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# The Influence of Project Based Learning Towards Students' Speaking Skill (An Experimental Study in SMAN 2 Serang City)

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**Abstract**

The purpose of this study was to determine how project-based learning affected the speaking skills of eleventh-grade students at SMAN 2 Kota Serang-Banten. The researcher employed cluster random sampling as the sampling strategy and a quantitative approach with a real experimental design. According to the pre-test results, the experimental class's minimum score was 48, whereas the control class's minimal score was 32. The experimental class's highest score was 84, while the control class's highest score was 72. We can conclude that there was no significant difference between the two classes' pre-tests. The experimental class's minimal score on the post-test was 62, while the control class's minimum score was 60. The experimental class had a maximum score of 86, whereas the control class had a maximum score of 76. We can conclude that there was a significant difference between the two classes' pre-tests. T.count≥t_table, or 7.37 ≥ 2.00, was determined based on the outcome of the test of mean difference significant (independent t_test). The alternate theory was approved. At the eleventh grade of SMAN 2 Kota Serang, it can be concluded that project-based learning had an impact on students' speaking skills. It is suggested for the English teachers to apply the PjBL model and focus on making students be more active in speaking class.

Keywords: *project-based learning, speaking skills, the influence*

## 1. INTRODUCTION

English language learners need to be proficient in four skills of language: speaking, listening, reading, and writing. To achieve the highest level of English comprehension, each of these abilities works in concert with the others. Speaking is a productive talent that is crucial to oral communication. Speaking is another way for people to communicate their ideas (Anugrah et al., 2022). A speaker must carefully consider what he is saying in order for the listener to understand his thoughts, feelings, and ideas (Handayani & Rahmawati, 2017). Speaking specifically, Brown (2007) asserts that the ability to speak a language indicates a person's capacity for generally competent discourse. Additionally, he claims that the ability to achieve pragmatic objectives through engaged conversation with other language speakers is nearly always the standard for successful language acquisition. According to Puspitasari et al. (2021), in order for students to survive speaking exercises, teachers should take into account certain aspects based on their interests and integrate them into the communication. It implies that a person must be able to demonstrate their ability to speak English in order to be considered competent in the language.

To effectively teach a subject to students, the teacher must prepare ahead of time by taking into account the model, method, or technique of learning. Teaching speaking is one of difficult in the English classroom because students are still afraid of making mistakes in grammar and shy to speak in English (Niswatun et al., 2022). Since mastering speaking is a difficult process that requires integrated competence in anxiety management and performance preparation, it is also necessary to carefully examine the best approach or learning model (Arifin & Rizki Firis Manda, 2021).

The choice of media, model, or approach for speaking classes is based on the students' level, character, and background of knowledge that have already been integrated with the technology, knowledge, emotional, and psychomotor skills of the students and have been in line with current curriculum. One such approach is project-based learning (Cahyani, 2021). In the teaching and learning of English, project-based learning is also used to reduce students' speaking anxiety (Anugrah et al., 2022).

Kusumawati (2021), project-based learning enhances students' cognitive, emotional, and psychomotor domains as they learn English and communicate its meaning to others. She goes on to say that project-based learning can help students become more creative and independent thinkers. By formulating questions, arranging the research, planning their education, reading at a higher level, and working together to develop the assignment creatively, the kids could solve their own difficulties. Bell (2010) recommended using project-based learning in English classes when students are attempting to produce their words vocally. According to him, there are five steps involved in integrating project-based learning into teaching and learning speaking skills. Developing a project theme is the

first stage. It is crucial that students select their own projects while using project-based learning. However, according to Gaer (1998), It will be difficult for beginner or lower level students to select their own project to study in the early stages of learning since they lack the vocabulary and self-assurance to create project themes. Thus, the teacher in this study chose the project themes based on the issues that the students were facing. Creating project activities is the second phase. The teacher decides how the students will complete their project in this step. It entails developing group members, activities, and objectives. The teacher will watch what the students are doing and attempt to address any issues they may be having. The project's execution is the third step. At this stage, the students begin to talk about the responsibilities of each group member and how to publish their work. Student presentations are the final step. The student publishes their work at this stage. It might be a performance, publishing, or presentation. The final stage, the student presentation stage, is the researcher's primary focus. The researcher will observe how the student presents themselves when speaking English, paying attention to grammar, pronunciation, and fluency, in order to assess whether or not the student's speaking skills have improved.

PjBL has been the subject of numerous research. The study "The effect of Project Based Learning on Learning Motivation and Problem Solving ability of Vocational High School Students" by Chiang and Lee (2016) is one of them. The objective was to determine whether or not project-based learning may improve students' motivation and problem-solving skills. The researcher employs convergent mixed methods research, utilizing both qualitative and quasi-experimental approaches. The study's subjects are the food and beverage majors from two Taiwanese vocational high schools. The treatment group consists of 46 pupils, whereas the control group consists of 42. The study's findings are as follows: (1) The treatment and control groups differ significantly ($F=32.335$, $p=.000<.05$). It indicates that PBL is having an impact on vocational high school students' motivation to learn. (2) Student motivation is positively impacted by PjBL.

Dewi (2016) conducted another study titled "Project Based Learning techniques to improve students speaking skills." The study's goal is to ascertain whether the project-based learning strategy may improve students' speaking skills. The researcher's approach was qualitative. The study's subjects are the 19 pupils enrolled in the tenth grade at SMKN 1 Banda Aceh. The research's outcome is as follows: (1) The PjBL method can improve students' speaking proficiency. (2) In speaking class, students respond quite well. Students felt more self-assured when speaking English.

Those previous studies discussed different points with this study. Besides having different research participants, this study also employed experimental study than those ones which employed qualitative and classroom action research. The researchers found the need to fill that gap to improve the situation of learning.

## 2. METHODOLOGY

In answering the research question, the researcher conducted quantitative research. Researchers used true experimental design. To measure the outcome, the researcher used specific treatment on one group and giving no treatment to another group and see their score to determine the outcome. The treatment that was given is PjBL in improving students' speaking skill. The treatment was given to experimental class and no treatment given to control class. The researcher used speaking test (pre - test and post - test) to take the data. To analyse and determine the speaking score, the researchers use Speaking Proficiency scoring rubrics by Brown (2004). The researchers also analysed the validity, did inter-rater reliability, normality test, homogeneity test. The hypothesis was tested by using t-test.

## 3. RESULTS AND DISCUSSIONS

Content validity was used in this research to know whether or not the data that used to measure students speaking skill are valid or not. The researcher used syllabus of Merdeka curriculum to determine the content of the test. The researcher asked the teacher to analyse the content used in both pre-test and post-test. It was proven that researchers' plan and treatment was already been in line with the syllabus of English subject of SMA eleventh grade.

Inter-rater reliability test used in this research to measure and determine whether a certain subject is affected by the given treatment across rater. There are two rater that take part to measure student speaking skill. The researcher is the first rater, and the English teacher is the second. Both of the raters took part in giving score in student speaking performance. The researcher used Cohen Kappa to interpret the result (see table 4.1. Agreement of Inter-Rater Reliability). The data in the table show that:

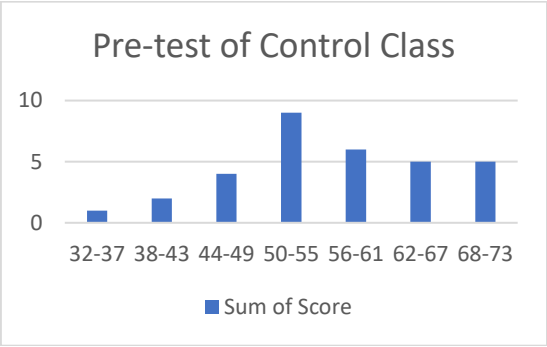
a. Pre-test in experimental class was 0.3, the interpretation was **fair**. It showed that the data was reliable.
***b.*** Pre-test in control class was 0.5, the interpretation was **fair.** It showed that the data was reliable.
***c.*** Post-test in experimental class was 0.8, the interpretation was **excellent**. It showed that the data was reliable.
***d.*** Post-test in control class was 0.5, the interpretation was **moderate**. It showed that the data was reliable.

***Table 4.1 Agreement of Inter-rater Reliability***

| Group Class | Pre-Test | Post-Test |
|---|---|---|
| Experimental Class | 0.3 Agreement | 0.5 Agreement |
| Control Class | 0.8 Agreement | 0.5 Agreement |

The experimental class's post-test normalcy revealed that the graphic was curve-shaped, well-shaped, and had a single peak that represents the mean. Figure 4.2, The Normality of Pre Test Experimental class, shows that the data was found to be normally distributed based on those criteria. The control class's Normality of Pre Test revealed that the graphic was curve-shaped, well-shaped, and had a single peak where the mean is. Figure 4.3, The Normality of Post Test for Control Class, shows that the data was found to be normally distributed based on those criteria. The image depicting the experimental class's post-test normality was well-shaped, with a single peak representing the mean and a curve.

**Figure 4.2 Normality Test in Pre-Test of Control and Experimental class**



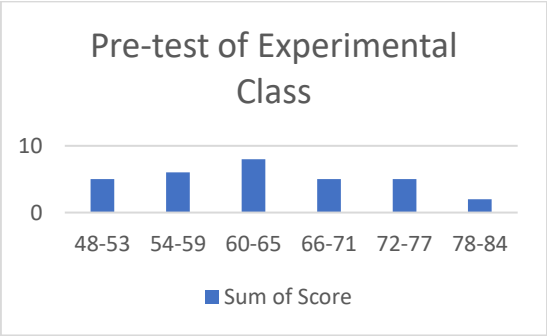
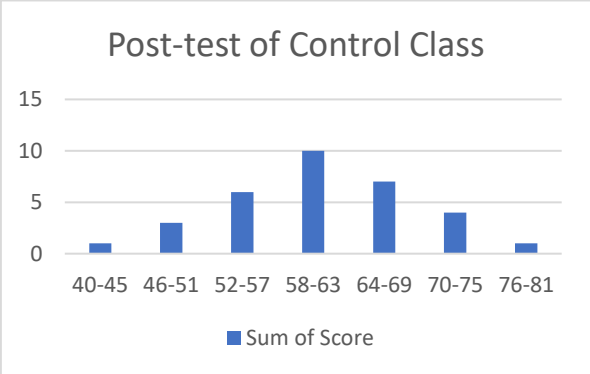
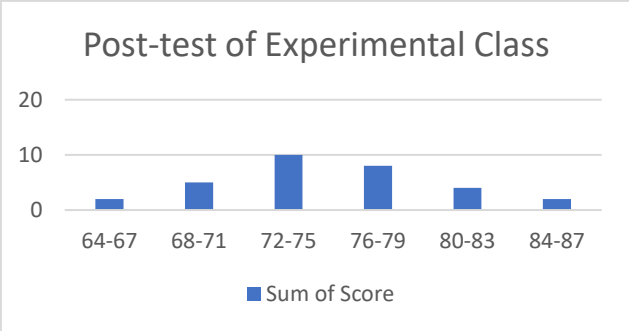




**Figure 4,3, Normality Test in Post Test of Control and Experimental class**






To determine the homogeneity or resemblance between the control and experimental classes, the homogeneity test was employed. The homogeneity criteria were displayed as follows:
If $F_{count} \geq F_{table}$: it indicates not homogenous
If $F_{count} \leq F_{table}$: it indicates homogenous
The pre-test homogeneity result was 1.02, while the post-test sample homogeneity value was 1.03. The value of the maximum variance and the lowest variance were then compared at a significant level of 0.05 using the F_(table) = 4.149. It indicates that the pre-test and post-test results for the experimental and control groups were homogeneous (see the table 4.4).

Table 4.4. Result of Homogeneity Test in Experimental Test and Control Class

| Group | $F_{count}$ Pre-test | $F_{count}$ Post-test | $F_{table}$ |
|---|---|---|---|
| Experimental and Control | 1.09 | 1.57 | 2.05 |

Pre-test :$F_{count} \leq F_{table}$ = 1.09 ≤ 2.05
Post-test : $F_{count} \leq F_{table}$ = 1.57 ≤ 2.05
In shorts, either pre-test and post-test of both groups were homogenous

Alternative hypothesis (Ha) and null hypothesis (H0) were used in this study. The null hypothesis said that there is no impact of employing project-based learning on students' speaking skills, whereas the alternative hypothesis stated that there is any impact. The researcher measured the $t_{count}$ and $t_{table}$ and then compare them.

a. Calculated the value of $t_{count}$

$$t_{count} = \frac{Mx - My}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{N_x + N_y - 2}\right)\left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

$$t_{count} = \frac{72 - 69{,}647}{\sqrt{\left(\frac{39{,}16421791 + 61{,}705984}{32 + 32 - 2}\right)\left(\frac{1}{32} + \frac{1}{32}\right)}}$$

$$t_{count} = \frac{2{,}353}{\sqrt{\left(\frac{100{,}87020191}{62}\right)\left(\frac{2}{32}\right)}}$$

$$t_{count} = \frac{2{,}353}{\sqrt{(1{,}6269387405)(0{,}0625)}}$$

$$t_{count} = \frac{2{,}353}{\sqrt{0.1016836713}}$$

$$t_{count} = \frac{2{,}353}{0.3188787721} = 7.378$$

b. Calculated the value of $t_{table}$

To find the value of $t_{table}$, the researcher used the formula as follows:
d.f = (Nx – Ny – 2)
= (32 + 32 – 2)
= 62

$t_{table}$ with the level of significance 0.05 (5 %) was 2.00

c. Compared $t_{table}$ and $t_{count}$

The criteria of testing as follows:
If $t_{count} \geq t_{table}$ it means that the null hypothesis (H0) is refused.
If $t_{count} \leq t_{table}$ it means that the null hypothesis (H0) is accepted.

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Min Score | Max Score | Mean | Std. Deviation |
| Pre-Test of Experimental Class | 31 | 48 | 84 | 61.2 | 9.04 |
| Pre-Test of Control Class | 32 | 32 | 72 | 55.4 | 9.88 |
| Post-Test of Experimental Class | 31 | 62 | 86 | 74.5 | 5.27 |
| Post-Test of Control Class | 32 | 40 | 76 | 60.7 | 8.28 |

It was computed as t_count≥t_(table), or 7.37 ≥ 2.00, based on the outcome of the test of mean difference significant (independent t-test). The alternate theory was approved. It is possible to draw the conclusion that project-based learning had an impact on students' speaking skills in the eleventh grade at SMAN 2 Kota Serang. It has been demonstrated that using project-based learning has increased students' enthusiasm in English classes. According to Anugrah et al. (2022), they could lessen their anxiousness when speaking. The post-test of experimental showed that it was higher than the control group. The hypothesis test demonstrates that the use of PjBL effectively supports the students' need to organize their time to finish speaking assignments, set up direct initial inquiry, and meaningfully integrate technology (Kusumawati, 2021); (Cahyani, 2021).

## 4. CONCLUSION

The findings of the research are proven that Project Based Learning can be an effective method in teaching & learning speaking for students. The students could enjoy, be more engaged in student environment, and gave good respond by learning with Project Based Learning. The independent t-test analysis in this study revealed that f_(count)> f_table at the significance level of 0.05 (5%) was 7.37 ≥ 2.00. The alternate theory was approved. In the tenth grade at SMAN 2 Kota Serang, it can be determined that Project Based Learning had an impact on the students' speaking skills. Lastly, teachers can educate their pupils how to talk by using project-based learning.

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