



The Effectiveness of English Score Application on Pre-Teaching Activities to Improve Vocabulary Mastery at SMAN 8 Padang

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Abstract

This research is pre-experimental research that is aimed to try out whether the use of the EnglishScore application is effective in improving students' vocabulary mastery. The population of the research was tenth-grade students at SMAN 8 Padang. The population consists of 339 students who are classified into ten classes. X.E2 was selected as the experimental class through cluster sampling method. This research was conducted over eight meetings during school hours. In order to collect the data, the researcher used multiple-choice test for pre-test and post-test. The test questions based on the two adapted narrative texts. The data analysis result shows that the significant value of the two-tailed paired sample t-test is 0.000 which means that the value of the two-tailed less than 0.05. So, the null hypothesis (H₀) is rejected and the alternative hypothesis (H₁) is accepted. In conclusion, the result of this research proved that the use of EnglishScore application had a good impact in improving students' vocabulary mastery.

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INTRODUCTION

Students are currently heavily influenced by learning technology. According to Fitria (2018) learning technology is a tool that is frequently used during the learning process. According to A (2019), the use of present-day technology in English language teaching is broadly described because of the innovative software of methods, tools, materials, equipment, systems, and techniques that are immediately applicable to English language education and result in the attainment of the desired goals. As a result, various types of technology are now used in the delivery of learning in high school. EnglishScore application is a piece of mobile-based application technology that can be used to help students learn English.

According to british council (n.d.), EnglishScore is a fast and reliable test application for determining the level of English language skills. This application will show all of students reports when they finish their test. EnglishScore allows students to practice numerous skills: reading, listening, grammar, and vocabulary.

Vocabulary is a crucial language learning component and must be known. Ritonga (2020) says that the importance of vocabulary mastery is to be able to convey students' ideas while also understanding what others are saying. Vocabulary and other skills in English language learning are related each other.

In senior high school, learning English that is taught indirectly requires students to know a lot of vocabulary. Based on the researcher's initial observations, students' vocabulary mastery at SMAN 8 Padang remains poor. This is because their vocabulary mastery is still minimal and the percentage of their desire to enrich it is still very low. In addition, reviews from students said that they had never used mobile-based application during learning activities. Furthermore, there has never been any use of learning media that provides a test to determine the extent of their vocabulary mastery. Thus far, they have only learned using books from the Ministry of Education and Culture, doing the exercises from LKS books (Student Worksheets), and occasionally using video from the teacher's PPT (PowerPoint).

Several research have also looked into the improvement of vocabulary. The first research was conducted by Yudhistira (2019) have analysed teaching vocabulary by using English songs. The second research was conducted by Bhakti & Marwanto (2018) have analysed teaching English vocabulary by using story telling. The third research conducted by (Putu Tressya, Sudirman, & I Putu Indra, 2017) have analysed students' vocabulary mastery by using the word family game. Then, (Nuralisah & Kareviati, 2020) have analysed vocabulary mastery by using memrise application. The another research conducted by Yulianti (2018) have analysed the use of the kamusku application for the students' vocabulary mastery.

From that previous research, there is no research have examined using application that provide tests and scores. Therefore, the EnglishScore application is worth to try. Through this application, the student's score will be displayed when student have completed all of the questions, so students will know the extent of their vocabulary mastery.

RESEARCH METHOD

Research design

Under the quantitative research approach, an experimental research design was used to carry out this research. The researcher used the pre-experimental method which consist of one group with pre-test, treatment, and post-test. Pre-experimental research is an observational approach to conducting experiments, and it is done without making comparisons (without control group). Pre-experimental techniques were used by researchers to determine whether the intervention using the EnglishScore application would have an impact on a small sample of people.

Population and sample

In this case, to see the effectiveness of implementing the EnglishScore application on vocabulary mastery, the researcher chose SMAN 8 Padang as the research site. The population area in this research will focus on class X students. The cluster sampling technique was used to select the sample for this research. Bhardwaj (2019) claims that the samples for cluster sampling is chosen randomly from groups or clusters that are already exist or emerge naturally. Through this

technique, the researcher found X.E2 class that consists of 35 students as the sample by using lottery method. This research was carried out over eight meetings inside of the school hours.

Instrumentation

Tests were used as an instrument in this research, which involves multiple-choice test types. The researcher chose multiple-choice test referring to the type of test used in the EnglishScore application. The multiple-choice questions are given for pre-test and post-test in the same form. The pre-test is used to determine the students' vocabulary mastery before applying EnglishScore application. While the post-test is used to determine whether there is an effectiveness after applying the EnglishScore application on students' vocabulary mastery. Each pre-test and post-test consist of 15 questions based on two adapted narrative texts.

Technique of data collection

A pre-test and a post-test made up the test instrument that the researcher used. First, students were taking the pre-test, which given by the researcher. Second, the researcher conducted six meetings to apply the EnglishScore application. Third, the researcher gives the post-test in the same form with pre-test, in order to see the effectiveness of EnglishScore application.

Validity and reliability

a. Validity

To check the validity of the instruments, one of the lectures in English Department of UNP was asked to review the validity and the appropriateness of the content. In addition, to validate the instrument, the researcher also asked students from class X.E1 as a non-sample class to use the instrument and check the validity by using SPSS program. This non-sample test process was carried out twice in the same class. According to the two results validity of the non-sample test, researcher was found 15 items to be valid out of 30 items.

b. Reliability

To see the reliability of the instrument, the researcher analysed it with the Cronbach's Alpha formula in SPSS program. Then, the reliability score that will be acceptable is 0,600 or higher. After the 15 items were found to be valid, the reliability test was proceeded. The SPSS program was used to assist the reliability test.

Techniques of data analysis

The researcher used SPSS to analyzed the data after the data was collected. The first step is to ensure the normality of the data distribution by using normality test. The purpose of the normality test is to determine whether the data is normal or not. In the SPSS program, the researcher uses Shapiro-Wilk test due to the research sample numbered less than 100. If the Sig. value is more than 0.05, the data is normally distributed. After doing normality test, to determine whether the data is homogeneous or not, the researcher performed a homogeneity. Then, to determine

whether there is a difference between the pre-test and post-test averages, paired sample t-test data analysis was followed. Paired sample t-test was used because there was only one class included in the sample.

RESULT AND DISCUSSION

The researcher held the research at X grade students of SMAN 8 Padang. The researcher chose X.E2 class that consists of 35 students as the sample by using cluster sampling technique and lottery method. To evaluate students' level of vocabulary mastery, before studying the material and receiving treatment, researcher gave students a pre-test. Then, after conducting the pre-test, EnglishScore application was applied in pre-teaching activities for 6 meetings, and continued by studying narrative text in whilst-teaching activities.

Result finding

1. The pre-test and post-test result

After following 6 meetings of learning, students took the post-test to see the effectiveness of the implementation of EnglishScore application. The following table displays the results from both the pre- and post-tests:

Students	Pre-test		Post-test	
	Correct answers	Score	Correct answers	Score
Student 1	7	47	12	80
Student 2	9	60	12	80
Student 3	4	27	11	73
Student 4	4	27	10	67
Student 5	2	13	7	47
Student 6	3	20	11	73
Student 7	7	47	12	80
Student 8	8	53	13	87
Student 9	7	47	8	53
Student 10	14	93	15	100
Student 11	4	27	10	67
Student 12	7	47	9	60
Student 13	5	33	7	47

Student 14	6	40	13	87
Student 15	7	47	12	80
Student 16	3	20	10	67
Student 17	4	27	8	53
Student 18	3	20	10	67
Student 19	5	33	10	67
Student 20	3	20	11	73
Student 21	4	27	12	80
Student 22	7	47	13	87
Student 23	6	40	11	73
Student 24	4	27	10	67
Student 25	9	60	12	80
Student 26	7	47	12	80
Student 27	8	53	13	87
Student 28	8	53	14	93
Student 29	10	67	12	80
Student 30	12	80	14	93
Student 31	7	47	13	87
Student 32	9	60	13	87
Student 33	7	47	13	87
Student 34	6	40	8	53
Student 35	6	40	8	53
MEAN	42.37		74.14	

According to the data displayed in the table above, the pre-test score ranged from 13-93 while the post-test score ranged from 47-100. The average score significantly increased from 42.37 to 74.14.

2. Data description

Utilizing SPSS, the data was processed to produce a description of the information. The following table displayed the data description results that was calculated using SPSS based on the outcomes of the pre-test and post-test procedures:

		Post-test	Pre-test
N	Valid	35	35
	Missing	0	0
Mean		74.14	42.37
Std. Deviation		13.916	17.599
Minimum		47	13
Maximum		100	93

According to the description of the data performed in the above table, the mean of post-test score increased from the pre-test score.

3. Normality test

Normality test was the next step that was done by the researcher after getting the data description. The aim of the normality test is to get the information whether the data is distributed normally or not. The Shapiro-Wilk test in SPSS program was applied by the researcher to determine whether the data were normal. The following table displays the results of the Shapiro-Wilk test-based normality test that was performed in SPSS:

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post-Test	.177	35	.007	.941	35	.059

a. Lilliefors Significance Correction

The significance value of the post-test is 0.059 which shows that is higher than 0.05. As a result, the data is considered to be distributed normally.

4. Homogeneity test

The aim of the homogeneity test is to find out whether the data have homogeneous variances or not. Using statistical analysis in SPSS, the homogeneity test was carried out. The table below displays the result of the homogeneity test:

Pre-Test Post-Test Score			
Levene Statistic	df1	df2	Sig.

.983	1	68	.325
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The significance value of homogeneity test is bigger than 0.05 that is 0.325. As a result, the variances of the two data are homogenous.

5. Hypothesis test

After doing homogeneity test, The Paired Sample T-Test in SPSS was used by the researcher to analyse the data. Paired sample t-test was used because there was only one class included in the sample. The researcher analysed the data to test the research hypotheses which are:

- Null hypothesis (H0): There is no improvement of students' vocabulary mastery before and after using EnglishScore Application.
- Alternative hypothesis (H1): There is an improvement of students' vocabulary mastery before and after using EnglishScore Application.

The result of the paired sample t-test is presented in the table below:

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-Test	42.37	35	17.599	2.975
	Post-Test	74.14	35	13.916	2.352

The average score of the post-test is greater than the average score of the pre-test. Then, the value of the correlation that is determined by the paired sample t-test is performed in the table below:

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre-Test - Post-Test	-31.771	13.763	2.326	-36.499	-27.044	-13.657	34	.000

The significance value of the two-tailed paired sample t-test is 0.000, as presented in the table above. The two-tailed paired sample t-test's significance value is lower than 0.05, which means that the alternative hypothesis (H1) must be accepted in place of the null hypothesis (H0).

Discussion

The significance value of the two-tailed paired sample t-test was smaller than 0.05, which indicates that the null hypothesis (H0) is rejected and the alternative

hypothesis (H1) is accepted. According to the alternative hypothesis (H1), there is an improvement of students' vocabulary after using EnglishScore Application. By comparing the mean score of the pre-test and the mean score of the post-test of the sample class, the result of the research can also be verified. It was found that the mean score of the class increased significantly from the pre-test. Before receiving the treatment, the mean score of the class was 42.37. After receiving the treatment, the mean score of the class was 74.14.

The EnglishScore application has been proven to improve student vocabulary mastery. However, as far as I am concerned, the EnglishScore application has not previously been found to be used in efforts to improve student vocabulary. So far, it just only been found that students' vocabulary improves through similar mobile-based applications. The research's finding of this research matches up with the findings of previous research which can also improve students' vocabulary mastery through mobile based applications. Nuralisah & Kareviati (2020) in their research proved that the Memrise application can help SMPN 1 students improve their vocabulary mastery. Yulianti (2018) stated that the Kamusku application dictionary can improve students' vocabulary mastery. Then research conducted by Aulia, Wahjuningsih, & Andayani, (2020) showed that students' vocabulary mastery is significantly impacted by using the Duolingo application.

The EnglishScore maximizes the use of those previous applications that has been mentioned. This application provides vocabulary test questions and also displays the scores at the end of each student's work. Through these features, students implement their vocabulary mastery by working on the available test questions. After working on the test questions, students can immediately find out the value of the test results they took. It makes students feel motivated to always improve their vocabulary mastery so that in the next work they can get even better scores.

By providing test questions and showing the results of students' vocabulary scores. The feature provided by the EnglishScore application allow students to know the progress of their vocabulary mastery results at each meeting. Students not only memorize various kinds of vocabulary, but can also directly practice their memorization by implementing it through working on vocabulary test questions. Every week students always try to master more vocabulary in order to get a higher score. This method can encourage students to improve their vocabulary mastery. This has been proven by an increase in the average post-test results of students after undergoing treatment for 6 meetings.

CONCLUSION

After conducting research on the effectiveness of the EnglishScore application in improving students' vocabulary mastery, it can be assumed that the EnglishScore application does have a significant influence in improving students' vocabulary mastery. This can be concluded from the significance value of the two-tailed pair sample t-test which is smaller than 0.05, namely 0.000. This indicates that the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted as the research result. The research results can also be verified by the significant

increase in the average post-test score through the application of the EnglishScore application.

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