



## THE EFFECTIVENESS OF USING COMPUTER GAME “FAST HANDS” TO IMPROVE STUDENTS’ VOCABULARY MASTERY FOR JUNIOR HIGH SCHOOL

(A Quasi Experimental Research at the Eighth Grade Students of SMP Negeri 1 Muntilan in the Academic Year of 2014/2015)

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### Abstract

*This study was a quasi-experimental research aimed at finding out whether computer game “Fast Hands” effectively improve students’ vocabulary or not. The population of this study were 192 students from the eighth grade of SMP Negeri 1 Muntilan in the academic year 2014/2015. Of this population, two classes were chosen as the experimental group (VIII-B) and the control group (VIII-F) consisting of 24 students for each group. Thus, there were 48 students as the samples.*

*Based on the result of the analysis, it is shown that the students’ progress in mastering vocabulary for both groups is good after they were given the treatment. It is shown from the different means result in the experimental group, that is from 66.46 in the pre-test to 84.79 in the posttest. Thus, it has 18.33 in difference. In the control group the difference between the two means is 13.54. 65.83 in the pre-test and 79.37 in the posttest.*

*To check whether the treatment significantly influenced students’ vocabulary, the t-test formula was used. Based on the result of the computation, the t-value is 2.237. This result was consulted with the critical value on the t-table with 5% alpha level of significance and 40 degrees of freedom by using interpolation. Based on the result of interpolation, the critical value is 2.015. Since t-value is higher than t-table ( $2.237 > 2.015$ ) it can be concluded that computer game “Fast Hands” effectively improve students’ vocabulary compared to the Word Lists Strategy. Thus, it is suggested that the teachers may use computer game “Fast Hands” in their teaching practice especially in improving students’ vocabulary.*

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## INTRODUCTION

### Background of the Study

English as one of the most influential languages in the world is very important to learn because it can be used to give and receive information and to develop education, technology and art. English is also useful for young students. Preparing students to learn English as early as possible is a very good thing because their brains are ready to learn and will be very easy for them to master.

English is the most widely used language in the world. In addition, Indonesia is one of the countries that many of its citizen use English as their daily language. Even many schools have implemented English as their primary language. It shows that English is a language that has a very large influence in life, especially in education, technology, science, art and in making the relationship of cooperation with other countries. The current era of globalization requires Human Resources to compete in accordance with current development. Therefore, English should be given or be introduced to students since they are children.

In English, there are four skills that should be mastered namely listening, speaking, reading and writing. In order to master English, we should also master the grammatical rule and vocabulary. More and more we master vocabulary, then it will be easier for us in mastering English.

Laufer (1997:140) in Indriarti (2014) states that learning vocabulary is one of the most important elements without which neither comprehension nor production of language is possible. On the other word, vocabulary cannot be separated from other language skills. The more words the learners know, they will be more better to understand what they hear or read. In addition, the more words they have, they will be more accurate to express their ideas in spoken or written form.

In School-Based Curriculum, teachers are given the freedom to utilize a variety of methods and media that can improve the interest, attention, and creativity of learners. This is important because in School Based Curriculum

the teacher serves as a facilitator who is expected to select the media used in learning. Medium as one of learning sources is an alternative way to optimize the learning process.

The media used should be interesting and they match to the characteristics of the learners. This aspect can be done by applying learning and playing technique, such as the use of computer games. Learning through computer games is able to provide several advantages. First, lessons given can be accepted with delight, as related with the nature of the game that is entertaining and exciting. Second, because game is fun, playing at once arouse great interest for learners in a particular subject.

Computer game has spread rapidly in youth people life; they get accustomed to the computer game rather than the other technology. By the development of the technology, computer game comes in various types. It is possible that we consider about the use of computer game as a medium in teaching and learning.

Here the writer tries to use "*Fast Hands*" as one of computer games to teach vocabulary. This is a game for learning English focusing on vocabulary items where the player will listen to the sound or read the word and then click on the matching pictures. It is really easy, fun and interesting to learn and review words. The players can choose the content that they want to play with and there are more than 500 vocabulary items in total.

By using computer game "*Fast Hands*" as a medium for teaching, learners are expected to be more interested in learning vocabulary and they get motivated in teaching learning process.

## LITERATURE REVIEW

There have been a number of researchers conducted some studies related to the use of *Computer Game* in improving students' vocabulary mastery such as Zahro' (2010), Sulistiyani (2010), Kirti (2013), Astuti (2014), Etikasari (2014), Sanchez (2006), and D'Alesio, Scalia, and Zabel (2007). From the related of previous studies, I am inspired to do an experimental research on teaching vocabulary by using computer game "*Fast Hands*". However, there are differences

between these researches above and this research. This research is about applying Computer Game “Fast Hands” to improve students’ vocabulary mastery, whereas, most researches above were about applying Song Lyrics, Computer Media (ATM 5 Programme), Cartoon Pictures, Puppet, Virtual Field Trips, and Multisensory Instruction. The writer uses computer game “Fast Hands” to improve students’ vocabulary mastery because this game is very interesting and many categories of vocabulary are contained in this game. Finally, the researcher decides to use computer game “Fast Hands” in this research because so far there are not many researchers using this medium in improving vocabulary mastery.

### General Concept of Vocabulary

vocabulary is a collection of the words with their meaning that it used to communicate. Kammeenui (1991) in Bintz (2011) states that Learning vocabulary is fundamentally about learning definition of words. Many teachers believe that defining words before reading a text is an effective instructional technique to support vocabulary growth and enhance reading comprehension; however, research indicates otherwise. For example, the popular practice of requiring students to find definitions of words and write those words in sentences before reading appears to have little apparent impact on their word knowledge and language use, and has not improved student comprehension of texts that contain those words.

### Computer Game “Fast Hands”

Game can be classified as one of the media that is familiar with youth people and can be used for teaching and learning process. In this study I used computer game “Fast Hands”. Computer game “Fast Hands” is a medium to teach vocabulary adopted by Owen.

This is a game for learning English focusing on vocabulary items. The player listen to the sound or read the word and then click on the matching pictures. It is really easy, fun and hopefully a great way to learn and review words. The player can choose the content their want to

play with and there are more than 500 vocabulary items in total.

### RESEARCH METHODOLOGIES

In this research, I used quasi-experimental research design with the use of non-equivalent control group design. This study involved two groups: an experimental group and a control group. This research used pre-test and post-test to obtain the data.

Table 1 Research Design

	Pre-Test	Treatment	Post-Test
Experimental Group	O <sub>1</sub>	X	O <sub>2</sub>
Control Group	O <sub>3</sub>		O <sub>4</sub>

The population in this study was the eighth grade students of SMP Negeri 1 Muntilan in the academic year of 2014/2015. The number of the students was 192, which were divided into 8 classes. The sample was VIII-B as the experimental group and VIII-F as the control group. The instrument of this research was test. Before the test is used to collect the data, the try-out test was conducted to measure the validity, reliability, discriminating power, and the difficulty level of the test. To measure the significance of the pre-test and post-test of the both groups, the researcher used *t-test* based on Arikunto (2006).

### RESULT AND DISCUSSION

#### Result of Try Out Test

The try-out test was conducted on April 27<sup>th</sup>, 2015. It was held in another class beside the experimental group and control group. The VIII C was chosen as the try out group. There were 24 students and they had to choose the correct answer in the multiple-choice task format, complete the vocabulary matching task format, and select response fill-in vocabulary format items test which consisted of 40 items in 60 minutes. The total scores of try out test were 1517.5 and the mean scores were 63.23. The result showed that the items were valid and reliable.

### Result of Pre-Test

This research was followed by 24 students of class VIII-B as the experimental group and 24 students of class VIII-F as the control group. There were 20 questions in multiple-choice, matching, and fill-in tasks format in 30 minutes.

From the pre-test result, the experimental group got total scores 1595 in doing pre-test. Next, the maximum score was 85.0, the minimum score was 50.0, and the mean score of this group was 66.46. In addition, the total scores of pre-test in control group was 1580. Furthermore, the maximum score was 80.0, the minimum score was 50.0 and the mean score of the students' result in this group was 65.83. The result of pre-test in control group was slightly different from the experimental group. As a result, the writer concluded that two groups had equal level vocabulary mastery before getting the treatment; therefore, the experiment could be continued.

### Treatments

The treatment was conducted two times for the experimental and control groups. Both groups received the same materials with different teaching media and method. The experimental group was taught by using Computer Game "Fast Hands" as media, while the control group was taught using the Word Lists Strategy.

### Result of Post Test

The post-test was followed by 24 students of class VIII-B as the experimental group and 24 students of class VIII-F as the control group. It was conducted as the same way as the pre-test.

Based on the post test result, the total score of experimental group was 2035. This group got mean score 84.79. Furthermore, the control group got total score 1905. The mean score of this group also increased, that was 79.37. As a result, the result showed that there was an improvement in post test result than pre-test. It can be concluded that computer game "Fast Hands" have more effective to improve students' vocabulary mastery than Word Lists Strategy.

### The Significance Difference of Two Tests

To know the significant difference of the experiment, t-test formula was used in this research. It was done by comparing the t-value and t-table. The t-value was found from the score differences between pre-test and post-test both in experimental and control groups, while the t-table was found by consulting to the critical value on the table column.

The difference of the means of the experimental and control groups was classified to be significant if the t-test was higher than the t-table. To measure the significance of the two groups, this formula was used:

$$\begin{aligned}
 t &= \frac{M1 - M2}{\sqrt{\frac{S1^2}{N1} + \frac{S2^2}{N2}}} \\
 &= \frac{84.79 - 79.37}{\sqrt{\frac{66.26}{24} + \frac{74.59}{24}}} \\
 &= \frac{5.42}{\sqrt{2.761 + 3.108}} \\
 &= \frac{5.42}{\sqrt{5.869}} \\
 &= \frac{5.42}{2.423} \\
 &= 2.237
 \end{aligned}$$

The critical value on the t-table for 46 degrees of freedom and 5% alpha level of significance was 2.015. Because t-value is higher than t-table ( $2.237 > 2.015$ ). It can be concluded that there is significant difference between the post-test of the experimental group and the control group. It means that there is difference in the experimental group and the control group on vocabulary mastery after they received the treatment. In can be concluded, teaching vocabulary by using computer game "Fast Hands" are more effective to improve the vocabulary mastery of the eighth grade of SMP Negeri 1 Muntilan in the academic year 2014/2015 than Word Lists Strategy.

### CONCLUSIONS

This research was conducted on the purpose to find out whether computer game "Fast Hands" effectively improves students' vocabulary. In other words, it was conducted to find out whether or not computer game "Fast

Hands” gives improvement of students’ vocabulary mastery compared to the Word Lists Strategy.

Based on the result of the experiment, there are some conclusions. Firstly, there is a significant difference in students’ improvement of vocabulary mastery between those who were taught by using computer game “Fast Hands” and those who were taught by using Word Lists Strategy for the eighth grade students of SMP Negeri 1 Muntilan in the academic year 2014/2015.

Secondly, the use of computer game “Fast Hands” is more effective in enhancing students’ vocabulary compared to Word Lists Strategy. It can be seen from the computation on the previous chapter which showed that the t-value is higher than the t-table on the 5% alpha of education and 40 degrees of freedom ( $2.237 > 2.015$ ). It means that the students’ vocabulary mastery on the experimental group is better than the control group which shows the effectiveness of the treatment given to the experimental group compared to the treatment given to the control group.

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