

## THE USE OF DIGITAL STORYTELLING AND DICTIONARY TO IMPROVE STUDENTS' VOCABULARY MASTERY (A Quasy-Experimental Study to Eight Grader of SMPN 1 Cilamaya Wetan)

Yogi Setia Samsi

University of Singaperbangsa Karawang, Indonesia  
Email: [ogie\\_21milan@yahoo.com](mailto:ogie_21milan@yahoo.com)

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**Abstract:** This research was aimed at finding whether or not the use of digital storytelling and dictionary can improve students' vocabulary mastery. To get the answer of the defined research questions, the researcher used quantitative approach and quasi experimental design. The research had been done in SMPN 1 Cilamaya Wetan, and took two classes as sample, namely, 8G and 8H with 40 respondents in each class. There were three steps in this research, namely pre-test, treatment, and post-test. Pre-test was held in both classes to know students' vocabulary mastery before the treatment. After doing pretest, treatment was held in experimental class by using digital storytelling and dictionary, that used the technology such as infocus, projector, speaker, and LCD in which the materials were taken from youtube, while control class only used song lyrics. In the next step, posttest was held in both classes to know the improvement after the treatment in experimental class. The data of the study were analyzed by using SPSS version 22 for windows. This research findings showed that experimental group had higher vocabulary score than control group. It can be seen from the posttest mean of experimental group was 74.75 , while the mean of control group was 60,62. Meanwhile, the average of normality gained in experimental group was 0.37 and the average of normality gained in control group was 0.075. Thus, the improvement of students' vocabulary mastery by using digital storytelling and dictionary in experiemental group is greater than using song in control group. It can be concluded that digital storytelling and dictionary improves vocabulary mastery of eight grader of SMPN 1 Cilamaya Wetan.

**Key Words :** *vocabulary mastery, digital storytelling, dictionary*

### INTRODUCTION

Especially for junior high school students, English skill is very useful for their basic to learn English at senior high school. However, there are still many problems in teaching English at junior high school, students still have many difficulties in learning English. The opinion of students' who studying English is frightening, students' are still difficult to make English sentences,

because students' still lack of vocabulary mastery. This propped of declining students' learning outcomes. Lack of English vocabulary mastery made difficult students' speak, write and listen to English. By vocabulary, students' are expected to be able to in speaking, listening and writing English.

Vocabulary is total number of word which make up a language (Hornby, 2003). Vocabulary is defined as

the words which are used in a language that should be known used particular person who does not constitute all the word. Vocabulary is very important in language teaching, because mastering language is impossible without vocabulary. Vocabulary is one aspect in learning a foreign language. Without a proportional amount of vocabulary, student gets trouble in their speaking, reading, listening, and writing. Students do not have enough vocabularies to help them in learning process of English and cannot memorize more vocabularies in their mind. In Indonesia, English is not considered as a second language, but English is a foreign language. English is also called as the target language that has to be taught in schools in today's Indonesian curriculum.

The students got many vocabularies by conducting reading activity. That motivation gives task and practice by involving reading activity in order that the students can understand word by word and meaning of words. So that, they can learn vocabulary. Most of students begin to read something because they have seen and they have heard something that is pronounced by other people. So that the using of media is needed to conduct teaching and learning process in the class. The suitable media is digital storytelling because the digital storytelling contains video, picture, and voice. Media is medium to send the message from speaker to receiver. It means that the media can help the teacher to send their information for their students. The examples of media are television, LCD projector, radio etc. From the statement above, the researcher chooses a suitable media that is digital storytelling to teach vocabulary.

By using this media, the students are able to see the objects in the form of

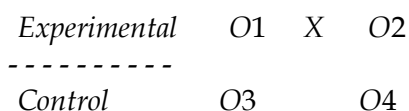
pictures, and spell of the objects name. In addition, the students are also able to listen the way to pronounce the words which they learn. As a result, they can understand and memorize the vocabularies well. Beside that, the students will be happy and they have feel enjoyable and enthusiastic to learn English vocabulary, they can catch the main message. In the last, the teacher can increase the quantity of English teaching and learning process. Based on the description above, the researcher is interesting conducts a research entitled "The use of digital storytelling and dictionary to improve students' vocabulary mastery (A quasi experimental design at the eight grade students' of SMPN 1 Cilamaya Wetan)".

## **METHOD**

In this research, the researcher uses quantitative approach to analyze the data because the researcher intended to examine the research hypothesis. The researcher compares the student value between experiments class group and control group. In this research, the researcher uses experimental research method. Creswell (2012, p. 295) said that "Experimental is controlled, it is the best of the quantitative design to use to determine caused and effect." It means this research is to determine the improvement of students' vocabulary mastery using Digital storytelling. Whether, there is improvement between students' vocabulary mastery by digital storytelling and without using Digital storytelling. Moreover, Quasi Experimental is an empirical study used to estimate the causal impact of an intervention on its target population. It divided into three kinds of design, there are one shot case study, one group pre-test and post-test design and statistic group comparison. Here, the researcher

uses one group pretest post test design. Pretest and post test are given before and after treatment.

One of the most commonly used quasi experimental designs in educational research can be represented as:



Arikunto (2006, p. 130) stated that “population is formulated as the whole groups of people or object that have been formulated clearly.” In this research was all students of seventh grade in SMP N 1 Cilamaya Wetan which consisted of 12 classes where each class generally consisted of 40 students. So, the total numbers of students are 582 students. From the population above, the researcher uses purposive sampling technique as sample. These two classes were gained because they had similar

average achievement and been considered as homogeneous classes in which the each class consisted of 40 students. Class VIII H was chosen as the experimental group which was taught by using Digital Story Telling while class VIII G was chosen as the control group which was taught using Song lyric.

First of all, the researcher calculates the data to analyze the pilot test by determining:

1. *Validity*

According to Creswell (2012, p. 159), “validity is the degree to which all of the evidence points to the intended interpretation of test score for the proposed purpose.” It is not sufficient to say that a test is “valid”; rather, the *intended use* of the test should be indicated. The validity of data will be conducted by AnatesV4. The criteria of validity are shown in the following table:

**Table 1.** *The Classification of Validity Coefficients*

Coefficient value	Interpretation of validity coefficient
0.00 - 0.199	Very low
0.20 - 0.399	Low
0.40 - 0.599	Moderate
0.60 - 0.799	Strong
0.80 - 1.000	Very strong

2. *Reliability*

Reliability means that scores from an instrument are stable and consistent (Creswell, 2012, p. 159). Reliability in this research was examined by using Pearson Product moment to know the correlation. Researcher used SPSS 16 for measuring it. The criteria of reliability instrument can be divided into 5 classes as follows:

- 1) If the *Cronbach alpha* score 0,00 - 0,20: less

- 2) If the *Cronbach alpha* score 0,21 - 0,40: rather
- 3) If the *Cronbach alpha* score 0,41 - 0,60: enough
- 4) If the *Cronbach alpha* score 0,61 - 0,80: reliable
- 5) If the *Cronbach alpha* score 0,81 - 1,00: very reliable

3. *Normality Test*

Normality test will be calculated before t-test. It aimed at investigating whether or not the distribution of pre-

test and post-test scores in two groups are normally distributed. The steps are as follows:

- a. Setting the level of significance at 0.05 and establishing the hypothesis as follows:  
 $H_0$  : The sample is not normally distributed  
 $H_1$  : The sample is normally distributed  
 The level of significant at 0.05 is used because it is a standard which is applied in social studies.
- b. Analyzing the normality test using SPSS 22.
- c. Comparing the level of significance to test the hypothesis. If significance  $< \alpha$ ,  $H_0$  is rejected; if significance  $> \alpha$ ,  $H_0$  is retained/accepted.

#### 4. Homogeneity of Variance

The homogeneity of variance test is used to determine whether the data obtained from the experimental group and control group has the same variance or not. Homogeneity of variance in the pre-test are needed to find out the two groups are same variance. The steps are as follows:

- a. Setting the level of significance at 0.05 and establishing the hypothesis as follows:  
 $H_0$  : The variance of the group is not homogenous  
 $H_1$  : The variance of the group is homogenous
- b. Measuring the homogeneity variance using SPSS 22.
- c. Comparing the level of significance to test the hypothesis. If significance  $< \alpha$ ,  $H_0$  is rejected; if significance  $> \alpha$ ,  $H_0$  is retained/accepted.

#### 5. Dependent t-test

In analyzing the result of pre-test and post-test, dependent t-test will be

used to compare the means' difference of the two tests. The steps are as follows:

- a. Setting the level of significance at 0.05 and establishing the null hypothesis for pre-test and post-test data analysis. Null hypothesis ( $H_0$ ) There is no significant difference between the pre-test and post-test scores.
- b. Analyzing the dependent t-test by using SPSS 22.
- c. Comparing (t) significance 2 tailed with the level of significance for testing the hypothesis. If (t) significance 2 tailed  $> 0.05$ , the null hypothesis is accepted; if (t) significance 2 tailed  $< 0.05$ , the null hypothesis is rejected.

#### 6. Independent t-test

The independent t-test will be used in this study to see whether the difference of mean between the experimental and control groups. There are three steps in analyzing the independent t-test.

- a) Stating the hypothesis and setting the alpha ( $\alpha$ ) level at 0.05.  
 $(H_0)$  : There is no significant difference between the pre- test and post-test mean for experimental and control groups.  
 $(H_1)$  : There is significant difference between the pre-test and post-test mean for experimental and control groups.
- b) Calculating independent t-test by using SPSS 22.
- c) Comparing (t) significance 2 tailed with the level of significance for testing the hypothesis. If (t) significance 2 tailed  $> 0.05$ , the null hypothesis is accepted; if (t) significance 2 tailed  $< 0.05$ , the null hypothesis is rejected.

### 7. Analysis Data Index Gain

Normalized gain (gain index) is used to find out the enhancement of students' vocabulary mastery. The calculated data was obtained from pre-test and post-test score of both experimental group and control group. In this study, N-gain would be used

when the mean score of both groups is different. Improvement that occurs before and after treatment is calculated with the following Hake (1991, p. 1) formula:

$$g = \frac{\text{post-test} - \text{pre-test}}{\text{maximum score} - \text{pretest}}$$

**Table 2.** The Criteria of Gain Index

Gain Index	Criteria
$g \geq 0.7$	High enhancement
$0.3 \leq g < 0.7$	Moderate enhancement
$g < 0.3$	Low enhancement

## RESULTS AND DISCUSSION

### A. Determining Pilot test Result

#### 1. Validity

To compute the validity test for reading ability, the researcher used *Anates V4*. Based on the calculation of instrument result above, the researcher got that the most of the items was valid because the score is 0,69. In the criteria, in coefficient correlation of validity if raw score 0,60–0,80 instrument was valid, with the computed who researcher got 0,69, it means that instrument was valid and the interpretation were high.

#### 2. Reliability

The calculation was done by using the program of *Anates V4*. The calculation of the variable instrument reliability of simple result of 15 items result who researcher got 0,85. Based on criteria coefficient of reliability if reliability

coefficient 0,61–0,80 reliability level was high. Its means that instrument of researcher got from test instrument was reliable and level reliability was high.

### B. Determining Pretest and Posttest Result

#### 1. Pretest Score

##### a) Normality Distribution Test

Kolmogorov-Smirnov formula with level of sig.  $\alpha = 0,05$  was used to investigate the normality of pre-test scores. The hypothesis used is as follow:  $H_0$  = The score of experimental class and control class are not normally distributed.

$H_1$  = The score of experimental class and control class are normally distributed.

The result are:

**Table 3.** Tests of Normality

Group	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	Df	Sig.	
Score	Exp.	,126	40	,107	,956	40	,119
	Cont.	,162	40	,010	,955	40	,114

Based on table 3 of normality test, it is obtained score value sig. Experiment class was 0,119 and Control class was 0,114 where both  $> 0,05$  then it

concluded then the data of every class had normal distribution, that means  $H_0$  accepted.

b) Homogeneity of Variance Test

**Table 4.** Test of Homogeneity Variance

Levene	Df1	Df2	Sig.
2.525	7	31	.035

Based on table 4, it showed that the significance of pre-test result between experimental class and control class is 0.035. Therefore, it can be concluded that the variance of the group is homogen because  $.035 > 0.05$ .

2. Post-test Score

a) Normality Distribution Test

Kolmogorov-Smirnov formula with level of sig.  $\alpha = 0,05$  was used to investigate the normality of pre-test scores. The hypothesis used is as follow:

$H_0$  = The score of experimental class and control class are not normally distributed.

$H_1$  = The score of experimental class and control class are normally distributed.

The result are:

**Table 5.** Tests of Normality (Post Test)

Groups	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	Df	Sig.	
Score	Exp.	,127	40	,101	,949	40	,072
	Cont.	,106	40	,200	,968	40	,335

Based on table 5, it showed the obtained score value sig. Experiment class was 0,072 and Control class was 0,335 where both  $> 0,05$  then it

concluded, that the data of every classes had normal distribution, that means  $H_0$  accepted.

b) Homogeneity of Variance Test

**Table 6.** Test of Homogeneity Variance

Levene	Df1	Df2	Sig.
1,061	10	29	.422

The table 6 showed that the significance of post-test result between experimental class and control class is 0.442. Therefore, it can be concluded that the variance of the group is homogen because  $0.442 > 0.05$ .

Independent t-test computation with level sig.  $\alpha = 0,05$  were conducted. The hypothesis used is as follow:

$H_0$  = There is no significant different between test result of experimental group and control group.

$H_1$  = There is a significant different between test result of experimental group and control group.

c) Independent t-test

After the normality distribution was conducted and analyzed. Then,

**Table 7. Independent Samples Test**

Description	T-test for Equality of Means						
	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Equal variances assumed	6,082	78	,000	15,62500	2,56916	10,51020	20,73980
Equal variances not assumed	6,082	68,118	,000	15,62500	2,56916	10,49849	20,75151

Based on table 7, it presented that the value sig. 0.000. It could be concluded that null hypothesis is rejected since significant result is lower than 0.05 ( $0.000 < 0.05$ ). Thus, there is significant difference between value of the control class and experiment class. Then the value tcount is compared with ttable. to determine the value of ttable use significant level for 2 tailed with (alpha) error level ( for education research  $\alpha = 0.05$ ,  $df = 74$ ). The result is 1.668 and  $t_{count} > t_{table}$  mean that the null hypothesis is rejected.

Therefore, it is  $6.082 > 1.668$  and  $H_0$  is rejected. It can be concluded that there

is significant different between students who are taught without by using digital storytelling and dictionary media. The use of digital storytelling and dictionary media can improve students' vocabulary mastery.

*d) Normality Gain*

Normalized gain (gain index) is used to find out the enhancement of students' vocabulary mastery. The calculated data was obtained from pre-test and post-test score of both experimental group and control group. Index gain in Experimental class:

**Table 8. N-Gain of Experimental and Control class**

Name	Normalized Gain			
	Experimental Group		Control Group	
Student 1	0,3	Moderate	0	Low
Student 2	0,7	High	-0,4	Low
Student 3	0,1	Low	0,1	Low
Student 4	0,7	High	0,2	Low
Student 5	1	High	0,2	Low
Student 6	0,4	Moderate	0,2	Low
Student 7	0,4	Moderate	0,1	Low
Student 8	0,4	Moderate	-0,2	Low
Student 9	0,5	Moderate	0,2	Low
Student 10	0,3	Moderate	0,1	Low
Student 11	0,4	Moderate	0,1	Low
Student 12	0,3	Moderate	-0,8	Low
Student 13	0,1	Low	0,3	Moderate
Student 14	0,6	Moderate	0,4	Moderate

Student 15	0,2	Low	0,5	Moderate
Student 16	0,6	Moderate	0	Low
Student 17	0,2	Low	0,2	Low
Student 18	0,2	Low	0,1	Low
Student 19	0,5	Moderate	0,2	Low
Student 20	0,5	Moderate	0,5	Moderate
Student 21	0,6	Moderate	0,2	Low
Student 22	0,1	Low	0,1	Low
Student 23	0,1	Low	0,4	Moderate
Student 24	0,4	Moderate	0,1	Low
Student 25	0,3	Moderate	0	Low
Student 26	0,3	Moderate	0,2	Low
Student 27	0,2	Low	0	Low
Student 28	0,7	High	-0,2	Low
Student 29	0,6	Moderate	-0,2	Low
Student 30	0,2	Low	0,3	Moderate
Student 31	0,6	Moderate	0,1	Low
Student 32	0,1	Low	-0,4	Low
Student 33	0,5	Moderate	0	Low
Student 34	0,4	Moderate	0,1	Low
Student 35	0,5	Moderate	0	Low
Student 36	0,4	Moderate	0,4	Moderate
Student 37	0,2	Low	0,1	Low
Student 38	0,3	Moderate	-0,1	Low
Student 39	0,1	Low	0	Low
Student 40	0,1	Low	-0,1	Low
Mean	<b>0.37</b>		<b>0.075</b>	

Based on the table 8, it showed that the experiment class had 4 students increased as high, 23 students increased as moderate and 13 students increased as low. Based on the table, the result of increasing in the average value of students' vocabulary mastery score after treatment result given the increase is high. Because if the students' score  $0,37 \leq g \leq 1,00$  is moderate the average scores in experimental class is 0.37, it means that the use of digital storytelling and dictionary can improve students' vocabulary mastery.

Meanwhile, the table shows that the result of control class of N-Gain, there were no students increased high, 7 students has increased a moderate and 33 students have increased low. Because of the students' scores  $0.075 \leq g < 0.70$  is

a Low increase. The average scores in control class is 0.075, it means that if it only uses the lecture/song method, the result will be less improvement for students' vocabulary mastery.

## CONCLUSION

From the research findings, the data shows that improvement of using digital storytelling and dictionary in vocabulary mastery is significance after the students got treatment with digital storytelling and dictionary. It can be seen from the normality gain in moderate level. Meanwhile, in control class there are no improvement. It can be concluded that the use of digital storytelling and dictionary can improve students' vocabulary mastery.



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## **Teacher**

A teacher asks her class, "If there are 5 birds sitting on a fence and you shoot one of them, how many will be left?" She calls on little Johnny. He replies, "None, they all fly away with the first gun shot" The teacher replies, "The correct answer is 4, but I like your thinking." Then, Little Johnny says "I have a question for YOU. There are three women sitting on a bench having ice cream: One is delicately licking the sides of the triple scoop of ice cream. The second is gobbling down the top and sucking the cone. The third is biting off the top of the ice cream. Which one is married?" The teacher, blushing a great deal, replied "Well I suppose the one that's gobbled down the top and sucked the cone" To which Little Johnny replied, "The correct answer is the one with the wedding ring on, but I like your thinking."

(Source: <http://www.study-express.ru/humour/funny-stories.shtml>, picture: [www.google.co.id](http://www.google.co.id))