equal variances not assumed			9,670	68,937	,000	15,444	1,597	12,258	18,631

Based on the test score in the table above, the assumed significance value of equal variances is 0.000 which means less than 0.05 (0.000 < 0.05). Based on the formula by the hypothesis of testing normality, H_0 shows that there is no significant difference in writing skills of students who are taught using PBL Method and conventional teaching. Meanwhile, H_1 shows that there is a significant difference in writing skills between students who are taught using PBL Method and those who are treated with conventional teaching. The results of this research show that there is a significant difference in the writing skills of the students who were treated by using the PBL method and those treated with conventional teaching. It can be concluded that the results of this research show that the use of PBL method have a significance effect on the students' writing skills.

In conclusion, the result of the independent sample t-test presented in this study have an influence on students' writing skills using PBL method. This means that there is a significant effect on students' writing abilities before and after being given treatment. So, this study proves that the use PBL method in teaching writing is an effective way to improve the writing skills of the first-grade students at SMK N 1 Wonoasri.

The students who are taught with the PBL method get higher scores than students who are taught using conventional teaching. It means, that the PBL method provides many advantages for students to improve students' writing skills. Researchers summarize some of the advantages using the PBL method. First, according to Nisa et al., (2017) problem-based learning has been shown to be one of the appropriate techniques for teaching writing. This is because problem-based learning involves several steps of writing, from idea self-construction to the final draft. Second according to Sidauruk & Silalahi (2020) that using problem-based learning in the experimental class has a significant effect in the learning process. Students have become more knowledgeable in the phrasing and using tenses. The ability of students in writing recount text was increasing than before using problem-based learning. The research recommends that PBL can be applied to teach English writing skills improving students' abilities, and including PBL as part of teacher training programs. Third, according to Nafisah et al., (2022) research results show that problem-based learning (PBL) has the most positive effects when the focal structure being assessed is at the level of material comprehension. This finding was supported by the results of document analysis in the experimental group, whose proportion was much higher than in the control group. By taking steps to teach problem-based learning (PBL) methods, students become more actively involved in the teaching and learning process.

It can be concluded that students who are taught using the PBL method have better abilities than students who are taught using conventional teaching. In other words, the PBL method has a significant effect on students' writing skills. Several things that can support these results are the PBL method makes students motivated and interested in writing and understanding the contents of written texts. The PBL method has a clear concept for students to participate in class activities, can train students in critical thinking and how to solve a problem. PBL can make students active in class because there are discussions and questions and answers about students' opinions about problems. Therefore, PBL is used as a method that can help students on writing skills at SMK N 1 Wonoasri.

4. CONCLUSION (10 PT)

Based on the explanation in the previous chapter and the results of the research, the researcher concluded that the use of the PBL had a positive effect on teaching writing in the classroom. The use of PBL can increase the students' writing skills and increase their writing scores. This is evidenced by the data analysis that has been calculated in the previous chapter. The results of data analysis show that the significance score is greater than 0.05, it means that H0 is rejected and H1 is accepted. This means that students who are taught by using PBL have better writing skills than students who are taught by using conventional teaching.

As for some of the benefits that are obtained when learning applies problem-based learning for students. PBL can motivate students in learning, make students responsible for learning, make students learn how to share and exchange their thoughts ideas with others, make students participate actively in learning, create students explore their skills to solve problems, increase student confidence, make students excited for the lesson by exploring all learning resources to solve problems, and make students have a positive attitude to learning. From the research that has been carried out, it can be concluded that problem-based learning is effective in teaching writing.

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