

Project Based learning to Improve Students' Creativity In Speaking and Vocabulary Achievements

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Abstract

The purposes of this study were to find out (1) whether there was a significant difference in vocabulary achievement between students who were taught through Project Based Learning, (2) whether there was a significant difference in speaking achievement between the students who were taught through project based learning, (3) whether there was a significant correlation between vocabulary and speaking achievements of the seventh grade students of Junior High school Number 18. The population of this study consisted of the seventh grade of Junior high school students. The total number of the population was 14, while the sample consisted of 14 students in the experimental group. In collecting the data, the pretest, treatment and posttest were used. However, the data were analyzed by using t-test. It was found that (1) there was a significant difference in vocabulary achievement where the sig value (2 tailed) was lower than 0.05, (2) there was a significant difference in speaking achievement where the sig value (2 tailed) was lower than 0.05, (3) there was a significant correlation and contribution between vocabulary and speaking. It could be concluded that Project based Learning can improved students' vocabulary and speaking achievements.

Key words: vocabulary, speaking, and Project Based Learning

INTRODUCTION

Foreign language learners learning to acquire the oral proficiency in the target language may have some problems, both internal and external. Internally, they may experience the feeling of anxiety. Students in class also experienced the poorest condition of speaking (Chamot, 1993). According to English Proficiency Index (2014), Indonesia is the 24th rank among 63 countries in the world. This result shows the ability of speaking practice is still low. It is important for teachers to encourage and motivate them to speak English, especially in class.

In speaking skill students can explore and improve their vocabulary. Learners do not have enough knowledge about the vocabulary learning techniques and they have difficulty in dealing with this problem themselves (Akin & Seferoglu, 2004). In spite of various studies in vocabulary learning, learners show very little effort to deal with their problems about newly learned words (Meara, 1982).

Vocabulary is the knowledge of words and encompasses all of the words we know and use when speaking (Stahl & Nagy, 2006). Vocabulary is needed for expressing meaning and in using the receptive (listening and reading) and the productive (speaking and writing).

To solve those problems, in this research project based learning was used. Krieger (2005) comments that project based learning is an excellent activity for language learning because it Nisbett (2003) states that "Project based learning is an important educational tool for learning

analytic thinking skills and for forcing self-conscious reflection on the validity of one's ideas" (p.210). Stewart (2003) states that " 75 percent of his unmotivated and reserved students' ranked project based learning as their most favorite classroom activity". (p.10)

Based on the description above, observation was used. Generally the 0 semester of Palembang Polytechnic of Tourism had problems in speaking achievement. Based on the observation, there were some students who had in speaking performance. Based on the observation and interview, this study was conducted to improve their vocabulary and speaking achievements. Therefore, this study would like to promote the use of Project based learning in order to improve vocabulary and speaking achievements of seventh grade students of junior high school number 18 Palembang.

Based on the outlines above, the problems of this study were formulated in the following questions: (1) was there any significant difference in vocabulary achievement between the students who were taught through Project based learning? (2) was there any significant difference in speaking achievement between the students who were taught through Project based learning? (3) was there any significant correlation between vocabulary and speaking achievements ?

RESEARCH METHOD

To conduct this study, quasi experimental research using non equivalent control group pretest-posttest design was used. Fraenkel and Wallen (1991) state, " an experiment usually involves at least two groups of subjects: an experimental group and a control or comparison group" (p.191). The study was conducted by using two groups: experimental and control groups. The experimental group received a treatment of some sort (a new text book, a different method of teaching , and so forth), while the control group did not have treatment.

The Population of this study was seventh grade students of junior high school. In this study, purposive sampling technique was used. The sample was taken by lecturer's judgment and results of speaking performance were used. Finally, there were 14 students were taken as the sample into experimental group.

In collecting the data , this study applied Project Based Learning with the picture which is selected by the students. There were 14 students who perform and describe the picture. To analyze the vocabulary test, raw scores were used. The scoring focused on the number of correct answers. The scores and the grades of the students' vocabulary achievement were grouped as follow: 27-31 (excellent), 22-26 (good), 17-21 (average), 12-16 (poor), 0-11 (very poor). For the speaking test, in order to score the students' speaking achievement, the scoring scale from Mid -continent comprehensive center (SOLOM) was used. The scoring focused on five main aspects: pronunciation, fluency, comprehensibility, vocabulary, and grammar (See Appendix 1). The speaking test was recorded and then scored by two raters who fulfill the requirements of English background and have at least 525 TOEFL scores. The scores and the grades of the students' speaking achievement were grouped as follow : 21-25 (excellent), 16-20 (Good), 11-15 (average), 6-10 (poor), <16 (very poor)

FINDINGS AND DISCUSSION

Vocabulary Achievement

The results of the vocabulary achievement in the experimental group was presented in the following table.

Table 1

Score distribution of the vocabulary achievement in the experimental group

Score	Category	Pretest		Posttest	
		N	%	N	%
27-31	Excellent	0	0	0	0
22-26	Good	0	0	7	70%
17-21	Average	6	60%	3	30%
12-16	Poor	4	40%	0	0
0-11	Very Poor	0	0	0	0
Total		15	100	10	100

Speaking Achievement

The results of the speaking achievement in the experimental group was presented in the following tables.

Table 2

Score Distribution of speaking achievement in the Experimental Group

Score	Category	Pretest		Posttest	
		N	%	N	%
27-31	Excellent	0	0	8	80
22-26	Good	5	10	2	20
17-21	Average	5	10	0	0
12-16	Poor	0	0	0	0
0-11	Very Poor	0	0	0	0
Total		10	100	10	100

Normality and Homogeneity Tests

To check the normality and homogeneity of the tests, Kolmogorov-Sminov and Levene's test were applied. Santoso (2010) states, "The data can be categorized as normal data if the value is higher than 0.05"(p.204). The results showed that all the Sig-Values of the normality and homogeneity tests exceeded 0.05, it can be concluded that all the data of speaking and vocabulary tests were both normal and homogeneous.

Paired Sample t-Test Analysis for students' Vocabulary and Speaking Achievements

The results of paired sample t-test of vocabulary and speaking tests in the experimental groups were presented in the following table

Table 5
Results of Paired Sample t-Test of Vocabulary and Speaking Achievements in Experimental Group.

Variable	Mean	Standar Deviation	Sig 2-tailed
Vocabulary	2.26	2.12	.001
Speaking (total)	6.10	3.34	.000
Comprehension	1.46	.876	.000
Fluency	1.10	.573	.000
Vocabulary	1.36	.743	.000
Pronunciation	1.10	.849	.000
Grammar	1.06	.678	.000

In the vocabulary pretest and posttest in the experimental group, t-value was 4.141, and Sig. Value was lower than 0.05. It could be concluded that there was a significant difference in vocabulary achievement after the treatment. In the speaking pretest and posttest in the experimental group, t-value was 7.064 and sig. Value was lower than 0.05. In terms of speaking aspects, all aspects gave significant differences with sig.values (2 tailed) were lower than 0.05. It could be concluded that there was a significant difference in speaking achievement after the treatment.

Independent Sample t-Test

The results of independent sample t-test of vocabulary and speaking achievements were presented in the following table.

Table 7
Results of Independent t-Test of Vocabulary and Speaking Achievements

Variable	Mean	Standar Deviation	Sig 2-tailed
Vocabulary	2.00	.640	.004
Speaking (total)	2.06	.791	.014
Comprehension	.467	.191	.021
Fluency	.533	.150	.001
Vocabulary	.500	.181	.010
Pronunciation	.200	.190	.301
Grammar	.400	.193	.047

In the vocabulary posttest in the experimental group mean difference was 2.000, t-value was 3.125 and sig. value (2tailed) was lower than 0.05. It could be concluded that there was a significant difference in vocabulary achievement between the students who were taught through Project based learning

In the speaking posttest in the experimental group, mean difference was 2.067, t-value was 2.612, and sig. value (2tailed) was lower than 0.05. In terms of speaking aspects, there were four aspects which gave significant differences namely comprehension (.021), fluency (.001), vocabulary (.010), grammar (.047). Meanwhile, there was a difference in pronunciation (.301) but it was not significant.

It could be concluded that there was a significant difference in speaking achievement between the

students who were taught through project based learning and those were taught without project based learning

Correlation between Vocabulary and Speaking

The correlation value between vocabulary and speaking was 0.662. and sig value (2-tailed) was lower than 0.05. It means, H₀₃ was rejected and H_{a 3} was accepted. It could be concluded that, there was a significant correlation between vocabulary and speaking.

Table 8
Correlation between vocabulary and speaking

Variables	Pearson Correlation	Sig. Value 2-tailed
Vocabulary	.662	.007
Speaking		

Contribution of Vocabulary to Speaking

In analyzing the contribution of vocabulary (variable) to speaking in the experimental group, regression analyses was used. The result showed that the contribution of vocabulary was 43.8%. It means, vocabulary gave contribution to speaking even the score was not high, but the value still existed although it was small.

Table 9
Contribution of Vocabulary to Speaking

Model	R	R Square	Change Statistic	
			R Square Change	Sig F Change
1	.662	.438	.438	.007

- a. Predictors: (Constant), Vocabulary
- b. Dependent Variable : Speaking

Contribution of Aspects of Speaking to Speaking Achievement

In analyzing the contribution of aspects of speaking to speaking achievement in the experimental group, stepwise regression was used. The results showed that the highest contribution was comprehension (84.2%). The contribution of pronunciation was 9.2%, vocabulary 4.9%, grammar 1%, and fluency 0.7%. It means, vocabulary gave contribution to speaking even the score was not as high as comprehension, but the value still existed although it was small.

Table 10
Contribution of Speaking Aspects to speaking Achievement

Model	R	R Square	Change Statistics	
			R Square Change	Sig.F Change
1	.918 ^a	.842	.842	.000
2	.967 ^b	.934	.092	.001
3	.991 ^c	.983	.049	.000
4	.997 ^d	.993	.010	.003
5	1.000 ^e	1.000	.007	.

RESULTS AND DISCUSSION

Based on the above mentioned findings, some interpretations could be described that teaching by using Project Based Learning can improve students' vocabulary and speaking achievements. The following is the interpretation in detail.

First, it might be influenced by some activities in teaching by using project based learning such as cases, arguments, rebuttals, listening, research and advanced issues. in which requires the students to discuss, learn, search the information to respond and answer to the topic or to defend their argument, and to stimulate their interest in the topic. This is also supported by Krieger (2005) that "project based learning is assembling and organizing effective arguments, persuading and entertaining an audience, and using the language to convince people that your arguments outweigh your opposition's" (p.1). In addition, after having project based learning, the students can conclude and share their ideas to one another in a group, and finally, it will improve vocabulary and speaking achievements among students.

Second reason why project based learning could improve students' vocabulary and speaking achievements was because the topics of project based learning which exposed to real-life that can attract students' attention and make the teaching and learning process more alive. This statement is strengthened by Halversen (2005) that project based learning is a method to force students to think about the multiple sides of an issue and it also forces them to interact not just the details of a given topic, but also with one another. The other reasons why project based learning could improve students' vocabulary and speaking achievements might be caused by its implementation., the students seemed excited and enthusiastic to speak in a group discussion.

In addition, in relation to the results of findings of each aspect of speaking achievement by using the Stepwise Multiple Regression Analysis, there were some aspects in the aspect of speaking achievement such as comprehension, fluency, vocabulary, pronunciation, and grammar. Based on the results, vocabulary gave significant contribution to speaking. This statement is strengthened by Thornbury (2002) who claims, "without grammar very little can be conveyed, without vocabulary nothing can be conveyed. It means that grammar gives a role in conveying something, but vocabulary gives a role in conveying something, but vocabulary gives a role in conveying everything" (p.3). As stated before, this might be caused by some activities by using project based learning such as cases, arguments, rebuttals, listening, research and advanced issues activities which require the students to be more actively participate in the teaching and learning process.

CONCLUSION

Based on the results of the analyses there was a significant difference in vocabulary achievement between the students who were taught through project based learning and those were taught without project based learning, and there was a significant difference in speaking achievement between the students who were taught through project based learning and those were taught without project based learning.

Moreover, based on the results of analyses there was a significant correlation between vocabulary and speaking achievement of the fourth semester English education study program students of Tridianti University, and there was contribution of vocabulary in speaking achievement. In terms of speaking aspects, there was contribution of speaking aspects to speaking achievement. The highest contribution was comprehension, but other aspects still gave contribution to speaking. Meanwhile, there was a contribution also of vocabulary to speaking aspect. The highest contribution was grammar, but vocabulary still gave contribution to other aspects. Based on the conclusions above, some suggestions are given to teachers and learners in learning English. First, the learners should be given more method in relation to the English speaking activity for instance using project based learning in the classroom which explores critical thinking and arguments. Second, the teachers should help the students to have self-confidence to speak English by using group discussion and games. Third,

teachers should be able to select appropriate and effective instructional technique and material to support the teaching and learning activities in the classroom.

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