

## Effectiveness of Socratic Application for Formative Assessment in Teaching Vocabulary at SMPN 16 Kota Tangerang Selatan

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### ABSTRACT

The purpose of this study is to determine whether the Socratic application is effective for teaching vocabulary to students in the eighth grade at SMPN 16 Kota Tangerang Selatan in the academic year 2021/2022. The sampling method was used to divide 64 students into two groups: the controlled group and the experimental group. The design of the study was quasi-experiment, while the instrument was a test with a pre-test and a post-test. The findings indicate that using the Socratic application for formative assessment as a technique for vocabulary learning was effective and appropriate for students.

**Keywords:** Socratic Application, Vocabulary

### INTRODUCTION

English has evolved into one of the most important secondary school subjects. It also becomes the subject that students must pass in the national final exam. Because Indonesia is a developing country, English is a foreign language. As a result, Indonesians continue to struggle with learning English.

Students must master the skills of listening, speaking, reading, and writing as well as other the elements of English such as Vocabulary. According to Risnawati, Nuhung, and Thamrin (2014), structure and vocabulary are important skills to learn in English. It means that vocabulary is an important aspect that will allow students to easily learn and master

English skills. Thus, interesting techniques for teaching vocabulary to students are important because vocabulary is the key for students; students will not be able to understand the meaning of English if they do not master the vocabulary.

There are numerous methods for increasing a student's vocabulary. One method is to use mobile learning. According to ElHusseini and Cronje (2010), mobile learning is the use of mobile devices in any field of study. Elements of mobile technology, such as portability and information accessibility, play an important role in improving English language education and learning. As a result, mobile learning refers to electronic media technology devices such as

smartphones, computers, and laptops. Through technology support, students can learn English in a more flexible manner.

English teachers must conduct an assessment at the end of the English teaching learning process to measure students' vocabulary. On the other hand, students are typically disinterested in the formative evaluation process, which can have an impact on their vocabulary development. One viable option for increasing students' interest during formative assessment is to use mobile learning, specifically the Socrative Application. Socrative is a website and application learning platform that is used as educational technology in schools and other educational institutions, according to Weebly (2014). To assess students in the classroom, the teacher can create quizzes, exit tickets, quick questions, or space races. As a result, the Socrative application is a formative assessment medium for improving student vocabulary.

Fitriani Nurhasanah's paper was published in entitled "The Effectiveness of Socrative Application for Formative Assessment in Vocabulary Teaching at SMA Muhammadiyah 1 Ponorogo." Found that when a teacher uses the Socrative application for formative assessment, student involvement improves, resulting in an increase of teaching and learning effectiveness. It means that there is a significant difference in students' vocabulary mastery when

involving the Socrative program in formative assessment.

## **METHOD**

The SMP Negeri 16 Kota Tangerang Selatan is located on Jl. Bhayangkara 1, Paku Jaya, Kec. Serpong Utara, Kota Tangerang Selatan, Banten 15220. The 8<sup>th</sup> grade student of the school is the subjects of this study. The researcher chose this school because during her internship there, she discovered that the students continue to struggle with vocabulary learning. The research will be carried out from the 13<sup>th</sup> of July 2021 to the 30<sup>th</sup> of August 2021.

The goal of the study is to determine the relationship between the variables. There are two classes in this study. One class is designated as the experimental class, and the other as the control class. Each class's students will take a pre-test and a post-test. In the experimental class, treatment teaching via Socrative Application will be used. Meanwhile, the control class only employs traditional methods.

After finishing the treatment in the experimental class, the researcher administered post-tests to both classes to assess the effectiveness of Socrative Application. Finally, the researcher evaluated the data from both the experimental and control groups. It also implies that the researcher selected a representative sample from the school's classes. A general overview of quasi-experimental design will be presented.

## FINDINGS AND DISCUSSION

### *Normality Test*

The test was used to determine whether or not the sample data was normal. If  $X^2$  (The chi square) count  $<$   $X^2$  table then it yield normal distribution data criteria, but if  $X^2$  count  $>$   $X^2$  table, the data is not normally distributed.

The score of pre-test from the experimental class, the data calculation yielded  $X^2$  count = 7.10 and  $X^2$  table = 11.07 with a significant level of 0.05 from a total of  $n = 32$ . If  $X^2$  count = 7.10 and  $X^2$  table = 11.07, It can be said that the pre-test result of the experiment class is in a normal distribution.

The data calculation obtained  $X^2$  count = 3.98 and  $X^2$  table = 11.07 with significant level 5 percent 05 0.05 by the total of  $n = 32$  based on the pre-test result from class VIII G as the controlled class. If  $X^2$  count = 3.98 and  $X^2$  table = 11.07; it meant that the pre-test in the controlled class is in a normal distribution.

Meanwhile, post-test score from class VIII F as the experimental class, the data calculation yielded  $X^2$  count = 8.62 and  $X^2$  table = 11.07 with a significant level of 5%, 0.05 by a total of  $n = 32$ . If  $X^2$  count = 8.62 and  $X^2$  table = 11.07; the score of experiment class post-test is distributed normally.

### *The normality test of students' post-test scores of controlled class*

The post-test score from VIII G as the controlled class, the data calculation yielded  $X^2$  count = 7.32 and  $X^2$  table = 11.07 with a significant level of 0.05

by a total of  $n = 32$ . If  $X^2$  count = 7.32 and  $X^2$  table = 11.07, it meant the distribution of the controlled class post-test is normal.

### *Pre-Test Results for the Experimental and Controlled Classes*

The pre-test data from the experimental and the controlled class was using T-test, the result showed that in the beginning, there was no significant difference between the experimental class and the controlled class at a significant level of 5% (= 0,05).

The pre-test data's central tendency is calculated. The average score for the experiment class was 57.50, while the calculated average score or mean for the controlled class was 55.78. The standard deviation score for the experimental class was 16.50, while the standard deviation score for the controlled class was 15.46. Following that, the researcher used the Fisher test to test hypotheses, and the results showed that  $t_{\text{count}}$  (0.43)  $t_{\text{table}}$  (1.99), indicating that  $t_{\text{count}}$  is less than  $t_{\text{table}}$ . It indicated that  $H_0$  is accepted when there is no significant difference in the students' vocabulary between the experimental and control classes. This occurred as a result of the researcher's failure to use Socratic Application for formative assessment as a treatment method in the experimental class.

### *The results of Post-Test in the Experimental and Controlled Classes*

Following the administration of the pre-test, the researcher used the

Socratic Application to administer the learning treatments in the experimental class. In the controlled class, the researcher followed the standard procedure. The researcher then administered post-test to the classes. The research calculation result of post-test data from experimental and controlled classes using t-test, it showed that students' vocabulary in experimental class who were exposed by Socratic Application for formative assessment improved more than students in controlled class.

The central tendency of the post-test of the experimental class data was calculated. The average score was 81.81, while the calculated average score for the controlled class was 76.81. While, the standard deviation score for the experimental class was 9.69 and the controlled class was 9.21. The researcher then used the Fisher test to evaluate hypotheses, and the results revealed that  $t_{count} 2.11 > t_{table} 1.99$ , indicating that  $t_{count}$  is greater than  $t_{table}$ . If the students' vocabulary score in the experimental class and the controlled class are different, then  $H_1$  is accepted.

### CONCLUSION

Based on the findings of this study, it is possible to conclude that there is a significant difference in terms of English vocabulary and students who were taught using the Socratic application for formative assessment and students who were taught using the conventional method at SMPN 16

Kota Tangerang Selatan in the academic year 2021/2022.

The findings revealed that there are significant differences in the post-test of experimental students who were taught using the Socratic application versus the conventional method, as evidenced by a T-test with a significant level of  $\alpha = 5\%$  or 0.05, which revealed that  $t_{count} 2.11 > t_{table} 1.99$ . It indicated that  $H_0$  is rejected and  $H_1$  is accepted.

The implementation of Socratic application is one of the techniques that can help the students in learning vocabulary. The improvement of students' learning vocabulary in experimental class is a result from applying Socratic application for formative assessment. It is also engaged students' interest in learning English.

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